

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

Application of SOUTHERN CALIFORNIA GAS
COMPANY (U 904 G) Proposing Woody Biomass
Pilot Project.

A.25-10-008
(Filed October 15, 2025)

**OPPOSITION OF SOUTHERN CALIFORNIA GAS COMPANY TO SIERRA CLUB'S
MOTION TO STRIKE SECOND CORRECTED REVISED TESTIMONY AND
PORTIONS OF REBUTTAL TESTIMONY**

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May 7, 2026

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Pursuant to Rule 11.1 of the California Public Utilities Commission (Commission or CPUC) Rules of Practice and Procedure, Southern California Gas Company (SoCalGas) hereby submits its opposition to Sierra Club's Motion to Strike SoCalGas's Second Corrected Revised Testimony and Portions of Rebuttal Testimony (Motion) in the above captioned proceeding.

I. INTRODUCTION

Sierra Club's Motion is an improper attempt to exclude relevant, responsive, and probative testimony that is squarely within the scope of this proceeding and fully consistent with the Commission's Rules of Practice and Procedure and longstanding Commission precedent. The Motion does not identify any procedural defects or legal bases that would justify the extraordinary remedy of striking testimony. Instead, it seeks to foreclose consideration of evidence simply because Sierra Club opposes the proposed woody biomass pilot project (Project).

SoCalGas's Second Revised Testimony makes a limited, good-faith update to the Project's carbon intensity (CI) scores to promote consistent treatment of biogenic carbon after reviewing issues first raised in Sierra Club's own testimony. Although these revisions increased the CI scores, they did not alter the substance of SoCalGas's Application or its core showing that the Project will significantly reduce greenhouse gas (GHG) emissions relative to the natural gas baseline. Rather, the updates improve the accuracy and completeness of the evidentiary record—precisely what the Commission expects of parties in its proceedings.

Similarly, the portions of SoCalGas's Rebuttal Testimony that Sierra Club seeks to strike constitute classic rebuttal. They respond directly to new claims, assumptions, and assertions

introduced by Sierra Club and other intervenors regarding methane leakage, air quality impacts, and alleged risks to the City of Kerman. Longstanding Commission precedent squarely recognizes an applicant’s right to offer rebuttal testimony to address such newly raised matters, and curtailing that right would contravene fundamental principles of due process.

Sierra Club’s reliance on isolated Commission decisions is misplaced and ignores the specific procedural context and equitable considerations present here. There is no evidence that SoCalGas engaged in gamesmanship, withheld information, or sought to surprise parties. To the contrary, Sierra Club has already availed itself of discovery specifically directed at the testimony it now seeks to strike. Under these circumstances, striking the testimony—or granting sur-rebuttal—would serve no legitimate procedural purpose and would needlessly prejudice SoCalGas.

Because Sierra Club has failed to demonstrate good cause, the Commission should deny the Motion in its entirety and consider SoCalGas’s testimony on the merits.

II. BACKGROUND

A. The Application, Scoping Memo, and Parties’ Testimony

On October 15, 2025, SoCalGas filed the instant Application seeking approval of a proposed Project to produce bio-synthetic natural gas using predominantly almond residual biomass feedstock, including orchard removals, shells, and sticks.¹ SoCalGas selected West Biofuels LLC (WBF) as the project developer.² WBF proposes to build, own, and operate a gasification facility (WBF Facility) in Kerman, CA that would process up to 80 BDT per day of agricultural biomass into approximately 750 MMBtu per day of biomethane.³ The biomethane would be transported by compressed natural gas trucks powered by renewable natural gas to a SoCalGas-owned parcel in the City of Visalia, where it will be injected into SoCalGas’s pipeline system.⁴

On November 21, 2025, SoCalGas served its Corrected Revised Prepared Direct Testimony of James Lucas and Dr. Matthew Summers, Chapter 2, *i.e.*, First Revised Testimony

¹ A.25-10-008 at 1.

² A.25-10-008 at 6.

³ *Id.* at 6.

⁴ *Id.*

on the then-current service list. A copy of the service email and redlined testimony is attached as Appendix A. The revisions were limited to: (1) adding Dr. Matthew Summers as a witness, (2) identifying which portions of testimony were sponsored by each witness, (3) relatively immaterial numerical updates to Tables 2-3 relative to baseline values, and (4) clarifying that, pursuant to Ordering Paragraph (OP) 3 of D.24-12-032, SoCalGas would return to ratepayers all interest accrued in the Cap-and-Invest funds through October 15, 2025.

On February 23, 2026, the Commission issued the Assigned Commissioner's Scoping Memo and Ruling (Scoping Memo), identifying eight issues for determination. The Scoping Memo did not provide a date for SoCalGas to provide supplemental testimony to address such issues.

Consistent with the procedural schedule, Sierra Club and other intervenors served prepared direct testimony on March 13, 2026. In challenging the Project's CI scores shown in Table 3 of the First Revised Testimony, Sierra Club noted that those scores prepared by the National Renewable Energy Laboratory (NREL) at WBFs' request treated the CO₂ as biogenic (by subtracting 55 gCO₂e/MJ), whereas the analysis in Tables 1 and 2 did not. After consulting with WBF, SoCalGas determined that updating the CI scores would improve consistency and completeness of the evidentiary record.

Accordingly, on April 9, 2026, SoCalGas served its second Corrected Revised Testimony of James Lucas and Dr. Matthew D. Summers, Chapter 2 (Second Revised Testimony), updating the CI scores in Table 3. Although the revisions increase the Project's CI scores, they remain consistent with SoCalGas's position that the Project would reduce GHG emissions compared to the natural gas baseline.

On April 10, 2026, SoCalGas served its Rebuttal Testimony addressing evidentiary claims made by Sierra Club and other intervenors in their respective testimony.⁵

B. Sierra Club's Discovery on SoCalGas's Testimony

On April 16, 2026, Sierra Club served its 6th Data Request, focused on the revised CI scores and SoCalGas's Rebuttal Testimony. A copy is attached as Appendix B.

On April 17, 2026, Sierra Club served its 7th Data Request, primarily addressing Rebuttal Testimony and related issues. A copy is attached as Appendix C.

⁵ Motion, Appendix A.

On April 30, 2026, SoCalGas responded to Sierra Club’s 6th Data Request. A copy is attached as Appendix F.

On May 1, 2026, SoCalGas responded to Sierra Club’s 7th Data Request. A copy is attached as Appendix G.

III. LEGAL STANDARD ON MOTION TO STRIKE TESTIMONY

A party may seek to exclude evidence on the grounds that the evidence is irrelevant or unduly prejudicial, or “on grounds that would be sufficient to object to or move to strike the evidence.” (*See Ceja v. Department of Transportation* (2011) 201 Cal.App.4th 1475, 1480 [“A motion in limine is made to exclude evidence before it is offered at trial on the ground that the evidence is either irrelevant or subject to discretionary exclusion as unduly prejudicial”] (*citing Ulloa v. McMillin Real Estate & Mortgage, Inc.* (2007) 149 Cal.App.4th 333, 337–338)). However, the inadvertent omission of relevant information unknown at the time direct testimony was filed is not grounds for exclusion.⁶ The Commission has long recognized that an applicant “is entitled to produce evidence in rebuttal to meet the new facts put into evidence by other parties after the applicant has rested its case in chief.”⁷ Denying that opportunity infringes basic principles of procedural fairness and due process.

IV. THERE IS NO GOOD CAUSE FOR STRIKING ANY OF SOCALGAS’S TESTIMONY

A. The Second Revised Testimony Merely Updated CI Scores and Remains Fully Consistent with SoCalGas’s GHG Emission Reduction Showing

Sierra Club’s assertion that the updated CI scores “fundamentally changed”⁸ the factual foundation of the Application is incorrect. The revisions did not alter SoCalGas’s position that the Project’s CI is substantially lower than the base case. As shown in Table 3 (redlined version) of the Second Revised Testimony, compared to the natural gas CI score of 70.12, the proposed Project has a CI score of 36.1 (49% less) and a CI score of -49.7 (170% less) with CCS:

⁶ D.04-07-022 at 156-157.

⁷ Decision 90642 (1979), 1979 Cal.PUC.LEXIS 826 at *25-26 (attached as Appendix D); *see also* D.85-06-112 (1985), 1985 Cal.PUC.LEXIS 457 at Finding of Fact 3 (attached as Appendix E).

⁸ Motion at 4.

Table 3: WTW Carbon Intensity for Bio-CNG

	CI LS-Diesel	CI NA-CNG	CI Bio- CNG	CI Bio-CNG with CCS
	Units in gCO ₂ e /MJ			
Feedstock	7.31	11.3	1.6	1.6
Fuel production	7.57	2.7	122.3	36.5
Vehicle operation	75.66	56.1	56.1	56.1
Biogenic CO₂ (VO)	0	0	-55.0	-55.0
Avoided emissions	0	0	-143.9	-143.9
WTW (gCO₂e /MJ)	90.54	70.12	-18.9 36.1	-104.9 7

SoCalGas updated Table 3 after Sierra Club identified inconsistent treatment of biogenic CO₂ in the NREL-prepared scores (by subtracting 55 gCO₂e/MJ). To support an accurate and complete record, and to directly address Sierra Club’s criticisms, SoCalGas updated its direct testimony to note these revised CI scores that are still lower than natural gas⁹. SoCalGas could not have done so earlier because the corrected calculations were prepared by NREL only after Sierra Club raised the issue.

Even assuming, *arguendo*, that these updated CI scores amount to a substantive change, Commission precedent makes clear that inadvertently omitted information may be supplied in rebuttal without penalty. In D.04-07-022 (cited by Sierra Club), the Commission rejected a proposed procedural disallowance where a utility corrected an inadvertent omission in rebuttal and emphasized equity and the availability of discovery.¹⁰ The Commission found, “Through inadvertency, SCE did not provide justification for \$3.408 million in CSBU-related capital additions (FERC Account 101) in its direct showing.”¹¹ After Cal Advocates noted the omission, SCE promptly provided the justification in its rebuttal testimony.¹² Cal Advocates proposed disallowing the \$3.4 million on procedural grounds, including that “providing justification in rebuttal testimony is too late for parties to analyze the showing.”¹³ The Commission found that

⁹ Second Revised Testimony at JMLS-12, fn. 44.

¹⁰ D.04-07-022 at 156-157.

¹¹ D.04-07-022 at 156.

¹² *Id.* at 156.

¹³ *Id.* at 156-157.

although utilities should not hold back in presenting relevant information, the circumstances merited waiving procedural requirements because “SCE obviously made a simple mistake” rather than withholding information as part of a litigation strategy.¹⁴ Similar considerations apply here. There is no evidence of gamesmanship or surprise.

Furthermore, Sierra Club has actively pursued discovery on the revised CI scores and underlying calculations. On April 16-17, 2026, Sierra Club served its 6th and 7th Data Requests on SoCalGas seeking information on the revised CI scores, and SoCalGas responded to them on April 30 and May 1, 2026.¹⁵ D.04-07-022 recognized, such discovery mitigates any procedural concern and favors consideration of the evidence on its merits.¹⁶ The Commission reasoned that given the small additions at issue, it was not prepared to find that the “parties would have had insufficient time to review the showing had they made a timely data request upon learning of the mistaken omission.”¹⁷ As a result, the Commission found that from an equity perspective, it would “consider SCE’s justification on the merits rather dismiss the entire CSBU capital additions request on procedural grounds.”¹⁸ Therefore, the updated CI scores in the Second Revised Testimony should similarly be considered on the merits rather than stricken on procedural grounds.

Sierra Club’s reliance on D.07-11-037 is misplaced. D.07-11-037 was issued in a water rate case related to arguments regarding only providing a “full justification” for its proposal until rebuttal testimony was submitted.¹⁹ That case involved late-stage rebuttal in a rate proceeding shortly before hearings. Golden State Water submitted over 200 pages of rebuttal testimony “barely two weeks” before the rate case hearing and submitted data responses two days before the hearing.²⁰ By contrast, SoCalGas submitted the Second Revised Testimony on April 9, 2026, more than a month before the motion for evidentiary hearings is due on May 15, 2026. SoCalGas fully responded to Sierra Club’s data requests focused on Rebuttal Testimony on April 30 and

¹⁴ *Id.* at 157.

¹⁵ *See* Appendices B, D, F, and G hereto.

¹⁶ *Id.* at 157-158.

¹⁷ *Id.*

¹⁸ *Id.* at 158.

¹⁹ Motion at 6.

²⁰ D.07-11-037 at 111.

May 1, 2026.²¹ Moreover, in D.07-11-037 the Administrative Law Judge denied a motion to strike rebuttal testimony.²² Therefore, D.07-11-037 is inapposite to the circumstances here.

B. The First Revised Testimony Merely Added Dr. Matthew Summers as a Witness to Chapter 2 and Clarified It Would Refund to Ratepayers Interest Accrued through October 15, 2025

Contrary to Sierra Club’s misleading claim,²³ SoCalGas did not “alter the basis” for its proposed Project when it served the First Revised Testimony on November 21, 2025. SoCalGas’s changes were limited to (1) adding Dr. Matthew Summers as a witness, (2) noting which portions of testimony Mr. James Lucas and Dr. Matthew Summers were sponsoring, (3) some inconsequential number updates to Tables 2-3 compared to baseline values, and (4) clarifying that SoCalGas would return to ratepayers all interest accrued in the Cap-and-Invest funds through October 15, 2025.²⁴ These changes did not change the basis of the proposed Project.

Although Sierra Club asserts it did not receive a redline, SoCalGas properly served the service list in effect, and any differences were readily identifiable through document comparison (*e.g.*, simple software comparison).

C. The Rebuttal Testimony Simply Presents Evidence Rebutting Various Misleading Claims by Sierra Club

Sierra Club argues that portions of Rebuttal Testimony should be stricken because “SoCalGas added new information that could have and should have been included in its direct testimony.”²⁵ Sierra Club misconstrues both the content and purpose of rebuttal. Sierra Club ignores well-established Commission precedent that an applicant “is entitled to produce evidence in rebuttal to meet the new facts put into evidence by other parties after the applicant has rested its case in chief.”²⁶ Here, SoCalGas developed its Rebuttal Testimony to respond to arguments and issues raised by Sierra Club relating to (1) methane leakage from the Project, (2) the

²¹ See Appendices F, G hereto.

²² *Id.* at 113.

²³ Motion at 4.

²⁴ See Appendix A hereto.

²⁵ Motion at 6.

²⁶ Decision 90642 (1979), 1979 Cal.PUC.LEXIS 826 at *25-26 (attached as Appendix D); *see also* D.85-06-112 (1985), 1985 Cal.PUC.LEXIS 457 at Finding of Fact 3 (attached as Appendix E).

Project's distance from populated areas, which is public information, and (3) impacts of air toxics emissions. SoCalGas should not be denied the ability to respond to Sierra Club's new evidence and arguments because doing so would violate SoCalGas's due process rights.

To the extent these changes amount to "new information", SoCalGas's first opportunity to provide it was in Rebuttal Testimony. Because these issues were outlined in the Scoping Memo issued after SoCalGas served its direct testimony with the Application, SoCalGas could not have addressed them until rebuttal. Had the Scoping Memo allowed SoCalGas an opportunity to supplement its direct testimony, it would have done so, as is customary in other proceedings. Therefore, nothing in the Rebuttal Testimony should be stricken.

a) **The Methane Leakage Portions Directly Rebut Sierra Club's Testimony Questioning the Project's Methane Emissions**

Sierra Club alleges that the project failed to account for methane fugitive emissions.²⁷ Sierra Club attempted to show that the Project fails to consider methane emissions associated with Bio-SNG production.²⁸ In direct response, SoCalGas presented a component-level analysis using U.S. EPA methodology:

Using the U.S. EPA Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017), West Biofuels conducted a component-level analysis showing that controlled methane leakage is estimated at 1.84 kg/day, equivalent to 0.0685 gCO₂e/MJ, representing a mere 0.06% of the facility's direct emissions. This quantitative data confirms fugitive methane is de minimis and illustrates its exclusion in the lifecycle modeling (see Attachment 1).²⁹

This analysis, supported by Dr. Summer's calculation memorandum, directly rebuts Sierra Club's claims and is plainly admissible rebuttal evidence.³⁰ It is appropriate for SoCalGas to produce such evidence in rebuttal to counter new facts put into evidence by Sierra Club and any other party.

²⁷ Motion at 7.

²⁸ Motion, Appendix A, Rebuttal Testimony at JLMS-16-17 (*citing* Sierra Club's Prepared Testimony of Emily Grubert and Ranajit (Ron) Sahu (Sierra Club Testimony) at 11), *available at*: <https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2510008/9048/602365888.pdf>.

²⁹ Motion, Appendix A, Rebuttal Testimony at JLMS-19.

³⁰ Motion, Appendix A, Rebuttal Testimony, Attachment 1 thereto (Calculation Memorandum prepared by Dr. Matthew Summers).

b) Distance from Populated Areas and Population Center in Response to Sierra Club’s Project Emissions Claims

Sierra Club alleges that Project emissions threaten residents of Kerman. In rebuttal, SoCalGas demonstrated (using publicly available information) that the WBF Facility is located approximately 7-8 miles from Kerman’s populated areas. Sierra Club alleges “there is no sound basis for waiting until rebuttal testimony” to produce such information.³¹ SoCalGas presented such evidence because Sierra Club’s testimony mischaracterized the Project as a threat to Kerman residents alleging that the Project would “worsen air quality.”³²

9 **1. Sierra Club Omitted Avoided Baseline Emissions in its Assessment**
10 Sierra Club’s conclusion that the SB 1440 Pilot Project will “worsen air quality”¹¹² omits
11 emissions from existing waste disposal practices that the project would displace, including air
12 curtain burning, biomass power generation, and diesel-intensive handling operations. By
13 focusing solely on facility emissions and ignoring displaced baseline emissions, Sierra Club fails
14 to assess net regional impacts. By diverting biomass into a controlled, thermochemical industrial
15 process with gas cleaning and flaring protocols, the SB 1440 Pilot Project can provide a superior
16 environmental alternative to current practices.

17 **2. The SB 1440 Pilot Project has Negligible Local Impacts ~~Due to~~**
~~18 Facility Distance~~

19 ~~Sierra Club’s analysis fails to account for the significant geographical buffer between the~~
~~20 West Biofuels facility and the populated area of the City of Kerman.¹¹³ The West Biofuels~~
~~21 facility is located approximately 7-8 miles from the populated areas of Kerman. At this distance,~~
~~22 atmospheric dispersion significantly reduces pollutant concentrations.~~ The San Joaquin Valley
23 Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line
24 and nearest sensitive receptors as part of the permitting process. The air toxics evaluation is
25 conducted consistent with the California Air Resources Board (CARB) Air Toxics “Hot Spots”
26 Information and Assessment Act (AB 2588; Health & Safety Code §§44300–44394)¹¹⁴ and
27 SJVAPCD Rule 2201 (New and Modified Stationary Source Review)¹¹⁵, which together focus

It appears that Sierra Club failed to account for the distance between the WBF Facility’s location and Kerman’s populated area. SoCalGas had no reason to present this information until Sierra Club put alleged community impacts at issue.

Furthermore, the distance between the WBF Facility and populated area of Kerman is publicly available information. Attachment 1 to SoCalGas’s original Chapter 2 testimony served

³¹ Motion at 8.

³² Motion, Appendix A, Rebuttal Testimony at JLMS-29 (*citing* Sierra Club Testimony, Sahu at 38).

with the Application notes the WBF Facility’s address as 8325 S. Madera Avenue, Kerman, CA 93630.³³ A simple Google maps search for the distance from the facility to Kerman’s populated area would reveal a distance between 7-8 miles. Also, on December 18, 2025, the ALJ issued a ruling setting the prehearing conference and directing SoCalGas to file supplemental information that included a map/diagram noting, *inter alia*, the WBF Facility and the city of Kerman (Ruling).³⁴ On January 7, 2026, SoCalGas served its response to the Ruling and included a map illustrating the WBF Facility and the City of Kerman to its north.³⁵ Sierra Club thus could have estimated the 7-8 miles distance between the Project site and Kerman’s populated area on its own, but chose not to do so in its testimony because it would contradict its claim that the Project would negatively impact the Kerman community. SoCalGas therefore has a right to point out such incongruence in Sierra Club’s testimony.

Moreover, Sierra Club’s claims that because SoCalGas did not define the terms “population area,” “population areas,” or “population center,” these portions should be stricken. This argument, however, goes to the weight of the evidence rather than its admissibility. Sierra Club is free to comment on these terms in its briefs.

c) **The Testimony Regarding Impacts of Air Toxics Emissions Directly Rebuts Sierra Club’s Claims that the Project will Negatively Affect Air Quality**

Sierra Club seeks to exclude rebuttal testimony regarding air toxics impacts.³⁶ SoCalGas’s rebuttal responds directly to Sierra Club’s unsupported claims that the Project would degrade air quality in Kerman. Rebuttal was both appropriate and necessary to correct the record. SoCalGas, as an applicant, is “entitled to produce evidence in rebuttal to meet new facts put in evidence by other parties in accordance with prior practice of the Commission.”³⁷

³³ See First Revised Testimony, Attachment 1, available at: https://www.socalgas.com/sites/default/files/2025-12/A.25-10-008_Woody_Biomass_Application-Revised_Chapter_2-Project_Selection.pdf.

³⁴ A.25-10-008, *Administrative Law Judge’s Ruling Setting Prehearing Conference and Directing Prehearing Filing* (Dec. 18, 2025) at 2-3, available at: <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M591/K672/591672840.PDF>.

³⁵ A.25-10-008, *SoCalGas’s Response to ALJ Ruling Seeking Additional Information*, available at: <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M593/K230/593230584.PDF>.

³⁶ Motion at 9.

³⁷ D.85-06-112 (1985), 1985 Cal.PUC.LEXIS 457 at Finding of Fact 3 (attached as Appendix E).

V. THERE IS NO GOOD CAUSE TO GRANT SIERRA CLUB LEAVE TO FILE SUR-REBUTTAL TESTIMONY

Sierra Club's alternative request for sur-rebuttal testimony should also be denied. The CI score updates do not alter the fundamental GHG-reduction showing compared to the base case. Sierra Club has already challenged SoCalGas's methodology and may address in legal briefs.

Additionally, SoCalGas has the right to produce new evidence challenging Sierra Club's claims and assertions raised in its testimony. As noted above, all of the evidence in Rebuttal Testimony that Sierra Club seeks to strike is evidence that contradicts or identifies fallacies in Sierra Club's testimony. If the Commission were to adopt Sierra Club's position that it should be allowed to file a sur-rebuttal to address rebuttal evidence that contradicts its claims, SoCalGas's due process rights would be violated because SoCalGas, as the applicant, would be unable to respond to it.

Third, Sierra Club has been conducting discovery on the same evidence it seeks to exclude. On April 16, 2026, Sierra Club served its 6th Data Request seeking information on the changes to the CI scores, leak emission estimates, distance from Kerman's populated areas, and reduced impacts of air toxics on Kerman residents;³⁸ SoCalGas fully responded to this request on April 30, 2026.³⁹ On April 17, 2026, Sierra Club served its 7th Data Request seeking information relating to changes to the CI scores;⁴⁰ SoCalGas fully responded to this request on May 1, 2026.⁴¹

Granting up to fifteen pages of sur-rebuttal to address approximately 21 lines of testimony and a short 4-page memorandum would be disproportionate and inequitable and would unnecessarily delay the proceeding. It would also deprive SoCalGas of any opportunity to respond, effectively giving Sierra Club the last evidentiary word and violating basic due process.

Therefore, Sierra Club should not be afforded relief to file sur-rebuttal testimony.

³⁸ Sierra Club's 6th Data Request to SoCalGas (Served 4/16/2026), Appendix B at 3-7.

³⁹ SoCalGas's Response to Sierra Club's 6th Data Request to SoCalGas (Served 4/30/2026), Appendix F.

⁴⁰ Sierra Club's 7th Data Request to SoCalGas (Served 4/17/2026), Appendix C at 4.

⁴¹ SoCalGas's Response to Sierra Club's 7th Data Request to SoCalGas (Served 5/01/2026), Appendix G.

Appendix A

**SoCalGas's 11/21/2025 Service Email
with First Revised Testimony Attached
(Redlined Version)**

Bautista, Ismael

From: Gossett, Joey S
Sent: Friday, November 21, 2025 11:54 AM
To: Bautista, Ismael; Jennifer@UtilityAdvocates.org; Central Files; CPUCdockets@eq-research.com; Santa Cruz, Francisco E; npedersen; kwz@cpuc.ca.gov; James@UtilityAdvocates.org; JLevin@BioEnergyCa.org; ABrown@B2EnergyLaw.com
Subject: A.25-10-008; Woody Biomass Pilot Project [Corrected Revised Prepared Direct Testimony of James Lucas and Dr. Matthew D. Summers on Behalf of Southern California Gas Company.]
Attachments: A.25-10-008 Woody Biomass Application - Revised Chapter 2 - Project Selection 2025.11.21 Final.pdf; A.25-10-008 Woody Biomass Application - Revised-Chapter 2 - Project Selection - Redline 2025.11.21 Final.pdf

To All Parties on the Service List for A.25-10-008:

Attached please find a service copy of the testimony listed below (in Searchable PDF/A Format). The testimony has also been uploaded to the CPUC Supporting Documents site.

- Corrected Revised Prepared Direct Testimony of James Lucas and Dr. Matthew D. Summers on Behalf of Southern California Gas Company (Selection of Pilot Project)
- Corrected Revised Prepared Direct Testimony of James Lucas and Dr. Matthew D. Summers on Behalf of Southern California Gas Company (Selection of Pilot Project) - **Redline**

Thank You.

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Application: A.25-10-XXX
Witness: James Lucas and Dr. Matthew Summers
Chapter: 2
Exhibit: SCG-02R

CORRECTED REVISED PREPARED DIRECT TESTIMONY OF
JAMES LUCAS AND DR. MATTHEW SUMMERS
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY
(SELECTION OF PILOT PROJECT)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

October 15, 2025

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1 **CORRECTED REVISED PREPARED DIRECT TESTIMONY OF**
2 **JAMES LUCAS AND DR. MATTHEW SUMMERS**
3 **CHAPTER 2**
4 **(SELECTION OF PILOT PROJECT)**

5 **I. PURPOSE**

6 The purpose of my prepared direct testimony on behalf of Southern California Gas
7 Company (“SoCalGas”) is to provide the background and describe the process used to select one
8 Senate Bill (“SB”) 1440 gasification pilot project (“SB 1440 Pilot Project”) that intends to
9 interconnect to a SoCalGas pipeline. My testimony will provide an overview of the: (1) SB 1440
10 Pilot Project solicitation (“SB 1440 Solicitation”), and (2) SB 1440 Pilot Project’s (i) eligibility
11 criteria, (ii) anticipated benefits, (iii) use of Cap-and-Trade funding, and (iv) reporting
12 requirements. My testimony will also discuss the foundational building blocks used to develop
13 the requirements of the SB 1440 Solicitation, the use of an independent third party to assist with
14 the assessment and selection of the SB 1440 Pilot Project, and an overview of the selected
15 SB 1440 Pilot Project. Such overview includes a project description, the estimated ratepayer and
16 environmental benefits, community benefits, and timelines.

17 The purpose of the SB 1440 Pilot Project is to demonstrate the production of bio-
18 synthetic natural gas (“Bio-SNG”)¹ from agricultural waste using gasification and methanation,
19 and its injection into the SoCalGas pipeline system. In its Application to the California Public
20 Utilities Commission (“Commission” or “CPUC”), SoCalGas is proposing one SB 1440 Pilot
21 Project that appears financially sustainable in the long-term. SoCalGas recognizes gasification
22 projects involve nascent technology and will collaborate with the applicant of the selected
23 SB 1440 Pilot Project to support these investments with the goal of providing the expected
24 environmental benefits to ratepayers and California.

¹ D.22-02-025 at 2, n.1 (“Bio-SNG derives from non-combustion thermal conversion, such as pyrolysis and gasification, of exclusively organic material. The feedstocks generally consist of woody biomass, such as forest waste, agricultural waste, and urban wood waste. Bio-SNG is defined in the R.13-02-008 Phase 4A Staff Proposal as follows: ‘A mixture composed primarily of methane, carbon dioxide, and water produced by chemical conversion (catalytic methanation) of purified and conditioned renewable syngas. Also contains low concentrations of carbon monoxide, hydrogen, and other minor constituents.’”) For purposes of this Testimony, Bio-SNG, biomethane and renewable natural gas (RNG) are considered the same.

1 By its Application, SoCalGas proposes a gasification project² that will truck the Bio-SNG
2 to an interconnection facility to accept the Bio-SNG to its pipeline system that will, among other
3 things, (1) demonstrate the use of woody biomass to produce Bio-SNG, (2) have the potential to
4 utilize carbon dioxide (“CO₂”) in carbon capture, utilization, or storage (“CCUS”) projects rather
5 than venting to the atmosphere,³ (3) utilize up to \$19.704 million in Cap-and-Trade funding to
6 support the SB 1440 Pilot Project to connect to the SoCalGas pipeline system, and (4) provide
7 emission reductions to the local community and California.

8 **II. OVERVIEW OF SB 1440 PILOT PROJECT SOLICITATION (WITNESS:**
9 **JAMES LUCAS)**

10 On December 18, 2017, the Commission issued D.17-12-004 (“SB 1383 Decision”)⁴
11 which established the necessary framework to direct SoCalGas and PG&E to implement dairy
12 biomethane pilot projects (“SB 1383 Pilot Projects”). SoCalGas utilized this framework to
13 successfully connect four dairy pilot projects to the SoCalGas pipeline system between 2021 and
14 2022. Given the Commission-approved framework and process worked very well for the
15 SB 1383 Pilot Projects, SoCalGas is utilizing a similar framework and process for the assessment
16 and selection of at least one SB 1440 Pilot Project.

17 **A. Background - SB 1383 Pilot Projects**

18 On September 19, 2016, Governor Brown signed SB 1383 into law. The bill requires the
19 California Air Resources Board (“CARB”) to approve and begin implementing a comprehensive
20 strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane
21 by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013
22 levels by 2030. One of the requirements of SB 1383 requires the Commission, in consultation
23 with CARB and the California Department of Food and Agriculture (“CDFA”), to direct utilities
24 to implement no less than five dairy biomethane pilot projects to demonstrate interconnection to

² At the time of this filing, there are no gasification or pyrolysis projects producing Bio-SNG and connected to the SoCalGas pipeline system.

³ D.22-02-025 at 46.

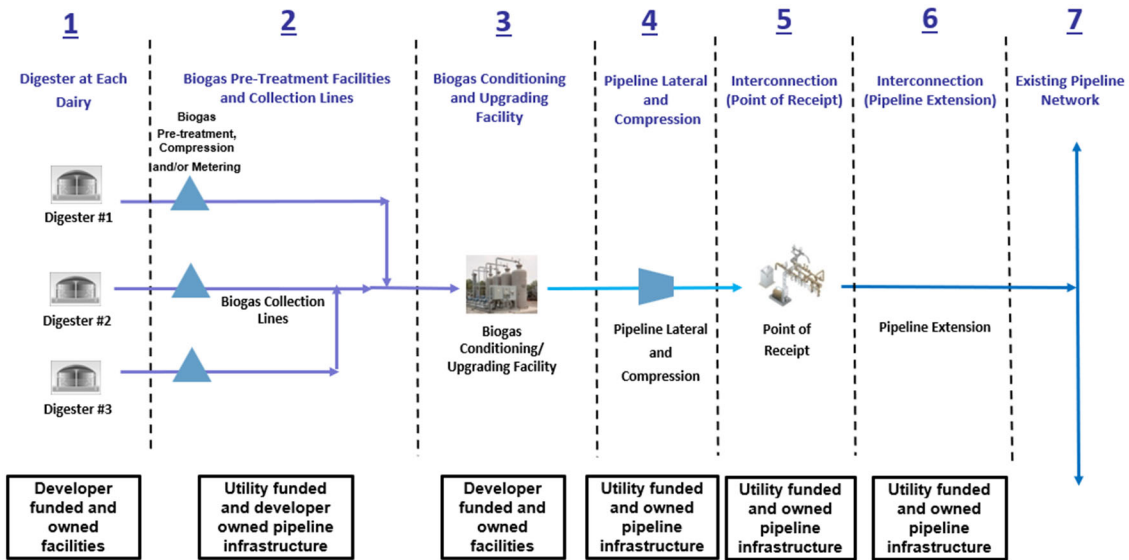
⁴ D.17-12-004, Decision Establishing Implementation and Selection Framework to Implement the Dairy Biomethane Pilots Required By Senate Bill 1383 (December 14, 2017), *available at*: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K352/201352373.PDF>.

1 the common carrier pipeline system. SB 1383 also allows the utilities to seek cost recovery of the
2 reasonable cost of pipeline infrastructure developed pursuant to the pilot projects.⁵

3 The SB 1383 Decision approved the investor-owned utilities (“IOUs”) to recover in rates
4 the cost of pipeline infrastructure (“SB 1383 Pipeline Infrastructure”) for no less than five
5 statewide SB 1383 Pilot Projects. The SB 1383 Decision defines SB 1383 Pipeline Infrastructure
6 as follows (Figure 1):⁶

- 7 • Biogas collection lines and facilities for treatment, monitoring, metering, and
8 compression of biogas before it enters the collection lines (lane 2);
- 9 • The pipeline (“Pipeline Lateral”) and compression that delivers biomethane from a
10 biogas conditioning facility to the point of receipt (lane 4);
- 11 • Point of receipt, where the utility receives gas that has been upgraded at a
12 conditioning facility (lane 5); and
- 13 • Pipeline extension that delivers biomethane from point of receipt to the utility’s
14 existing gas pipeline system (lane 6).

15 **Figure 1: Dairy Biomethane Pilot Primary Components**



16 The SB 1383 Decision further created a committee comprised of the Commission as the
17 lead agency, in consultation with the CARB and CDFA (“Selection Committee”), charged with
18

⁵ SB 1383 (Lara, 2016), available at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383.

⁶ D.17-12-004, Appendix A (Dairy Biomethane Pilot Implementation Framework) at 1.

1 issuing the final SB 1383 Dairy Pilot Solicitation (“SB 1383 Solicitation”).⁷ On March 7, 2018,
2 the Selection Committee issued the SB 1383 Solicitation,⁸ and on December 3, 2018, it selected
3 six SB 1383 Pilot Projects.⁹

4 SoCalGas used the SB 1383 Solicitation as a general guide for preparing the SB 1440
5 Solicitation, including making modifications based on the different feedstocks used to produce
6 Bio-SNG.

7 **B. SB 1440 Pilot Project Eligibility Criteria**

8 D.24-12-032 states that, consistent with the direction provided in D.22-02-025, if SoCalGas
9 elects to submit a new woody biomass pilot project application by October 15, 2025, the proposal must
10 meet the following criteria:¹⁰

- 11 • May focus on either forest or agricultural waste, as best serves its interests and the
12 interests of its customers;
- 13 • Should have its procurement efforts and strategic placement coordinated with
14 local and state authorities, including the Department of Conservation;
- 15 • Must include costs for pipeline extensions to the pilot facilities in the project
16 costs;
- 17 • Should facilitate future potential extensions for additional projects;
- 18 • Should propose methods for using carbon dioxide in carbon capture and storage
19 or use projects rather than venting carbon dioxide to the atmosphere;
- 20 • Should test technologies that are capable of extension and have significant
21 potential to increase the renewable natural gas supply in the long term; and

⁷ *Id.*, Appendix A at 4.

⁸ CPUC, *Solicitation for SB 1383 Dairy Pilot Projects*, by Selection Committee (March 7, 2018),
available at: https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_website/content/utilities_and_industries/energy/energy_programs/gas/natural_gas_market/dairypilotssolicitation.pdf.

⁹ CPUC, Press Release: *CPUC, CARB, and Department of Food and Agriculture Select Dairy Biomethane Projects to Demonstrate Connection to Gas Pipelines* (December 3, 2018), available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M246/K748/246748640.PDF>.

¹⁰ D.24-12-032 at 6-7.

- Must study and report fugitive methane, pollutant, and particulate matter emissions and emissions reduction or elimination methods in the gasification or pyrolysis process, the methanation process, and pipeline infrastructure.

As provided in Section III.B of this testimony, the proposed SB 1440 pilot project meets all of the above requirements.

C. Eligible SB 1440 Pilot Project Costs

1. Background

D.22-02-025 directs California’s four large gas IOUs, *i.e.*, SoCalGas, PG&E, SDG&E, and SWG (the “Joint Utilities”) to collectively set aside \$40 million¹¹ from their 2022 Cap-and-Trade allocated allowance auction proceeds so that additional funding is available to offset pipeline build-out costs and related expenses associated with the pilot projects.¹² To assist with determining the types of expenses to be eligible to offset pipeline build-out (“SB 1440 Pipeline Infrastructure”), SoCalGas considered two prior Commission-approved programs that utilize ratepayer funding to help off-set biomethane interconnection costs. Those programs are as follows:

Biomethane Monetary Incentive Program

In 2015, the Commission issued D.15-06-029 which, among other things, created a \$40 million monetary incentive program for biomethane projects that successfully connect with an IOU-operated gas pipeline. Assembly Bill (“AB”) 2313 (Williams, 2016) subsequently required the Commission to increase the program’s monetary incentive from \$1 million to \$3 million for individual biomethane projects and from \$3 million to \$5 million for dairy cluster biomethane projects.¹³

In D.20-12-031, the Commission acknowledged that the \$40 million funding approved in D.15-06-029 was fully subscribed along with a waitlist for an additional \$38.5 million worth of

¹¹ Of the \$40 million, SoCalGas’s allocation is \$19.704 million.

¹² D.22-02-025 at 47.

¹³ A “dairy cluster biomethane project” is defined in Public Utilities Code Section 399.19 as “a biomethane project of three or more dairies in close proximity to one another employing multiple facilities for the capture of biogas that is transported by multiple gathering lines to a centralized processing facility where the biogas is processed to meet the biomethane standards adopted by the commission pursuant to subdivisions (c) and (d) of Section 25421 of the Health and Safety Code and injected into the pipeline of the gas corporation through a single interconnection.”

1 project funding.¹⁴ After weighing the benefit of increased biomethane capture and use against the
2 modest reduction in the California Climate Credit necessary to fully fund all existing biomethane
3 projects, including those on the waitlist, the Commission found it appropriate to provide an
4 additional \$40 million in funding from Cap-and-Trade allowance proceeds for the monetary
5 incentive program to fund the biomethane projects currently on the waitlist, bringing total
6 funding to \$80 million.¹⁵

7 Furthermore, SoCalGas Rule 45 states the monetary incentive is limited to eligible
8 interconnection costs that include:¹⁶

- 9 • Engineering costs (Interconnect Screening, Preliminary Engineering Study, and
10 Detailed Engineering Study costs).
- 11 • Costs associated with facilities downstream of the biomethane interconnector’s
12 processing plants used for delivering biomethane into the utility or third-party
13 pipeline system.
- 14 • Total installed costs of receipt point facilities. These facilities include, but are not
15 limited to meters, regulators, appurtenant facilities, quality measurement, odorization
16 facilities, and auxiliary facilities.
- 17 • Facility enhancement costs. These enhancements include, but are not limited to,
18 enhancements to gas pipelines and other related system upgrades that are required to
19 enable continued safe and reliable operation of utility’s system due to the addition of
20 each biomethane interconnection.
- 21 • For dairy cluster biomethane interconnection, costs incurred for biogas gathering
22 lines to help reduce emissions of short-lived climate pollutants (“SLCP”) pursuant to
23 Section 39730 of the Health and Safety Code shall be considered eligible costs.

¹⁴ D.20-12-031 at 11.

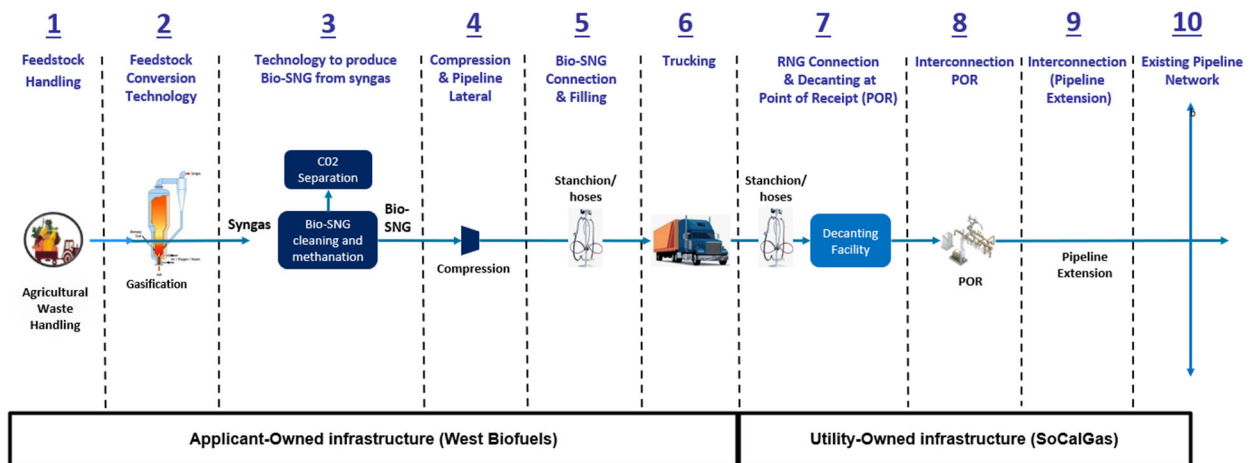
¹⁵ *Id.* at 14-15 (noting, “This is an appropriate use of gas utility Cap-and-Trade allowance proceeds since every unit of biomethane injected into gas utility pipelines displaces a unit of fossil fuel that would otherwise disperse GHG emissions into the atmosphere”).

¹⁶ SoCalGas, Rule No. 45: Standard Renewable Gas Interconnection at Sheet 22, *available at*:
<https://tariffsprd.socalgas.com/view/tariff/?utilId=SCG&bookId=GAS&tarfKey=600>.

2. SB 1440 Pipeline Infrastructure Eligible Costs

A gasification or pyrolysis project consists of stages and components similar to those in a SB 1383 Pilot Project. For example, dairy projects require digester(s) to produce biogas from the manure. The biogas is then cleaned and processed to produce pipeline quality biomethane. For a SB 1440 Pilot Project, gasification or pyrolysis equipment produces syngas from woody biomass. The syngas is then cleaned and methanated to produce pipeline quality Bio-SNG. Figure 2 illustrates and defines the high-level components of the proposed SB 1440 Pilot Project to produce Bio-SNG and connect to a utility pipeline.

Figure 2: Proposed Woody Biomass Pilot Primary Components



After consideration of the existing Commission programs which provide ratepayer funding to offset the cost of biomethane interconnections, SoCalGas proposes the following facilities be considered eligible costs for the SB 1440 Pilot Project:

SB 1440 Utility-Owned Pipeline Infrastructure

- Stanchions/hoses and decanter facility owned and operated by SoCalGas (lane 7 of Figure 2), where Bio-SNG will be trucked from a project site.
- Point-of-receipt owned and operated by SoCalGas, where SoCalGas receives gas that has been upgraded at a syngas cleaning and methanation Facility (lane 8 of Figure 2).
- Pipeline extension owned and operated by SoCalGas that delivers biomethane to the SoCalGas existing gas pipeline system (lane 9 of Figure 2).

1 **SB 1440 Applicant-Owned Pipeline Infrastructure**

- 2 • If there is Cap-and-Trade program funding remaining after funding lanes 7, 8, and 9,
3 SoCalGas is proposing to use Cap-and-Trade program funding to offset selected
4 SB 1440 Pilot Project costs in lane 4 of Figure 2. Taking this approach mirrors
5 existing Commission policy, as lane 4 infrastructure components are eligible costs
6 under the biomethane monetary incentive program and the SB 1383 Pilot Projects.
7 ○ All lane 4 infrastructure components will be owned and operated by the
8 Applicant, with SoCalGas reimbursing the Applicant for eligible costs.¹⁷

9 **III. OVERVIEW OF SELECTED SB 1440 PILOT PROJECT**

10 **A. Overview (Witness: James Lucas)**

11 SoCalGas selected West Biofuels LLC (“WBF”), the sole Applicant whose proposal met
12 the requirements under D.22-02-025 and D.24-12-032, to build, own, and operate a gasification
13 facility (“WBF Facility”) in Kerman, California, that will convert agricultural waste biomass into
14 biomethane. The Bio-SNG will then be trucked to SoCalGas’s decanter and pipeline point of
15 receipt facility where the biomethane will then be injected into the SoCalGas pipeline and can be
16 used or sold for a variety of potential end uses, *e.g.*, vehicle fuel, utility biomethane procurement,
17 etc.

18 The WBF Facility plans to process up to 80 bone dry tons (“BDT”) per day of
19 agricultural waste biomass into approximately 750 MMBTU per day of biomethane. The WBF
20 Facility will be co-located adjacent to the Central California Almond Growers Association
21 (“CCAGA”) almond processing facility and the Bio-SNG produced will be transported by
22 compressed natural gas powered trucks (using renewable natural gas) to SoCalGas’s
23 interconnection in Visalia, CA.

24 SoCalGas proposes to site the new interconnection facility on a company-owned parcel
25 located directly across from its operating base in the City of Visalia. This parcel previously
26 functioned as a compressed natural gas (“CNG”) refueling station until the early 2000s. There is
27 a high-pressure pipeline across the street from the former CNG station parcel which will
28 minimize the pipeline extension costs (lane 9).

¹⁷ SoCalGas will utilize the same process and procedure used to reimburse SB 1383 Pilot Project lane 2 costs.

1 **B. The Proposed SB 1440 Woody Biomass Pilot Project Meets the Project**
2 **Eligibility Criteria (Witness: James Lucas)**

3 In accordance with the guidance outlined in D.22-02-025, D.24-12-032 specifies that if
4 SoCalGas chooses to submit a new woody biomass pilot project application by October 15,
5 2025, the proposal must satisfy specific criteria. The following demonstrates how the SB 1440
6 Pilot Project has fulfilled each of these requirements.¹⁸

7 ***Criteria: May focus on either forest or agricultural waste, as best serves its interests***
8 ***and the interests of its customers***

9 The proposed WBF Facility meets this criterion by sourcing woody biomass from
10 agricultural feedstock. The feedstock is primarily almond residual biomass, which includes
11 orchard removals, shells, and sticks generated within the California central valley.

12 ***Criteria: Should have its procurement efforts and strategic placement coordinated***
13 ***with local and state authorities, including the Department of Conservation***

14 SoCalGas meets this criterion through its engagement with various local and state
15 authorities, including the Department of Conservation, regarding the proposed SB 1440 Woody
16 Biomass Pilot Project.

- 17 • On April 1, 2025 and September 18, 2025, SoCalGas discussed with the Department
18 of Conservation (“DOC”) if SB 155 and the SB 1440 Pilot Projects could be
19 strategically placed to qualify under both pilot projects.
- 20 • On September 5, 2025, SoCalGas met with the Commission’s Energy Division to
21 discuss the Application requirements and potential SB 1440 Pilot Project.
- 22 • On September 16, 2025, SoCalGas met with the City of Visalia to discuss the
23 proposed project and the use of SoCalGas’s former CNG station parcel in the City of
24 Visalia.

25 ***Criteria: Must include costs for pipeline extensions to the pilot facilities in the***
26 ***project costs***

27 SoCalGas satisfies this criterion by including the cost of the pipeline extension (lane 9)
28 within the overall project budget, which is covered under the \$19.7 million in Cap-and-Trade

¹⁸ D.24-12-032 at 6-7.

1 funding. Also, the cost of the utility owned infrastructure in lanes 7 and 8 (Figure 2) is also
2 included under the \$19.7 million in Cap-and-Trade funding.

3 ***Criteria: Should facilitate future potential extensions for additional projects***

4 SoCalGas’s proposal meets this criterion by including an interconnection facility
5 designed to potentially transition into an open access/virtual pipeline, thereby enabling
6 connectivity for other RNG producers in the area. According to WBF, there are many other
7 potential feedstock suppliers which could be contracted with in the future to truck additional Bio-
8 SNG to the interconnection facility. There are other farms which have already contacted WBF
9 about building similar Bio-SNG facilities at their locations to utilize their waste biomass.

10 Also, if the interconnection facility is later converted into an open-access/virtual pipeline,
11 additional nearby feedstock sources – such as landfill and wastewater treatment facilities – could
12 decide to produce RNG. Furthermore, the development of new facilities will be necessary to
13 manage the organic waste diverted from landfills in compliance with SB 1383, creating further
14 opportunities for RNG production and infrastructure expansion.

15 ***Criteria: Should propose methods for using carbon dioxide in carbon capture and***
16 ***storage or use projects rather than venting carbon dioxide to the atmosphere***

17 The WBF Facility satisfies this criterion by incorporating carbon dioxide removal (CDR)
18 technologies into its proposal, enabling the capture of carbon dioxide emissions rather than
19 releasing them into the atmosphere (see Section III.C for additional detail).

20 ***Criteria: Should test technologies that are capable of extension and have significant***
21 ***potential to increase the renewable natural gas supply in the long term***

22 The WBF Facility meets this criterion by offering the potential to scale beyond its initial
23 15 MW capacity. While traditional fossil fuel-based methanation facilities have operated at
24 scales up to 1,500 MW, biomass-based systems¹⁹—once successfully demonstrated at the WBF
25 Facility—can also be expanded. Although reaching such large-scale capacity may not be
26 practical for biomass, increasing the size beyond 15 MW could enhance process economics

¹⁹ U.S. Department of Energy (DOE), *Final Environmental Impact Statement – Great Plain Gasification Project – Mercer County, North Dakota* (August 1980), available at: <https://www.energy.gov/sites/prod/files/2014/12/f19/EIS-0072-FEIS-volume1.pdf> (125 million cubic ft/day of natural gas calculated to 1,500MW).

1 through scale efficiencies. WBF estimates that future biomass collection systems in California
2 could support facilities up to 100 MW, indicating significant room for growth.

3 ***Criteria: Must study and report fugitive methane, pollutant, and particulate matter***
4 ***emissions and emissions reduction or elimination methods in the gasification or***
5 ***pyrolysis process, the methanation process, and pipeline infrastructure***

6 SoCalGas and WBF meet this criterion by committing to thorough emissions
7 documentation and reporting for the SB 1440 Pilot Project (see Section IV for additional detail).

8 **C. WBF Technology Overview (Witness: Dr. Matthew Summers)**

9 The WBF Facility will utilize a Fast Internally Circulating Fluidized Bed (“FICFB”)
10 gasifier technology, a gasification system that produces versatile high-hydrogen syngas ideal for
11 catalytic conversion to Bio-SNG. The following provides a description of the primary equipment
12 used to produce Bio-SNG from woody biomass.

13 **Gasification Facility**

14 The FICFB gasifier is a dual fluidized bed gasification system using synthetic bed
15 material to transfer heat from the combustion zone to the gasification zone. Biomass is fed into
16 the gasification zone via a screw auger where it is thermochemically converted to raw syngas
17 through contact with the hot fluidized bed material and steam. The bed material and the
18 remaining char are transported to the combustion side by gravity where air is injected and the
19 char is combusted to heat the bed material. The hot bed material is lifted up the riser with the
20 combustion flue gases into a cyclone where the bed material and flue gases are separated. The re-
21 heated bed material is reintroduced into the fluidized bed gasification chamber while the flue
22 gases continue through the flue gas treatment system. The raw syngas, extracted on the
23 gasification side, is conditioned to remove impurities before becoming available for methanation.

24 **Syngas Cleaning Facility**

25 Syngas is generally a mixture of hydrogen, carbon monoxide, CO₂, nitrogen, methane,
26 water vapor, and trace compounds, including other light hydrocarbons. While syngas is a
27 combustible gas suitable for some end-use energy applications, it can also be purified and
28 upgraded for use in various synthesis processes, including the production of biomethane.

29 The syngas formed in the gasifier is first cooled in the syngas cooler and then cleaned of
30 bulk contaminants. A filter removes char particles that may have been transported along with the
31 syngas. The filter is operated at an elevated temperature and periodically backflushed to remove

1 solids. The second stage is a structured media scrubber with a Rapeseed Methyl Ester (“RME”)
2 liquid, an economical solvent also known as Canola oil biodiesel, to remove tars, water, and
3 other condensates from the syngas operated. Another scrubbing column is then run at a lower
4 temperature (operated with RME solution) to further reduce the water and light hydrocarbon
5 content to acceptable levels for fuel synthesis operations. The clean gas is then compressed and
6 heated before being sent through a final conditioning process. This adsorption process removes
7 sulfur compounds from the syngas to protect the methanation catalyst from deactivation.

8 **Methanation Facility**

9 Conversion of the syngas into Bio-SNG is accomplished through a catalytic methanation
10 process. After the reaction, water and small impurities of unreacted hydrogen and carbon
11 monoxide will be removed to purify the Bio-SNG stream for pipeline injection. The Bio-SNG
12 product is purified to meet the SoCalGas pipeline quality specifications. The Bio-SNG product is
13 compressed for filling to the Bio-SNG tube trailer. Recovered impurity gases from the process
14 are recycled back to the methanation unit for further conversion to Bio-SNG product. The
15 methanation unit would include gas monitoring system to ensure that Bio-SNG produced will
16 meet SoCalGas’s Rule 30 and 45 gas quality specifications prior to trucking the Bio-SNG to the
17 interconnection facility.

18 **Carbon Capture Facility**

19 For the WBF Facility, CO₂ is collected from both the gasification and the methanation
20 sections of the process using established CDR technologies. The flue gas from the regenerator
21 section of the gasifier is partially recycled, and the unrecycled fraction is purified using
22 adsorbent and membrane technologies to remove nitrogen, water and other condensable
23 compounds, sulfur containing compounds, and inert gases, to yield a purified CO₂ stream
24 meeting the quality standards for sequestration. CO₂ selective membranes and adsorbent
25 technologies are commercially available from multiple suppliers.

26 In addition, the product gas from the methanation reactor uses another established
27 membrane system to yield a purified Bio-SNG stream and a rejected CO₂ stream. The project
28 will rely on a commercially available membrane technology which allows efficient selective
29 separation processes to concentrate the methane while residual gases are routed back to the
30 reactor and CO₂ is concentrated to the desired levels for sequestration. In addition to the gas
31 streams, there is also solid ash which will result from the biomass gasification process. The ash

1 ranges from 2-4% of the biomass and is generated from the non-organic parts of the biomass.
2 This material can be utilized as a soil amendment or in cement production.

3 These CDR systems are not required for operating the plant, as they are simply extra
4 process steps to improve the overall carbon intensity of the produced Bio-SNG. The gasification,
5 cleaning, and methanation steps can still operate without the carbon capture steps. Continuously
6 capturing CO2 for long term onsite storage will not be practical so implementation of CDR will
7 be dependent on having an offtake partner for carbon dioxide.

8 **D. Permitting (Witness: Dr. Matthew Summers)**

9 While the permitting process for this project has not yet begun, WBF is well-versed in
10 permitting similar-scale biomass power plant projects, having successfully completed several in
11 California. WBF estimates that it will take 8 to 12 months to obtain all required permits after
12 submitting finalized facility drawings and a detailed description of planned operations with an
13 application for a Conditional Use Permit with Fresno County.

14 The expected permits and associated environmental review for the WBF Facility include:

- 15 • Conditional Use Permit from Fresno County
- 16 • Applicable Air Quality Permit(s) from the San Joaquin Air Pollution Control District
- 17 • Building Permit from Fresno County
- 18 • Applicable CEQA review initiated by Fresno County

19 **E. Benefits (Witness: Dr. Matthew Summers)**

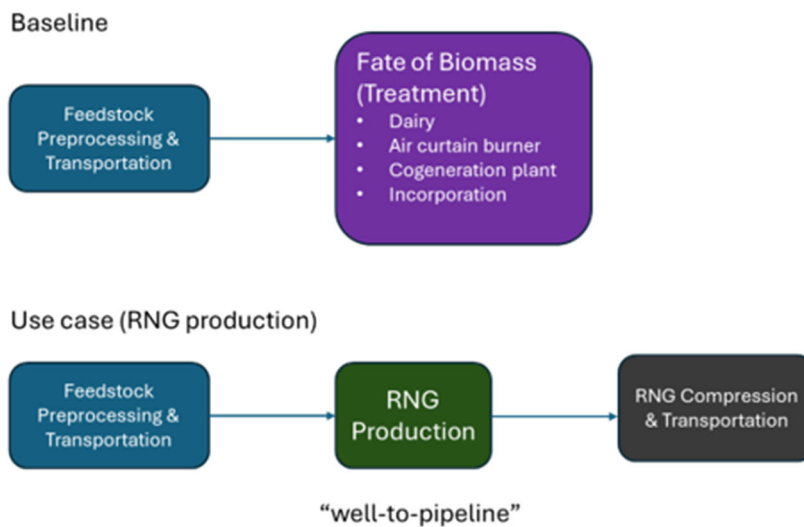
20 **1. Ratepayer and Environmental Benefits**

21 Ratepayers will benefit from the SB 1440 Pilot Project because the WBF Facility is
22 expected to provide emission reductions compared to typical biomass disposal practices from the
23 almond industry (without the SB 1440 Pilot Project). The National Renewable Energy
24 Laboratory analyzed the project-specific GHG and criteria pollutant emissions using the
25 Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (“GREET”) model
26 originally developed by Argonne National Laboratory (“ANL”) and used by the California Air
27 Resources Board (“CARB”) and others to quantify and compare the emissions of fuel production
28 pathways (see Attachment 1). Specifically, CARB has developed its own adaptation called CA-
29 GREET, which is based on ANL’s GREET model. In the first step, the “well-to-pipeline”
30 emissions for the Bio-SNG were compared to the business as usual “baseline” emissions using

1 the standard biomass disposal methods. In the second step, the “well-to-wheels” carbon intensity
2 (“CI”) is calculated for the compressed Bio-SNG fuel (“Bio-CNG”) produced from this project.

3 In the “well-to-pipeline” analysis, the baseline emissions from the current and projected
4 future biomass disposal practices of the CCAGA were analyzed. Without the development of the
5 WBF Facility, these practices are expected to continue into the future. The baseline emissions are
6 then compared to the Bio-SNG production use case, which is illustrated in Figure 3.

7 **Figure 3: Comparison of Baseline Emissions to Bio-SNG Production**



8 The baseline disposal practices for each type of biomass to be used at the WBF Facility
9 are shown below (Table 1) along with their corresponding emissions. Almond shells, which
10 make up approximately 20% of the feedstock, are normally delivered to dairies as feed and
11 bedding. Of the stick piles generated from the sorting and hulling process, which accounts for
12 approximately 10% of the total feedstock to the pilot facility, approximately half are disposed of
13 at biomass power facilities and half are burned in air curtain incinerators (“ACI”). Of the orchard
14 removals (older low yielding trees), which are approximately 70% of the facility feedstock,
15 about 90% are incorporated into the soil and 10% are disposed of at biomass power facilities.
16 Incorporation, sometimes referred to as “whole orchard recycling,” is not always feasible
17 because some fields require removal of the dead wood to prevent the transfer of disease to new
18 plantings. The almond industry and CCAGA expect the need for off-site removal of this biomass
19 will continue to increase with time. The WBF Facility will provide a beneficial outlet for this
20 removed material, offsetting less desirable forms of disposal, such as air curtain burning. Table 1
21 shows the baseline CI’s expressed in grams of carbon dioxide equivalent per potential megajoule
22

of Bio-SNG production (gCO₂e/MJ) for each of the current disposal alternatives for the biomass. The criteria pollutant emissions associated with the disposal methods are expressed in milligrams per potential megajoule of Bio-SNG production (mg/MJ). Criteria pollutants include oxides of nitrogen (“NO_x”), particulate matter less than 10 microns (“PM₁₀”), volatile organic compounds (“VOC”), carbon monoxide (“CO”), and sulfur oxides (“SO_x”).

Table 1
Baseline Carbon Intensity and Criteria Pollutant Emissions

Biomass type	%	Base case disposal method	Qty	CI	NO _x	PM 10	VOC	CO	SO _x
			kg/hr	gCO ₂ e /MJ	mg/MJ				
Almond shells	20%	100% dairy bedding	608	16.5	0.87	0.06	0.09	0.64	0.01
Sticks	10%	50% air curtain inc.	152	6.8	3.95	18.01	0.98	16.26	1.14
		50% biomass plant	152	8.2	5.07	0.12	0.07	0.90	9.32
Orchard removal	70%	90% incorporation	1914	100.9	2.73	0.18	0.29	2.00	0.04
		10% biomass plant	213	11.5	7.08	0.17	0.10	1.25	13.00
Total	100%		3038	143.9	19.69	18.55	1.53	21.05	23.53

For the use case of processing the biomass to Bio-SNG on a “well-to-pipeline” basis, the emissions include the feedstock logistics (feedstock gathering, chipping/grinding, loading, truck transport), Bio-SNG plant electricity (electric grid power), the Bio-SNG plant direct emissions, and Bio-SNG compression and transportation to the point of injection into the pipeline. Two use cases were analyzed: (1) Bio-SNG production, and (2) Bio-SNG production with carbon capture and storage (CCS). While the CCS requires energy, it captures about 80% or more of the plant CO₂ emissions. Table 2 below shows the results of the two use case scenarios for Bio-SNG production.

1
2

Table 2
Bio-SNG Use Case Carbon Intensity and Criteria Pollutant Analysis

Use Case (Bio-SNG)	CI	NOx	PM10	VOC	CO	SOx
	gCO2e/MJ	mg/MJ				
Feedstock logistics	1.55	3.80	0.25	0.41	3.03	0.07
Bio-SNG plant electricity	4.01	3.91	0.46	0.63	2.14	1.42
Bio-SNG plant direct emissions	116.55	10.26	0.83	0.71	2.33	0.31
CCS						
Bio-SNG compression and transportation	1.69	1.6574	0.19	0.296	4.20418	0.53
Total, g/MJ Bio-SNG	123.81	19.628	1.73	2.044	11.7868	2.33
Use Case (Bio-SNG w/ CCS)	CI	NOx	PM10	VOC	CO	SOx
	g CO2e/MJ	mg/MJ				
Feedstock logistics	1.55	3.80	0.25	0.41	3.03	0.07
Bio-SNG plant electricity	4.01	3.91	0.46	0.63	2.14	1.42
Bio-SNG plant direct emissions	23.31	10.26	0.83	0.71	2.33	0.31
CCS	7.71	5.24	0.62	0.84	2.86	1.90
Bio-SNG compression and transportation	1.69	1.6574	0.19	0.296	4.20418	0.53
Total, g/MJ Bio-SNG	38.27	24.8692	2.35	2.885	14.574454	4.23

3

In comparing the base case to the Bio-SNG production cases, there is an overall reduction in CO2e emissions (carbon intensity) for both cases on a well-to-pipeline basis. The results also show that for almost all of the major criteria pollutants, the Bio-SNG production use cases generate less emissions than the baseline practices. In addition, the overall emissions are expected to decline steadily over time as California’s electric grid continues to transition toward more decarbonized, renewable energy sources.

10

The CI of the Bio-SNG can be compared with other transportation fuels. It can be compared with fossil CNG and other “well-to-wheel” (“WTW”) fuel pathways. The WTW analysis expands the well-to-pipeline analysis to include the GHG emissions from the vehicle operation. Because fossil CNG is the chemical equivalent of Bio-CNG, vehicle emissions are the equivalent. However, in the case of Bio-CNG, these emissions are offset by the biogenic content

14

of the Bio-CNG. In addition, this analysis also credits the avoided emissions from the “business as usual” disposal fate of the biomass from the baseline case (aka counterfactual credit).

With these pathway factors considered, the GREET analysis shows the Bio-SNG facility can make Bio-CNG that has a negative CI of -18.9 gCO₂e/MJ and -104 gCO₂e/MJ for Bio-CNG and Bio-CNG with CCS respectively (Table 3). Producing and utilizing the Bio-CNG fuel from this project will be a net carbon sink over its lifecycle. This compares very favorably to average lower sulfur diesel and North American Compressed Natural Gas (“NA-CNG”), which both have a positive CI of +90.54 gCO₂e/MJ and +70.12 gCO₂e/MJ respectively from the 2024 R&D GREET model.²⁰ WBF has plans to utilize this GREET analysis to apply for a Low Carbon Fuel Standard (“LCFS”) fuel pathway with CARB to certify the Bio-SNG/Bio-CNG carbon intensity.

Table 3: WTW Carbon Intensity for Bio-CNG

	CI LS-Diesel	CI NA-CNG	CI Bio- CNG	CI Bio-CNG with CCS
	Units in gCO ₂ e /MJ			
Feedstock	7.31	11.3	1.6	1.6
Fuel production	7.57	2.7	122.3	36.57
Vehicle operation	75.66	56.1	56.1	56.1
Biogenic CO ₂ (VO)	0	0	-55.0	-55.0
Avoided emissions	0	0	-143.9	-143.9
WTW (gCO₂e /MJ)	90.54	70.12	-18.9	-104.75

2. Community Benefits

In addition to the emission reductions, WBF plans to support the local community through inclusive community engagement, workforce development, and environmental stewardship. The project will offer opportunities to small and diverse businesses by collaborating with community and labor stakeholders, creating clean energy job opportunities, and encouraging participation from disadvantaged communities. Examples of anticipated community benefits include job creation in Fresno County, partnerships with local organizations, educational outreach, and the responsible use of agricultural waste to reduce pollution. Building on WBF’s

²⁰ Argonne National Laboratory, *R&D GREET 2024 Rev1 Release* (May 23, 2025), available at: <https://greet.anl.gov/>.

1 long-standing presence in California since 2007, the project will foster sustainable development
2 and accessible knowledge sharing to ensure broad and lasting community impact.

3 **F. Timeline (Witness: James Lucas)**

4 The WBF Facility plans to initiate the project after Commission approval of this
5 application and will take between two and three years to complete, which includes design,
6 permitting, equipment procurement, and construction. The start date is contingent on a variety of
7 factors (*e.g.*, permitting, contract execution, etc.). SoCalGas will work closely with the WBF
8 project team to develop the schedule for the design, procurement, construction, and
9 commissioning of SB 1440 Utility-Owned Pipeline Infrastructure. SoCalGas estimates it will
10 take approximately 18 to 24 months from the start of the detailed engineering study to
11 commission the SB 1440 Utility-Owned Pipeline Infrastructure, which will be done concurrently
12 with the buildout of the WBF Facility.

13 **G. SB 1440 Pipeline Infrastructure Costs (Witness: James Lucas)**

14 SoCalGas will utilize the Cap-and-Trade program funding for lanes 7-9. If there are funds
15 remaining, SoCalGas is initially proposing to use Cap-and-Trade program funding to offset
16 selected SB 1440 Pilot Project costs in lane 4 of Figure 2. Taking this approach follows existing
17 Commission policy because lane 4 infrastructure components are eligible costs under the
18 biomethane monetary incentive program and the SB 1383 Pilot Projects.²¹

19 If there is Cap-and-Trade program funding remaining after funding the previously
20 mentioned infrastructure (lanes 4, 7, 8, and 9), SoCalGas proposes to utilize the remaining
21 funding to support the costs for WBF's Bio-SNG connection and filling facilities (lane 5) and
22 methanation and CDR facilities (lane 3). For any funding made available to WBF, SoCalGas
23 intends to follow the invoicing and payment procedures for eligible costs as outlined in
24 Schedule C of the SB 1440 Gasification/Pyrolysis Pilot Project Funding Agreement.

25 Pursuant to Ordering Paragraph (OP) 46 of D.22-02-025, \$19.704 million of Cap-and-
26 Trade allowance proceeds were set aside to fund the SB 1440 Pilot Project costs. The \$19.704
27 million in funds plus \$3.018 million of interest recorded as of August 2025 reside in the Biomass
28 Project Fund Subaccount within the Green House Gas Balancing Account ("GHGBA"). Pursuant

²¹ Specifically, D.20-12-031 authorized the use of \$40 million in Cap-and-Trade funds to further fund the biomethane incentive program. D.20-12-031 at 28 (OP 3).

1 to OP 3 of D.24-12-032, SoCalGas will refund to ratepayers the amount accrued through October
2 15th, 2025 in rates effective January 1, 2026. Additionally, SoCalGas proposes to return to
3 ratepayers any additional interest that accrues on the \$19.704 million of funds through the next
4 available annual regulatory account update advice letter filing after a final decision on the
5 Application. SoCalGas will return interest to ratepayers after a final decision on the Application.

6 Pursuant to OP 48 of D.22-02-025, any unspent Cap-and-Trade allowance proceeds shall be
7 returned to ratepayers in the California Climate Credit by December 31, 2032 pursuant to Cap-
8 and-Trade Regulation Section 95893 (d)(8). There is no anticipated revenue requirement that is
9 being proposed for recovery from ratepayers associated with the Utility-Owned Pipeline
10 Infrastructure presented herein.

11 **H. SB 1440 Pilot Project Agreements (Witness: James Lucas)**

12 There are three SB 1440 Pilot Project agreements to be executed by SoCalGas and WBF
13 pertaining to pipeline interconnection, and the reimbursement of SB 1440 Applicant-Owned
14 Pipeline Infrastructure. WBF will have 120 calendar days from a Commission decision
15 approving the Application and SB 1440 Pilot Project to execute the relevant agreements. The
16 three agreements are as follows:

- 17 1) Renewable Gas Interconnection Agreement (“RGIA”), which is a slightly
18 modified version of SoCalGas’s Standard Renewable Gas Interconnection
19 Agreement to account for the Cap-and-Trade allowance proceeds. The RGIA is
20 included as Attachment A of the Application.
- 21 2) California Producer Operational Balancing Agreement (“CPOBA”).²²
- 22 3) SB 1440 Gasification/Pyrolysis Pilot Project Funding Agreement (*see*
23 Attachment B of the Application).

24 WBF will be responsible for ensuring its own compliance with all of its obligations
25 arising out of or in connection with Rule 30, Rule 45 and the SB 1440 Pilot Project. More
26 specifically, WBF must enter into all requisite agreements to enable SoCalGas to proceed with
27 full project implementation. Prior to SoCalGas incurring significant costs by the procurement of
28 materials and constructing the facilities in lanes 7-9 in Figure 2, WBF will be required to

²² SoCalGas, California Producer Operational Balancing Agreement – Form 6452, available at:
<https://tariffsprd.socalgas.com/view/tariff/?utilId=SCG&bookId=GAS&tarfKey=416>.

1 demonstrate project readiness by providing the required documentation to show compliance with
2 each of the requirements set forth in Schedule D of the SB 1440 Gasification/Pyrolysis Pilot
3 Project Funding Agreement. The date for the WBF Facility to be operational and trucking
4 biomethane to the interconnection facility is not more than five years after WBF has received
5 notification by SoCalGas that the Commission granted the Application.

6 **IV. PROGRAM REPORTING (Witness: James Lucas)**

7 Pursuant to D.22-02-025, OP 43, the SB 1440 Pilot Project is required to participate in
8 data reporting and evaluations, which shall be submitted to the Commission, its sister agencies,
9 or SoCalGas upon request. The SB 1440 Pilot Project must also agree to allow these agencies to
10 monitor and evaluate the data. Commercially sensitive data may be submitted to the Commission
11 with a request for limits on disclosure pursuant to D.21-09-020's processes and Commission
12 General Order 66-D's additional requirements. SoCalGas will work with the Commission and/or
13 other state agencies to develop a reporting template for the SB 1440 Pilot Project.

14 **V. CONCLUSION**

15 Biomethane is poised to play an important role in decarbonizing California's economy in
16 the years ahead.²³ Since 2015, the Commission has approved and/or implemented several
17 programs utilizing ratepayer funding to help offset the cost for developers to successfully
18 develop their projects and connect to the utility pipeline. The recent SB 1383 Pilot Projects
19 demonstrate how state agencies, IOUs, and project developers can actively work together to
20 successfully implement projects, achieve significant emission reductions to California, and
21 provide benefits to the local community.

22 Similar to the SB 1383 Pilot Projects, the WBF Facility proposes to provide emission
23 reduction benefits for ratepayers, the state, and local community, and create approximately 20
24 full time jobs within the local community. SoCalGas is looking forward to working closely with
25 the Commission and WBF team to connect the first woody biomass project to the SoCalGas
26 pipeline system.

27 This concludes my prepared direct testimony.

²³ R.13-02-008, Phase 4A Staff Proposal at 55, *available at*:
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M386/K579/386579735.PDF>.

1 **VI. QUALIFICATIONS**

2 James Lucas

3 My name is James Lucas. My business address is 555 West Fifth Street, Los Angeles, in
4 California. I am currently employed by SoCalGas as a Manager, Market Development. Since
5 starting with SoCalGas over 30 years ago, I have held various positions in the areas of Product
6 Development, Project Management, Program Management, Energy Efficiency, Financial
7 Analysis, Pipeline Operations, and Engineering. I hold a Bachelor of Science degree in
8 Mechanical Engineering from the University of California Santa Barbara and a Master of
9 Business Administration from California State University Fullerton. I am a registered
10 Professional Mechanical Engineer in the State of California.

11 I have previously provided testimony before the Commission.
12
13

1 **Dr. Matthew D. Summers**

2 My name is Dr. Matthew D. Summers. My business address is 14958 County Road,
3 Woodland, in California. I am currently the Chief Operating Officer of West Biofuels, LLC. I
4 am in charge of all day-to-day operations of a technology company developing commercial
5 biomass gasification systems for North America. Part of my responsibilities include supervising
6 staff and contractors and all aspects of technology development at West Biofuels including
7 developing technical partnerships in the US and Europe to bring biomass conversion
8 technologies to the marketplace. I also managed the planning, engineering, and construction of
9 Woodland Biomass Research Center that includes the construction of a 1-MW thermal biomass-
10 to-energy system that was built to demonstrate advanced fluidized-bed conversion process from
11 Austria. I am also responsible for managing the development and construction of several
12 commercial biomass powerplant facilities.

13 I have many years of experience as a technical consultant on the engineering, economic
14 and environmental performance of biomass-to-energy technologies. I have earned a Ph. D. in
15 Biological and Agricultural Engineering from University of California, Davis and hold a M. S. in
16 Mechanical Engineering from Stanford University. I am a California Professional Engineer and
17 General Engineering Contractor.

18 I have not previously provided testimony before the Commission.

ATTACHMENT 1

Appendix B

Sierra Club's 6th Data Request to SoCalGas (Served 4/16/2026)

CPUC Docket A.25-10-008

Application of Southern California Gas Company Proposing Approval of Woody Biomass Pilot Project

Data Request of Sierra Club-SCG-06

To: Ismael Bautista
From: Nina Robertson, Earthjustice, on behalf of Sierra Club
Date Sent: April 16, 2026
Response Due: April 30, 2026

Please provide a response to the following Third Set of Data Requests propounded by the Sierra Club no later than COB **April 30, 2026** via e-mail or, if voluminous, flash drive by mail.

Please provide all e-mail responses to the following individuals. Responses via regular mail can be sent only to Nina Robertson.

Nina Robertson
1 Sansome Street
Suite 1700
San Francisco, CA 94110
Earthjustice
nrobertson@earthjustice.org

This third set of data requests seeks information relating to A.25-10-008, the Application of Southern California Gas Company Proposing Approval of Woody Biomass Pilot Project. Sierra Club reserves the right to submit further data requests.

GENERAL INSTRUCTIONS

The following general instructions apply to all data requests propounded by Sierra Club and the Southern California Gas Company (“SoCalGas”) in this proceeding.

1. As to any data request consisting of a number of separate subdivisions, or related parts or portions, a complete response is required to each part or portion with the same effect as if it were propounded as a separate data request.
2. Any objection to a data request should clearly indicate to which part or portion of the data request the objection is directed.

3. If any document, in whole or in part, covered by this request is withheld for whatever reason, please furnish a list identifying all withheld documents in the following manner: (a) a brief description of the document; (b) the date of the document; (c) the name of each author or preparer; (d) the name of each person who received the document; and (e) the reason for withholding it.

4. If, in answering any of these data requests, there is deemed to be any ambiguity in interpreting either the data request or a definition or instruction applicable thereto, promptly contact Nina Robertson to obtain a clarification.

5. Responses to these data requests should be transmitted as they become available.

DEFINITIONS

A. As used herein, the term “SoCalGas” and “SCG” are used to refer to SOUTHERN CALIFORNIA GAS COMPANY and any and all of its respective present and former employees, agents, consultants, attorneys, officials, and any and all other persons acting on its behalf.

B. The terms “and” and “or” shall be construed either disjunctively or conjunctively whenever appropriate in order to bring within the scope of these data requests any information or documents which might otherwise be considered to be beyond their scope.

C. The singular form of a word shall be interpreted as plural, and the plural form of a word shall be interpreted as singular whenever appropriate in order to bring within the scope of these data requests any information or documents which might otherwise be considered to be beyond their scope.

D. The term “communications” includes all verbal and written communications of every kind, including but not limited to telephone calls, conferences, notes, correspondence, and all memoranda concerning the requested communications. Where communications are not in writing, provide copies of all memoranda and documents made relating to the requested communication and describe in full the substance of the communication to the extent that the substance is not reflected in the memoranda and documents provided.

E. The term “document” shall include, without limitation, all writings and records of every type in your possession, control, or custody, whether printed or reproduced by any process, including documents sent and received by electronic mail, or written or produced by hand.

F. “Relate to,” “concern,” and similar terms and phrases shall mean consist of, refer to, reflect, comprise, discuss, underlie, comment upon, form the basis for, analyze, mention, or be connected with, in any way, the subject of these data requests.

G. When requested to “state the basis” for any analysis (including studies and workpapers), proposal, assertion, assumption, description, quantification, or conclusion, please describe every fact, statistic, inference, supposition, estimate, consideration, conclusion, study, and analysis known to you which you believe to support the analysis, proposal, assertion, assumption, description, quantification, or conclusion, or which you contend to be evidence of the truth or accuracy thereof.

H. As used herein, “West Biofuels” and “WBF” refers to West Biofuels, LLC and any and all of its respective present and former employees, agents, consultants, attorneys, officials, and any and all other persons acting on its behalf.

I. As used herein, “Project” refers to the proposed SB 1440 Pilot Project for which SoCalGas seeks approval from the California Public Utilities Commission in A.25-10-008 (“Application”).

J. As used herein, “emissions,” if not qualified by other terms, refers collectively to both greenhouse gases and other air pollutant emissions.

SIERRA CLUB SIXTH SET OF DATA REQUESTS

SC 6-1. Please indicate the relevant qualifications of Witness James Lucas.

SC 6-2. Please indicate the relevant qualifications of Witness Matthew Summers.

SC 6-3. In Rebuttal Testimony at JLMS-12 footnote 44, SoCalGas states that “[t]hese percentages are derived from CI scores of 36.1 g CO₂e/MJ (without CCS) and –49.7 g CO₂e/MJ (with CCS), as presented in the Lucas/Summers Testimony, which was updated to have consistent treatment of biogenic carbon.”

- a. Please state the basis for the alteration of the CI scores indicated in the Corrected Revised Testimony on pages JLMS-17.
- b. Please provide the modeling spreadsheet that was used to determine the new CI scores in the Corrected Revised Testimony.
- c. Please indicate which witness conducted the modeling that led to this revision.
- d. Please indicate which witness is responsible for this answer.

SC 6-4. Please state the basis for the assertion in Corrected Revised Testimony at JLMS-17 that “[p]roducing and utilizing the Bio-CNG fuel from this project will be a net carbon sink over its lifecycle” when the proposed Project without CCS has a revised CI of 36.1 CO₂e/MJ.

SC 6-5. Rebuttal Testimony at JLMS-14 that “[w]ith biogenic and non-biogenic emissions fully accounted for in both the base case and use cases in the lifecycle analysis,

the net CI remains the most important factor for compliance with 17 CCR §95893(d)(5).”

- a. What is meant by “net CI.”
- b. Please state the basis for “net CI” being an indicator of compliance with 17 CCR §95893(d)(5).
- c. Please indicate the witness responsible for this answer.

SC 6-6. Rebuttal Testimony at JLMS-19 and in Attachment 1 indicates reliance on “U.S. EPA (1995). Protocol for Equipment Leak Emission Estimates. EPA-453/R-95-017. November 1995” for a “component-level analysis” of methane leakage at the facility.

- a. Where, if at all, does this U.S. EPA document indicate that the leakage emissions factors used in the Protocol are relevant for methane?
- b. Please indicate the witness responsible for this answer.

SC 6-7. Rebuttal Testimony at JLMS-31 states that “[b]y replacing high emission agricultural burning with controlled and permitted operations, the SB 1440 Pilot Project 3 supports the Commission’s ESJ and clean air objectives.”

Please explain what is meant by “high emission agricultural burning” and the extent to which it differs, if at all, from “open burning” and “agricultural burning” as described in the following two publications by San Joaquin Valley Air Quality Management District
<https://www.valleyair.org/agriculture/agricultural-burning>;
<https://ww2.valleyair.org/media/hjgh03mb/2024-final-ag-burnreport.pdf>.

- a. Please describe how, if at all, emissions from “high emission agricultural burning” as referenced in the Rebuttal Testimony are reflected in the “base case” emissions presented in SoCalGas’s Testimony.
- b. If “high emission agricultural burning” is assumed in the base case, please provide the geographic coordinates of the assumed burning.

SC 6-8. SoCalGas indicates in Rebuttal Testimony that “[a]t a distance of approximately 7-8 miles, incremental concentrations from an individual stationary source are indistinguishable from regional background levels and do not materially affect lifetime cancer risk or chronic hazard indices. Accordingly, air toxics impacts at the population center from this project are less than significant under CARB and SJVAPCD risk evaluation frameworks.” Rebuttal testimony also states at JLMS-29, “the San Joaquin Valley Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line and nearest sensitive receptors as part of the permitting process.”

- a. Please provide the analysis conducted to reach the above conclusions regarding lifetime cancer risk, chronic hazard indices, and air toxic impacts from the proposed Project.

- b. Has SoCalGas identified the sensitive receptors relevant to evaluating the impact of the proposed Project’s emissions?
- c. If the answer to the above question is yes, please provide the geographic coordinates of the sensitive receptors that have been evaluated, if any, to reach the above conclusions.
- d. Does SoCalGas’s conclusion assume that the current geographic locations of sensitive receptors and population areas will not change in the future?
- e. Please indicate the witness responsible for this answer.
- f. Please detail the witness’s experience in evaluating the impact of air toxics from emitting stationary sources.

SC 6-9. Please provide the geographic coordinates of the “populated areas” and the “population center” to which SoCalGas refers in Rebuttal Testimony at JLMS-29 and JLMS-30, respectively. Please indicate the witness responsible for this answer.

SC 6-10. Rebuttal Testimony at JLMS-19 states that the proposed Project would displace emissions from “air curtain burning, biomass power generation, and diesel-intensive handling operations.”

- a. Please provide the geographic coordinates of the air curtain burners that the proposed Project purports to displace.
- b. What are the distances of these air curtain burners relative the “populated areas” in the City of Kerman to which SoCalGas refers in Rebuttal Testimony at JLMS-29.?
- c. Please provide the geographic coordinates of diesel-intensive handling operations that the project purports to displace?
- d. What are the distances of the diesel-intensive handling operations to the populated areas in the City of Kerman to which SoCalGas refers in Rebuttal Testimony at JLMS-29.?
- e. What are the names of the biomass plants the emission from which the proposed Project purports to displace?
- f. Figure 3 of the Corrected Revised testimony indicates “cogeneration plant”. What is the name of the cogeneration plant?
- g. What are the addresses of the biomass and/or cogeneration facilities, the emissions from which that the project purports to displace?
- h. Please indicate the witness responsible for this answer.

SC 6-11. The modeling spreadsheet provided by SoCalGas indicates in the “Baseline Case” sheet, in cells D7, D8, D10, and D13 that “West Biofuels design data” is the “Source” for several assumptions used in the modeling of emissions.

- a. Please provide all “West Biofuels design data” that provided the basis for these modeling assumptions.
- b. Please indicate the witness responsible for this answer.

- SC 6-12. The modeling spreadsheet provided by SoCalGas indicates in the “Baseline case” sheet, in cells D9, D11, D12, D14, D15 and D16 that “CCAGA communication of current disposal practices” is the “Source” for the percentages assigned to baseline uses of woody biomass feedstock.
- a. Please provide all “CCAGA communications of current disposal practices” that were relied upon for the values entered in the spreadsheet at cells A9, A11, A12, A14, A15, A16 and B9, B11, B12, B14, B15, B16.
 - b. Please indicate the witness responsible for this answer.
- SC 6-13. The modeling spreadsheet provided by SoCalGas indicates in the “Baseline case” sheet, in cell I26 that “Chipping and Loading” is the “Source” for the emissions factors for “biomass preprocessing” reports in cells B26-G26.
- a. Please provide the relevant source used for the associated modeling assumptions.
 - b. Please indicate the assumed make and model of the diesel equipment used in calculating the “biomass preprocessing” emissions.
 - c. Please indicate assumed annual operating time of the diesel equipment used in calculating the “biomass preprocessing” emissions.
 - d. Please indicate the witness responsible for this answer.
- SC 6-14. The modeling spreadsheet provided by SoCalGas indicates in sheet “Baseline case” cell I29 “NREL data” as the source for the emissions factors for “Dairy Bedding Direct” presented in cell B29.
- a. Please provide the relevant “NREL data.”
 - b. Please indicate the witness responsible for this answer.
- SC 6-15. The modeling spreadsheet provided by SoCalGas indicates in the “Baseline case” sheet, in cell I31, that “EPA Biomass Air Curtain Incinerator” is the “Source” for the emissions factors for “Air Curtain Incinerator Direct” presented in cells B31 - G31.
- a. Please provide the relevant emissions factor source
 - b. Please indicate the witness responsible for this answer.
- SC 6-16. The modeling spreadsheet provided by SoCalGas includes in the “Baseline Case” sheet “Table 1”.
- a. Please provide the sources for the percentages listed in columns B and C in Table 1.
 - b. Please indicate the witness responsible for this answer.
- SC 6-17. Rebuttal testimony at JLMS-31 states “West Biofuels has successfully executed two interconnected distributed energy projects of the same scale as the proposed SB 1440 Pilot Project. These projects have achieved high-capacity factors of

greater than 90%, demonstrating that West Biofuel's systems are engineered for high availability commercial service rather than sporadic research use.”

- a. Please indicate the names of both projects referenced.
- b. Do either of these two projects include methanation?
- c. Do either of these two projects use a flare?
- d. If the answer to the above question (c) is yes, please provide data on the duration and amount of gases that have been flared from these facilities since they began operations.
- e. Please provides the calculations used to conclude that these projects operate at “90% capacity factors.”
- f. For each facility, please indicate the span of time during which a 90% capacity factor was achieved.
- g. Please indicate the witness responsible for this answer.

SC 6-18. Revised Corrected Testimony at JLMS-13 lists permits and CEQA review that is still pending. Rebuttal Testimony at JLMS-29 indicates that “[t]he San Joaquin Valley Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line and nearest sensitive receptors as part of the permitting process.” Please indicate the status of the following permits and reviews and when their completion is expected:

- a. Applicable Air Quality Permit(s) from the San Joaquin Air Pollution Control District, including the air toxic impact analysis.
- b. Building Permit from Fresno County
- c. Applicable CEQA review initiated by Fresno County.
- d. Please indicate the witness responsible for this answer.

SC 6-19. Please indicate the fate of the CO₂ that will be captured from the proposed Project through the CCS process.

- a. If any of the CO₂ will be stored, please indicate where the storage will occur.
- b. If the CO₂ will be stored, please indicate the leakage rates of the storage reservoir and whether the CO₂ storage facility is permitted.
- c. Please indicate the witness responsible for this answer.

SC 6-20. Rebuttal Testimony at JLMS-19 refers to “commercial CCS data,” “Industry data from established global technology suppliers” and “commercial benchmarks” Testimony cites the following projects and companies: GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean.

- a. Please indicate which, if any, of the cited examples have both captured CO₂ emissions from biomass gasification and been deployed commercially.
- b. Please indicate the witness responsible for this answer.

- c. Please indicate witness's experience in evaluating and implementing CCS projects.

Appendix C

Sierra Club's 7th Data Request to SoCalGas (Served 4/17/2026)

CPUC Docket A.25-10-008

Application of Southern California Gas Company Proposing Approval of Woody Biomass Pilot Project

Data Request of Sierra Club-SCG-07

To: Ismael Bautista
From: Nina Robertson, Earthjustice, on behalf of Sierra Club
Date Sent: April 17, 2026
Response Due: May 1, 2026

Please provide a response to the following Third Set of Data Requests propounded by the Sierra Club no later than COB **May 1, 2026** via e-mail or, if voluminous, flash drive by mail.

Please provide all e-mail responses to the following individuals. Responses via regular mail can be sent only to Nina Robertson.

Nina Robertson
1 Sansome Street
Suite 1700
San Francisco, CA 94110
Earthjustice
nrobertson@earthjustice.org

This third set of data requests seeks information relating to A.25-10-008, the Application of Southern California Gas Company Proposing Approval of Woody Biomass Pilot Project. Sierra Club reserves the right to submit further data requests.

GENERAL INSTRUCTIONS

The following general instructions apply to all data requests propounded by Sierra Club and the Southern California Gas Company (“SoCalGas”) in this proceeding.

1. As to any data request consisting of a number of separate subdivisions, or related parts or portions, a complete response is required to each part or portion with the same effect as if it were propounded as a separate data request.
2. Any objection to a data request should clearly indicate to which part or portion of the data request the objection is directed.

3. If any document, in whole or in part, covered by this request is withheld for whatever reason, please furnish a list identifying all withheld documents in the following manner: (a) a brief description of the document; (b) the date of the document; (c) the name of each author or preparer; (d) the name of each person who received the document; and (e) the reason for withholding it.

4. If, in answering any of these data requests, there is deemed to be any ambiguity in interpreting either the data request or a definition or instruction applicable thereto, promptly contact Nina Robertson to obtain a clarification.

5. Responses to these data requests should be transmitted as they become available.

DEFINITIONS

A. As used herein, the term “SoCalGas” and “SCG” are used to refer to SOUTHERN CALIFORNIA GAS COMPANY and any and all of its respective present and former employees, agents, consultants, attorneys, officials, and any and all other persons acting on its behalf.

B. The terms “and” and “or” shall be construed either disjunctively or conjunctively whenever appropriate in order to bring within the scope of these data requests any information or documents which might otherwise be considered to be beyond their scope.

C. The singular form of a word shall be interpreted as plural, and the plural form of a word shall be interpreted as singular whenever appropriate in order to bring within the scope of these data requests any information or documents which might otherwise be considered to be beyond their scope.

D. The term “communications” includes all verbal and written communications of every kind, including but not limited to telephone calls, conferences, notes, correspondence, and all memoranda concerning the requested communications. Where communications are not in writing, provide copies of all memoranda and documents made relating to the requested communication and describe in full the substance of the communication to the extent that the substance is not reflected in the memoranda and documents provided.

E. The term “document” shall include, without limitation, all writings and records of every type in your possession, control, or custody, whether printed or reproduced by any process, including documents sent and received by electronic mail, or written or produced by hand.

F. “Relate to,” “concern,” and similar terms and phrases shall mean consist of, refer to, reflect, comprise, discuss, underlie, comment upon, form the basis for, analyze, mention, or be connected with, in any way, the subject of these data requests.

G. When requested to “state the basis” for any analysis (including studies and workpapers), proposal, assertion, assumption, description, quantification, or conclusion, please describe every fact, statistic, inference, supposition, estimate, consideration, conclusion, study, and analysis known to you which you believe to support the analysis, proposal, assertion, assumption, description, quantification, or conclusion, or which you contend to be evidence of the truth or accuracy thereof.

H. As used herein, “West Biofuels” and “WBF” refers to West Biofuels, LLC and any and all of its respective present and former employees, agents, consultants, attorneys, officials, and any and all other persons acting on its behalf.

I. As used herein, “Project” refers to the proposed SB 1440 Pilot Project for which SoCalGas seeks approval from the California Public Utilities Commission in A.25-10-008 (“Application”).

J. As used herein, “emissions,” if not qualified by other terms, refers collectively to both greenhouse gases and other air pollutant emissions.

SIERRA CLUB SEVENTH SET OF DATA REQUESTS

SC 7-1. In the modeling spreadsheet provided by SoCalGas, in the Baseline Case sheet, cells C25 to B32 list GHG emissions factors attributable to different activities or fates of the woody biomass.

- a. Please provide gas-specific data on each GHG emissions factors (i.e. disaggregate the methane, N₂O, CO₂, and any other gases)
- b. Please indicate the witness responsible for this answer.

SC 7-2. In Rebuttal Testimony at JLMS-14, SoCalGas testifies that its approach is consistent with “CARB Policy” and “CARB’s approach to low-carbon fuels and waste diversion strategies.”

- a. Please describe both the scientific basis and precedent in carbon accounting methods generally accepted for CI calculations in California for assuming that changing the location, timing, and responsibility for emissions of CO₂ confers a credit for negative emissions.
- b. Please specifically address the rationale, precedent, and consistency with other California CI calculations for assuming that if CO₂ is emitted when a Bio-SNG/CNG user burns the SNG/CNG all at once rather than when woody biomass decomposes in a field over time, no CO₂ emissions have occurred.
- c. Please indicate the witness responsible for this answer.

SC 7-3. Does SoCalGas agree with the following statement: the climate impact of sequestering a unit of captured CO₂ via a CCS facility is identical to that of shifting a unit of CO₂ emissions associated with biomass decomposition from a field to an end user’s flue stack? If it does not agree, please explain in detail

SoCalGas' basis for not agreeing with this statement. Please indicate the witness responsible for this answer.

- SC 7-4. In Rebuttal Testimony at JLMS-14, SoCalGas references "avoided" emissions.
- Please explain in detail what emissions are "avoided" (rather than relocated in time and space) to calculate a net CI for Bio-SNG/CNG.
 - Describe in detail the fate of the carbon atoms embodied in the "avoided" emissions referenced in Rebuttal Testimony.
 - Does emitting biogenic CO₂ from Bio-SNG/CNG combustion rather than via Whole Orchard Recycling and other alternative woody biomass fates result in a negative CI? If so, please explain the basis for this response.
 - Please indicate the witness responsible for this answer.
- SC 7-5. Please explain in detail the life cycle assessment and GREET experience of the preparer of Table 3 at JLMS-17 in the Amended Corrected Revised Prepared Direct Testimony. Please indicate the witness responsible for this answer.
- SC 7-6. SoCalGas in Rebuttal Testimony states at JLMS-15 that "the GREET methodology may be validly applied as long as the analysis relies on identical mathematical calculations and validated emission factors."
- Please demonstrate that the analysis provided for the proposed Project relies on "identical mathematical calculations and validated emission factors."
 - Please identify to which GREET model these calculations are "identical."
 - Please explain whether the original or the updated WTW CI values provided in SoCalGas' testimony are the values relying on "identical mathematical calculations and validated emission factors" from a GREET methodology.
 - Is a change in Bio-SNG/CNG CI from -18.9 to 36.1 gCO₂e/MJ is consistent with use of a fully validated, trusted methodology?
 - Please indicate the witness responsible for this answer.
- SC 7-7. Rebuttal Testimony at JLMS-14 references "high-emissions practices, such as air curtain burning."
- Please explain whether conversion of carbon to CO₂ is more or less complete for air curtain burning than Bio-CNG/SNG burning.
 - Please describe the fate of the unburned carbon in either case and explain its impact on CI.
 - Please indicate the witness responsible for this answer.
- SC 7-8. Does SoCalGas agree with the following statement: the climate impact of emitting one unit of CO₂ now is identical to the impact of emitting one unit of CO₂ in 20 years? Please indicate the witness responsible for this answer.

- SC 7-9. Does SoCalGas agree with the following statement: the climate impact of biogenic CO2 emissions is identical to that of fossil CO2 emissions? Please indicate the witness responsible for this answer.
- SC 7-10. Please provide any empirical evidence that facilities comparable to the proposed Project have successfully maintained 0 methane emissions over their lifespan. Please indicate the witness responsible for this answer.
- SC 7-11. What are the life cycle methane emissions from the proposed Project? Please indicate the witness responsible for this answer.
- SC 7-12. Rebuttal Testimony at JLMS-19 refers to the following projects and companies: GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean.
- a. Please provide the names and addresses of operating, commercial scale CCS facilities associated with biomass gasification that have demonstrated 90%+ CO2 capture via the GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean systems referenced by SoCalGas.
 - b. Please provide any evidence that the facilities with CCS referenced at JLMS-19 have demonstrated at least 78% mitigation of GHG emissions relative to pre-CCS conditions – i.e. successfully sequestered all excess GHGs induced by the use of CCS, in addition to at least 78% of the emissions associated with pre-CCS conditions, with at least 100-year demonstrated storage.
 - c. Please indicate the witness responsible for this answer.
- SC 7-13. Please clarify whether SoCalGas agrees that CCS capture efficiency is sufficient to demonstrate GHG mitigation potential via CCS. If not, please describe what other information is necessary to prove mitigation potential. Please indicate the witness responsible for this answer.

Appendix D

CPUC Decision 90642 (1979)

1979 Cal.PUC.LEXIS 826

1979 Cal. PUC LEXIS 826; 2 CPUC2d 89

California Public Utilities Commission

July 31, 1979

Decision No. 90642, Case No. 58223 (et al.)

CA Public Utilities Commission

Decisions

Reporter

1979 Cal. PUC LEXIS 826 *; 2 CPUC2d 89

Application of *PT&T Co.* for a general rate increase denied and a rate reduction ordered.

Disposition: Wright, Orville I

Core Terms

staff, estimate, cost, telephone, recommend, was, customer, has, toll, message, plant, phone, rate of return, revise, interstate, route, private line, terminal, advertize, station, monthly, conversion, methodology, companies, handicap, install, saving, tariff, intrastate, ratepayer

Headnotes

[*1]

[1] OPERATING EXPENSES -- NONALLOWABLE EXPENSES. This Commission will not disallow for ratemaking purposes an amount expended by a utility as operating expense unless there is an abuse of discretion in making the expenditure by the corporate officers of the public utility.

[2] EVIDENCE -- BURDEN OF PROOF. It is settled that in order to raise rates it is incumbent on the utility to justify the increase before the Commission (*Nor. Cal. Power Co.* (1912) 1 CRC 315.) The utility seeking an increase in rates has the burden of showing by clear and convincing evidence that it is entitled to such increase. The presumption is that the existing rates are reasonable and lawful. Any doubts must be resolved against the party upon whom rests the burden of proof. (*So. Counties Gas Co.* (1952) 51 CPUC 533; *Citizens Utilities Co.* (1953) 52 CPUC 637; *Park Water Co.* (1955) 54 CPUC 498.)

[3] EVIDENCE -- BURDEN OF PROOF. To meet the burden of presenting clear and convincing evidence of the need for an increase, the applicant must produce evidence having the greatest probative force. (*Railroad Commission v. PG&E Co.* (1938) 302 US 388.) The credibility of witnesses and the probative [*2] value of their testimony are questions for the trier of fact. (*Leonard v. Watsonville Community Hospital* (1956) [47 Cal 3d 509, 518.](#))

[4] ORDERS OF THE COMMISSION -- FINDINGS. It is for the Commission to arrive at its findings from the consideration of conflicting evidence and undisputed evidence from which conflicting inferences may reasonably be drawn. (*SoPac Co. v. PUC* (1953) [41 Cal. 2d 354, 362.](#))

[5] ORDERS OF THE COMMISSION -- FINDINGS AND CONCLUSIONS. The Commission may form its own conclusions as to the probative value of the evidence before it. ([Market Street Railway v. Railroad Commission \(1945\) 324 US 548.](#)) The Commission may choose its own criteria or method of arriving at its decision, even if irregular, providing unreasonableness is not clearly established. ([PT&T Co. v. PUC \(1965\) 62 Cal. 2d 634;](#) [American Toll Bridge Co. v. Railroad Commission \(1939\) 307 US 486.](#))

[6] EVIDENCE -- BURDEN OF PROOF. When the utility has not sustained the burden of satisfying the Commission that the proposed increase in rates is justified, the application will be denied. (E.L. Anderson (1930) 34 CRC 676.)

[7] EVIDENCE -- WEIGHT AND SUFFICIENCY. Unlike jury [*3] trials, in administrative proceeding before any agency composed of trained specialists and before expert examiners or hearing officers, the burden of evaluating the weight and probity of testimony and evidence covering technical subject matter is primarily that of sifting and evaluating the evidence based on the agency's expertise. Expert opinion does not bind the Commission. The Commission may form its own conclusions without the aid of expert opinions. ([Market Street Railway v. Railroad Commission \(1945\) 324 US 548, at 560-561.](#))

[8] EVIDENCE -- WEIGHT AND SUFFICIENCY. The applicant is entitled to produce evidence in rebuttal to meet new facts put in evidence by other parties after the applicant has rested its case in chief.

[9] PRACTICE -- FUNCTION OF ALJ. The president ALJ has discretion over the scope of rebuttal and may disallow evidence merely cumulative of the evidence given in chief. ([Ray Jackson \(1963\) 219 CA 2d 445.](#))

[10] PRACTICE -- FUNCTION OF ALJ. Given the constraints of the regulatory lag plan it is clear that the ALJ properly exercised his discretion in limiting rebuttal testimony to factual presentations rather than testimony merely contradictory [*4] of other parties. ([Kahn v. Rabett \(1918\) 39 CA 312.](#))

[11] RETURN -- FACTORS CONSIDERED -- CAPITAL STRUCTURE. We conclude that the exclusion of JDIC from the capital structure remains the better approach for the reasons cited in [SoCal Edison D 87828](#), [82 CPUC 531, 543](#):

"The inclusion of unamortized ITC as equity is required only for regulatory agencies that utilize capital structure in deriving rate base and not for regulatory agencies, such as this Commission, that derive rate base from the weighted average depreciated balances."

[12] RETURN -- FACTORS CONSIDERED. We do not consider that the current federal anti-trust action against the Bell System and Pacific is a negative factor with respect to rate of return. Clearly, it seems to us that the enforcement of the public laws of the United States should not be deemed by the public bodies to be a detriment either to the public or to the corporations effected.

[13] OPERATING EXPENSES -- FEES TO AFFILIATES -- WESTERN ELECTRIC ADJUSTMENT.

The Western Electric adjustment involves are adopting certain adjustments to Pacific's plant and expenses to establish lower prices than those actually charged Pacific by Western [*5] Electric (a wholly owned subsidiary of American) on the theory that Western Electric should be entitled to "no greater rate of return than would be reasonable for a regulated utility". ([City of Los Angeles v. PUC , 7 Cal. 3d 311, 342;](#) emphasis added.) The court has not only approved this adjustment but reversed us when we sought once to depart from it ([City of Los Angeles v. PUC , supra](#)).

[14] RATES -- LIFELINE -- TELEPHONE. Lifeline service was never intended to be a general-use offering. It was intended to be a minimum service at a minimum justifiable monthly rate to serve those who had very limited calling requirements and who could not afford a higher priced service.

[15] RATES -- LIFELINE -- TELEPHONE. It is obvious that a large growth in lifeline service would result in lowering the utility's overall revenues in the residences classification. In turn, these losses would have to be made up by

future residences rate increases. If lifeline service becomes the major service category a substantial portion of the rate increases must fall in that category. It is to prevent this result and to retain the original purpose of lifeline service as a "lifeline" [*6] that we are adopting the rates herein.

[16] TELEPHONE UTILITIES -- SERVICE TO HANDICAPPED. We do not agree that constitutional or statutory provisions require this Commission to provide special facilities for the hearing-and speech-impaired at basic exchange rates.

[17] TELEPHONE UTILITIES -- CUSTOMER OWNED EQUIPMENT -- ANTI-TRUST. A teletypewriter is in fact an item provided by the utility in competition with private firms. Therefore, it is a competitive product, and consideration of the anti-competitive implications of our actions in this field is required as mandated by [Nor. Cal. Power Agency v. PUC \(1971\) 5 Cal 3d 370](#) and by [Phonotele Inc. v. PUC \(1974\) 11 Cal 3d 125](#).

[18] TELEPHONE UTILITIES -- CUSTOMER OWNED EQUIPMENT -- ANTI-TRUST. It is inherent that Pacific is in competition with the commercial sellers and renters of all TDD equipment to the extent that Pacific provides TDD's at less than cost, competition is inhibited or destroyed. Moreover, the resulting saturation of the market may well have a devastating effect on incentive for further innovation and development in the field by private industry. This would be an anti-competitive effect directly [*7] traceable to state action ([Cantor v. Detroit Edison \(1976\) 420 US 579](#)).

[19] TELEPHONE UTILITIES -- SERVICE TO HANDICAPPED. We see no rationale or legal basis to treat disabled persons in other categories in a manner different from the deaf and speech impaired. Accordingly, we shall direct that comparably computed special monthly rates for these items for the certified handicapped be instituted by Pacific, and that the so-called "installation charge" associated with each such particular item be eliminated for those users.

Counsel

APPENDIX A

LIST OF APPEARANCES

Applicant and Respondent: *Gerald H. Genard*, James S. Hamasaki, and Christopher R. Rasmussen, Attorneys at Law, for The Pacific Telephone and Telegraph Company.

Respondents and Interested Parties: A. M. Hart, *H. Ralph Snyder, Jr.*, and Kenneth Okel, Attorneys at Law, for General Telephone Company of California; *R. W. Winchester* and Orrick, Herrington, Rowley and Sutcliffe, by *Robert J. Gloistein*, for Continental Telephone Company of California; Dinkelspiel, Pelavin, Steefel & Levitt, by *Alvin H. Pelavin*, Attorney [*8] at Law, for Calaveras Telephone Company, Capay Valle Telephone System, Inc., Dorris Telephone Company, Ducor Telephone Company, Evans Telephone Company, Foresthill Telephone Company, Happy Valley Telephone Company, Hornitos Telephone Company, Livingston Telephone Company, The Ponderosa Telephone Company, The Siskiyou Telephone Company, Volcano Telephone Company, Sierra Telephone Company, and Mariposa Telephone Company; *Victor A. Silveira*, for California Independent Telephone Association; *Ed Perez*, Attorney at Law, and *Manuel Kroman*, for Burt Pines, City Attorney of Los Angeles; *Leonard L. Snaider*, Attorney at Law, for George Agnost, City Attorney, City and County of San Francisco; *William S. Shraffran*, Attorney at Law, for John W. Witt, City Attorney, City of San Diego; *Ivo Lazzeroni*, for the County of Los Angeles; *Lessing E. Gold*, Attorney at Law, for Western Burglar and Fire Alarm Association; John H. Oliphant and *Allen B. Wagner*, for the Regents of the University of California; Ross Cadenasso, by *Dean Anderson*, Attorney at Law, for California Association of Utility Shareholders; Etta Gail Herbach and *John L. Matthews*, Attorney at [*9] Law, for General Services Administration; *William L. Knecht*, Attorney at Law, for California Interconnect Association; *Jack Krinsky*, for Ad Visor, Inc.; *Peter James*, for Peter James and Company; *David L. Wilner*, for Consumers Lobby Against Monopolies; Sylvia M. Siegel and *Ann Murphy*, Attorney at Law, for Toward Utility Rate Normalization; *Burt Wilson*, for Campaign Against Utility Service Exploitation; *Allen R. Crown* and Glen J. Sullivan,

Attorneys at Law, for California Farm Bureau Federation; Graham and James, by *James T. Proctor*, Boris Lakusta, and David Marchant, Attorneys at Law, for California Hotel and Motel Association; *Robert E. Taren*, Attorney at Law, for Grey Panthers of Santa Cruz; *Therese Wandling*, Attorney at Law, for Deaf Counseling Advocacy Referral Agency; Brobeck, Phleger & Harrison, by Gordon E. Davis and *William H. Booth*, Attorneys at Law, for California Retailers Association; *Richard S. Kopf*, Attorney at Law, for Southern Pacific Communications Company; and *Howard Green*, for himself.

Commission Staff: *Rufus G. Thayer, Jr.*, Attorney at Law, *Robert C. Moeck*, *Thomas Lew*, and *James G. Shields* [*10].

Panel: Sturgeon, Vernon L; Gravelle, Richard D; Dedrick, Claire T; Grimes, Leonard M

Opinion By: Bryson, John E

Opinion

OPINION

I. GENERAL

Procedural Background

On January 19, 1978, The Pacific Telephone and Telegraph Company (Pacific) tendered for filing its "Notice Of Intention To File Application For General Rate Increase" with this Commission. This Notice of Intention was not accepted as complete by the Commission staff until May 15, 1978. On July 14, 1978, Pacific's "Application For General Rate Increase", Application No. 58223, was filed with the Commission. This application seeks authorization for a general rate increase to produce additional annual revenues in the amount of approximately \$470,000,000, with an increase in Pacific's authorized rate of return to 10.7 percent.

The application indicated in summary form the following reasons for the rate increase:

"The above-described increases are necessary because Pacific's presently authorized rate of return is far too low to be reasonable in light of Pacific's current and future financial and business risks and because Pacific has a pressing need to raise an unprecedented amount of capital to support its construction program for the future. The present rates, if continued through the 1979 test period, will produce [*11] a realized rate of return substantially below that which is presently authorized by the Commission and will significantly jeopardize Pacific's ability to attract investors.

"Such increases are also required because of the continuing inflationary pressures which are causing Pacific's operating expenses to rise in amounts disproportionate to increases in operating revenues. The rate increases are further necessary to allow Pacific to continue to implement its plant modernization programs which will enable Pacific to provide better and more economical service to its customers. "

The application was based on a test year of January 1, 1979 through December 31, 1979.

Order Instituting Investigation No. 21 (OII No. 21) was filed July 25, 1978 and consolidated for hearing with Application No. 58223. Duly noticed public hearings were held before Administrative Law Judge Orville I. Wright.

Pursuant to the schedule, the staff filed its prepared testimony and exhibits on September 15, 1978. The net effect of the staff recommendations, if adopted, would result in a rate decrease of approximately \$234 million annually. The scope of OII No. 21 would allow for rates to be reduced in these [*12] consolidated proceedings.

Following a prehearing conference on July 21, 1978, hearings to receive public witness testimony were held in various locations around the State during August and early September. On September 26, 1978, Pacific began

presenting its rate of return testimony, followed by the staff and other parties. The record on rate of return was closed and the issues submitted for briefing on October 25, 1978. Pursuant to the schedule ordered by the ALJ, opening briefs on rate of return were filed on January 2, 1979. Replies to the rate of return issue were included in the reply briefs on the main case due March 9, 1979. Following completion of the rate of return issue, hearings continued on an intensive schedule. After 58 days of hearings, 149 exhibits, 68 items by reference, and 6,083 pages of transcript, hearings were concluded on January 11, 1979. Concurrent opening briefs were due no later than February 23, 1979, and concurrent reply briefs were due no later than March 9, 1979, at which time the matters stood submitted.

Synopsis of Decision

This decision and order reduces Pacific's gross revenues by \$42.2 million per annum in proceedings wherein Pacific [*13] requested an increase in annual revenues of \$470 million and staff recommended a decrease of \$234 million.

We find Pacific's allegations in its application that its current rate of return of 8.85 percent is too low to enable it to raise capital in the competitive market to support its construction and modernization programs in California to be true. We increase its rate of return to 9.73 percent, yielding a permissible shareholders' return on investment of 12.25 percent and increasing gross revenues by \$113.6 million.

We find Pacific's allegations in its application that continuing inflationary pressures are causing Pacific's expenses to rise disproportionately to its revenues so that, if present rates are continued through 1979, Pacific will realize a rate of return substantially below its presently authorized rate of 8.85 percent to be untrue. We find that Pacific has substantially understated the degree of increased productivity available and to be available to it through telephone modernization programs on line and on order. Pacific's conservatism in viewing productivity translates, in these proceedings, to its substantial overstatement of test year operating expenses and, [*14] hence, our adoption of the staff's more realistic estimates.

We also find Pacific's estimates of its test year toll revenues to be substantially understated in the light of known trends. The vigorous growth in toll calling through California and, indeed, throughout this entire land is the justification Pacific asserts for its need for new construction and, therefore, new capital, a proposition with which we, as we have shown, agree.

We find that the most reasonable forecast of revenues and expenses for 1979 shows that Pacific would earn a 10.06 percent rate of return at present rates. Thus, while we increase gross revenues requirements by \$113.6 million by reason of the increase authorized in rate of return, we decrease gross revenue requirements by reason of revenue and expense estimates adopted at different levels than those of Pacific by \$155.8 million. The net effect is a rate reduction of \$42.2 million.

We have carried the indicated reduction of revenues into Pacific's rate structure primarily by inaugurating a program termed the Zoned Usage Measurement (ZUM) Plan which is estimated to reduce revenues by \$105 million. ZUM entails elimination of all remaining multi-message [*15] unit service in the SF East Bay and Los Angeles extended areas and the substitution therefor of calling zones with optional measured rates so that residential subscribers will achieve savings in accordance with their usage. Off-peak and weekend rate differentials will be available similar to those now in effect on long distance calls. The result we anticipate is that most callers presently experiencing monthly multi-message unit charges will see their bills reduced without changing their calling habits. Those subscribers who utilize the telephone system at off-peak times will gain additional savings. There will be a modest (30 cents) increase in flat rate service, but the subscribers will be permitted to regrade to measured service without charge if they so desire. While savings to many will ensue, ZUM also will make telephone rates in California more reflective of frequency, distance, and length of calls so that the cost of the service provided by the utility and the price of the service to the customer will become more in balance.

We are continuing the program to implement Single Message Rate Timing (SMRT) by extending it to Sacramento, Bakersfield, Fresno, Modesto, Riverside, [*16] Santa Rosa, and Stockton on a feasible schedule, a revenue reduction of \$5.2 million.

We find that the rates for special equipment to assist the deaf and other handicapped users in gaining access to the telephone system should be materially reduced, a revenue reduction of \$12.0 million. We believe it is a desirable goal and in the public interest to seek to provide full access to the telephone network for all handicapped persons at the same basic exchange rates as are charged to subscribers in equal circumstances save for the fact of their physical disability.

Key telephones, extensions, premium sets, and service connections, are all found to be underpriced in relation to costs and we increase these rates by \$55.2 million, collectively.

We preserve the present 30-call lifeline rate, but increase the charge for additional calls from 5 cents to 10 cents (31-40 calls) and 15 cents (41 calls or over).

Many other changes are encompassed in this decision, but the foregoing may be considered as most significant.

Legal Principles

Pacific's entire 500-page brief is predicated upon legal principles which are true in and of themselves, but wholly inapplicable to the case before [*17] us.

Pacific earnestly asserts that "every investment may be assumed to have been made in the exercise of reasonable judgment, unless the contrary is shown" ([Missouri ex rel S.W. Bell T. Co. v Public Service Commission \(1923\) 262 US 276, 289.](#)) Accordingly, asserts Pacific, the Commission is required to presume that "Pacific's judgments" on revenues and expenditures were made in good faith and were not imprudent until the contrary has been affirmatively established by those contesting the exercise of managerial discretion.

[1] The decision cited by Pacific, together with its other points and authorities, all go to the same principle, which is that this Commission will not disallow for ratemaking purposes an amount expended by a utility as operating expense unless there is an abuse of discretion in making the expenditure by the corporate officers of the public utility. That this is true there can be no doubt. How the principle, applicable to past test periods and past expenditures, applies to future test periods and estimated expenditures, such as in this case, is not explained.

[2] The staff sets forth the long-standing and proper rule. It is settled that in order to raise [*18] rates it is incumbent on the utility to justify the increase before the Commission. (*Northern Cal. Power Company* (1912) 1 CRC 315.) The utility seeking an increase in rates has the burden of showing by clear and convincing evidence that it is entitled to such increase. The presumption is that the existing rates are reasonable and lawful. Any doubts must be resolved against the party upon whom rests the burden of proof. (*Southern Counties Gas Company* (1952) 51 CPUC 533; *Citizens Utilities Company* (1953) 52 CPUC 637; *Park Water Company* (1955) 54 CPUC 498.)

This Commission is charged with the responsibility of ensuring that all charges, demanded or received by any public utility, shall be just and reasonable. (Pub. Util. Code § 451.) No public utility shall raise any rate except upon a showing before the Commission and a finding by the Commission that such increase is justified. (Pub. Util. Code § 454.) (See [City of Los Angeles v Public Utilities Commission \(1975\) 15 Cal 3d 680.](#))

[3] [4] To meet the burden of presenting clear and convincing evidence of the need for an increase, the applicant must produce evidence having the greatest probative force. (*Railroad [*19] Commission v. Pacific Gas & Electric Company (1938) 302 US 388.*) The credibility of witnesses and the probative value of their testimony are questions for the trier of fact. ([Leonard v Watsonville Community Hospital \(1956\) 47 Cal 2d 509, 518.](#)) It is for the Commission to arrive at its findings from the consideration of conflicting evidence and undisputed evidence from which conflicting inferences may reasonably be drawn. ([Southern Pacific Company v Public Utilities Commission \(1953\) 41 Cal 2d 354, 362,](#) appeal dismissed, 348 US 919, 98 L ed 414.)

[5] [6] The Commission may form its own conclusions as to the probative value of the evidence before it. (*Market Street Railway v Railroad Commission* 1945) [324 US 548, 89](#) L ed 1171.) The Commission may choose its own criteria or method of arriving at its decision, even if irregular, providing unreasonableness is not clearly established. (*Pacific Telephone & Telegraph Company v Public Utilities Commission* (1965) [62 Cal 2d 634](#); *American Toll Bridge Company v Railroad Commission* (1939) [307 US 486](#); 83 L ed 1414.) When the utility has not sustained the burden of satisfying the Commission that the proposed increase in [*20] rates is justified, the application will be denied. (E. L. Anderson (1930) 34 CRC 676.)

The foregoing are the precepts which we must employ in considering the record before us.

ALJ's Rulings

At the onset of Pacific's opening brief on general ratemaking issues, three rulings of the ALJ are challenged. The challenged rulings were made during the course of the evidentiary hearings and are alleged to have arbitrarily denied Pacific its right to present evidence in this proceeding. The rulings are alleged to be "serious prejudicial error."

The first ruling excluded from evidence Exhibit 8-A for identification. This exhibit is entitled "Results of Federal Communications Commission Docket 21230" and presented the test year effects of changes that would take place on Pacific's books of account effective January 1, 1979. At the time the exhibit was offered into evidence, it was established by staff counsel's questions to the sponsoring witness that: (1) the material was informational only, (2) Pacific did not rely upon the information for any relief in the proceedings, (3) the material being offered was late-filed, and (4) the offer of the exhibit was contrary to the time constraints [*21] of the Regulatory Lag Plan without good cause being offered in excuse therefor. To the ALJ's direct question as to what harm would befall Pacific if the proffered exhibit was not received in evidence, Pacific merely asserted that it wished to have the information presented in FCC Docket 21230 before the Commission at the time it deliberated as to its decision in this case. The ALJ accordingly offered Pacific the opportunity to produce the docket, have it identified as an item in the proceeding, and have it thereby physically placed before the Commission in the record of this proceeding. Pacific did not so produce the document, but, of course, the Commission will nevertheless take official notice of the decision in the subject docket.

The second alleged error of the ALJ occurred during the cross-examination of Pacific's witness on advertising expenses. In its brief, Pacific states that during cross-examination of its advertising witness, staff counsel established that *after* the preparation of the advertising exhibits new information became available to Pacific which caused it to cancel plans for two of the local advertising projects which it had included in its projected [*22] expenses for test year 1979. The estimated expenses exceeded \$1.6 million. Pacific states that on redirect examination it attempted to set forth other changes which would increase the advertising budget for test year 1979 but was not permitted to do so.

Thus, Pacific asserts, it was denied the right to adduce additions to its advertising estimates while being subjected to deletions therefrom by reason of staff counsel's cross-examination. Such procedure, Pacific asserts strongly, was recently condemned by this Commission *In re Southern California Edison Company*, Decision No. 89711 (December 12, 1978, [84 CPUC 733](#)), where it was said:

"We note that to the extent that later information is used, there should be a two-way street in its utilization, and the end result should reflect both additions and deletions and any adjustments deemed appropriate" ([84 CPUC at 793](#))

What Pacific neglects to mention, even by transcript reference, is that the alleged deletions from Pacific's advertising estimates for 1979 were the direct result of Pacific's counsel's failure to object in a timely fashion, or at all, to questions of staff counsel which drew forth the damaging admissions. Further, [*23] the record shows that when the staff counsel made a motion to strike the \$1.6 million in question, Pacific's counsel was directly asked by the ALJ whether it chose to rely upon the presentation and wished to present it to the Commission for its consideration. Pacific responding in the affirmative to such direct questioning, The ALJ denied the staff motion to strike the material. Accordingly, allowing Pacific to add new advertising expenses to its existing exhibit, produced

in accordance with the Regulatory Lag Plan, would have clearly been contrary to the time constraints of our resolution establishing a measured program for expeditious resolution of general rate proceedings.

The third allegedly serious prejudicial error of the ALJ occurred with respect to his handling of proffered rebuttal evidence of Pacific. That Pacific misunderstands the regulatory process and the presumptive expertise of the Commission as a trier of fact is well established in the staff's brief. The staff recites that at the commencement of the hearings on January 2, 1979 portions of prepared testimony offered by Pacific in rebuttal were stricken by the ALJ. The stricken testimony was primarily argument [*24] rather than factual presentation which would advance the record. The ALJ gave leave to Pacific to include the stricken material in its briefs if it so desired, and Pacific has done so.

Pacific argues that its rebuttal testimony is the opinion of experts testifying within their special fields of expertise which are beyond common knowledge and experience. Pacific asserts that the testimony of the staff and other parties is largely opinion testimony and no different from what is being offered in rebuttal. Pacific further argues that limiting its offered rebuttal testimony to presentation in a brief was denial of a fair hearing, citing Public Utilities Code Section 1708 and [California Trucking Association v. Public Utilities Commission \(1977\) 19 Cal 3d 240, 244 - 245](#). Finally, Pacific argues that exclusion of its rebuttal testimony, *sua sponte*, by the ALJ denies it equal protection of the law since no similar action was taken with respect to the allegedly similar type of evidence of the staff and other parties.

Pacific equates the Commission proceeding here to that of an ordinary court of law. In the latter case, the use of expert testimony is generally permitted to assist [*25] the trier of fact in matters so beyond the common experience that the opinion of experts is helpful. (Witkin, California Evidence, pp. 366 - 370; Evidence Code, Section 720(a).)

[7] Unlike jury trials, however, in administrative proceedings before any agency composed of trained specialists and before expert examiners or hearing officers, the burden of evaluating the weight and probity of testimony and evidence covering technical subject matter is primarily that of sifting and evaluating the evidence based upon the agency's expertise. Expert opinion does not bind the Commission. The Commission may form its own conclusions without the aid of expert opinions. ([Market Street Railway v Railroad Commission \(1945\) 324 US 548, at 560 - 561, 89 L ed 1171, at 1181.](#))

Merely labeling the testimony of its witnesses as "expert" does not give Pacific the right to present the rejected testimony as evidence. The Commission is capable of weighing the staff evidence in its case in chief with that of the applicant in its case in chief without additional testimony and argument by the applicant.

[8] [9] The applicant is entitled to produce evidence in rebuttal to meet new facts put in evidence [*26] by other parties after the applicant has rested its case in chief. (48 Cal. Jur. 2d 154; Wigmore, Evidence, Section 1873 et seq.) It was permitted to do so here. The presiding ALJ has discretion over the scope of rebuttal and may disallow evidence merely cumulative of the evidence given in chief. ([Ray v Jackson \(1963\) 219 CA 2d 445.](#))

[10] Given the constraints of the Regulatory Lag Plan and the fact that 53 days of hearing had already taken place, it is clear that the ALJ properly exercised his discretion in limiting rebuttal testimony to factual presentations rather than testimony merely contradictory of other parties. ([Kahn v. Revett \(1918\) 39 CA 312.](#)) We believe that the substantial rights of the applicant were carefully preserved in the process of permitting factual materials into the record as evidence and allowing argument, reasoning, or statement of position of Pacific to be brought before us by way of brief, as Pacific has done. (Pub. Util. Code § 1701; Rules of Practice and Procedure Rule 64.)

What the ALJ has accomplished in his ruling with respect to rebuttal testimony, as a practical matter, can scarcely be said to have prejudiced Pacific. If anyone is prejudiced, [*27] it is the parties to the proceeding who have been denied the opportunity to cross-examine Pacific's policy witnesses with respect to their arguments. We have Pacific's arguments before us; we have considered them, each and all; and we could not have done more had they been given a number and set forth in the record as the exhibit next in order.

No error has been demonstrate by Pacific.

II. RATE OF RETURN

Present Authorized Rate of Return

Pacific last sought an increase in its rate of return in Application No. 53587 and was authorized a return on equity of 11 percent and a rate of return on the intrastate rate base of 8.85 percent by Decision No. 83162, issued July 23, 1974 ([77 CPUC 117](#)). On November 2, 1976, the Commission issued Decision No. 86593 in Application No. 55492 and Case No. 10001, which, among other things, reduced Pacific's rate of return by 0.007 of a percentage point (from 8.85 percent to 8.843 percent) based upon Pacific's excessive level of held orders or service deficiency (80 CPUC 559).

Adopted Authorized Rate of Return

In this proceeding we are authorizing a return on equity for Pacific of 12.25 percent and a rate of return on its intrastate **[*28]** rate base of 9.73 percent. We will review the position and evidence presented by the parties, all of whom agreed that Pacific's present rate of return is inadequate, and our reasoning in arriving at our decision with respect to the appropriate earnings level for Pacific.

Pacific

Pacific's treasurer, Mr. Robert M. Joses, testified that the cost of common equity to Pacific is at least 14.5 percent, resulting in an overall rate of return which should be applied to rate base of at least 10.7 percent. He testified that, due to the impact of inflation and delays in obtaining rate relief, actual earnings by Pacific in the last several years have fallen far short of the level of earnings authorized by the Commission despite productivity increases. Only recently, according to Mr. Joses, have earnings begun to approach the authorized level.

Pacific's post-tax interest coverage has declined significantly in recent years and it is now the lowest in the Bell System at 2.46 percent, being well below the 3.0 percent level which this Commission found necessary in Pacific's last general rate application involving rate of return ([Pacific Tel. & Tel. \(1974\) 77 CPUC 117, 134](#)).

Pacific's **[*29]** debt issues were down-rated by recognized rating agencies over the past several years, and at the conclusion of the hearings were rated by Moody's at Aa and by Standard & Poor's at A+. Subsequently, Moody's has further down-rated Pacific's debt issues to an A rating.

The market price of Pacific's common stock has been below book value for eight years, and dividends have been increased only once since 1961; they have not kept pace with the rate of inflation or with comparable investments. The market price of Pacific's common stock is presently approximately 70 percent of the book value, making Pacific the only Bell System company with a market-to-book ratio of less than one.

Finally, Pacific's debt ratio has risen from 45.5 percent in July 1973 to 50 percent as of year-end 1977, resulting in Pacific's having the lowest common equity ratio, as of December 31, 1977 in the Bell System.

As a result of all the above factors, Mr. Joses testified that it is becoming increasingly difficult for Pacific to raise capital on reasonable terms in amounts sufficient to construct the facilities necessary to meet customers' service requirements.

In addition to the foregoing difficulties, **[*30]** Mr. Joses points to the possibility that Pacific will have to refund substantial portions of the allegedly inadequate revenues already collected and have present earnings substantially reduced on an ongoing basis by reason of this Commission's September 13, 1977 order (Decision No. 87838), commonly referred to as the tax remand case. Making this situation even more difficult, according to Mr. Joses is the Internal Revenue Service (IRS) ruling of June 8, 1978, that Pacific would become ineligible to use accelerated depreciation, both retroactively and prospectively, if the Commission's aforesaid order becomes final. Use of the investment tax credit is likewise affected by the above considerations.

An added factor, pointed out by Mr. Joses, which makes it even more difficult for Pacific to raise the necessary capital in the future is the apparent refusal of the American Telephone & Telegraph Company (American), Pacific's majority shareholder, to subscribe to any additional Pacific common equity offerings as long as Pacific's financial condition is not improved by action on part of this Commission.

A major premise of Mr. Joses' views with respect to Pacific's capital needs is his [*31] belief that Pacific must regain its AAa credit rating as a prerequisite to its being in a position to properly serve its customers in the California market. To obtain an AAA rating, the witness testified Pacific should maintain a capital structure composed of no more than 45 percent debt and at least 55 percent equity.

To demonstrate the validity of his views in an objective fashion, he relies upon a form of the "comparable earnings" test, determining which companies have risks which are comparable to that of Pacific, whose rate of return is being determined. The witness contends that Pacific's financial risk is extremely high by reason of the uncommonly low equity ratio of 45 percent, and its business risks are likewise high, the following major factors contributing substantially to such business risk of Pacific:

Growing competition

The current federal antitrust suit (primarily seeking divestiture of Western Electric from American)

Inflation

Labor and capital intensity of Pacific

Regulatory lag

Uncertainty of eligibility for accelerated tax depreciation

Job development investment credit (JDIC)

Prospective changes in U.S. telecommunications policy

Pacific is now subject [*32] to growing competition, according to Mr. Joses, in many areas of its business. As a result of the Federal Communications Commission's (FCC) Registration Program, Pacific faces the prospect that substantial numbers of its customers may elect to purchase terminal equipment from outside suppliers. In addition to the risk of loss of business, there is the additional risk that Pacific might find it necessary to write off equipment that could otherwise continue to be productively employed.

Specialized common carriers also pose a basic threat to Pacific's business, according to the witness. Such specialized carriers are allowed the use of Pacific's facilities, but are free to service only the high density/low-cost of service routes, while Pacific is required by its certificate to service all routes.

Pacific regards the threat of dismemberment of the Bell System as a result of the pending federal antitrust suit as adding substantially to the present risk of investing in Pacific. Obviously, according to the witness, if the Bell System is dismembered, Pacific would no longer have the various risk-reducing benefits that various experts, utility commissions, and, assertedly, this Commission [*33] have over the years found to be provided by the unified Bell System (e.g., [Pacific Tel. & Tel. \(1974\) 77 CPUC 117-134](#)).

The prospect of further inflation, having in mind the high labor and capital intensity of Pacific, together with regulatory lag, combine to increase dramatically Pacific's business risk, according to Mr. Joses. The California Consumer Price Index has far outstripped the increase in telephone prices and Pacific, through effective management innovation, has, in Mr. Joses' opinion, provided California ratepayers an outstanding service at bargain prices.

The witness testified that when the effects of inflation and Pacific's labor and capital intensity are combined with the effect of regulatory lag the damage is severe and substantially explains Pacific's present low financial standing.

Pacific has had to wait an average of about two years for relief in its last three completed rate cases. The net effect of these lags, according to the witness, is that revenue increases are inadequate because they are late in arriving and based on old operating data.

The witness contends that Pacific's business risk is increased significantly by the risk of ineligibility [*34] for accelerated depreciation and Job Development Investment Credit (JDIC) resulting from this Commission's September 13, 1977 decision on that subject. He believes this has grown more grave as a result of the IRS rulings mentioned earlier that Pacific will become retroactively and prospectively ineligible for these two tax benefits if the Commission's decision is allowed to go into effect. Finally, Pacific faces a very large degree of risk by virtue of the prospect of changes in U.S. telecommunications policy which are currently being considered by Congress. It now appears likely, according to Mr. Jose, that Congress may completely rewrite the Communications Act of 1934 and the Satellite Communications Act of 1962 with, as yet, uncertain effects on the role of Pacific as a regulated telecommunications utility. Thus, this risk is of potentially unlimited dimensions, according to the witness.

Having analyzed a number of aspects of Pacific's financial and business risks, Mr. Jose next selects three groups of companies to compare with Pacific in his employment of the comparable earnings approach. In order to restore Pacific's credit standing and its financial integrity to a high-quality [*35] level, Mr. Jose concludes that Pacific would have to earn a return commensurate with that of high-quality companies. Thus, two of the groups he selects to study are the AAA electrics and the AAA industrials. In addition, he studies the returns on equity of electrics whose stock is trading at a price of 120 percent or more of book value since that is the market-to-book relationship which he determines Pacific needs in order to be able to sell equity without dilution.

Mr. Jose's comparisons indicate that while Pacific's new debt in recent years has cost generally more than new AAA issues, Pacific's equity earnings have been substantially lower than these three groups of companies -- an average of 41 percent below the AAA electrics, 47 percent below the electrics selling at 120 percent or more of book value, and 43 percent below the AAA industrials. Pacific has earned only 56 percent of what other companies with which it must compete have earned on equity.

Mr. Jose's second approach to determining Pacific's cost of equity is the equity risk premium approach. Mr. Jose analyzes the same three groups of companies again because, allegedly, those companies display the characteristics [*36] of good financial health which Pacific must achieve in order to regain its financial integrity. The equity risk premium approach is described by Mr. Jose as being based on the universally accepted fact that the cost of debt for a firm is less than its cost of equity. The difference between the two costs is the equity risk premium, which represents the cost spread that is inherently found between debt and equity. Taking the three groups of comparison companies, Mr. Jose determines an average risk premium for five- and ten-year historical periods between the cost of new debt and the return on book equity for each of the three groups. This average difference equates to the premium earned by equity over debt by these financially healthy companies. He then adds these equity risk premiums alternatively to the composite cost of Pacific's five most recent long-term debt issues, which span the period May 1973 through January 1978. Based upon these three groups, Pacific's required return on equity to be competitive ranges from a low of 13.01 percent to a high of 16.04 percent.

Based upon these data and the considerations already discussed, Mr. Jose concludes that the return on equity [*37] for Pacific at the objective debt ratio of 45 percent should be in the range of 14 percent to 15 percent. However, since Pacific's debt ratio for 1979 is estimated to average 52.3 percent and its common equity ratio is estimated at 43.3 percent, he concludes that a return on equity at the upper end of the 14 percent to 15 percent range is definitely warranted.

In conclusion, Mr. Jose reaches a recommended cost of common equity of 14.5 percent by utilizing the midpoint of the 14 percent to 15 percent range, which he finds to be the bare minimum cost of equity for Pacific. This conclusion is based on the result of comparable earnings and risk premium tests for the selected three groups of companies with comparable risk to Pacific. Based on this minimum cost equity capital of 14.5 percent, the overall rate of return to be applied to rate base is 10.7 percent.

Pacific next presented Mr. Richard W. Lambourne, Senior Vice President of McMorgan and Company, a firm specializing in the investment management of large jointly administered pension funds.

Mr. Lambourne stated that the purpose of his testimony was to evaluate, as an outside expert, the factors which a professional investor [*38] would consider before investing in Pacific's securities. Based upon the strengths of the telecommunication industry and the dynamic economic growth of the west, Mr. Lambourne testified that professional investors would normally view Pacific as an attractive but conservative investment except for a number of significant potential and actual negatives in the situation. These factors are as follows:

Increasing threat of competition in the communications field

Telephone revenues more sensitive to declines in economic activity

Inflation

Regulatory lag

Mr. Lambourne compares Pacific's equity as viewed by a prospective investor with equity offerings of other Bell System companies and concludes, as did Mr. Joses, that Pacific's is perhaps the least attractive to an investor.

However, in terms of professional investors' perception of risk, the witness testified that the fact that the regulatory environment in California is among the most adverse in the nation from the investor's point of view is given the greatest weight. Mr. Lambourne's methodology in arriving at an appropriate rate of return for Pacific, which he believes should be in the range of 14 percent to 15 percent, is derived [*39] by use of the risk premium approach.

Pacific, in its direct showing, also presented Mr. Paul Hallingby, Jr., Vice Chairman of the Board of Merrill, Lynch, Pierce, Fenner & Smith, Inc., and Managing Director of its Investment Banking Division. Mr. Hallingby described the purpose of his testimony as being to establish the level of earnings required for Pacific to attract the necessary capital under all market conditions and on satisfactory terms.

This witness stressed the increasing importance attributed to Moody's and Standard & Poor's bond ratings by investors in their decision-making process. He points out that Pacific's debt financings have been consistently larger than those of the average Bell subsidiary and far larger than the average Aaa-AAA Industrials and the average Aa/AA Electrics. The large size of these bond issues has generally dictated that there be only two bidding groups when they are sold at competitive bidding, according to this witness. By contrast, when electric utilities have sold bonds competitively there have often been three to five bidding groups. This reduced competition creates a greater risk, according to Mr. Hallingby, that there will not be an [*40] acceptable bid for Bell subsidiary bonds, and this risk can only be mitigated by maintaining their Aaa/AAA rating.

For this, and for other reasons given by the witness, he believes it is necessary that Pacific once again secure an Aaa/AAA rating to become fully competitive in obtaining new capital.

Mr. Hallingby, as does Pacific's other witnesses, cites inflation antitrust action by the Department of Justice, regulatory lag, and competition as being negatives in Pacific's security market outlook. The primary distinction, however, which this witness finds between the business risks of Pacific and the other Bell subsidiaries is the state regulatory environment. Mr. Hallingby testified that, in his view, the California regulatory environment is one of the worst in the nation from the viewpoint of security holders, and, thus, Pacific's business risks are greater than the average Bell subsidiary.

Mr. Hallingby's objective evidence wherein he arrives at a recommendation that Pacific should earn a 15 percent return on equity is based upon the risk premium approach, as well.

The risk premium approach, which is described by Pacific as the method commonly used by professional investors [*41] and market analysts, consisted in this proceeding of the utilization of a 52-year statistical analysis prepared by Roger G. Ibbotson, Assistant Professor of Finance, University of Chicago, and Rex A. Singquefield, Vice President, American National Bank & Trust Company of Chicago. This monograph gathered data of

unadjusted annual returns of stocks, bonds, and government bills, which data were then analyzed as to geometric mean, arithmetic mean, and standard deviation. The Ibbotson & Sinquefeld (I&S) Study concluded that the average premium realized from stocks over high-grade corporate bonds has been 5.1 percent. The total return on stocks in this long period was 9.2 percent and on long-term corporate bonds, 4.1 percent; hence, the premium of 5.1 percent. The I&S Study further shows that their data yield a difference of 6.7 percent between stocks and U.S. Treasury Bills.

Mr. Lambourne utilizes the bond premium method by noting that the addition of the 5 percent difference in the I&S Study between stocks and bonds, when added to the 9 percent interest costs incurred by Pacific in its most recent debt financing, yields the sum of 14 percent which is, in the witness's opinion, [*42] the appropriate return on equity to be found by this Commission.

Mr. Hallingby notes that the I&S Study shows a 9.2 percent rate of return for stocks as compared with a 3.4 percent rate of return for long-term government bonds, a difference of 5.8 percent. This witness suggests that the 5.8 percent be added to the current yield on long-term U.S. government bonds, which was approximately 8.2 percent at the time of his testimony, so as to yield a market cost of Pacific's common equity capital of approximately 14 percent.

Staff

Staff witness Mr. T. R. Mowrey presented the staff position with respect to cost of capital and the recommended rate of return for Pacific in this case. Mr. Mowrey concluded that based upon his estimated capital structure for the test year, a return on common equity of 11.53 percent and return on Pacific's California intrastate rate base of 9.4 percent is reasonable. The principal differences between the capital structure recommended by the staff witness and the applicant's witness is that the staff substituted an issue of \$300,000,000 in common equity in place of one of the two \$300,000,000 long-term debt issues proposed by Pacific. We note that Pacific [*43] has issued \$300,000,000 in privately placed long-term debt and an additional \$300,000,000 in privately placed preferred stock since the time of preparation of Pacific's presentation and that of the staff.

JDIC also was excluded from Pacific's capital structure in the staff exhibit.

The capital structure recommended by the staff, when related to the recommended rate of return, produces an after-tax interest coverage of 2.5 times. As shown in the staff exhibit, a 2.5 times interest coverage is higher than Pacific's 1973-1977 five-year average. It should also be noted, according to Mr. Mowrey, that during this five-year period Pacific's bonds were rated AA by Standard & Poor's and Aaa by Moody's. The staff's recommended capital structure is testified to as being the more reasonable in that Pacific's long-term debt ratio is maintained at approximately 50 percent, which is comparable to its December 31, 1977 level, and is in accord with the applicant's stated goal of decreasing its long-term debt ratio to 45 percent.

The staff contends that the Investment Tax Credit (ITC) arising from the JDIC calculations should not be capitalized. The reason for this is that the Commission [*44] has so stated in Southern California Edison Application No. 54946, [Decision No. 87828, 82 CPUC 531, 543](#):

"The inclusion of unamortized ITC as equity capital is required only for regulatory agencies that utilize capital structure in deriving rate base and not for regulatory agencies, such as this Commission, that derive rate base from the weighted average depreciated balances."

The Commission has recently reaffirmed its position in southern California Edison Decision No. 89711, Application No. 57602 (December 12, 1978, [84 CPUC 733, 801, 809](#)); and in Southern California Gas Company Decision No. 89710, Application No. 57639 (December 12, 1978, [84 CPUC 657, 671-672](#)).

[11] Based on the record in this case, we conclude that the exclusion of JDIC from the capital structure remains the better approach for the reasons cited by the staff, and we adopt that methodology in this proceeding.

In its rate of return showing, the staff methodology employed by Mr. Mowrey was to make comparisons of pertinent financial and statistical data of Pacific with those of 47 other telephone utilities, including the Bell System, the General Telephone System, and other independents. The staff decision to [*45] use telephone utilities for comparative purposes, rather than industrial companies as employed by Pacific's witnesses, was based on the fact that Pacific operates in a regulated environment and, as such, experiences business and financial risks similar to those of other telephone utilities. The recommended rate of return sponsored by the staff is comparable to that being authorized for other telephone utilities, including the Bell System, even when consideration is given to the higher debt ratios included in the General and other independent telephone companies' capital structures.

Some of the additional factors which the staff witness considered in arriving at his rate of return recommendation are as follows:

Pacific is a regulated public utility engaged in a business which affects the public interest and that must provide its services at reasonable rates.

Pacific is 90 percent owned by American and draws upon American for management expertise and guidance.

Pacific's inclusion in the Bell System makes it less risky than businesses operating without such affiliation.

Pacific normalizes federal income taxes for ratemaking purposes, providing additional internal cash flow, [*46] thus mitigating to a certain extent the need for external capital.

That a fair rate of return must give consideration to both consumer as well as investor interests.

Economic conditions -- the effects of continued inflation and increases in interest rates.

The essentiality of Pacific's product to the public.

Pacific's recorded earnings experience.

Cities

The City of Los Angeles, City of San Diego, and City and County of San Francisco (Cities) presented Mr. Manuel Kroman as their witness on rate of return. Mr. Kroman submitted substantial evidence consisting of 23 tables and 3 charts utilizing data published by various financial journals and statistical sources. He concluded that Pacific should be allowed a 9.25 percent rate of return for intrastate operations which was based upon an 11.72 percent intrastate return on equity.

Mr. Kroman's view is that a fair yardstick to be used when evaluating the reasonable rate of return for a utility is to compare the applicant's request with the returns most recently authorized by other state regulatory commissions. The witness's comparison indicates that the median authorized return on common equity by original cost jurisdictions [*47] is 11.5 percent, related to a median equity ratio of 49.2 percent. The range of these returns is from a low of 8.75 percent to a high of 13.03 percent. These values may be compared with applicant's request of 14.5 percent, including JDIC, or 14.99 percent excluding JDIC.

Cities' witness provided data showing that the recorded returns on equity, as compared with associated equity ratios for Bell System subsidiaries, General Telephone subsidiaries, Moody's 24 utilities, Dow Jones' 15 utilities, the 9 utilities selling at 120 percent of book value selected by Mr. Joses for Pacific, and the 5 AAA-electrics selected by Mr. Joses, track quite closely. The trend in return on equity for all telephone companies is on the rise, and Pacific is no exception according to Mr. Kroman's exhibit. Mr. Kroman recommends a total company rate of return of 9.33 percent, with an interest coverage of 2.40 times and a return on equity of 11.83 percent.

County of Los Angeles

The County of Los Angeles, participating in the proceeding but producing no witnesses on rate of return, filed its brief in which it concurs with the position taken by the Cities.

The brief of the County of Los Angeles is [*48] supportive in detail of the recommendations of the Cities' witness, Mr. Kroman, and also takes issue with the contentions raised by Pacific, which contentions will be considered in the discussion hereinafter.

General Services Administration

The General Services Administration (GSA), Western Area Field Office, Regulatory Law, filed its brief on behalf of the executive agencies of the United States government and presented a witness on the rate of return issue, Mr. Mark Langsam. Mr. Langsam has broad experience in rate of return matters and has testified before regulatory commissions throughout the United States on behalf of the government.

Mr. Langsam recommends that Pacific should be granted an overall rate of return of 9.0 percent and a return on equity of 11.0 percent and should be given the opportunity to earn up to 9.3 percent rate of return and 11.5 percent on return of equity. This witness' views are predicated upon analysis, not of the capital structure of Pacific independently, but upon the cost of senior capital and equity of the Bell System as a unit.

The GSA witness presented comparable earnings studies which centered on the analysis of relative risk associated [*49] in returns for American, Standard & Poor's Utilities, and Standard & Poor's Industrials. This analysis of relative risks showed, according to the witness, that American is associated with the least risk and the Industrials with the greatest risk. It also showed that the utilities are associated with more risk than American but with less than the Industrials, and that American and the Utilities are considered to be "money stocks" with the emphasis on current income rather than growth, while the Industrials are considered to be "growth stocks" with the emphasis on growth rather than current income.

In short, the witness for GSA believes that this Commission should pierce the corporate veil of Pacific, find that American is the alter ego of Pacific for all purposes, and determine rate of return for Pacific predicated upon the capital structure of American.

Toward Utility Rate Normalization

Toward Utility Rate Normalization (TURN) has filed a brief on rate of return, in which it endorses the views of GSA. The TURN brief is scholarly in that it reflects a research of decisions of regulatory authorities in numerous states of the United States which have utilized the capital structure [*50] of the consolidated Bell System subsidiaries. The TURN brief additionally stresses the double-leverage position of American in marketing securities through its subsidiaries and urges that consideration should be given to recognition of the American parent of Pacific as this Commission and the courts have done, for example, with respect to the Western Electric adjustment.

California Association of Utility Shareholders

The California Association of Utility Shareholders (CAUS), filed a brief in this proceeding and presented a witness, Mr. Ross J. Cadenasso, President. CAUS adopts the position of Pacific in these proceedings, asserting that the market place has clearly proven that the shareholders' return from Pacific has been inadequate since at least 1970. Mr. Cadenasso testified that to reestablish a fair balance between the rights of the investors and the shareholders, a minimum return on equity of 14 percent to 14.5 percent is required provided that there is no elimination of full normalization of income taxes and that the regulatory commission will act to increase rates in an appropriate fashion consistently in the year following the test year. If the above provisions are [*51] not met, the additional risks thereby created require, in the witness' opinion, a return of up to 15.5 percent or 16 percent on equity in order that Pacific will meet the attraction of capital test laid down by the United States Supreme court.

California Interconnect Association

The California Interconnect Association (CIA) presented no witness on rate of return on its own behalf but submitted a brief in which it recommends that the rate of return on common equity must be not less than 14.5 percent for the period for which rates are reasonably expected to be effective ([Pacific Tel. & Tel. v PUC \(1965\) 62 Cal 2d 634, 645](#)).

CIA believes that Pacific is the best judge of what money it must raise and what that money has cost it to date, and CIA is in agreement with the witnesses for Pacific and for the CAUS with respect to rate of return and with respect to return on equity.

Discussion

We have regarded the fact of growing competition in the telephone industry as justifying consideration in establishing an appropriate rate of return for Pacific. However, it is abundantly clear that competition in telecommunications, and specifically with respect to Pacific, is insubstantial [*52] as compared with competition as it exists among the unregulated industries. We believe that the statement of the Federal Communications Commission in Docket No. 16258 regarding American is appropriate:

"We find the earnings of manufacturing companies do not provide a useful or reliable measure for fixing the return to be allowed the respondents herein."

This Commission has historically likewise placed little weight upon comparisons between Pacific and nonregulated entities. Additionally, as the staff asserts, the rapidly improving technology in the telephone industry is as likely to benefit Pacific in increased earnings as it is to constitute a business risk to the company.

As with competition, the prospective changes in the United States' telecommunication policy cannot at this juncture be said to be detrimental to Pacific. During the course of these proceedings, two staff witnesses expressed the view that some degree of nonregulation of Pacific's products and services is inevitable looking into the future. We prefer to believe that Pacific will be fully capable of meeting competition and adjusting to changes in telecommunications policy in a manner which will benefit its [*53] shareholders, and that the future prospects do not constitute such a business risk as would require us to give heavy weight to the aspect of competition in determining an appropriate rate of return for Pacific in this proceeding.

We have some difficulty in distinguishing how Pacific suffers more than any other regulated or unregulated business by inflation, even though it is admittedly a company with high intensity of both labor and capital. Some of the evidence indicates that Pacific, being regulated, is in a better position than nonregulated companies to meet the fiscal demands imposed upon it by inflation. Other witnesses have expressed the view that regulatory lag deprives the company of the alacrity inherent in nonregulated businesses to adjust its price schedules upward to match inflationary trends. It is clear on the record in this case, however, that Pacific's prices have kept pace with its increases in labor and material costs and it has consistently improved its actual earnings as reflected in rate of return during the course of months during which these proceedings have been in progress. Regulatory lag remains a problem which this Commission recognizes and has made [*54] continuing efforts to mitigate.

[12] We do not consider that the current federal antitrust action against the Bell System and Pacific is a negative factor with respect to rate of return. Clearly, it seems to us that the enforcement of the public laws of the United States should not be deemed by public bodies to be a detriment either to the public or to the corporations affected. We have no opinion at this time as to whether or not a successful prosecution of the Justice Department with respect to the Bell System will result in a detriment or benefit to the shareholders of Pacific or to the ratepayers of Pacific. Whether there is a business risk associated with this litigation remains to be seen. The final outcome of that antitrust action is years away.

A great degree of emphasis has been placed by two of Pacific's witnesses on what is termed "adverse regulatory climate" in California. This asserted element of business risk is dramatized by Pacific with respect to the claimed uncertainty of eligibility for accelerated tax depreciation and JDIC in the face of the earlier decisions of this Commission, the California Supreme Court, and the United States Supreme Court. It is [*55] asserted that should Pacific be forced to refund approximately \$205,000,000 to its ratepayers and reduce its rates by approximately 65,000,000 per year, it will lose eligibility for accelerated depreciation and ITC. In the event the loss of eligibility becomes a reality, Pacific will then be forced to pay back taxes, including interest, in the amount of approximately \$700,000,000.

We have not considered this risk as persuasive in elevating Pacific's return on equity. Decision No. 87838, issued September 13, 1977, was required, in effect, by the California Supreme Court's mandate that this Commission strike a balance between the competing interests of shareholders and ratepayers (*City of Los Angeles v Public Utilities Commission (1975) 15 Cal 3d 680*). Further, the California Supreme Court had previously declared our decisions inappropriate and Pacific's management obstinate and imprudent in not adopting flow-through accounting for taxes as did other major California utilities (*City and County of San Francisco v Public Utilities Commission (1971) 6 Cal 3d 119*). The specter of financial disaster resulting from this Commission's treatment of Pacific's income taxes remains [*56] only that Pacific, as the record shows, has been audited by the IRS through the year 1973 without adverse consequences regarding taxes. Also we have substantial doubts that we should, or can, burden the ratepaying public with adverse financial decisions of Pacific attributable to obstinacy and imprudence of management, as found by the highest Court of this State.

There are, of course, numerous other issues which we might address in explaining the exercise of our judgment with respect to rate of return in this case. Suffice to say that we have examined all of the recorded evidence in this case, reviewed the copious and scholarly briefs of all the parties, so informed, and have exercised our judgment, in arriving at the rate of return and return on equity shown in the table following, which incorporates the capital ratios as established by the staff in this proceeding:

TABLE 1

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY

Adopted Rate of Return

	<i>Capital</i>	<i>Cost</i>	<i>Weighted</i>
	<i>Ratios</i>	<i>Factors</i>	<i>Cost</i>
Long-term Debt	50.04%	7.62%	3.81%
Preferred Stock	4.24	7.51	.32
Common Equity	<u>45.72</u>	<u>12.25</u>	<u>5.60</u>
Total	<u>100.00%</u>		<u>9.73%</u>

[*57]

III. REVENUES

Revenue Estimates for the Test Year

The revenue estimates for the test year are developed for interstate toll revenues, intrastate toll revenues, local service revenues, and miscellaneous revenues. From these categories an estimate of uncollectible revenues is subtracted in developing the final revenue estimate.

Both Pacific and the staff reviewed the historical performance of the applicant, anticipated economic conditions in the test year, Pacific's projected product and service offerings, and estimated station and message volumes in the test year, as well as other factors in estimating revenues.

The staff estimate of \$4,666,914,000 for total operating revenues exceeds Pacific's estimate of \$4,661,445,000 for those categories by \$5,469,000, made up as follows:

Utility Exceeds Staff

(Dollars in Thousands)

Local Service Revenues	\$ (67,351)	(3.5)%
Intrastate Toll Revenues	(133,898)	8.2
Interstate Toll Revenues	112,636	11.0
Uncollectible Revenues	(2,441)	(5.2)
Phone Center Adjustment	(12,948)	(100.0)
Prop. 13 Adjustment	<u>93,651</u>	<u>100.0</u>
Total Operating Revenues	<u>(5,469)</u>	<u>(.1)%</u>

(Red Figure)

[*58]

The staff's recast revenue estimates utilize the lower rates adopted by Pacific as a result of OII No. 19 wherein Pacific's Advice Letter No. 12860 was filed, while Pacific's estimates do not utilize such lower rates. As the rates we set in this proceeding will be predicated upon post-Proposition 13 tax expense, and Pacific's Tax Initiative Account will be closed, there is no issue respecting the above property tax adjustment of \$93,651,000, being \$94,301,000 net of uncollectibles for the test year.

Pacific's estimate for miscellaneous revenues in the amount of \$217,472,000 has been accepted by the staff, and the difference in uncollectibles is a result of the staff's higher revenue estimates.

The staff estimate of \$1,915,198,000 for local service revenues at present rates is greater than Pacific's estimate of \$1,847,847,000 by \$67,351,000 or 3.5 percent. Approximately 92 percent of the difference between the staff and Pacific results from the staff estimate for subscriber station revenue being \$62,188,000 higher than that of Pacific.

Total station gain for the test year is estimated at 850,000 for a total weighted average number of company stations of 15,200,000 in 1979. [*59] The staff estimate of intrastate toll message volumes is approximately 20 percent greater than that of Pacific.

Estimates of interstate toll revenues and intrastate toll revenues by the staff are, respectively, \$112,636,000 or 11 percent lower than Pacific's and \$133,898,000 or 8.2 percent higher than Pacific's. The bulk, or 80 percent, of the difference in interstate toll revenue estimates is attributable to lower staff expense estimates in the following four areas: commercial, traffic, relief and pensions, and property tax expenses.

Pacific's intrastate toll estimate is based on its October 1977 view of the test year, and the staff points out that it had eight months of additional data available to use in deriving its estimates. Differences are largely due to the respective parties' estimates of customer billings, Pacific's expenses, and rate base associated with Pacific's Intrastate Message Toll and Wide-Area Toll Service (WATS). The remainder is due to differences in estimating Private Line Toll.

The staff witness on maintenance expense also estimated an annual revenue increase of \$13,038,000 in 1979 from Phone Center activity. It is anticipated by the staff that Pacific [*60] will increase its sales of optional residence terminal equipment and services as a result of Phone Center personnel contact with customers.

Pacific relies upon its results of operations studies as presented by witness Hamish Bennett. As in previous cases, Pacific's revenue estimates are based on a combination of a "bottoms-up" forecast, being akin to a performance or

end-result budget based upon field office input, and a "tops down" forecast of telephone activity commencing with administration. Pacific's Bennett testified that past company estimates were prepared by essentially the same procedures now used by Pacific for its test periods results. Evidence was presented by Pacific showing that its one-year estimates have been fairly accurate in the past.

Pacific contends that its estimates of revenue, adjusted for the effects of D 88232 are accurate, and include stimulation from Phone Center activity. Pacific's estimates reflect overall growth of 8.4 percent for the test year over 1978.

In its brief, Pacific charges the staff with basic inconsistency seemingly because staff project manager Robert Moeck permitted each team member to use the maximum amount of individual discretion [*61] and independence in preparing his showing. However, the record demonstrates that Pacific's Bennett directed the activities of Pacific's personnel in the same professional fashion. We confess that we can see no deficiency inherent in staff or company project management.

We are perplexed at the statement in Pacific's opening brief, at page 14, that "the budgeting and estimating procedures which underlie the October 1977 budget for 1979 are the very procedures regularly pursued by Pacific to direct the operations of the business . . ." Staff counsel seized upon this obvious misstatement to point out that Pacific's estimates here are admittedly not Pacific's regular operating budget which is a commitment budget, approved by American for one year only, and that Pacific, in fact, has had little experience since 1972 in budgeting two years in advance. The differences between a normal commitment budget and the forecasts before us were, however, explained by Mr. Bennett on direct and on cross-examination. We accordingly disregard Pacific's unfortunate statement on brief.

We believe that Pacific's estimate of Local Service Revenues as adjusted by the Proposition 13 deduction and including [*62] Pacific's estimate of the effect of Phone Center is the more reliable and will be adopted.

Miscellaneous revenues were not an issue and we will adopt Pacific's estimate, as did the staff.

We believe that Pacific's estimate of intrastate toll customer billings, \$1,787,886,000, is too conservative. We, therefore, adopt the staff's estimate, \$2,001,616,000, of customer billings. The resultant message toll and WATS revenues via settlements along with the intrastate private line toll employing adopted expenses and rate base yield total intrastate toll revenues in the amount of \$1,646,127,000.

The interstate toll revenue of the amount adopted, \$1,044,753,000, is a direct result of adopted expenses and rate base. This amount is calculated by standard settlement procedures.

Adopted Intrastate Operating Revenues

The total intrastate operating revenues adopted herein are as follows:

	(Dollars in Thousands)
Local Service	\$1,847,847
Miscellaneous	217,472
Intrastate Toll	1,646,127
Interstate Toll	1,044,753
Uncollectibles	<u>46,470</u>
 Total Operating Revenue Before Adjustments	 \$4,709,729
Proposition 13 Adjustment	<u>(93,651)</u>
 Total Operating Revenues	 \$4,616,078

[*63]

Summary of Earnings -- Table 11

Adopted intrastate operating revenues, operating expenses and taxes, balance net revenues, rate base, and rate of return are shown for the test year 1979 at present rates in Table II.

The calculation of the gross revenue increase necessary to produce a rate of return on rate base of 9.73 percent is set forth below:

Authorized rate of return	9.73%
Adopted rate of return, present rates	10.06%
Decrease in rate of return required	0.33%
Adopted intrastate rate base	\$6,759,837,000
Net revenue decrease	\$22,300,000
Net-to-gross multiplier	1,894
Gross revenue decrease	\$42,200,000

TABLE II

The Pacific Telephone and Telegraph Company

SUMMARY OF EARNINGS

Year 1979 Estimated

Present Rates

<i>Line</i>	<i>No.</i>	<i>Item</i>	<u>Total Company Operations</u>			
			<i>Staff</i>	<i>Utility</i>	<i>Intrastate</i>	
			<i>Estimate</i>	<i>Estimate</i>	<i>Adopted</i>	<i>Adopted</i>
			(Dollars in Thousands)			
		OPERATING REVENUES				
	1	Local Service	\$1,833,935	\$1,847,847	\$1,753,546	\$1,751,866
	2	Toll Service	2,661,588	2,640,296	2,690,880	1,646,127
	3	Miscellaneous	217,472	217,472	217,472	217,472
	4	Less: Uncollectibles	<u>46,051</u>	<u>44,170</u>	<u>45,820</u>	<u>35,145</u>
	5	Total Operating Revenues	4,666,914	4,661,445	4,616,078	3,580,320
		OPERATING EXPENSES AND TAXES				
	6	Current Maintenance	992,330	1,073,643	999,040	740,037

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7	Depreciation	632,886	658,722	632,216	485,867
8	Traffic	307,811	345,786	321,524	255,997
9	Commercial	375,255	472,207	467,009	397,425
10	General Office Sal. & Exp.				
	a. Revenue Accounting	61,826	61,826	61,826	53,523
	b. Balance G.O.	178,839	179,721	180,570	140,158
11	Operating Rents	33,875	33,528	33,875	27,002
12	General Services & Licenses	52,798	90,515	56,418	43,306
13	Balance Other Op. Exp.				
	a. Relief & Pensions	383,173	443,555	415,648	322,626
	b. Balance				
		<u>20,632</u>	<u>21,449</u>	<u>20,632</u>	<u>15,837</u>
14	Total Operating Expenses	3,039,575	3,380,952	3,188,758	2,481,778
15	Federal Income Tax	376,103	183,243	282,695	217,145
16	California Corporation Tax	73,227	20,530	50,506	38,777
17	Social Security Tax	86,422	92,117	92,546	71,834
18	Other Taxes				
		<u>118,407</u>	<u>278,440</u>	<u>118,571</u>	<u>91,015</u>
19	TOTAL OPER. EXPENSES & TAXES	3,693,374	3,955,282	3,733,076	2,900,549
20	BALANCE NET REVENUES	973,180	706,163	883,002	679,771
	RATE BASE				
21	Telephone Plant In-Svc.: 100.1	12,086,491	12,162,766	12,078,422	9,271,397
22	Prop. Held for Fut. Tel. Use	6,140	6,112	6,140	4,875
23	Tel. Plant Acq. Adj.: 100.4	--	--	--	--
24	Working Cash	154,326	193,722	165,353	126,925
25	Materials & Supplies 122	52,417	57,382	52,505	40,378
26	Less: Depreciation Resv. 171	2,473,082	2,539,361	2,473,000	1,880,050
27	Less: Resv. for Def. Taxes 176				
		<u>1,016,836</u>	<u>1,052,025</u>	<u>1,049,475</u>	<u>803,688</u>
28	TOTAL RATE BASE	8,809,456	8,828,656	8,779,945	6,759,837
29	RATE OF RETURN (20 divided by 28) X by 100	11.05%	8.00%	10.06%	10.06%

[*64]

IV. OPERATING EXPENSES

Current Maintenance

Maintenance expense for the test year is estimated by the staff as \$999,040,000 as compared to Pacific's \$1,073,643,000. The areas of difference, wherein we adopt the staff's view, are as follows:

Utility Exceed Staff

(Dollars in Thousands)

Basic Estimates	\$8,792
Electric Power Adjustment	12,063

Utility Exceed Staff**(Dollars in Thousands)**

Phone Center Adjustment	11,789
Main Frame Adjustment	37,832
Western Electric Adjustment	<u>10,837</u>
Staff View Adopted	<u>\$81,313</u>

Basic Estimates

The staff's unadjusted estimate of \$1,064,871,000 for total maintenance expense is \$8,792,000 or 0.8 percent below the utility's estimate of \$1,073,663,000.

The major difference between the staff's and Pacific's unadjusted estimates is Account 604, Central Office Equipment. Pacific's estimate for this account is high, mainly because it underestimated the productivity levels for this account. Failure to recognize increased productivity due to improved technology results in an overstatement of the labor component of all operating expenses, and certainly those in the current maintenance category.

Pacific estimated productivity increases for Central Office equipment [*65] changes at 4.26 percent and 4.87 percent for 1978 and 1979, respectively. The average productivity gain in the previous four years, according to staff testimony, was 15.5 percent. Because the staff had nine additional months of recorded data on which to base its estimate, the staff witness was able to discern that the recorded accumulated productivity level for Central Office equipment changes for the first half-year of 1978 was 10.98 work units per hour, which exceeds not only the utility's 1978 estimate of 9.94 work units per hour, but its 1979 estimate of 10.52 work units per hour.

The staff testified Pacific's estimate of productivity increase for Central Office equipment upkeep was likewise understated. Pacific estimated productivity gains of 7.30 percent and 8.14 percent for 1978 and 1979, respectively. The average productivity gain in the previous four years was 12.2 percent. The recorded accumulated productivity level for Central Office equipment upkeep for the first half of 1978 was 12.97 work units per hour, which exceeded its 1978 estimate of 12.41 work units per hour and was within 3.5 percent of its 1979 estimate of 13.42 work units per hour.

The record, additionally, [*66] shows that Pacific's productivity estimates expressed in its December 1977 budget view and again in its 1978 budget view are higher than its estimate before us in this proceeding, and within the time frame available for the staff presentation. Further, it appears that Pacific's estimate in determining workload for Account 604, Central Office Equipment, was predicated upon the use of Central Office frames as its plant unit indicator, although American's advice to Pacific was that such an indicator was inaccurate.

We accordingly conclude that the basic estimate for current maintenance of the staff is more reasonable and will be adopted.

Electric Power Adjustment

The staff estimate of the cost of electric power for the test year is \$34,537,000 as compared with Pacific's estimate of \$46,600,000, a difference of \$12,063,000.

The issue of the electric power adjustment in this proceeding is limited to the cost of such power and excludes usage, as the staff accepted Pacific's estimate that in the test year there would be no increase in usage over the 1977 level. Curiously, then, Pacific, in its opening brief, cautions us that the 1977 usage levels are conservative and that the [*67] introduction of more electronic switching will require more electrical power, as an electronic switching office uses about twice the power per subscriber line as does an older type electrical-mechanical office.

This argument is contrary to Pacific's zero energy growth estimate for electric power and also appears to be an implied admission that the staff's productivity estimates at a higher level than those of Pacific, discussed above, have merit.

The record shows that Pacific's total electric power bill rose 88 percent in the three-year period from 1974 to 1977 although Pacific's total kilowatt-hour usage increased less than 1 percent. In the face of this evidence, Pacific's witness testified that the staff witness' increase of only 0.32 percent from 1977 to 1978 and to 1979 is "absurdly low." The staff, of course, contends that the end of the drought and the reduction of Energy Cost Adjustment Clause (ECAC) adjustments flowing therefrom support the reasonableness of its estimate.

The staff made its estimate by first determining how much electric power (kilowatt-hours) Pacific Gas and Electric Company, San Diego, Gas & Electric Company, Los Angeles Department of Water and Power, [*68] Southern California Edison Company, and the city of Anaheim supplied Pacific in 1977, together with the cost of that power. It next determined for each electric utility the percentage of its power costs that were directly related to changes in ECAC and the percentage related to changes in the base rate. The staff then consulted with representatives of the electric utilities and members of the staff and reviewed electric utility decisions pending in electric utility rate applications before this Commission. With this information, the staff adjusted each of the electric utilities' estimated monthly 1977 kilowatt-hour sales to Pacific for increases and decreases in ECAC and base rate. The electric utility rate schedule most applicable to the utility were used for determination of increases and decreases in base rate and ECAC. Further reductions of power cost due to Proposition 13 tax savings were not considered.

Pacific's cross-examination of staff witness Mr. Dade developed that Pacific misunderstood the staff witness' use of the normal year basis for estimating rainfall as opposed to the wet year which ended the drought. Pacific, in its brief, continues to erroneously assert [*69] that the staff is relying on the repetition of an "all-time wet year" for its 1979 forecast. The evidence clearly shows that such is not the case and we will adopt the electric power adjustment proposed by the staff in this proceeding as being the more reasonable.

Phone Center Adjustment

A Phone Center is a retail-like store in which residential customers who have modular or plug-in connecting jacks on their premises can select a telephone set for their own installation, return telephone sets upon moving, and select and purchase optional residential equipment. It is apparent that the Phone Center Store advent will decrease Pacific's labor expense through the elimination of otherwise necessary service visits to the customers' premises.

The staff has accordingly proposed an adjustment of \$11,789,000 to maintenance expense Account 605, Station Repairs, in the test year based upon an analysis of normalized savings to Pacific. Normalization was employed by the staff in order to develop the test year into a typical year of operation. For that reason, there is a reflection of 1980 estimates in the normalized test year.

The staff normalized the revenue, capital, and expenses [*70] of the Phone Center Program by determining the present worth of 1980 year values as of January 1, 1979. A beginning of year annuity was calculated from the present worth, using an after-tax rate of return of 8.85 percent. The annuity was then multiplied by 0.9843, developed from a ratio of total Nevada Bell main station inward movement to total Pacific main station inward movement. The result was a conversion of total company adjustments to a State of California base. The staff determined that plant capital should be adjusted in the amount of \$10,520,000 and that revenue should be increased by \$13,038,000 by reason of the Phone Center operation. These computations were determined in the same manner as the maintenance estimate.

Pacific objects to the adjustment of Phone Center maintenance expense with its corollary plant and revenue effect. Pacific contends that the inclusion of 1980 data in the 1979 test year computation results in the inclusion in the staff's estimate of savings which will not be realized during the test year. Too, it is asserted that Pacific's October 1977 budget for 1979 included \$22,000,000 in capital reduction and \$4,000,000 in expense reduction to reflect [*71] the effects of the Phone Center Program. Pacific, in effect, asserts double counting in the part of the staff.

The record shows that Pacific informed the staff by response to an earlier data request for documentation by Pacific that the \$22,000,000 alleged reduction in capital and \$4,000,000 alleged reduction in expenses were included in Pacific's budget but that the work papers could not be produced. On January 3, 1979, Pacific's witness, Mr. Woodrell, stated that he had such work papers and that they would be produced. These work papers were never introduced into evidence. In the staff's closing brief, it is stated that the work papers did not support the testimony of Mr. Woodrell and that they were, in fact, dated beyond the period during which Pacific was authorized to prepare its testimony pursuant to the Regulatory Lag Plan. We cannot accept the staff counsel's assertions on brief as correct but we do accept the uncontradicted testimony of the staff witness that the Phone Center savings were not included in the materials submitted to him by Pacific.

With respect to the alleged use of non-test period data, we believe it most appropriate for the staff to develop a typical [*72] test year results-of-operation study (to reflect conditions in effect when the revised rates will be applicable), even if anticipated results estimated to occur beyond the test year are employed in making the required computations.

For the above reasons, we find the staff adjustment for maintenance expense for Phone Center in the amount of \$11,789,000 to be reasonable and we adopt that adjustment in this proceeding. We also adopt the rate base adjustment of \$10,520,000 as being reasonable in this proceeding. We, however, do not adopt the revenue adjustment of \$13,038,000 for further reason that the record in this case demonstrates quite clearly that sales of optional residential equipment generated through the operation of the Phone Centers may not constitute a benefit in the sense of profit to Pacific.

Main Frame Adjustment

The staff has proposed a reduction in maintenance expense reflective of the number of maintenance hours which will be saved by Pacific in association with its Main Distribution Frames Program (MDF). An MDF is a distribution frame in a central office at which outside plant cables from customer premises terminate and cross-connect to Central Office line [*73] equipment.

MDF is one area of improved technological economy. Pacific has 53 such technological modernization and efficiency programs available to it which will substantially reduce maintenance expenses in later years, some of which are being implemented today, according to the record. In addition, it has another 58 maintenance saving modernization programs under development which should achieve further economies in operations. The staff witness selected only four of these programs in arriving at his proposed adjustment: Common System Main Interconnecting Frame Systems (COSMIC); Computer System for Main Frame Operations (COSMOS); Dedicated Inside Plant (DIP); and Frame Force Administration Plans (FFAP).

The staff relied upon Pacific's latest study for the total effect of these programs and arrived at a normalized savings for the main frame operations programs for the test year of \$37,832,000. The staff made an additional adjustment for plant in the amount of \$6,260,000 for depreciation expense and for other expenses in a manner paralleling the methods used for the Phone Center adjustments which we have previously discussed. There is no revenue effect for the main frame operations [*74] programs.

In our discussion with respect to Phone Center, we approved the staff's methodology in arriving at its estimates for the test year as being typical. Pacific argues that the data employed by staff witness Mr. Dade pertained to 1980 and should not be utilized. Curiously, Pacific, on brief, argues that "actual results can be very misleading;" this for the reason that the highest pay-off savings implementations will occur first and the lowest pay-off savings implementations will occur last. This, of course, is the very rationale the staff espouses in employing its typical test year methodology.

Pacific further draw our attention to the study relied upon by the staff, having in it a statement to the affect that Pacific is of the opinion that the hours saved through frame force administration appear optimistic, and Pacific will be in a better position to evaluate frame force administration when supporting documentation becomes available and results from implementation can be evaluated. At the same time, Pacific argues that the savings from frame

force administration have been included in Pacific's own budget for the 1979 test year as presented in this proceeding. Pacific's [*75] brief inconsistently asserts that three of the programs utilized in the staff's study will not be completed until 1980 and that all four of the programs are unproven. These assertions, however, not supported by reference to the record, are at variance with Pacific's chart set forth in its brief in which it presents substantial productivity increases in the implementation of the programs at issue.

The evidence shows that the Bell System established a maintenance task force in May of 1977 to find ways to properly reduce maintenance expense in the future. The record further demonstrates that the staff requested information on the progress of the maintenance task force in May of 1978 but was unable to determine what was available and have it produced before September 12, 1978 after the cut-off date for preparation of the staff exhibits. The transcript makes clear that staff witness Mr. Dade believed that his adjustments to maintenance expense were minimal in the face of the many ongoing expense reduction programs of Pacific, and a review of all the evidence convinces us that the main frame adjustment is reasonable and should be adopted.

Western Electric Adjustment

[13] The Western [*76] Electric adjustment involves our adopting certain adjustments to Pacific's plant and expenses to establish lower prices than those actually charged Pacific by Western Electric (a wholly owned subsidiary of American) on the theory that Western Electric should be entitled to "no *greater* rate of return than would be reasonable for a regulated utility". ([City of Los Angeles v Public Utilities Commission, 7 Cal 3d 331, 342; 102 Cal Rptr 313](#); emphasis added.) The court has not only approved this adjustment but reversed us when we sought once to depart from it ([City of Los Angeles v PUC, supra](#)).

Although Pacific does not agree with the Western Electric adjustments made in previous Commission cases and approved by the California Supreme Court, it does not here contest the basic adjustment. For a succinct review of this adjustment, see [City of Los Angeles v PUC, supra](#), beginning at page 345.

In this case we again adopt the affiliated interest adjustment and the staff's estimates and computations thereof wherever the adjustment reaches. For maintenance expense, because of our decision on rate of return, the Western Electric effect changes from \$10,837,000 to \$8,538,000. [*77]

Depreciation Expense

The difference between the staff estimates for depreciation and those of Pacific contain the following elements: basic estimates, IDC rate, Phone Center adjustment, main frame program, Western Electric adjustment, ACTS, teleprocessing, and advertising. Except for the basic estimates, all of the above enumerated elements going into the depreciation expense difference are discussed in other sections of this decision.

We adopt the basic estimates of the staff in this proceeding, as we have done in the past, as being predicated upon this Commission's policy consistently applied. There is, in fact, no serious contention made by Pacific that the depreciation methodology employed by the staff is in error. We find the staff's estimates, together with the staff's reflection of our decisions herein in the depreciation expense category, to be fair and reasonable and we adopt them.

Pacific and the staff have reflected in their Western Electric studies California surviving plant based on a survivor curve which indicates a composite average survivor life in excess of 30 years. Pacific has used the same survivor curve in this and several prior proceedings. The [*78] staff recommended in this proceeding that Pacific initiate a study to evaluate the validity of this survivor curve and submit the study to the staff prior to Pacific tendering a notice of intent for any future rate case. Since the same survivor curve has been utilized for this and several prior proceedings, it is appropriate to have its applicability re-evaluated for future proceedings and it will be so ordered.

Traffic Expense

Traffic expense for the test year is advanced by the staff as \$307,811,000 as compared to Pacific's \$345,787,000 for a difference of \$37,976,000 or 12.3 percent. The areas of difference are as follows:

Utility Exceeds Staff**(Dollars in Thousands)**

General Traffic Supervision	\$3,738
Operators' Wages	13,981
Lunchroom	83
Operator Employment and Training	300
Printing and House Services	212
Miscellaneous	5,949
Service Inspection and Customer Instruction	<u>2,299</u>
Estimating Differences	26,562
Automated Coin Telephone Service Adjustment (ACTS)	<u>11,415</u>
Total Differences	<u>37,977</u>
Differences:	
Staff view adopted	24,263
Pacific's view adopted:	2,299
Service Inspection ACTS	<u>11,415</u>
Total Differences	<u>37,977</u>

[*79]

General Traffic Supervision

Pacific's estimates for 1979 are based upon its October 1977 view of the test year and include wage and salary increases which are anticipated in 1979. While variable inputs with respect to Pacific's commitment budgets commence at the lower operating levels ("bottoms up" budget) and are reviewed and adjusted by upper management, the record in this case is clear that not all of Pacific's projections were initiated at the lower levels. Additionally, the record shows that the budget process failed to take into account certain unusual and nonrecurring events and, in some areas, did not properly treat the issue of productivity.

Overall, the staff compared the 1975 budget for Pacific in the amount of \$270,515,000 with actual recorded experience of \$266,817,000. Further, the period of 12 months ending June 1976 for Pacific was compared with recorded experience, showing a projection of \$281,927,000 and actual experience of \$272,722,000. The staff's estimate for general traffic supervision is \$3,738,000 lower than Pacific's estimate.

There are eight subaccount estimating differences in General Traffic Supervision.

Subaccounts 621-11 and 31 -- GA [*80]

We adopt the staff's estimate which is \$293,000 less than that of Pacific for the reason, among others, that Pacific estimated salary increases in one year in the range of 10.6 to 15.2 percent, and we concur with the staff that this range is unreasonable and the staff recommendation of 5.8 percent as the rate of increase is reasonable.

Subaccount 621-11, 21, and 31 -- No. Region

Pacific estimated an increased number of supervisory personnel in the Northern Region for Subaccount 621-11, 21, and 31. The staff points out that the region management level has been phased out and that the number of traffic offices and personnel has been decreasing. Further, the staff disagrees with Pacific that additional network designers will be required in view of the increased on-line technology. The staff's estimate is found to be the more reasonable, the difference between it and Pacific being \$870,000.

Subaccounts 621-15, 16, 35, and 36

With regard to subaccounts 621-15, 16, 35 and 36, the staff criticized Pacific's estimates as being based upon future projections of unusual and nonrecurring experiences, such as course development expenses which occurred in 1976 and 1977 but which [*81] are not anticipated to recur on a regular basis. The staff is of the opinion that such expenses should not be treated as recurring but should be amortized over a 10-year period. We believe the staff's view to be the more reasonable, the difference between it and Pacific being \$240,000.

Subaccounts 621-25 and 26 -- No. Region

For Subaccounts 621-25 and 26, in the Northern Region, Pacific projected expenses in the sum of \$2,642,000 for 1979. The staff points out that the 1978 projection is only \$1,464,000 for these accounts. The staff witness testified that Pacific was unable to provide any reasonable explanation for the substantial difference. Accordingly, the staff made a projection based upon the Northern Region to arrive at its basic estimate which we adopt as reasonable, and which is \$902,000 less than Pacific's projection.

Subaccounts 621-35 and 36

In Subaccounts 621-35 and 36, for Northern and Southern Regions, Pacific had projected \$875,000 for 1979 in excess of the staff estimates for the yearly "right-to-use" cost to Pacific for certain American computer programs. Here, again, the staff witness testified that Pacific paid these annual fees to American without [*82] seriously examining the possibility of designing and writing the programs with its in-house force or outside contractors, and without questioning American as to the reasonableness and magnitude of these fees. The staff's investigation of the fees disclosed significant, unexplained overruns in the program development cost. Further the staff testified that the cost formula used by American to allocate development costs to the operating companies was inequitable, resulting in excessive charges to Pacific. The staff accordingly recommends disallowance of the above-stated portion of the fees and we find that the staff view is the more reasonable.

Subaccounts 621-15 and 16 -- No. Region

In Subaccounts 621-15 and 16, for the Northern Region, we adopt as reasonable the staff's reduction of \$77,000 to account for the aforesaid adjustments to supervisory force levels.

Transfer to Construction -- Account 621

For the Southern Region, Pacific projected a transfer-to-construction amount for 1979 which was lower than the amount for 1977. Knowing of no reasonable explanation for this difference, the staff used the 1977 transfer figure of \$1,393,000 as the basis for its projection [*83] of \$1,420,000 in 1979. We find this adjustment to be reasonable, constituting a credit to Account 621 in the amount of \$114,000.

Network Administrators

In the Southern Region, Pacific has projected the number of network administrators as increasing from 82 in 1977 to 102 in 1979. In view of the fact, asserts the staff, that there will be fewer offices and personnel to administer in

1979, and in view of the increased report mechanization taking place within Pacific, the increase in administrators is not justified. We adopt the staff adjustment in the amount of \$367,000 being based upon the 1977 level of 82 network administrators.

Operators' Wages

Pacific's estimate is \$254,122,000, the staff being \$13,981,000 less in their estimate or 5.8 percent. We believe that the staff's view of the estimated operators' wages is more reasonable and we adopt it.

Pacific's estimate of the wages of operators, insofar as it relates to force levels, appears to have overlooked certain important considerations brought forward on the record by the staff.

During 1979, for example, Pacific will discontinue the handling of direct distance dialing toll service and manual switching service [*84] for the General Telephone Company in several exchanges throughout the State.

Pacific was unable to present a valid rationale for its inclusion of the 350 personnel who are employed in this function to remain in the operating wages category.

Additionally, the staff survey shows that 155 PBX operators who support the service representatives in commercial operations, and who charge their time to traffic Account 624, will be completely displaced in 1979 by an automated system called Business Office Centrex/Universal Call Distribution. Pacific's estimate does not reflect this consideration.

Further, Pacific's expansion of Direct Distance Dialing (DDD) is believed by the staff to have the effect of reducing the number of Pacific operator assisted calls, and the implementation of automatic intercept devices which handle intercept calls automatically will likewise reduce the amount of operator assisted calls.

The staff, for all of the above considerations, testified that Pacific has overestimated the requirement for operators and for operator assisted call volume.

The adjustment for operators' wages is \$8,627,000, which we adopt as reasonable.

Network Administration

In Subaccount [*85] 624-22, Network Administration, the Staff's estimate is \$1,302,000 lower than that of Pacific. The rationale testified to by the staff witness is that Pacific failed to adequately recognize the decreasing number of operator offices and operators by projecting an increase in the number of network administrators whereas a decrease should be in order. We share the opinion of the staff that the number of supervisory personnel should be directly related to the number of offices and operators and find the staff's basic estimate in this category to be the more reasonable and we adopt it.

Records Clerical

The staff asserts with respect to Subaccount 624-23, Records Clerical, that Pacific failed to properly estimate this expense in view of the increased mechanization of work records presently available. The estimate, according to staff testimony, is higher by Pacific than in previous years. We find the staff's estimate of 1 record clerk per 70 employees to be the more reasonable and adopt this basic estimate, being a difference of \$1,060,000.

Intercept Records

With respect to Subaccount 624-24, Intercept Records, it appears that there was, at least, a failure of communication [*86] between Pacific and the staff in the preparation of the two estimates. The staff witness' testimony is that the Southern Region projection for intercept records was 32 individuals whereas the Northern Region's projection was 94 individuals, an increase in the Northern Region from 66 in 1977. Upon being questioned as to this discrepancy, Pacific reduced its Northern Region projection to 67 for the test year. During the course of the investigation, the staff witness found that the Southern Region was utilizing an automated record

system and had been doing so for some years. Pacific provided no reasonable explanation for the difference in the mechanization between north and south, and asserted that the use of the 94 individuals in its original estimate for test year 1979 was an error. In consequence, the staff utilized the same number of individuals for the Northern Region as for the Southern in making its estimate for intercept records. We adopt the staff estimates as being the more reasonable. The difference between the staff and Pacific is \$778,000.

Transfer to Construction -- Account 624

The amount from Account 624 for the Southern Region which is transferred to construction [*87] was projected by Pacific to decrease, whereas the staff witness testified that the normal expectation would be for an increase as in the Northern Region. The staff again used 1977 as a base year and increased this credit to an amount \$58,000 higher than Pacific's estimate. We adopt this estimate by the staff as being the more reasonable.

Wage Overlay

As a consequence of the basic estimating differences made by the staff and adopted by us, the wage overlay figure is required to be adjusted and it becomes \$2,136,000 lower than Pacific's corresponding figure.

Lunchroom

The staff witness testified that lunchroom expenses should be \$83,000 lower than Pacific's estimate by reason of Pacific's failure to consider the reduction in the number of traffic operator offices throughout the state. We adopt the staff's estimate as being the more reasonable.

Operator Training

The staff's estimate of Account 627, Training Expenses, is \$6,873,000, being \$300,000 lower than Pacific's estimate. Here Pacific projected sufficient funds to provide a one-week supplemental training course for each of the 5,500 individuals in the Northern Region. The staff believes that the year 1978 [*88] should be regarded as typical, and in that year Pacific allowed funds for the training of only 4,524 individuals. We believe the staff's estimate of this expense to be the more reasonable and adopt it.

Printing and House Services

The staff's projection for Accounts 629 and 630, Central Office Printing and House Services, is \$212,000 less than Pacific's projection. The basic difference in these estimates by the respective parties is that Pacific employed an estimate of 10 percent increase per annum whereas the staff used 7 percent as being more reflective of the growth rate in prior years. We believe that the staff's estimate is the more reasonable and adopt it.

Miscellaneous

A further ostensible difficulty in communications between the staff and Pacific occurred with respect to Account 631, Central Office Miscellaneous Expense. There the staff's investigation revealed that this account doubled between 1974 and 1976, increasing from \$6,549,000 to \$12,393,000. Pacific's projection for the test year 1979 is \$15,749,000. While Pacific asserts that this substantial increase was due to data processing charges having accelerated, the staff witness testified that substantiation [*89] for the magnitude and the necessity for the charges in this account were not provided. Given this impasse, the staff witness reduced Pacific's estimate at an even \$10,000,000 being \$5,949,000 less than Pacific's estimate.

Pacific's rebuttal witness, Mr. Morse, testified that the 1974-1976 increases in Central Office Miscellaneous Expenses were caused by the overall increase in the mechanization of the total traffic operation. He points out that Pacific's estimate for the test year shows only an annual increase rate of 8 percent since 1976. Pacific, however, nowhere in the record develops fact and rationale which support the doubling of this item of expense within the two-year period. Accordingly, we accept the staff's estimate of this expense as being the more reasonable and adopt it.

Service Inspection and Customer Instruction

The staff's estimate for Account 622, Service Inspection and Customer Instruction, is \$2,299,000 less than Pacific's estimate.

With regard to this account, the staff witness relied heavily upon testimony of Pacific's witness in an earlier case (A 55492) to develop a ratio of operator-handled calls subject to administrative monitoring. Using this [*90] as a base, the staff developed an expense difference of \$1,218,000 for the operation of the service inspection organization for 1979, including a reevaluation of the number of supervisors and clerks to be employed.

Pacific's rebuttal testimony by Mr. Morse adequately explains the function of service inspection within the Pacific system, but does not rebut the staff witness' developed percentage predicated upon Pacific's testimony in the prior case. While we acknowledge we are dealing throughout with estimates, our preference is to rely as much as possible upon direct knowledge rather than upon positions taken or testimony given by parties in prior proceedings. Accordingly, we adopt Pacific's higher estimate of this account as being the more reasonable.

Subaccounts 622-21, 26, 31, and 36

In Subaccounts 622-21, 26, 31, and 36, for the Southern Region, the staff made a comparison of Northern and Southern Region personnel. The staff points out that 92 instructors in northern California handle a business volume which is only 10 percent smaller than the volume handled by Southern Region operators who number 154. Pacific's rebuttal evidence establishes that the correlation assumed [*91] in the staff analysis is in fact lacking. We thus find that the estimate of Pacific is the more reasonable and we adopt it. Pacific's estimate is \$118,000 more than that of the staff.

Wage Overlay Adjustment (payroll taxes, insurance and vacation expense variables)

In accordance with the views expressed above, we likewise do not adopt the \$178,000 adjustment proposed by the staff for wage overlay.

Automated Coin Telephone Service (ACTS)

The staff has recommended an adjustment of \$11,415,000 to traffic expense by reason of automated coin telephone service (ACTS). The staff witness testified that during the investigation phase of this proceeding he reviewed the automation development for coin toll service known as ACTS. This automation is designed to mechanize operator functions and result in substantial savings in Pacific. The staff points out, in its prepared testimony, that Pacific's five-year plan for 1973-1983 shows capital costs for ACTS of \$8,000,000 and annual savings of \$14,269,000. The staff, noting the handsome return on investment, being more than 100 percent in the first year, took the view that \$6,400,000 in capital costs, included in the test year rate [*92] base, and \$11,415,000 in annual savings should be included in the test year. The fact is that ACTS has not and will not be implemented by Pacific during the test year.

With puzzling inconsistency, Pacific contends that the imputed cost savings argued for by the staff should be disregarded because this Commission, in Decision No. 88232, issued on December 13, 1977, requested a feasibility study of ACTS, and, in any event, ACTS will be implemented in the 1981-1983 time frame. It is obvious that either the study requested by the Commission is not necessary or the decision by Pacific to implement ACTS in a period beyond 1979 is premature.

The staff fills this void by testifying that it learned from sources outside Pacific that ACTS had been installed in Phoenix, Arizona, in 1977 and is currently in operation. Therefore, contends the staff, no feasibility study is required and Pacific should have acted to implement ACTS at a period at least earlier than the 1979 test year.

In view of all the circumstances, we conclude that the staff has not carried its burden of proof that the ACTS adjustment should be made in this case, and we do not adopt it. However, the staff did make a persuasive [*93] showing for implementing ACTS ahead of Pacific's 1981-83 time frame. The record does show that there are now

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several such systems in operation with other Bell System operating companies. We are of the opinion that Pacific should not lag behind other companies in implementing this cost-savings system. Accordingly, we will order Pacific to accomplish significant implementation of the ACTS system in California by the end of 1981.

Commercial Expense

The staff's estimate of commercial expense for 1979 is \$375,255,000 as compared to \$472,207,000 submitted by Pacific, a difference of \$96,952,000. The areas of difference are as follows:

Utility Exceeds Staff

(Dollars in Thousands)

Advertising:		
Phone Center	\$1,237	
Service Information	320	
Building Signs	77	
Automated Dialer	137	
"The System is the Solution"	1,835	
Long Distance	1,998	
National Residential Ad	189	
Salaries	198	
Directory Assistance	1,534	
Other	<u>715</u>	
Balance		\$8,240
Phone Power Program		2,461
General		875
Local Commercial Operations:		
Computer Output	\$5,205	
Business Office	4,330	
Automated Payment	2,172	
Phone Center Stores	2,595	
Centralization	860	
Residential Service Center	<u>468</u>	
Balance		15,630
Directory:		
National Yellow Pages	\$2,546	
Page Design	1,500	
Photo Composition	2,000	
Mechanization	<u>6,026</u>	
Balance		12,072
Teleprocessing Adjustment		<u>57,674</u>

Utility Exceeds Staff(Dollars in Thousands)

Total Commercial Differences	\$96,952
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For the reasons that follow, we adopt the staff's view on the following
issues and Pacific's view on the balance:

Utility Exceeds Staff
(Dollars in Thousands)

Advertising:

Building Signs	\$77	
Automated Dialer	137	
National Residential Ad	189	
Directory Assistance	1,534	
Other	715	
Balance		\$2,652
Directory:		
National Yellow Pages		<u>2,546</u>
Staff's view adopted		\$5,198

[*94]

Advertising

The staff's estimate of Account 642, Advertising, is \$6,529,000 and is \$8,240,000 less than Pacific's estimate of \$14,769,000, a difference of 126.2 percent.

We discuss each category of advertising expense in the order presented.

Phone Center

Pacific's projection for Phone Center advertising expenses is \$1,484,000, and the staff recommends that five-sixths of that projection be disallowed as unreasonable. The staff's view is predicted upon Pacific's estimate being for an additional 30 new Phone Center stores in 1979, whereas, according to the staff, Pacific's more recent view calls for only 5 stores. The adjustment is computed on the basis of the number of new stores in Pacific's estimate.

Throughout this proceeding, Pacific has required precision in language from the staff and interested parties with respect to data requests. The record shows that Pacific has required those soliciting information from it to turn square corners in obtaining data. What is asked for imprecisely is not given. With respect to the Phone Center advertising budget, the staff witness requested the number of new "locations" and was given the number of new "locations". What **[*95]** the staff witness really required, however, was the number of Phone Center "conversions" scheduled for 1979, the larger number upon which Pacific's estimate of advertising expense is based. Having failed to give a full and complete answer which would perhaps have dissuaded the staff witness from making the advertising recommendation with respect to Phone Center, Pacific was required to present rebuttal testimony and now claims that the staff witness "misunderstood" its response. While we believe that the record demonstrates that

the staff witness was led into error by Pacific's overly precise response to a general data request, we nonetheless must view the facts as they are ultimately developed on the record. In this instance, we believe that the staff adjustment should not be adopted, and that Pacific's estimate is fair and reasonable.

We believe that the Phone Center concept is a viable mechanism to increase customer convenience with respect to the telephone system and agree that the services there available should be reasonably publicized.

Service Information

The service information budget is projected by Pacific at \$570,000 as compared with the staff projection of \$250,000 [*96] for this activity, a difference of \$320,000.

The staff's position is that Pacific's estimate duplicates other programs such as Lifeline (\$200,000 per year), Residence Catalog (\$600,000 per year), and Rate Service Charges, (\$270,000 per year), which the staff supports, as well as the directories. Additionally, the staff estimate is based upon a new billing procedure to be inaugurated in the test year by Pacific which will combine the subscribers' bill with service information, effecting a considerable savings in printing costs.

Pacific's witness, Mr. Golightly, testified that the service information messages do not cover the major items singled out as individual projects by the staff. Rather, the service information project includes bill inserts and mass media expenses for:

Optional Residence Telephone Service and similar offerings

Services for the Handicapped

How to get money back if lost in a coin box

How to handle obscene calls

How to teach your child to remember or find his or her phone number

How to identify a telephone employee who requests admittance to your home

How to avoid damaging buried telephone cables

How to use the phone book and where to find dialing informaton [*97]

The variety of available telephone service in each exchange

Emergency numbers and dialing instructions (localized to each community and in foreign languages wherever required by 5 percent or more of the total population)

Offers of copies of the Residence Catalog and a special booklet containing government listings and emergency numbers -- in each community (again, in foreign languages wherever required by 5 percent or more of local population)

With respect to the savings estimated by the staff of printing costs, Pacific's witness testified that the new procedure will be implemented in mid-1979, but there will be offsetting increases in expenses billed as the Accounting Department charges back its additional paper costs and its additional costs required to program computers to do the message printing. In short, contends Pacific, the new billing procedure will be offset by additional expenses.

For the foregoing reasons, we will not adopt the proposed staff adjustment to Service Information Advertising in this proceeding.

Building Signs

The staff has taken issue with the sum of \$77,000 budgeted for designing and constructing building signs on the ground that they should [*98] be more appropriately placed in rate base as a capital expense. We agree with the staff in this specific matter and find that the adjustment of \$77,000 for building signs is the more reasonable approach and it will be adopted.

Automated Dialer

Pacific has budgeted \$100,000 to promote automatic dialers, \$30,000 to promote touch-tone telephones, and \$7,000 in the test year for a building tours program. The staff recommends that the Commission not adopt these estimates, asserting that recent information has indicated that the automatic dialer program has been discontinued, that touch-tone phones are priced below cost, and that the building tours program is promotional in nature. We find that the recommended deletions from the proposed Pacific budget are fair and reasonable and will be adopted.

The system is the Solution

"The System is the Solution" is challenged by the staff as being essentially institutional advertising in nature rather than promotional, as categorized by Pacific. The staff argues that the program does not address itself to any specific products, but rather attempts to project an image of the telephone company as a problem solver and a terminal equipment [*99] supplier.

The staff further testifies that the level of expense for advertising this program is unreasonable and that the ads were of double page type, not providing as much information as the space would allow.

We think the better position is that of Pacific which contends that it is not only entitled, but required by business exigencies, to stimulate response from potential customers of Pacific's terminal equipment and network facilities. In this proceeding, two of the staff witnesses agreed that the deregulation of terminal equipment might well be in the public interest and we accordingly view Pacific's business advertising program as a fair and a reasonable estimated expense for the test year and we adopt such estimate.

In approving Pacific's advertising expense in this regard, however, we do not wish to suggest that we approve Pacific's assertion in its brief that Pacific's estimates of future expenses are somehow inviolate. They are not. Pacific must, in every case, carry the burden of proof.

Long Distance

With respect to long-distance advertising, the staff proposes a disallowance of \$1,998,000 from Pacific's projected advertising budget. The staff testified [*100] that its review shows Pacific's evidence, that advertising increases toll revenues far above the cost of the advertising, is inconclusive. Thus, the staff made its own independent market survey of 120 subscribers to determine their reactions to long-distance stimulation advertising, the results of such survey leading to the proposed disallowance here discussed.

We believe Pacific to be correct in asserting that no single study may perfectly quantify relationships between advertising investment and revenue increases over forecasts, but there may be a convergence of data which, if taken together, provides assurance that advertising is a key element in nourishing growth in toll revenue and that such revenue has been well above what was anticipated with the advertising.

Having in mind the continuing controversy with respect to the degree, if any, to which long-distance telephone revenues contribute to Pacific's operating profits, and the desired current stimulation in network efficiency through greater off-peak usage, we believe that Pacific's estimate for long-distance advertising is fair and reasonable and will be adopted in this proceeding.

National Residential Ad

National [*101] advertising expense relating to residential advertising were examined by the staff and their approval recommended only as to the 1978 level. The staff testified that the reason for its recommended disallowance of \$189,000 in this expense was predicted upon Pacific's being unable to develop an appropriate

analysis of the programs projected in 1979 for staff review. The staff recommended allowance is predicated upon inclusion of this advertising expense in any future GE 100 cost-based tariff offerings for decorator phones. We agree with the staff in this regard and the proposed disallowance will be adopted.

Salaries

Pacific's projection of salaries charged to Account 642 is unclear according to staff testimony. The staff has been unable to reconcile a projection in Pacific's exhibit sponsored by Mr. Bennett of the amount of \$771,000 and the working papers furnished to the staff which fixed that amount at \$629,000. The staff's estimate for wages and salaries charged this account is \$198,000 less than Pacific is prepared to accept. While we acknowledge that the difficulties encountered by the staff in tracking the work function of individuals leads to vexing problems in its [*102] work, we nevertheless have been presented with no facts which persuade us that the adjustment which Pacific has made to Mr. Bennett's estimate should not close the matter. We accordingly will not adopt the additional salary adjustment proposed by the staff in the amount of \$198,000.

Directory Assistance

The advertising expense of \$1,538,000 projected for Pacific's directory assistance program is recommended for disallowance by the staff on the grounds that Pacific decided in early 1978 not to pursue the program.

This matter has been discussed earlier in this opinion with respect to Pacific's assertion that this Commission should not adopt a proposed disallowance where the applicant has been denied the right to present evidence showing that the canceled project was more than offset by projects later approved. In point of fact, Pacific simply abandoned his program in the course of the proceedings either by error or inadvertence. We find the staff position to be fair and reasonable and the budgeted amount for directory advertising will be disallowed.

Other

The schedules supporting Exhibit 149, late filed, show an additional disallowance which nets \$715,000, the staff [*103] being lower than Pacific in this regard. We will accept the staff's adjustment as being fair and reasonable.

Phone Power Program

Phone Power is Pacific's advertised offer to subscribers of an evaluation of phone usage together with a program of recommended improvements therein on an individual basis.

Pacific has budgeted \$2,461,000 for its Phone Power Program for the test year. The staff has recommended disallowance of this expense as unreasonable because it asserts that the program is a free management consulting service which is in competition with other consulting firms and because no valid profitability analysis of the program has ever been attempted by Pacific. Basically, the staff is justifiably concerned that ratepayers may be subsidizing Pacific's entry into competitive terminal markets.

Pacific, on the other hand, contends that its only goal is to increase toll revenues which, according to Pacific's showing in this proceeding, cover over twice their direct embedded costs -- costs which include return on capital, direct maintenance, taxes and all other direct costs involved in providing the service. Pacific contends that the service is not free, but that prospective [*104] users are screened to determine whether provision of the program to them will indeed result in increased toll revenues. Finally, Pacific asserts that based upon its witness Mr. Turk's exhibit in this proceeding, the break-even point for a Phone Power Program costing Pacific \$2.5 million is about \$4.2 million in toll revenue stimulation; Pacific's Phone Power Program will generate more than \$30 million in additional revenues, according to Pacific's evidence.

On balance, we are inclined to accept that Pacific's Phone Power Program as budgeted for the test year is fair and reasonable and it will be adopted.

General

The staff has recommended that \$875,000 in general commercial administration expenses be disallowed because it alleges that Pacific has made no showing to merit the increases it requests in headquarters' personnel. We think that the estimate by Pacific is fair and reasonable in the light of the current sophisticated marketing environment in which Pacific exists, the several tracking of product and service requirements imposed by this Commission upon Pacific, and increase of the headquarters' personnel represents a 6 percent growth rate for the test year.

Local [*105] Commercial Operations

For Account 645, Local Commercial Operations, the staff's estimate of \$196,963,000 is \$15,630,000 lower than Pacific's estimate. There are six proposed adjustments within the ambit of Account 645.

Computer Output

Pacific has inaugurated a new microfilm system titled "Computer Output Microfilm for Business Offices" (COMBO). The staff has reviewed the program and obtained productivity increase estimates from Pacific which varied from 7.7 percent to 0 percent. The staff is of the opinion that a productivity increase of 6 percent after the break-in periods is reasonable for the company system-wide, and, upon that basis, recommends a reduction in Pacific's estimate of computer output expense of \$5,205,000.

While the issue is not without doubt, we believe Pacific's testimony that a 6.5 percent productivity increase was included in its October 1977 budget for 1979 and that to adopt the staff's adjustment would result in a double count of the estimated expense savings. We find Pacific's estimate to be the more reasonable and adopt it.

Business Office

Pacific has a system titled "Business Office Centrex/Universal Call Distribution" which is being installed [*106] in all business offices which routes calls directly to the service representatives at the first available position. The staff estimates that a productivity increase of 5 percent is reasonable for the institution of this service and, therefore, recommends an expense reduction in the amount of \$4,330,000 for the test year.

Pacific's testimony with respect to Business Office Centrex/Universal Call Distribution is that there will be no impact of that system on commercial productivity. While Pacific admits that there are estimated savings for PBX operators in the use of the subject system, it sets forth that the evidence shows that such savings were included in Pacific's October 1977 budget for 1979. We believe that the evidence is as Pacific has stated it and will not adopt the proposed business office adjustment.

Automated Payment

Pacific has a program titled "Automated Payment and Reporting System" (APARS). This system is an interactive on-line system of record storage, retrieval and payment processing. The staff contends that the capital investment for this system has been made in 1978 and that the company projects that it will eliminate 183 jobs, approximately, system-wide. [*107] The staff contends that no recognition has been given to these savings in the 1979 estimate and recommends an expense reduction of \$2,172,000.

Pacific counters that it had tentatively schedule implementation of APARS in 1979 but that force savings in that year would have been offset by development, capital and expense costs, according to the evidence. Further, the record shows that Pacific does not plan to implement APARS during the test year because of system design problems. For the foregoing reasons, we will not adopt the staff reduction for APARS savings.

Phone Center Stores

The staff recommends an expense reduction of \$2,595,000 through the implementation of Phone Center Stores and modular jacks which reduce the transaction time between service representatives and subscribers on service orders. The staff evidence is that it is inevitable that the average transaction time will accordingly be reduced, and it is alleged that Pacific has not made an adjustment for such reduction. The staff recommends the reflection in the test year of a productivity increase of 3 percent.

Pacific's rebuttal witness, Mr. Woodrell, testified that the total transaction time will increase [*108] rather than decrease in the Phone Center environment because additional functions of serving the customer are provided. These include, according to the witness, telephone set assembly and demonstrations, prepared instructions, directory distribution, and "bagging" of orders. We believe that the evidence on this issue does not support disallowance of expense by reason of Phone Center Store productivity improvement.

Centralization, Residential Service Center

The staff has recommended the disallowance of \$1,328,000 of commercial expense on the grounds that conversion of existing small local offices to centralized Residential Service Centers (RSCs) and Phone Center Stores, as well as other RSC operational changes, would make Pacific's operations more efficient. We do not find a persuasive rationale in the staff's presentation to dissuade us from adopting Pacific's estimate for these expenses as being fair and reasonable. The staff adjustment of \$860,000 and \$468,000 for centralization of residential service centers is, therefore, not adopted.

Directory

The staff's estimate for directory expenses is \$99,578,000, being \$12,072,000 lower than Pacific's estimate. The expenses [*109] at issue in the directory category are four: national yellow pages, page design, photo composition, and mechanization.

National Yellow Pages

The staff recommends a reduction of \$2,546,000 by reason of the exclusion of all expenses associated with former national yellow pages personnel, said function being discontinued by Pacific commencing at the beginning of test year 1979. The staff evidence is that there were 134 people employed in the national yellow pages department in 1977 and these personnel have been shifted to other sales departments and other operations regardless of need. Pacific responds that the availability of trained people from the former national yellow pages sales program provided an opportunity to build up the sales effort at minimum cost and profitably generate more directory advertising revenue. Contrary to the staff allegation, Pacific's witness testified, all of the former national yellow pages sales employees were placed in productive, profit-making jobs.

We believe that Pacific has not carried its burden of proof with respect to the elimination of all expenses associated with former national yellow pages personnel.

While the conclusion of Pacific's [*110] witness may be correct, both the staff and the Commission are left to view 134 employees whose work has been discontinued prior to the test year. We will accordingly adopt the national yellow pages reduction in directory expense as just and reasonable.

Page Design

The staff recommends a reduction of \$1,500,000 in test year directory expenses by reason of Pacific's intended conversion of all yellow page directories from the present four-column design to five-column design. However, Pacific's evidence shows that the proposed conversion will not take place until January 1, 1980, beyond the test period. Accordingly we will accept Pacific's estimate of directory expenses with respect to page design as being fair and reasonable and it will be adopted.

Photo Composition

The staff recommends reduction of directory expenses by \$2,000,000 in the test year, being the cost savings associated with the recent change in the manufacturing procedure of directories wherein Pacific is switching from lead composition printing to photo composition. Rebuttal testimony by Pacific, however, as well as its direct showing, demonstrates that the cost savings for photo composition have been adequately [*111] reflected in Pacific's October 1977 view of the test year. The staff's recommended adjustment will therefore not be made.

Mechanization

The staff recommends that directory expenses be reduced in the amount of \$6,026,000 by reason of the fact that Pacific's "mechanization conversion account" shows a balance of \$8,110,000 for 1979 although the mechanization was scheduled to be completed prior to the test year. The staff asserts that the mechanization account charges are capital costs, have been recovered, and should not be again charged to the ratepayers.

Pacific's witness, Mr. Dekker, testified that mechanization expenses are not truly non-recurring or capital costs but are ongoing expenditures properly classified as operating costs. Accordingly, we will not adopt the proposed staff adjustment for mechanization expenses.

Teleprocessing

A great deal of investigatory and hearing time was devoted to the staff's efforts to determine the suitability of recommending an adjustment for teleprocessing equipment for Pacific. At the root of the staff's difficulty with the proposed adjustment for teleprocessing in the amount of \$57,674,000 is Pacific's recalcitrance to yield [*112] up to the staff investigator information readily at hand or readily available to it from American.

During the investigative phase of this proceeding, the staff discovered that a teleprocessing operation is being planned by American for all the subsidiary companies. Full implementation of the plan is not expected to take place until 1986.

The staff learned that other utilities are converting, or have already converted, to direct teleprocessing usage by service representatives. Accordingly, Pacific was requested to provide the cost of a teleprocessing system for all of its business office service representatives, the projected savings, and the projected increase in force productivity. The response to the data request received on June 21, 1978 stated, in effect, that Pacific is taking initial necessary steps towards positioning itself to completely automate its business offices for teleprocessing between 1983 and 1985. It was stated that no special study had been made regarding teleprocessing of the business offices. Such a study, it was asserted, would be both time-consuming and costly and was not then contemplated by Pacific.

The staff made an independent investigation, without [*113] assistance by Pacific, and learned that five telephone entities were, in fact, using a teleprocessing system similar to that being used by Pacific Gas and Electric Company in California. The staff accordingly went forward and presented its proposed adjustment on the grounds that Pacific was imprudent in not making a timely conversion to teleprocessing equipment. During the course of hearings the staff witness, Mr. Strahl, amply and eloquently developed on cross-examination by Pacific's counsel that the proposed staff adjustment was made independently of any assistance by Pacific, was competently prepared, and was reasonable.

On rebuttal, Pacific produced its witness, Mr. Taylor, who, over the objection of staff counsel, was permitted to show in detail that Pacific's studies looking toward teleprocessing commenced at least as early as 1975, were ongoing in nature, and would be implemented through American at a later time.

Staff counsel's motion that the late evidence produced on rebuttal, which evidence was available at the time of the staff investigation, be excluded from evidence was denied by the ALJ with the understanding that the Commission might desire to reverse his decision. [*114]

Evidently belatedly recognizing the merits of the staff's position, Pacific, in its opening brief, falls back to legal principles, again to the effect that the Commission may not substitute its managerial judgment for that of the utilities being regulated.

There appears to be little question but that teleprocessing innovations are at least due, if not overdue, at Pacific. It is also apparent from this record that Pacific did not pursue use of IBM or other outside firms to accomplish early installation of teleprocessing with attendant cost savings. Instead it elected to await Bell System's "in house" development.

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The staff made an impressive showing for an adjustment to Pacific's commercial expenses in the amount of \$57,674,000 in reduced expenses. This estimated reduction in expense would have been realized by Pacific had the recommended teleprocessing system been in operation for the calendar year 1979 test period.

However, the fact remains that teleprocessing is absent for Pacific in the test year, and we will not adopt the proposed staff adjustment.

We will, however, require Pacific to implement a teleprocessing system for its service representatives no later than **[*115]** December 31, 1982 and to make a complete showing in its next general rate case of its teleprocessing schedule, including plant expense, force effects, and estimated cost savings.

Balance General Office

The balance of general office expenses after revenue accounting, where no difference exists, is estimated by the staff at \$178,939,000 being \$732,000 below Pacific's estimate of \$179,721,000, as follows:

Utility Exceeds Staff

(Dollars in Thousands)

Balance General Office:		
PBX Inventory		\$ (196)
Antitrust Activity		342
Legislative Advocacy		68
Managers' Visits		26
Citizenship Activities		161
Abandoned Projects		1,040
Treasury Department		196
Law Department		(1,206)
Other General Office		<u>301</u>
Differences		<u>\$732</u>
PBX Inventory	\$ (196)	
Antitrust Activity	342	
Citizenship Activities	161	
Law Department	<u>(1,206)</u>	
Staff View Adopted		\$ (899)
Pacific's View Adopted		<u>1,631</u>
Total Differences		<u>\$732</u>

(Red Figure)

Law Department

The staff estimate of \$7,016,000 exceeds Pacific's estimate by \$1,206,000. The staff witness, Mr. Weissman, reviewed Pacific's estimate [*116] for its Law Department expenses and conferred with the general counsel of Pacific in that regard. The staff estimate, being later in time and employing more current data and analysis, more accurately predicts the volume of legal matters and the level of activity in lawsuits for the test year. We adopt the staff estimate, although higher than that of Pacific, as being fair and reasonable.

Antitrust Activity

The staff recommends an adjustment of \$342,000 representing one-half of the Law Department expenses attributed to the United States Justice Department antitrust actions against the Bell System and Pacific. A similar adjustment was adopted by the Commission in Decision No. 88232.

In our earlier decision, we stated that we would continue to observe developments in the antitrust matters to determine whether it might be necessary to reevaluate the 50 percent used in that decision.

Pacific contends that the proposed disallowance of expense of the Law Department for antitrust activities is different than our earlier treatment of similar expenses charged by American to Pacific through the license contract. We perceive that there is a difference in form, certainly, but not [*117] a difference in substance. It remains speculative as to whether the ratepayers of Pacific or the stockholders of Pacific will benefit most, or at all, through the defense of the Justice Department antitrust litigation. In these circumstances we continue to believe it to be fair and reasonable that 50 percent of the costs of such litigation be allowed as an appropriate charge to the ratepayer and 50 percent be allowed as an appropriate charge to the shareholders. Accordingly, we adopt the staff adjustment as being fair and reasonable.

Citizenship Activities

The staff excluded \$161,000 for citizenship activities because, according to the staff witness, these expenses are not necessary to efficiently operate the telephone company and thus should be a stockholders' expense.

Citizenship activities are described by Pacific as being the company's response to the requirement that Pacific contends it shares with all business to ensure that California, and each of its many communities, offers the best possible climate for the growth of the individual and the fullest development of its employees. Pacific's witness, Mr. J.K. Gilbert, further testified that Pacific is engaged in a [*118] series of programs directed towards involving its employees, at their discretion, in the political environment of the State and community in which they work and live. The emphasis of these programs is participation, not partisan politics, according to Pacific.

It is our opinion that the citizenship activities, so explained by Pacific's witnesses, are not so clearly related to Pacific's business activities as to require our adoption of these expenses in ratemaking matters. We rather believe that the weight of the argument goes to the staff's position and we will adopt the staff's adjustment in this regard.

Abandoned Projects

The staff estimates that \$1,040,000 in abandoned projects should be excluded from operating expenses and charged instead to Account No. 323 Miscellaneous Income Charges, in order to be consistent with the Uniform System of Accounts.

Pacific contends that the contested expenditures are necessary "estimates" made in the ordinary course of business and should properly be charged above the line. The example is given that preliminary local projections of telephone growth, due perhaps to new residential development, suggest the possibility of the need for [*119] the construction of additional telephone facilities in a certain location. Under Pacific's operating procedures, it is argued, a "project" number is assigned and preliminary engineering time is devoted to determining what new plant may be required. This time is charged to the "project". After investigation, the need for construction of additional facilities is not indicated and the "project" is canceled.

While the record does not make clear whether or not the example given by Pacific in its presentation is or is not typical or normal, the record does show that a detailed analysis of the projects involved in the \$1,040,000 proposed disallowance by the staff has not been made.

Further, this Commission in Decision No. 88232 did not adopt the proposed recommendation, stating that it would be difficult, if not impossible, to fairly apply the standards distinguishing a "project" from an "estimate". We believe that the rationale in our earlier decision remains valid and we will not make the proposed staff adjustment for abandoned projects.

PBX Inventory

The staff has added \$196,000 as an expense adjustment for PBX inventory. This adjustment is uncontroverted by Pacific and [*120] we accept it as reasonable.

Treasury Department

The staff estimate of \$6,500,000 for Treasury Department expenses is \$196,000 lower than Pacific's. The staff points out that their estimate is based upon historical expenses and that Pacific's budget estimates in this account for 1976 and 1977, compared to actual expenses, were higher by \$3,167,000 and \$179,000, respectively. The staff uses a trending method to make its estimate for the test year.

We note that the difference in Pacific's estimate for 1976 and 1977 showed a very substantial movement toward the prediction of actual expenses. We accordingly believe that the Treasury Department estimate by Pacific is more reasonable for the test year and we will not adopt the proposed staff adjustment.

Legislative Advocacy, Managers' Visits, Other General Office

The differences between the staff and Pacific with respect to Legislative Advocacy, Managers' Visits, and Other General Office expenses are shown in the table which precedes our discussion of the balance of General Office Expenses. Both the staff and Pacific made adjustments to expenses which would eliminate expenses associated with these items consistent with prior [*121] Commission decisions. Our review of the record does not persuade us that the staff's proposed further adjustments to Pacific's estimates in the foregoing categories should be made. We will, therefore, adopt Pacific's estimates as being fair and reasonable for the test year.

Operating Rents

Operating rents basic estimate by the staff is \$33,875,000 being \$347,000 greater than Pacific's estimate of \$33,528,000.

This staff adjustment results from its review of Pacific's estimate at a later point in time, thereby including a more accurate projection of future rental requirements. We accept the staff estimate as being the more reasonable.

General Services and Licenses

The staff estimates general services and licenses at \$52,798,000 as compared to \$90,515,000 by Pacific, a difference of \$37,717,000.

However, since the close of the record in this case, that portion of Application No. 55492, filed February 13, 1975 and Case No. 10001, filed November 12, 1975 dealing with American's license charges to Pacific has been decided in Decision No. 90362, issued June 5, 1979. In accordance with the stipulation between staff and Pacific herein, we will apply the percentage disallowance [*122] we have recently found to be reasonable to the dollar amounts of license contract expense estimated by the staff in the instant case. The result is the allowance of \$56,418,000 for total California operations.

We adopt the staff's estimates and methodology as shown in Tables III and IV which follow.

Decision No. 90362 will be modified to confirm its refund order and to provide that future rates contemplated by that decision are those adopted herein to become effective contemporaneously with the tariffs in Appendix B of this decision.

TABLE III

American Telephone and Telegraph Company

ADOPTED LICENSE CONTRACT EXPENSE

(\$000)

<i>Line</i>		<i>1979 Staff</i>	<i>Percent</i>	<i>Disal-</i>	
<i>No.</i>	<i>Description</i>	<i>Estimate</i>	<i>Disallowed</i>	<i>lowance</i>	<i>Adopted</i>
		(1)	(2)	(3)=(1)x(2)	(4)=(1)-(3)
1	AT&T General Departments	\$49,866			
2	Amortization of Moving Expense	<u>47</u>			
3	Total AT&T General Departments	49,913	27.77%	13,860	\$36,053
4	Bell Labs	34,636	48.29	16,726	17,910
5	Investment	37,738	31.42	11,857	25,881
6	Add Madison Ave. Property \$18,190 x 9.5233%	<u>1,732</u>			<u>1,732</u>
7	Total Investment	39,470			27,613
8	Rate of Return	8.843%			9.73%
9	Return on Investment	3,490			2,687
10	Federal Income Tax & IC Net	1,580			236
11	Royalties	(468)	-	-	(468)
12	Disallowance for Product & Investor Relat- ed Activities	\$ (36,353) ¹			
13	Licensed Contract Expense (3) + (4) + (9) + (10) + (11) + (12)	52,798			56,418
		(Inverse Figure)			

[*123]

TABLE IV

American Telephone and Telegraph Company

ADOPTED LICENSE CONTRACT EXPENSE TAX CALCULATION

¹ Amortization of Moving Expense included herein.

(\$000)

<i>Line</i>	<i>Description</i>	<i>Amount</i>
<i>Investment Calculation</i>		
1	Return on Investment	\$2,687
2	Revenue Require [(1) + 0.54]	4,976
3	FIT at 5.12% [(2) x 0.0512] ¹	255
<i>Interest Calculation</i>		
4	Total Investment	27,613
5	Interest Factor [(4) x 0.0158] ¹	436
6	Revenue Requirement [- (5) x <u>0.46</u>] 0.54	(371)
7	FIT at 5.12% [(6) x 0.0512]	(19)
8	Net FIT [(3) + (7)]	236

Inverse Figure

Balance of Other Operating Expenses

The balance of other operating expenses are estimated at \$21,449,000 by Pacific and at \$20,632,000 by the staff, a difference of \$817,000 which is made up as follows:

Utility Exceeds Staff	(\$000)
Other Operating Expenses:	
Dues and donations	270
Insurance	598
Charged to construction	<u>(51)</u>
Staff View Adopted	<u>\$817</u>

(Red Figure)

Dues and Donations

The staff's estimate of dues and donations is \$270,000 less than that of Pacific, a difference of 48.7 **[*124]** percent. The staff excluded \$387,000 for dues, donations, and contributions, \$77,000 for in-house coordinators for charitable works, and \$90,000 for pensions and benefits related to executives on loan engaged in charitable work.

Pacific excluded \$284,000 for dues, donations, and contributions.

The staff's higher estimate of dues, donations, and contributions to be excluded is based upon an analysis of the actual 1977 expenses of Pacific and projected into test year 1979. In-house coordinators and executives on loan for charitable works are not available to perform their usual work, the staff points out, and therefore, these expenses should not be borne by the ratepayer. Further, the staff indicates that Pacific charges the salaries and expenses of executives on loan to a nonratemaking expense account and suggests that the related pensions and

¹ Factors used in A-55492.

benefits should be likewise charged below the line. We find the staff's recommendations to be fair and reasonable and adopt them in this proceeding.

Insurance

The staff estimate of \$1,073,000 for insurance expense in Account No. 668 is \$598,000 less than the utility estimate. The proposed staff adjustment is made in order to reflect [*125] the cancellation of some liability policies since Pacific's estimate for this proceeding was prepared. We agree with the rationale of the staff and adopt this equitable adjustment of insurance expense in this proceeding.

Charged to Construction

The sum of \$51,000 charged to construction shown in the first paragraph of this section on Balance of Other Operating Expenses is a reflection of adjustments which we have adopted and discussed in other sections of this opinion.

Relief and Pensions

Relief and Pensions are estimated at \$443,555,000 by Pacific as contrasted with \$383,173,000 estimated by staff, a difference of \$60,382,000.

It is not feasible to isolate the various elements making up this substantial difference between the staff and Pacific on the subject of relief and pension plans for the reason that substantial differences from the original staff and company's estimates become reconciled in accordance with the several decisions we make in the course of this opinion which affect the labor component in Pacific's operating expenses. We will, accordingly, discuss the several elements without specifically enumerating and quantifying the adopted total California figure [*126] for relief and pensions in the sum of \$415,648,000, together with its intrastate component of \$322,626,000.

The most important item, quantitatively, in the category of Relief and Pensions is the recommendation by the staff that the interest rate assumption for Pacific's plan be increased from 5 percent to 5 1/2 percent and that the wage assumption inherent in the plan be increased from 3 1/2 percent to 4 percent.

The original staff adjustment for pension expense reflected a basic accrual payroll estimate prepared by the staff, an adjustment to accrual payroll to reflect the various staff expense adjustments, a pension accrual rate reflecting later information than that used by Pacific, and a downward adjustment to the accrual rate to reflect the effects of a higher interest rate assumption in the pension plan.

The adopted pension plan expense accepts the staff's basic accrual payroll estimates modified only for those expense adjustment items discussed under other headings and the accrual rate developed by the staff using the latest information available. The accrual rate adopted herein excludes any modification because of the proposed interest rate and wage assumption increases [*127] recommended by the staff.

Thus, the amount of pension plan expense is \$8,401,000 below the amount estimated by Pacific and \$30,091,000 above the original staff estimate. The latter increase reflects a payroll increase of \$13,598,000 by reason of our not accepting certain staff expense adjustments discussed elsewhere in this opinion and our disapproving \$16,493,000 in adjustments by reason of the staff's proposed interest rate assumption for the pension plan.

Pension Fund Interest Rate Assumption

In Application No. 51774 the staff recommended that each actuarial factor should stand on its own merit in the method utilized by Pacific in developing its Service Pension Fund and Death Benefit Fund accruals.

The Commission adopted the staff accountant's rationale in Decision No. 80347, dated August 8, 1972, wherein we stated:

"... each of the factors which go toward determining pension fund accruals should be evaluated as accurately as possible rather than have offsetting infirmities cancel out to a reasonable end result."

Pacific uses an actuarial cost method, generally known as the aggregate cost or remaining-cost method in determining its pension fund accrual. This method [*128] is designed to contribute a level percentage of the basic payroll of current active employees during their remaining working lives so that the contribution, together with the present trust funds and future investment earnings on these amounts, will be sufficient to pay: (1) future pensions to current active employees; (2) employees separated from service with a right to a deferred pension; (3) retired employees; and (4) future death benefits for current active and retired employees.

The following actuarial assumptions developed from the combined experience of the Bell Systems' telephone companies are used by Pacific to accomplish these results:

Wage Scales

Mortality Rates of Active & Retired Employees

Disability Retirement Rates

Service Retirement Rates

Qualified Beneficiary Ratios

Separation Rates

Survivor Options

Interest Rate (long-term average rate of earnings on the pension fund)

These actuarial assumptions are reviewed in Pacific's annual actuarial study and, when appropriate, are either changed or deleted.

The staff accountant analyzed the reasonableness of the actuarial interest rate assumption analyzed the reasonableness of the actuarial interest rate assumption [*129] independent of the other seven factors which contributed to the determination of the Pension Trust Fund accrual rate. The staff witness determined the estimated yield of the various types of assets held by the Pension Trust Fund of Pacific as of December 31, 1977 to be 5.62 percent.

The witness further computed that the Fund's actual earnings experience for the past 19 years has been 5.74 percent whereas Pacific used a far lower interest rate during this period. For example, a 3 percent actuarial interest rate was used from 1958 to 1962; 3.5 percent from 1963 to 1971; and 5 percent from 1972 to the present time. The staff recommends that the 5 percent rate be changed in the test year to 5.5 percent.

During the presentation of rebuttal evidence by Pacific to the proposed increase in the Pension Fund earnings rate, it developed that Pacific was placing reliance upon a study developed in 1972 by American, which oversees the pension funds for all of its subsidiaries, that was the basis for changing the interest rate from 3.5 percent to 5 percent. This study, termed the "Blue Book" by Pacific's witness, was not delivered to the staff in response to any data requests and came as [*130] a surprise to the staff at the time of Pacific's rebuttal presentation. While the timely exchange of this document with the staff would have doubtless saved substantial time of the staff witness, substantial record time in cross-examination, and was requisite to any concept of fair play in the discovery process, we will not adopt the staff's recommendation that the proposed adjustment be deemed adopted, absent our conviction that the merits of the proposal require such adoption. This is not our view.

While Pacific claims that the adoption of the staff witness' recommended change in the earnings rate would be in violation of the Employee Retirement Income Security Act of 1974 (ERISA), [29 U.S.C., Section 1001](#), etc., we find such contention to be wholly without merit. ERISA merely provides that the fund trustee establish and maintain

actuarial assumptions which represent the Enrolled Actuary's best estimate of anticipated experience under the plan. Obviously, if the Enrolled Actuary agreed with the staff witness, there would be no violation of the legal requirements for federal tax recognition of Pension Fund contributions.

However, Pacific did present Enrolled Actuaries to testify [*131] in support of the admittedly conservative earnings percentage utilized by American and, hence, Pacific in determining payroll contributions to its Pension Funds. It must be added, in addition, that the basic premise of the actuaries differs markedly from that of the staff witness, and we are persuaded that the actuaries take the more reasoned approach.

The actuaries value the Fund's composition and experience over at least a 30-year period. They look forward 30 years to determine the needs of the Fund and they look backward 30 years to determine the anticipated future earnings of the Fund. Their actuarial philosophy is well set forth by Pacific's witness, Mr. Rex Sinquefield, inappropriately presented as a rate of return witness.

Accordingly, we will not adopt the staff's proposed adjustment.

Savings Plan

With respect to the component in relief and pensions having to do with the cost of Pacific's savings plan, both the staff and Pacific employed the same earnings rate and differed only to the extent that each of the parties' estimate of payroll differed. We have modified the original difference between the parties to reflect the several decisions we have reached affecting [*132] Pacific's saving plan in the course of this option.

Dental Plan

The dental plan of Pacific constitutes another instance where the actual rate of the plan for 1978 differed substantially from the estimate given by Pacific. The actual dental plan rate for 1978 decreased from 1977 while Pacific estimated an increase in such rate. The staff's reasoning is, of course, predicated upon the later time frame in which it was enabled to view events. The staff's estimate for test year 1979 is predicated upon actual plan experience in 1977 and 1978 and we adopt the staff's estimate for the test year as being more reasonable.

Extraordinary Medical Expense

Extraordinary medical expense was linked to basic medical expense and the staff estimate and Pacific's estimate are both predicated upon historical performance. The staff estimate increased 1979 expense by 11 percent over actual 1978 expense, whereas Pacific's estimate increased said expense by 12 percent. We note that several of the staff adjustments are higher than those of Pacific and we deem it appropriate that we adopt staff estimates so as to be consistent herein. Accordingly, we adopt the staff estimate of extraordinary [*133] medical expense.

Basic Medical Insurance

Although the staff and Pacific used different bases for determining the medical insurance rate, the two rates developed only a difference of 0.9 percent, the staff's being the greater. We will adopt the staff estimate in this proceeding in harmony with our policy of consistency and reasonableness.

Group Life Insurance

The staff was able to obtain actual 1978 rates applicable to group life insurance for employees of Pacific. These data were not available when Pacific prepared its estimates for the test year 1979. The rates in 1978, as testified to by the staff, were the same as those established in 1976, the latter year reflecting a 30 percent decrease. The rate has remained constant in the intervening years and the staff has not projected an increase in said rate for the test year. We adopt the staff's position in this regard as being reasonable.

Special Medical Expense

Special medical expense is the counterpart to extraordinary medical expense, but is for retired employees rather than Pacific's active force. Both the staff and Pacific used the same methodology in determining estimates for special medical expense as [*134] they did for others of the medical plans, and, consistently, we adopt the staff estimate as being the more reasonable.

V. TAXES AND RELATED ISSUES

Ad Valorem Taxes

Pacific prepared its Notice of Intention to file an application for general rate relief in this proceeding prior to receiving its 1978-1979 fiscal year full market value determination by the California State Board of Equalization and also before the passage of the Jarvis-Gann property tax relief initiative in June 1978. The staff estimates for test year 1979 incorporate the Jarvis-Gann method to compute ad valorem taxes and uses the actual 1978-1979 fiscal year full market value. The Jarvis-Gann initiative provides for a 1 percent tax rate plus an additional percentage amount to pay for embedded debt costs. The staff utilized a tax rate of 1.25 percent times market value in the ad valorem tax computations. This 1.25 percent represents 1 percent tax rate established by Jarvis-Gann plus an estimated 0.25 percent for indebtedness. We adopt the staff's methodology with respect to ad valorem tax as the reasonable method to be employed in this case.

Payroll Taxes

The staff estimate differs from the utility [*135] estimate for payroll taxes by \$5,695,000, or 6.6 percent. This difference is the result of partly offsetting items as follows: (1) Pacific's use of an FICA base of \$18,900 and rate of 6.05 percent in contrast to staff use of \$22,900 and 6.13 percent respectively, the latter amount and rate being changed by Congress late in 1977; (2) a decrease in labor force due to staff adjustments in traffic, marketing, commercial, directory, and advertising, as adjusted herein; and (3) the staff use of a frequency distribution in calculating payroll taxes as opposed to Pacific's percentage of payroll subject to tax. Pacific's methodology was not used because the staff believed its reliability decreased as the magnitude of the base change increased. We adopt the staff's methodology and estimates as being the more reasonable.

State and Local Taxes

The major difference between the staff and Pacific's estimates with respect to local taxes is that the staff estimate of San Francisco payroll taxes was \$91,000, or 3.7 percent, larger than Pacific's. The difference in San Francisco payroll tax was not one of rate but was caused by the differences between Pacific and staff with respect to wage [*136] overlay effects of various adjustments. We adopt the differences in state and local taxes insofar as they correspond to staff-proposed adjustments or estimates which we adopt in this proceeding.

The staff decreased Pacific's estimate of Miscellaneous Other Taxes by \$4,000 because of differences in interpretation of past trends. We adopt the staff estimates.

Removal Expense Estimate

The staff cost of Removal Expense Estimate has been included in excess tax depreciation. This estimate of \$57,350,000 for the test year 1979 exceeds Pacific's estimate by \$9,050,000. The difference reflects the staff's 1979 Plant Retirement estimate of \$408,650,000, which exceeds Pacific's estimate by \$41,646,000. We adopt the staff's estimates and difference in this regard.

Liberalized Tax Depreciation

The staff applied Liberalized Tax Depreciation on a normalized basis for development of the Federal Income Tax with the test year flow-through basis for the California Corporation Franchise Tax (CCFT). For federal income taxes, straight-line depreciation is used in the federal income tax calculation; however, on Pacific's tax return, additional tax depreciation is permitted through the [*137] use of liberalized tax depreciation under the Internal Revenue Code. On a normalization basis, the tax effect of the additional tax depreciation is calculated and placed

in a Deferred Tax Reserve Account, which is deducted from rate base for ratemaking purposes. For CCFT, the state tax depreciation on a liberalized basis is used for ratemaking purposes. We adopt this methodology in this decision.

Investment Credit

In this rate proceeding, the Investment Credit (IC) used for reduction of the federal income tax is calculated on the ratable flow-through method. The IC realized on plant additions since 1971 is amortized on a full year convention over the life of the plant additions.

The staff estimate of \$41,900,000 per amortized IC for the test year 1979 includes a negative \$2,676,000 of investment tax credit amortization for realized IC that was flowed-through by the Commission in a prior rate proceeding. We adopt this methodology for IC in this proceeding.

Interest Allocated from American

The staff recommends that interest allocated from American to Pacific should be treated as an income tax deduction to Pacific for ratemaking purposes. The amount was calculated [*138] to be \$34,313,000 for the year 1979.

We will defer decision upon this issue of imputed interest expense as it is encompassed by Order Instituting Investigation No. 24, presently set for hearing.

Fixed Charges

The staff estimated test year 1979 total Fixed Charges of \$345,374,000. Based on a computation of Pacific's operating and nonoperating plant ratios of January 1, 1975 through 1978 and 1979 estimated, the staff allocated 93.67 percent of the total Fixed Charges expense or \$323,512,000 to Operating Plant. The staff adjusted this amount by a negative \$72,000 for administrative building in Nevada in which Pacific concurs.

The staff's Fixed Charges estimate of \$323,440,000 exceeds Pacific's estimate by \$7,828,000. Fixed Charges are calculated for the expense of long- and short-term debt. Differences are due to different estimates by staff and Pacific as to the cost and amount of long- and short-term debt, and the allocation to Operating Plant.

The staff computed the Fixed Charges estimate using a 1979 average outstanding debt based on the debt and cost structure utilized in the Finance Division's rate of return report. As we adopt the Finance Division's rate of return [*139] report in this proceeding, we likewise adopt as reasonable the Fixed Charges estimate prepared by the staff.

California Corporation Franchise Tax

CCFT is a privilege tax for the right to do business in California. This tax is based on the income of the preceding year. However, for rate-fixing purposes, the Commission has historically computed this tax on a current-year basis consistent with other revenue and expense items.

Pacific's Tax liability for CCFT is not solely dependent upon its California operations. Since it is part of the Bell System, the State Franchise Tax Board has taken the position that its tax liability should be determined with reference to "a Combined Report" of the Bell System. The "Combined Report" makes use of a three-factor formula which determines the relationship of California wages, revenues, and average net tangible property of all Bell System operations in California to the same three-factor formula items for the total Bell System. Because of the effect of using the "Combined Report" three-factor formula method, the utility's tax liability may be greater or less than the statutory rate of 9 percent of its separate taxable earnings in California, [*140] unlike utilities operating exclusively in California, which incur straight 9 percent CCFT tax rate on their separate taxable earnings.

The staff has reviewed, analyzed, and found reasonable Pacific's 10.5 rate for determining its test year liability for CCFT at present rates. Pacific has applied this 10.5 percent CCFT rate for determination of its estimated CCFT at present rates.

Federal Income Tax and Deferred Tax Reserve

President Carter, on November 6, 1978, signed *Public Law 95-600* (Revenue Act of 1978), which provided that the corporate income tax rate commencing with the test year would decrease from 48 percent to 46 percent for taxable income in excess of \$100,000.

The resulting adjusted net-to-gross multiplier of 1.894 is based on uncollectibles at 0.97 percent, State Corporation Franchise Tax rate at 1.25 percent, and Federal Income Tax rate at 46 percent. Pacific has used the 10.5 percent CCFT in its recommended net-to-gross multiplier. We have adopted the adjusted net-to-gross multiplier as recommended by the staff in this proceeding (and employing the methodology as adopted in Decision No. 88232 and prior decisions).

Additionally, the staff computed that [*141] Pacific's deferred tax reserve contained \$40,818,000 in prior credits, based upon the older 48 percent rate. The staff testified that because of the reduction in rate, the excess sum in the reserve should be returned to the taxpayer without Commission action. Accordingly, the staff recommends that the accumulated tax expense dollars be refunded to the ratepayers over a 10-year period in the form of a rate reduction. The Deferred Tax Reserve would likewise be adjusted over the 10-year period. Thus, there would be a ratemaking adjustment of a tax expense reduction each year of \$4,081,800 and a reduction to the Deferred Tax Reserve of \$4,081,800 each year.

Pacific agrees that the ratepayers are ultimately entitled to the benefits of the reduction in the Federal Income Tax rate and contends, essentially, that the normalization of the Deferred Tax Reserve component reflecting such tax rate differential will ultimately result.

We believe that utilization of the 10-year amortization schedule set forth by staff witness Mr. Weissman is preferable to Pacific's proposed treatment. We find the staff's adjustments to tax expense and to the Deferred Tax Reserve reasonable, and will adopt [*142] these adjustments in this proceeding.

Normalization and Rateable Flow-through

Pacific's application is based on the normalization method of accounting with respect to accelerated depreciation and rateable flow-through with respect to ITC. Likewise, the staff's estimates of Pacific's income taxes were developed on a full normalization and rateable flow-through basis.

The staff witness testified that the staff is recommending full normalization and rateable flow-through in this proceeding pending the outcome of litigation. That litigation is now in federal court.

We, accordingly, adopt the methodology employed by Pacific and by the staff in this proceeding with respect to the normalization method of accounting with respect to ITC pending final disposition of said litigation. If the Commission decision relating to the ratemaking treatment of accelerated depreciation and ITC (Decision No. 87838, dated September 13, 1977) withstands judicial review, refunds and further rate reductions will follow.

Order Instituting Investigation No. 23

Order Instituting Investigation No. 33 was filed on December 12, 1978. In said Order Instituting Investigation, the Commission undertook [*143] to reach a decision with respect to the change in income tax rates for corporations from the former 48 percent to 46 percent, effective January 1, 1979. In this proceeding, we have adopted the effective 1979 income tax rate of 46 percent.

In decision No. 90316, issued May 22, 1979, in Order Instituting Investigation No. 33, Pacific and the independent telephone utility respondents were permitted to defer filing of any advice letter rate reductions pending disposition of this proceeding, Application No. 58223. It was there stated that any overcollection in toll revenues from January

1, 1979 would be passed through to the ratepayers in the form of a one-month negative surcharge (credit) applicable to the intrastate message toll charges for that month.

Order Instituting Investigation No. 33 was ordered consolidated with Application No. 58223 and Order Instituting Investigation No. 21 for implementation of rate reductions and revenue credits for overcollections flowing from the Revenue Act of 1978 upon the revenue requirements of Pacific and the telephone corporations listed in Appendix B to Order Instituting Investigation No. 33.

In accordance with the above decision, Pacific [*144] shall compute and submit to the staff for its review and approval a computation of the appropriate amount of negative surcharge to be applied for the month succeeding the date when the rates established by this decision go into effect. Said computation of negative surcharge shall be in accordance with our discussion and order in Decision No. 90136, issued May 22, 1979.

Order Instituting Investigation No. 19

This Commission filed Order Instituting Investigation No. 19 on June 27, 1978 for the purpose of determining the ad valorem tax reductions available to utilities under the jurisdiction of this Commission occurring by reason of the adoption by the people of the State of California of Article XII-A to the Constitution. Tax Initiative Accounts were therein ordered to be established for each utility, including Pacific, which account was to act as a control mechanism to ensure that the differences between 1977-1978 property taxes and 1978-1979 property taxes would be returned to the ratepaying public in the form of a monthly credit. Pacific is currently implementing our decisions in Order Instituting Investigation No. 19.

In this decision, we are adopting actual ad valorem [*145] taxes for the test year 1979. However, since we have included in our test year estimate of revenues the effect of the Proposition 13 adjustment of \$93,651,000, Pacific shall continue the negative surcharge to the ratepaying public. Accordingly, when the rates ordered herein go into effect, it will be necessary for Pacific to review the then-existing status of the Tax Initiative Account and the monthly negative surcharge to insure that neither under-accumulation nor over-accumulation of property tax reductions occur and to provide the Commission staff with the results of said review.

Disallowed Deductions -- Tax Effect

The staff has recommended in this proceeding that all ratemaking disallowances should be utilized by this Commission in determining the actual income tax expense of Pacific in the ratesetting environment.

As with the Staff's proposal with respect to imputed interest expense to Pacific from American, we will defer decision on this issue, as well, until such time as the record is closed in Order Instituting Investigation No. 24. Both of the staff proposals with respect to the treatment for income tax computations are substantial and should be considered upon [*146] a record wherein all appropriate respondents are parties.

VI. RATE BASE AND RELATED ISSUES

Telephone Plant in Service

In this proceeding, we are adopting the staff's estimate of telephone plant in service as adjusted to reflect the several ratemaking decisions affecting rate base which we have made herein. Pacific's estimates for the years 1978 and 1979 are based upon its October 1977 budget and recorded data up to June 1977. The staff had access to recorded data up to June 1978.

The staff, after review of the utility's experience of plant requirements in respect to the number of customers and consistent with the staff estimate of customer growth, believes that the plant additions estimated by Pacific for the years 1978 and 1979 are necessary and should be met in order to avoid any service deficiencies. The staff, in estimating plant in service for the years 1978 and 1979, used as a reference the recorded plant of the beginning of the year 1978 and Pacific's estimated gross additions for the years 1978 and 1979. The staff's estimate of retirements for the year 1979 is based upon the past five years' experience and exceeds Pacific's estimate by

\$41,646,000 before adjustments. **[*147]** We will adopt the staff's estimate of telephone plant in service as set forth in Table II herein.

Property Held for Future Use

The staff and Pacific are in close agreement with respect to Pacific's estimate of Property Held for Future Use for the test year 1979. Pacific, however, has included in its estimate capitalized interest and taxes on land which is held for future use during the time that construction is in progress. The staff disapproves of this adjustment as being contrary to past Commission policy and we concur with the staff's adjustment.

We will accept the staff's estimate of Property Held for Future Use in this proceeding.

Interest During Construction (IDC) and Taxes on Land During Construction

Ordering Paragraph No. 12 of Decision No. 88232 and Finding of Fact No. 54 of that decision provide respectively:

"12. Interest and taxes on land shall be treated for accounting purposes as set forth in Finding 54."

"54. Pacific should be ordered, prospectively, to stop capitalizing interest and taxes on land on which plant is being constructed, and to hold such land in Account 100.3 (for future use) until the construction is completed, at which time it should **[*148]** be transferred directly into Account 100.1 (telephone plant and service). A retroactive application of this method is unreasonable.

The staff's estimate of the aforesaid adjustment is \$991,000 for the test year as opposed to Pacific's estimate of \$962,000. Pacific is not contesting this ratemaking adjustment in this proceeding and we find that the staff's estimate of \$991,000 is reasonable.

However, Pacific is contesting the staff's recommendation that Pacific be ordered to maintain its basic books and records in accordance with this Commission's ratemaking adjustment. Adoption of this accounting recommendation is a clear violation of Section 793 of the Public Utilities Code, according to Pacific, in that Pacific would be required to maintain its accounting records and books in a manner that is clearly inconsistent with the Federal Communications Commission (FCC) Uniform System of Accounts.

In the staff's direct showing with respect to this adjustment, it was recommended that Pacific comply with Ordering Paragraph No. 12 by submitting to the Commission staff for evaluation the journal entries necessary to comply with said ordering paragraph. On brief, the staff recommends **[*149]** that Pacific be required to file an affidavit under penalty of perjury that it is maintaining its accounts as ordered by Decision No. 88232, Ordering Paragraph No. 12. Too, the staff on brief argues that at no time was any evidence offered to demonstrate that compliance with the aforesaid ordering paragraph in Decision No. 88232 actually would be contrary to prescribed federal accounting methods as set forth by Pacific in its opening brief.

By virtue of the above circumstances, we will not adopt the staff recommendations as it appears to be contrary to FCC procedures.

Federal Energy Regulatory Commission (FERC) -- IDC Rate Calculation Formula

The staff recommends that Pacific be ordered to adopt the FERC formula in computing the IDC rate. Utilization of such formula in the test year 1979 would reduce the 1979 weighted average rate base found by the Operations Division by \$1,980,000, being the difference between the 8.5 percent rate used by the Operations Division staff and 7.16 percent recommended by the Finance Division staff based upon the FERC formula.

The IDC formula, as developed by FERC for the calculation of IDC rates for energy utilities subject to its jurisdiction, **[*150]** was designed to create a method which would give recognition to the interrelationship between capital utilized for rate case purposes and the capital components of IDC in a manner that would permit a utility to achieve a rate of return on its total utility operations, including its construction program, at approximately the rate which

would be allowed in a rate case. However, as pointed out by Pacific, the proposed IDC of 7.16 percent is far short of the 9.40 percent rate of return recommended by Mr. Mowrey, the staff witness on rate of return.

We will not adopt the FERC method for Pacific in this proceeding.

Plant Verification

In *Decision No. 88232, 83 CPUC 149, 223*, and Finding Of Fact No. 57 at 83 CPUC 256, the Commission adopted the staff's proposed accounting and rate base treatment for telephone plant inventory loss. The amount at issue in that proceeding was \$9,100,000. The corresponding plant verification adjustment recommended by the staff in this proceeding is \$3,545,000 and the recommendation is predicated upon the same reasoning advanced to the Commission in the earlier proceeding.

In Decision No. 88232 we agreed with the view of the staff that Pacific should [*151] not be entitled to earn a rate of return upon portions of plant which are unaccounted for and presumably nonexistent. We there also agreed that the amortization of such inventory losses over an eight-year period was the appropriate method to use in handling these items.

Pacific has presented no additional facts and its argument with respect to the plant verification adjustment is not persuasive. We find the plant verification adjustment, as proposed by the staff, to be fair and reasonable and we adopt it in this proceeding.

Depreciation Reserve

The major difference between the staff and Pacific with respect to depreciation expense and reserve is the staff's reduction, before adjustment, of depreciation expense in the amount of \$24,662,000 being the differences between the staff's and Pacific's methods of calculating a composite depreciation rate and determining the appropriate weighted average plant in service which the rate is applicable to for the 1979 test year.

This difference reflects adjustments which arise from the different treatment of IDC by the staff and Pacific, the Phone Center adjustment, and the main frame program, the ACTS adjustment, the teleprocessing [*152] adjustment, and the advertising adjustment, all discussed elsewhere in the course of this opinion.

Again, the major dollar differences do not result from differing views by Pacific and the staff as to methodology in determining depreciation estimates, but rather result from the staff's having access to later recorded data upon which to premise its computations of the appropriate plant, depreciation, and reserve balances in the test year. We adopt the staff's estimates as, adjusted for the reasons expressed herein, in this proceeding.

Working Cash

The difference between the staff and Pacific's estimates as to the appropriate amount of working cash allowance is \$40,063,000. The difference reflects adjustments as follows: (1) the staff's lag days for revenue and expenses (except ad valorem tax) are based upon the latest study (1977), which was not available to Pacific at the time of the preparation of this application; (2) the staff's lag days for ad valorem taxes are based on a calendar year rather than upon Pacific's use of a fiscal year; and (3) other ratemaking adjustments discussed elsewhere herein.

We have adopted the staff's estimate of working cash allowance, as adjusted, [*153] as reflective of uniform Commission practice in this proceeding.

Materials and Supplies

The staff's estimate of Materials and Supplies is predicated upon Pacific's past experience in relationship to growth construction expenditures. The basis estimate was reduced by \$1,813,000 for inventory management of PBX and \$668,100 for circuit pack costs as discussed elsewhere in this opinion. We adopt the staff's estimate of materials and supplies in this proceeding.

Transfer of Circuit Pack Costs to Materials and Supplies

Prior to 1977, the staff testified that Pacific charged circuit pack equipment (components of Central Office, PBX, or carrier equipment) to maintenance expense. In 1977 Pacific transferred \$916,772 relating to circuit pack equipment (charged to maintenance expense over a four-year period) from maintenance expense and recorded \$668,100 in its Materials and Supplies Account, and \$248,600 in its Deferred Charges Account. Pacific's justification for this transfer is based upon the adoption of an accounting instruction received from American stating that the cost of circuit pack should be reclassified as Materials and Supplies, and not Expenses, as in prior years. [*154]

The effect of transferring circuit pack costs to Materials and Supplies is to include an additional \$668,100 in rate base upon which Pacific earns a return. The staff disagrees with the above procedure instituted by Pacific because Pacific has already been compensated for the circuit pack costs in prior years through their inclusion in operating expense of prior rate proceedings. The staff recommends that Pacific not be allowed to earn a return on circuit pack costs which have already been provided for through rates in prior years. The circuit pack costs should be segregated from other Materials and Supplies so that these costs can be readily identified.

We find the staff's position with respect to the circuit pack costs reasonable and adopt the adjustment in this proceeding and will require Pacific to properly segregate these costs from other Materials and Supplies.

VII. RATE DESIGN

Introduction

Rate designs were presented by Pacific and the staff. No other parties presented rate design exhibits. Several of the other interested parties did present testimony with respect to Pacific's and/or the staff's proposed rate designs and the underlying cost analyses upon [*155] which the rate designs were based. We shall discuss the testimony of the other interested parties, as such testimony is pertinent to the revisions authorized herein, as we address each of the areas where revisions are authorized.

Pacific and the staff presented rate designs which vary significantly due to the differing revenue requirements upon which each respective rate design is based. Pacific provided a rate design to produce an annual revenue increase of \$469.8 million in the 1979 test year. The staff developed a rate design to produce an annual revenue decrease of \$234.1 million in the 1979 test year. The staff also presented two alternative rate designs to produce a net zero change in annual revenues and a \$200 million increase in annual revenues in the test year.

The revenue requirement upon which we are herein establishing rates and charges requires an overall reduction in annual revenues. We believe, that based on the record in this proceeding, we must give consideration to rate increases for certain competitive services. Also, the remaining Multi-Message Unit (MMU) Service is an anomaly which should be eliminated. Our adopted rate design as discussed below will [*156] provide for increases in competitive services and the elimination of the MMU service within the framework of an overall reduction in annual revenues in the 1979 test year. Other rate revisions including services for the handicapped will also be adopted.

We present a number of rate saving options to Pacific's customers in this decision. We will direct Pacific to publicize these options within the next 120 days with a view to encouraging residential customers to call their service representative to determine how they may benefit most for the new rate structure.

Additionally, Pacific should provide residential customers a continuing consumer advisory service to advise them, on request, as to which rate plan option or options can be expected to provide the least-cost service to the inquirer. Pacific should publicize this service widely, and Pacific shall submit within 60 days of the effective date hereof a detailed plan of implementation of such consumer advisory services, the plan to be subject to Commission approval prior to its taking effect.

Residence Lifeline Service

Pacific and the staff propose revisions in the rates applicable to the number of calls per month over [*157] 30 on residence lifeline service (1MQ). The present rate of \$2.50 per month for the first 30 calls would remain unchanged. Under the proposed revisions a rate of 10 cents per call would be applicable for calls between 30 and 40 per month and a rate of 15 per call would be applicable for calls over 40 per month.

The proposed changes in rates for calls per month in excess of 30 are consistent with our findings in Decision No. 87584 and are reasonable. That decision noted that some modifications of lifeline service to prevent abuse might be warranted and ordered Pacific to make appropriate studies. The results of such studies are reflected in Pacific's exhibits and the rates authorized herein. We shall adopt the staff's proposal as set forth above.

[14] TURN opposes any change in the overtime charge per call on lifeline service. TURN asserts that surcharges are not usage sensitive based on cost/use data. TURN further asserts that lifeline customers are to be penalized for subscribing to lifeline service, and that this penalty is made more onerous by the fact that the 10 and 15 surcharges are not subject to peak and off-peak pricing. It appears to be TURN's objective to [*158] establish lifeline (1MQ) service as the basic grade of service attracting all residence subscribers through the use of a low message rate that would apply regardless of the number of or length of calls made. If that is not its intent, it would be the result of TURN's proposals. However, lifeline service was never intended to be a general-use offering. It was intended to be a minimum service at a minimum justifiable monthly rate to serve those who had very limited calling requirements and who could not afford higher priced service. Lifeline service was originally established by Decision No. 74917, dated November 6, 1968, wherein we noted the service was developed in response to citizens' pleas for "special rates for the elderly poor, the infirm and shut-ins to whom telephone service is essential. . . . To many of them the present minimum monthly telephone bill represents almost three days' food allowance. They are unable to pay more. A call a day is their minimum need." The rates authorized herein continue to meet original objectives of lifeline service.

[15] The position of TURN, which would make lifeline service more attractive in view of the other changes herein, would ultimately [*159] result in destruction of the service as customers gravitated to the most attractive offering. It is obvious that a large growth in lifeline service would result in lowering the utility's overall revenues in the residence classification. In turn, these losses would have to be made up by future residence rate increases. If lifeline service becomes the major service category a substantial portion of the rate increases must fall in that category. It is to prevent this result and to retain the original purpose of lifeline service as a "lifeline" that we are adopting the rates herein.

It should be noted that, presently, when the 30 call allowance per month lifeline service subscriber exceeds the 30 call allowance during the monthly billing period, a message unit charge of five cents per call is assessed for the additional calls. Further, 30 call per month lifeline service is not subject to Single Message Rate Timing (SMRT), which is assessed on other measured services at the rate of one cent per minute of call holding time beyond an initial five-minute period. Imposing the adopted surcharges on calls beyond the allowed first 30 calls is a reasonable balance that offsets the existing [*160] advantage the 30 call allowance subscriber enjoys by not being subject to SMRT. As indicated in prior decisions it is our goal to eventually establish usage sensitive SMRT on all classes of basic exchange service when central office capacity and capability for measuring all service is available.

Although the revisions proposed by Pacific and the staff are very similar, there is a difference between Pacific and the staff as to the revenue effect of the revisions. Since the staff's revenue effect is based on more recent calling pattern data we shall adopt the staff's test year revenue effect of this rate change.

Message Toll Service

Pacific proposes revisions to the message toll schedule which would simplify the schedule and the applicability of message toll rates. Pacific's proposed revisions provide for the establishment of a one-minute schedule for all operator handled messages except coin, establish surcharges which would be applicable to operator handled calls, and reduce the number of toll rate bands. Pacific also proposes to convert the 3MMU and 4MMU Routes to message toll service. The conversion of these MMU Routes to message toll will be subsequently discussed in [*161] conjunction with the staff's proposed Zone Usage Measurement (ZUM) Plan.

The staff proposed revisions to the message toll schedule incorporate a one-minute schedule for operator handled messages except coin, surcharges on operator handled calls, discounts similar to the interstate discounts for evening and night calls, and reductions in the number of toll rate bands. The revised message toll schedule structure proposed by the staff was utilized in each of the staff's proposed rate designs.

We believe that, based on the record, the staff's proposed structure for the message toll schedule has merit in that the proposed structure will simplify the applicability of message toll rates. Considering the overall reduction in annual revenues required, we shall adopt the message toll service revisions proposed by the staff in its alternate rate design to produce an essentially zero change in annual toll revenues. The revenue effect to Pacific is estimated to be a \$200,00 annual reduction.

Single Message Rate Timing Implementation

In Decision No. 83162 as modified by Decision No. 86593 we ordered Pacific to implement business one-party measured service, residence one-party measured [*162] service with a 60-message allowance, and residence one-party measured service with a 30-message allowance. We also ordered the concurrent withdrawal of business two-party flat, residence two-party, and four-party flat rate services. These revisions were ordered for the exchange of Bakersfield, Fresno, Modesto, Riverside, Santa Rosa, and Stockton.

As indicated by the staff, the Commission has not ordered the withdrawal of business one-party flat rate service in these six exchanges. We agree with the staff that business measured service should not be offered on an optional basis with business flat rate service. To offer optional business measured service subject to SMRT would not be consistent as only measured service with SMRT is applicable in the larger metropolitan areas of the state. We shall order the withdrawal of business flat rate services in these six exchanges simultaneously with the implementation of only measured service with SMRT in these exchange to be completed on or before July 1, 1981.

Extended Area Service

In Decision No. 77311 we established the extended area service rate plan for nonmetropolitan areas which in this proceeding has been referred to by [*163] Pacific and the staff as the Salinas Formula. The extended area increments applicable under the Salinas Formula have not been revised since the increments were established in 1970. In establishing the present Salinas Formula increments recognition was given to the loss in message toll revenues which would occur with the establishment of extended free calling over previous message toll routes. Both Pacific and the staff presented testimony in this proceeding of the changes in message toll rates over the period from 1970 to 1978. We agree that the Salinas Formula increments should be revised to reflect similar increases to the toll increases which have occurred over the years since the Salinas Formula increments were first established. To not increase the Salinas Formula increments will only serve to continue the subsidization of free calling over extended routes for a select group of customers at the expense of the general body of ratepayers. We shall adopt the staff's proposal for Salinas Formula increments. The revenue effect of these rate changes is a \$2.5 million increase.

Service Connection Charges

Pacific proposes revisions to the multi-element service connection charges [*164] including increases in the charge levels and revisions to the multi-element charge structure. The staff proposes lesser increases in the multi-element charge levels, revisions to the multi-element charge structure, and increases in all service connection charges, move and change charges, and in-place connection charges.

Multi-element service connection charges are applicable to service connections, moves and changes, in-place connection and other activities on monkey individual, and party line residence and business service as well as semipublic service. The staff proposes increases in all service connection, move and change, and in-place connection charges. We agree with the staff that it is unreasonable to burden the simple residence and business customers with increased service connection charges and leave the service connection charges applicable to business unchanged. We shall adopt the staff's proposal to increase service connection charges, move and change charges, and in-place connection charges for complex services by 10 percent.

In developing its rate designs the staff placed a very high priority on revisions to the service connection charges and included the same [*165] proposed revisions in all rate designs without regard to the revenue requirement upon which a rate design was based. Neither Pacific's nor the staff's proposed service connection charge level attempts to recover full cost. Failure to recover full cost through charges dictates that the cost burden is being carried by the general body of ratepayers. On the other hand, increasing service connection charges to full cost levels may price telephone service so high as to price telephone service out of the reach of some segments of our society. We must therefore strike a balance. We shall adopt the staff's proposal to hold the maximum increase in service connection charges on a simple residence installation to 25 percent.

The staff and Pacific agree upon the objectives which should be considered in determining the levels for multi-element charges but disagree on how best to achieve each objective. The four objectives cited by Pacific and concurred in by the staff are the following:

1. Multi-element charges should be cost related.
2. Multi-element charges should be cost causative, i.e., the customer causing the cost of the utility is charged in relation to such cost.
3. Multi-element [*166] charges should encourage the use of Phone Center facilities.
4. Multi-element charges should relate directly to the work activities involved and be understandable to the customer.

The staff's view is that in order for any multi-element service connection charges to be cost related the costs must be predicated upon Pacific's actual experience. Although Pacific provided the costs associated with each multi-element, such costs were not based solely upon Pacific's experience. We agree with the staff that Pacific should base its rates and charges on Pacific's experience. We adopt the staff's recommendation that Pacific be ordered to develop multi-element service charge cost studies in consultation with the staff and include such cost studies as a part of Pacific's next general rate application.

The multi-element charges proposed by Pacific are based on 65 percent of estimated cost. The staff's proposed multi-element charges are based on 50 percent of estimated costs and fulfill the cost basis objective. In order to remain within our adopted parameter of holding the increase for service connection charges on a simple residence service to 25 percent we shall adopt the staff's proposed [*167] charge levels.

Pacific and the staff propose that the multi-element charge structure be revised to include a separate charge for a premises visit. The premises visit charge would only apply when a visit by Pacific to the customer's premises is actually required for the installation of service or equipment. The proposed premises visit charge element is based upon cost, may not be applicable if the customer utilized Phone Center facilities, and will be directly related to a work activity. Thus, the premises visit charge element fulfills, the second, third, and fourth objectives. The premises visit charge element is reasonable and will be adopted.

The issue of the appropriateness of the existing station handling charge element was raised by TURN in its brief. TURN suggests that the station handling charge element has no basis and should be completely abolished. TURN offers no analysis as to the proper costs associated with the station handling charge element or the revenue effects associated with the elimination of the charge element. Both Pacific and the staff presented testimony on the cost associated with the station handling charge element. We believe the record in this [*168] proceeding supports the continued existence of the station handling charge element. TURN's position is wanting of evidence and cannot be accepted.

There is some disagreement between Pacific and the staff as to the appropriate level of the station handling charge element. Pacific proposes a station handling charge of \$12.50 for business and residence which is in excess of 100 percent of full cost. Pacific indicates that the \$12.50 charge is necessary to encourage the use of Phone Center facilities. The staff propose a station handling charge of \$5.00 for business and residence. The staff's proposed charge is based on 50 percent of cost. The staff argues that Pacific's proposed charge of \$12.50

will penalize those customers whose premises have not been equipped with jacks. The staff suggests that only at such time as 85 percent to 90 percent of the total residential premises are equipped with jacks the station handling charge element should be increased to full cost. We agree with the staff that Pacific's \$12.50 charge is unreasonable and we will adopt the staff's \$5.00 charge.

The staff proposed other revisions to the multi-element service connection charge tariff. These [*169] proposed revisions will simplify the applicability of multi-element charges by bringing such services as Optional Residence Telephone Service (ORTS), Optional Calling Measured Service (OCMS) and Custom Calling under the multi-element charges when such service are provided in conjunction with simple residence and business service. These revisions are reasonable and will be adopted.

The result is a restructuring of the multi-element service charge. For relatively simple orders there is a reduction in applicable charges, while for complex orders involving premises visits rates will be increased. The result is rates more in line with the cost of providing the service. The result of these rate changes is an estimated \$7.3 million increase.

Zone Usage Measurement Plan

Pacific proposes to convert the only remaining MMU Routes -- the 3MMU and 4MMU Routes (distances of 9 to 16 miles) -- to message toll service. Prior Commission decisions have systematically converted MMU Routes to message toll. Pacific also indicates that there is no remaining rationale for the existence of the present MMU rate structure and that MMU calls are processed and detailed exactly the same as toll calls. [*170] Pacific's proposed conversion of the 3MMU and 4MMU Routes to message toll is supported by General Telephone Company of California (General) and the California Farm Bureau Federation (Farm Bureau).

As an alternative to Pacific's proposed conversion of the 3MMU and 4MMU Routes to message toll, the staff proposes the ZUM Plan. Under the ZUM Plan the 3MMU and 4MMU Routes would be converted to zones to local calling applicable to calls from all types of services, except coin services, and an allowance for zone calling usage would be included in the usage allowance for certain one-party business and residence measured rate services. The staff proposes no corresponding change in the basic rate for measured service but does propose an increase of 30 cents per month for residential flat rate service.

Three calling zones would be established for each exchange under the ZUM Plan. Zone 1 is designed to include contiguous exchanges and noncontiguous exchanges or district areas where the distance between rate centers of the originating exchange or district area and the noncontiguous exchange or district area is eight airline miles or less. Generally, Zone 1 includes the present local free [*171] calling areas. Zone 2 is designed to include the present 3MMU (9 to 12 miles) Routes and Zone 3 is designed to include the present 4MMU (13 to 16 miles) Routes. The staff proposes that the ZUM Plan be implemented in the San Francisco-East Bay Extended Area (SF-EBEA) and the Los Angeles Extended Area (LAEA) which are the only locations where MMU service is now provided.

Essentially the ZUM Plan establishes an extended area rate structure not unlike the existing intrastate toll rate structure, which features off-peak pricing. Calls will be timed in one-minute units, whereas present MMU calls are initially timed in a three-minute unit. The result will be savings to all customers over present MMU rates, with greater savings for customers who call off peak and make calls of two minutes or less duration. Anticipating that some flat rate residential customers may want to convert their service to measured rate service because the higher basic rate (30-cent increase) resulting from the ZUM Plan does not benefit them (given their localized calling pattern), we will direct a 120-day period for conversion to another class of service without the usual service regrade charge.

The staff's [*172] proposed ZUM Plan is supported by the California Retailers Association (CRA), the General Services Administration of the United States Government (GSA), the City and County of San Francisco, and the Cities of Los Angeles and San Diego (Cities).

The staff developed and sponsors the ZUM Plan because of the severe settlements penalty that conversion of the remaining MMU Routes to message toll would have on the independent telephone companies that do not participate in the MMU business and as a means of promoting measured-rate residence service by making measured service more attractive in comparison with flat rate residence service.

TURN in its closing brief terms Pacific's proposed conversion of the MMU Routes to toll as "oppressive" due to the increase in rates to consumers that would occur and the staff's proposed ZUM Plan as "not equitable" primarily due to the measured service characteristics included in the ZUM Plan. No evidence in support of these allegations was presented by TURN.

Continental Telephone Company of California (Continental) takes the position that Pacific's proposed conversion of MMU Routes to toll will greatly reduce Continental's earnings from message toll [*173] due to the effects such a conversion would have on the toll service rate of return. Continental also takes an opposing position with respect to the staff's proposed rate designs on the basis that message toll rates should not be used to "balance" a rate design to achieve a given change in revenue requirement. Continental asserts that Pacific's local exchange rates should be used as the "balancer".

As we stated earlier we believe that the record supports the elimination of the remaining MMU service. Both Pacific's proposed MMU conversion to toll and the Staff's proposed ZUM Plan will accomplish this result. We must then consider these two proposals in an arena where General and the Farm Bureau support Pacific's toll proposal and the CRA, the Cities, and the GSA, who represent the users of communications services in the areas affected by these proposals, support the staff's proposed ZUM Plan. The elimination of MMU service must also be accomplished within the constraints of an overall reduction in annual revenues in the 1979 test year.

As a basis for converting the remaining MMU Routes to message toll Pacific cites prior Commission decisions in which the Commission has authorized [*174] the conversion of the 5MMU through 11MMU Routes to message toll. Accordingly, Pacific is proposing to convert the 3MMU and 4MMU Routes to message toll. As indicated by the staff, the Commission also authorized the conversion of the 2MMU Routes to local free calling rates in Decision No. 74917. Both Pacific's proposal and the staff's proposal are therefore consistent with prior Commission decisions.

General supports the conversion of the 3MMU and 4MMU Routes to message toll on the basis of consistency with prior Commission decisions which converted the 5MMU through 11MMU Routes to message toll and on the basis of simplification of tariff rate structures. General opposes the staff's ZUM Plan on the basis that the ZUM Plan will create "rate disparities" which will cause public resentment, that General cannot implement the measurement of Zone 1 calls (local calls) under the ZUM Plan, and that the ZUM Plan would result in the removal of certain free calling areas with no notice having been provided customers affected by such removal of free calling areas.

Continental and General both request that should the Commission order rates for Pacific which will result in reduced revenues [*175] to the independent telephone companies that the independents, including Continental and General, be authorized offsetting rate increases to match the reduced revenues.

The Farm Bureau supports Pacific's proposed conversion of MMU to message toll based on a continuation of prior conversions of MMU Routes to message toll. The Farm Bureau does not support the ZUM Plan as it believes that the ZUM Plan deviates from prior Commission policy for converting MMU Routes to message toll.

CRA supports the ZUM Plan on the ground that there has been no demonstration that the rates for intrastate toll are valid for calls on the 3MMU and 4MMU Routes in the metropolitan areas. CRA states that there may be a need to make calls in the 9 to 16 mile range which would be impaired by the existing message toll rate structure. CRA also suggests that Pacific be required to study the ZUM Plan, once implemented, and to utilize the data collected as a basis for future modifications of the ZUM Plan.

Cities oppose Pacific's proposed conversion of MMU to toll. They see it as inspired to be punitive to Los Angeles and San Francisco and allege that it will result in unreasonable and repressive rate increases [*176] to the people

of Los Angeles and San Francisco. Cities support the ZUM Plan and rely upon CRA and staff to address the merits of the ZUM Plan. Cities do suggest that there is a lack of cost support and calling data to justify either Pacific's or the staff's proposal.

GSA supports the ZUM Plan and suggests that implementation of the ZUM Plan can be accomplished without an increase in any current rates, but rather, from the overall lowering of Pacific's revenue requirement.

The conversion of the remaining MMU Routes to message toll would result in an estimated revenue increase of \$41.5 million in the 1979 test year. Adoption of the ZUM Plan proposed by the staff in its alternate rate design would result in an estimated revenue decrease of \$105.0 million in the test year.

MMU service as it presently exists is applicable only to routes within the SF-EBEA and the LAEA. Adoption of Pacific's proposal to convert the remaining MMU Routes to message toll would result in rate increases to the telephone using public in these two areas. We disagree with the Cities that such rate increases are intended by Pacific as punitive; however, we agree with the Cities and CRA that conversion [*177] of the remaining MMU Routes to message toll completely disregards the needs of the telephone using public in these areas.

The ZUM Plan is residually priced and, as such, is not based on an in-depth analysis of the calling needs of the public. As the staff testified, sufficient data are not presently available to develop the ZUM Plan statewide, and the staff proposes to implement the ZUM Plan only within the SF-EBEA and LAEA at this time. The staff recommends that if the ZUM Plan is adopted, Pacific should be ordered to collect, analyze and report pertinent data on its implementation and operation. The staff suggests that with such data available the ZUM Plan, if adopted, could be modified and implemented in other areas of the State based upon actual experience gained from offering the ZUM Plan in the SF-EBEA and LAEA.

The present 3MMU and 4MMU rates provide no discount for off-peak calling outside of the peak busy hours on the telephone system which typically occur in mid-morning and mid-afternoon on business days. There is a need for incentive rates on these heavily used routes to encourage customers to call at off-peak periods. Such incentive is provided by lower off-peak [*178] rates consisting of 35 percent discount in the evening and 60 percent discount at night and on weekends under the ZUM Plan. These same discount percentages are proposed by the ZUM Plan for local calls made from measured rate telephones. With anticipated increased telephone usage in the growing energy crisis, it is essential that telephone network efficiency be maximized by use of such incentive rates.

We find that the ZUM Plan has merit and we will adopt the plan for Pacific. It will provide for elimination of present MMU service in a manner appropriate to bridge the gap between our prior decisions authorizing the conversion of the 2MMU and the 5MMU through 11MMU Routes. We agree with the staff that the ZUM Plan should only be implemented in areas other than the SF-EBEA and LAEA when sufficient data are available to convince us that such additional implementation is reasonable. We shall order Pacific to implement the ZUM Plan, to gather data and report the results on a quarterly basis to the Commission in a format to be developed after consultation with the staff.

General participates with Pacific in the provision of MMU service within the LAEA. Adoption of Pacific's toll [*179] proposal, supported by General, or adoption of the ZUM Plan will affect General and its customers. General opposes the ZUM Plan because it believes the plan will create rate disparities and result in customer confusion. General cites, in support of its position, certain calling patterns where the rate applicable to a call of same distance and duration made from an exchange within the LAEA under the ZUM Plan would be less than a call from within the LAEA to an exchange outside the LAEA for which message toll rates are applicable. General states that adoption of the ZUM Plan will merely add to customer confusion by creating a new type of local service to go along with the many types of local service already available. Also, General assets lack of proper customer notice as a ground of opposition. Since the ZUM Plan as proposed by the staff will remove certain local free calling areas from certain of General's exchanges, General believes these free routes cannot be removed without providing the affected customers with notice and allowing them the opportunity to be heard.

It would appear from the record in this proceeding that General's opposition to the ZUM Plan on the basis of [*180] rate disparities and customer confusion have limited merit. While the examples of differences in rates cited by General are true, they are not so significant to require us to summarily dismiss the ZUM Plan as unreasonable. Many services provided by General contain rate differences which might be termed disparities. A primary example of a rate difference similar to those cited by General in opposing the ZUM Plan can be found in the offering of ORTS. ORTS is offered to customers in selected exchanges in the LA Area and SF Bay Area and provides for flat rate calling on routes up to 40 air miles. Calls from an exchange in which ORTS is offered to an exchange up to 40 miles away are offered at a flat rate while calls from the distant exchange back to the exchange in which ORTS is offered may be at message toll rates. General believes that adoption of Pacific's proposed conversion of the MMU Routes to message toll will simplify the number of local services which are available by eliminating MMU service. General fails to point out that the ZUM Plan also would eliminate MMU service which would tend to reduce customer confusion.

On July 25, 1978, the Commission issued OII No. 21 which [*181] ordered an investigation on the Commission's own motion into the rates and charges of all telephone corporations listed therein including General. OII No. 21 was consolidated for hearing with Application No. 58223 and was served upon all respondents, thus placing said respondents on notice of possible changes in rates and charges of the respondent telephone corporations. General's position that the ZUM Plan revises rates and charges without customer notice therefore has no merit. It should also be noted that, as was brought out on the record, General's position on lack of customer notice, if valid, would be equally applicable to its proposed conversion of the 3MMU and 4MMU Routes to message toll with substantial rate increases involved. However, it is our view that Pacific's application on 3MMU and 4MMU changes was adequate notice to the public and the respondent telephone utilities of such changes and of possible variations thereof, of which the ZUM Plan is but one.

General presented testimony that the timing of local calls as required under Zone 1 of the ZUM Plan cannot be implemented in General's serving areas. The staff presented similar testimony. We shall, therefore, [*182] adopt the ZUM Plan for General excluding the provisions for Zone 1.

Implementation of the ZUM Plan in the SF-EBEA and the LAEA will require the conversion of certain present free local/free calling routes to Zones 2 and 3 of the ZUM Plan. Both General and Pacific have indicated that these conversions will require additional equipment to be brought on line. Pacific will require 6 to 12 months after the effective date of this order to install the required equipment and General will require a maximum of 24 months to install the required equipment.

The conversion by Pacific of the present 3MMU and 4MMU Routes to the ZUM Plan can be accomplished in 90 days after the effective date of this order utilizing present facilities. General indicates that the conversion of the present 3MMU and 4MMU Routes to the ZUM Plan will result in a stimulation of traffic which might require the installation of additional equipment. General indicates that up to two years might be needed to install this additional equipment. General provided no quantitative study on the estimated stimulation of traffic. Also General overlooks the effects of the ZUM Plan off-peak pricing which will tend to shift traffic [*183] from busy hours to off-peak hours, thereby reducing load. Pacific advised the staff that no additional facilities would be required to convert the 3MMU and 4MMU Routes to Zones 2 and 3, respectively. Since the conversion of MMU service to ZUM must be accomplished on both ends of the same route simultaneously we will order General and Pacific to implement the conversion of the 3MMU Routes to Zone 2 of ZUM and the conversion of the 4MMU Routes to Zone 3 of ZUM within 90 days of the effective date of this order, except as otherwise provided in the rate appendix, hereto, for specific routes requiring 24 months for implementation.

The annual revenue effect of the ZUM Plan is a \$105 million reduction for Pacific and a \$24.8 reduction for General.

Rate Offsets for the Independents

Both Continental and General have requested that the Commission authorize offsetting rate increases for the independent telephone companies if the effects of the rates and charges authorized for Pacific will result in

reduced revenues to the independents. The effects on the independents including settlements of the rates and charges authorized herein for Pacific are as follows:

1979 Annual Revenue

(Dollars in Millions)

General

ZUM Rates and Billings	[24.8]
Exchange Rates (Other)	2.4
Private Line	(0.4)
Message Toll	<u>0.2</u>
Total	(22.6)

(Red Figure)

[*184]

Other Independents

We agree with General that in the instant proceeding a reduction in annual revenue to General of \$22.6 million in the 1979 test year must be offset by increasing rates and charges for services provided by General and we shall so order. Since the rates and charges authorized herein for Pacific will not result in reductions in revenue for Continental and the other independents there is no requirement for offsetting increases in any other independent's rate and charges.

General recommends that should the Commission authorize offsetting rate increases that such increases be granted in the following priority: (1) directory advertising, (2) service connection charges, (3) competitive items, and (4) primary service including the single message unit. The staff recommends the following areas listed in order of priority for offsetting rate relief for General: (1) private branch exchange services, (2) key telephone service, (3) premium sets, (4) touch calling sets, (5) extensions, (6) service connection charges, (7) single message unit rate, (8) standardization of the rate for one-party flat rate residence service, and (9) intrastate billing surcharge.

Except for [*185] directory advertising rates the recommendations for offsetting rate relief by General and the staff are very similar. Increases in directory advertising rates will not be consistent with our 90-day implementation period for the ZUM Plan. The time lag between the implementation of ZUM and the time at which General would receive the increased revenues from increases in directory advertising rates would not provide the necessary rate relief to General. We shall therefore concentrate the rate relief granted to General in the areas of competitive items and service connection charges, inasmuch as these services have not been increased for a number of years and are generally well below the costs to serve.

We shall permit General to file an advice letter with tariffs for increases in rates and charges as set forth herein subject to Commission authorization by resolution. We will require General to notify its customers of such proposed rate changes. The following is a summary of the increased rates and charges which may be permitted as an offset for General (as detailed in Appendix C):

(Dollars in Millions)

Service Connection Chages	\$5.6
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	(Dollars in Millions)
Private Branch Exchange Service	2.1
Key Telephone Service	6.5
Extensions	5.5
Premium Sets	1.2
Touch Calling Sets	<u>1.7</u>
Total	\$22.6

[*186]

Competitive Items of Terminal Equipment

Several parties presented testimony on the appropriate methodology to be used in the determination of Pacific's rates and charges for competitive items of terminal equipment. In this proceeding the items included in the category of competitive items of terminal equipment are extensions, premium sets, and key telephone service equipment.

The rates and charges proposed by both Pacific and the staff are based upon the "GE-100" methodology of fully allocated costs which has historically been utilized in proceedings before the Commission to show the relationship between costs and rates and charges for terminal equipment. The GE-100 methodology utilized by Pacific and the staff is supported by the California Interconnect Association. CRA and GSA take issue with certain portions of the GE-100 methodology as used by Pacific and the staff. In addition, both CRA and GSA recommend adoption of installation charges for key telephone service which are based on 100 percent of the nonreusable costs of providing service.

Although we will not herein authorize increases in rates for key telephone service and equipment to levels proposed by Pacific **[*187]** or the staff, we will discuss certain of the issues presented in this proceeding concerning the development of rates and charges for terminal equipment based upon the GE-100 methodology. We will take this approach in order to narrow down such issues which might be brought up in similar proceedings in the future.

CRA indicates that there is a mismatch between the net plant factor and the depreciation reserve as such are utilized by Pacific and the staff in the GE-100 methodology. CRA bases this claim on the fact that the net plant factor is held constant while actual depreciation charges reduce investment on a straight-line basis. CRA's concern is based upon a misunderstanding of the GE-100 methodology. The constant net plant factor is consistent with the "real world" of investment and depreciation reserve shown on the books of the utility. Since all investment in terminal equipment goes into the utility's rate base, the appropriate net plant factor should reflect the actual conditions of the rate base. To do otherwise would result in transferring a burden from the terminal equipment customers to the general ratepayers. While the treatment utilized by Pacific and the staff **[*188]** may not reflect the conditions applicable to a single specific subscriber, it fairly represents the actual conditions of the terminal equipment subscribers as a group.

GSA recommends that the GE-100 methodology be revised to include the use of a net plant factor which is developed for each item of equipment. This would require extensive analysis of each rate element. Such a process would be very time-consuming and costly for a utility the size of Pacific.

The staff indicated that Pacific has revised its costing process to develop a net plant factor by major plant accounts and/or subaccounts. We agree with the staff that the use of net plant factors developed by account is an appropriate and reasonable method of associating actual cost experience with a given service. The rates and charges for competitive items of terminal equipment authorized herein will not incorporate net plant factors by account because no specific presentation of such factors was made in this proceeding. However, based on the record in this proceeding we are placing parties on notice that in the future we will consider development of rates

and charges based on the GE-100 methodology which incorporates [*189] net plant factor by account as appropriate.

CRA and GSA indicate that the administration factor utilized in the GE-100 rate development process by Pacific and the staff does not properly recognize costs and revenues. CRA recommends that when costs associated with a given piece of equipment or service are included in the development of a charge and/or rate the revenues associated with such costs should also be considered. More specifically, the administration factor utilized in the GE-100 process includes several expenses associated with service connections; however, the revenues from service connection charges are not reflected by Pacific or the staff in the development of the costs upon which proposed rates and charges are based. We agree with parties that the cost upon which cost-based rates and charges are established should reflect all revenues associated with such costs.

GSA recommends that the GE-100 methodology be revised to reflect separation effects in the determination of rates and charges for cost-based terminal equipment. To include separation effects in the development of rates and charges of competitive items of terminal equipment would reduce the rates and charges [*190] for such services. In order to have parity in the rates and charges applicable to terminal equipment provided by the utility and terminal equipment which might be provided by the customer, credits would have to be provided to customers who utilize customer provided equipment. Such credits would create a positive revenue requirement which must be made up in higher rates to the general body of ratepayers. Inclusion of separations effects in the development of rates and charges for competitive items of terminal equipment is therefore unreasonable and will not be adopted.

CRA and GSA recommend that the installation charges applicable to competitive items of terminal equipment be developed on the basis of 100 percent of nonrecoverable costs as determined utilizing the GE-100 methodology. The installation charges proposed by Pacific and the staff are based on 50 percent of nonrecoverable costs. Installation charges based on 50 percent of nonrecoverable costs are proposed by Pacific and the staff for key telephone equipment because the present installation charges for such equipment are based on 50 percent of cost. To arbitrarily change from installation charges based on 50 percent [*191] of cost to installation charges based on 100 percent of cost will cause a reduction in monthly rates for present customers with no associated reduction in cost. Such a reduction in revenues without a reduction in cost only serves to place a larger cost burden on the general body of ratepayers. Neither CRA nor GSA provided the quantitative effects of their recommended change in installation charges.

Nonrecoverable costs as developed in the GE-100 costing process include nonrecoverable materials such as terminal blocks and associated wiring, installation labor and engineering, removal labor and engineering, and restoration. Each of these costs once incurred by Pacific will not recur until the customer requests disconnection or a change in serving arrangement. If the installation charge is based on 50 percent of the nonrecoverable costs the remaining 50 percent of such costs are recovered through the recurring monthly rate. As the costs of installation labor and engineering escalate due to inflationary pressures any repricing of the installation charges based on 50 percent of the nonrecoverables automatically places 50 percent of these increased labor and engineering costs in [*192] the area where such costs must be recovered in the recurring monthly rates. Therefore, an existing customer's rates may increase, yet the existing customer whose service remains unchanged did not cause increased costs to the utility. To establish a separate level of rates and charges applicable to new customers and a separate level applicable to existing customers as recommended by CRA would be burdensome for Pacific to administer.

In Decision No. 87962 which established permanent rates and charges for the Dimension 400 PBX we authorized installation charges based on 100 percent of nonrecoverable costs. Use of installation charges based on 100 percent of nonrecoverable costs is appropriate also for new offerings of terminal equipment. However, due to the burden which will be placed on the general body of ratepayers we will not adopt installation charges based on 100 percent of cost for the existing services for which rates and charges are adopted herein.

Extensions, Premium Sets, and Inside Wiring

*Pacific and the staff propose increases in the rates and charges for business and residence extensions, Touch-Tone telephone sets, Princess telephone sets, and Trimline telephone [*193] sets and in the rate for inside wiring associated with business and residence extensions. Telephone sets similar to the sets offered by Pacific as extensions and premium sets are available from vendors other than Pacific. Since these sets are highly competitive we will authorize increases in the rates and charges for these sets within the constraints of achieving an overall reduction in annual revenues.*

Pacific proposes rates and charges for extension sets, premium sets, and inside wiring based upon the fully allocated costs as such costs are developed using the GE-100 methodology. Pacific's proposed rates and charges are developed considering each set on a stand-alone basis. Present rates and charges for the premium sets were established on an incremental basis.

*The staff in its rate design and alternative rate design also proposes rates and charges for extension sets and premium sets based upon the GE-100 fully allocated costs. With the exception of the Touch-Tone telephone sets, the staff's proposed rates and charges are developed for the extension and premium sets on a stand-alone basis. The staff proposes rates and charges for Touch-Tone sets based on the incremental [*194] difference in cost between a standard rotary set and a standard Touch-Tone set.*

With respect to Touch-Tone, it is desirable that Touch-Tone be the predominant offering as Pacific's switching network is converted to electronic switching. Touch-Tone provides much more rapid dialing and results in a shorter holding time prior to establishment of telephone conversations. This savings in time can result in substantial economies in a computer based system that is handling millions of calls every day. In order to accelerate the conversion from the present rotary dial operation to Touch-Tone, Pacific will be ordered to provide a program for such accelerated conversion together with an appropriate rate plan. Such a program and rates will be subject to Commission authorization.

Both Pacific and the staff reflected revenues from their respective levels of service connection charges and Phone Center data in their proposed levels of rates and charges for extension sets, premium sets and inside wiring. The staff's report, having been prepared at a later date, was based on more recent Phone Center data.

*We have herein adopted the staff's proposed revisions in service connection, move [*195] and change, in-place connection, and multi-element service charges. The staff's proposed treatment of the rates and charges for Touch-Tone sets is reasonable wherein recognition is given to the provision of a rotary instrument as the primary instrument which is included in the basic exchange rate. As the capability to offer Touch-Tone is expanded and the number of customers with Touch-Tone increases, Touch-Tone will at some point in the future be considered basic service. The staff's proposed rates and charges for extensions and premium sets reflect more recent Phone Center data. We shall therefore adopt the staff's proposed rates and charges for extensions and premium sets.*

*We will not, however, adopt increases for residence interior wiring. The staff recommended the elimination of the residence interior wiring rates as a means of achieving an overall revenue requirement. Also the elimination of the residence interior wiring rates will simplify the rate structure. Such reductions will also pass reductions in rates associated with the overall reduction in revenue requirement as ordered herein to Pacific's customers on a statewide basis. Elimination of the residence inside [*196] wiring rates is therefore reasonable in the public interest and shall be adopted.*

We will not adopt the elimination of the interior wiring rates applicable to business services and shall adopt the staff's proposed rates for business and inside wiring. The staff asserts that insufficient data was available to properly separate the costs of business inside wiring and recommends that Pacific be ordered to develop cost data on such costs. Also, as indicated by the staff, the business inside wiring rates are applicable to competitive services such as PBX's. We cannot, therefore, eliminate the business inside wiring rates without a full showing of the costs associated with business inside wiring for extensions. We shall order Pacific to provide the cost data associated with business inside wiring in its next general rate application. Based upon this data we can give further consideration to the business inside wiring rates.

Key Telephone Service

In their alternate rate designs the staff as well as Pacific proposed fully allocated cost-based rates and charges for key telephone equipment. GSA and CRA recommend levels of rates and charges for key telephone equipment based upon [*197] their respective modifications to the GE-100 methodology. CIA supports full cost levels of rates and charges for key telephone equipment. The Regents of the University of California (Regents) request exemption from any increases in rates and charges for equipment and/or services provided by Pacific when such equipment is already in place.

We have addressed the changes in GE-100 methodology recommended by GSA and CRA. We will not address such recommendations here again. Although as a government agency we are also suffering under the restraints imposed by budget cuts resulting from the passage of Proposition 13, it is not in the public interest to exempt all governmental entities and institutions of higher education as recommended by the Regents. To do so would only serve to pass on to the general body of telephone ratepayers through increases in telephone rates the increased burden of the cost of government that the voters in California found so oppressive when funded through the property tax that they voted Proposition 13 into law by the initiative process.

Adoption of the full cost-based rates and charges for key telephone equipment proposed by Pacific and the staff would [*198] result in an increase in annual revenue in the test year of \$93.5 million and \$93.7 million, respectively. Due to the constraints of the overall revenue requirement authorized by this order we cannot authorize increases in rates and charges for key telephone equipment to the levels recommended by either Pacific or the staff. We do recognize, however, that both the present rates and charges and the adopted rates and charges for key telephone equipment do not cover the full costs of providing service.

Our adopted levels of rates and charges for key telephone equipment are based on increasing installation charges for this equipment to the levels proposed by the staff. The adopted installation charges are based on 50 percent of the nonrecoverable costs. This will insure that at least 50 percent of the nonrecoverable costs will be recovered from new installation. Our adopted rates are developed to recover the necessary revenues to match the adopted revenue requirement.

Foreign Exchange Service

Pacific and the staff recommend revisions in the offerings of foreign exchange (FEZ) services. The proposed revisions to standardize Pacific's rates for business FEX service rendered [*199] from an independent company exchange and to eliminate the inconsistency in the applicable mileage rates for FEX services to and from district areas where the district area is noncontiguous have merit on the basis that these revisions will simplify the applicable tariffs. We shall adopt the staff's recommendations.

Pacific and the staff also propose revisions to have intrastate FEX rates and charges applicable for the exchange access lines provided for use with an interstate Type 2006 channel. Under present tariffs the basic exchange rates are applied to the access line on such interstate services. As a basis for these proposed revisions Pacific asserts that interstate FEX service is not a basic service but is an optional or vertical service which is selected by a customer to replace message toll service between two or more exchanges. It is the revenue contribution from this same message toll service which FEX service replaces that helps support the cost of basic service. Therefore, it is appropriate to charge the higher intrastate FEX rates to interstate FEX users in order that the service is fully supported in the rates paid by them, and not by other toll users.

Southern [*200] Pacific Communications Company (SPCC) indicates that Pacific's proposed increase for the FEX access line would create a discriminatory rate disparity with basic exchange access lines.

The staff supports the proposed revisions based on achievement of parity in the rates applicable to the local access lines furnished on both interstate and intrastate FEX services. Also, the present tariffs of General provide for the applicability of intrastate FEX rates to the local access line on interstate FEX services. Adoption of the proposed revisions will bring Pacific's tariffs into alignment with General's tariffs.

The assertions of SPCC of creation of a discriminatory rate disparity are without merit. Interstate FEX services are truly optional services selected by customers to replace message toll service. Intrastate FEX customers pay rates in excess of the basic exchange rates for the local access portion of the intrastate FEX service. The higher rates for FEX service are higher to reflect the fact that such FEX services are optional and cross-elastic with message toll service. It is, therefore, appropriate for intrastate FEX rates to be applicable to the local exchange access lines [*201] of an interstate FEX service. We shall adopt the staff's proposal.

Expanded Measured Service Plan

In response to Decision No. 87584 Pacific developed and filed with the Commission a study specifying the plant requirements, cost and time within which Pacific could accomplish the implementation of SMRT for all of Pacific's resident and business customers. In this proceeding Pacific has provided an update of the previous study for the expansion of SMRT. This study, known as the expanded measured service (EMS) plan is detailed in exhibit No. 34. The updated study includes the costs and an implementation schedule for the expansion of SMRT for all of Pacific's residence and business customers in all areas of California.

The staff concurs with Pacific's plan to expand measured service to all areas of the State. The staff recommends that Pacific be ordered to proceed with the implementation of SMRT in all areas of the State per Pacific's proposed implementation schedule. The staff suggests that the ZUM Plan fulfills many of the desired rate design characteristics for measured service identified by Pacific in Pacific's presentation. However, due to a lack of actual data obtained [*202] from actual experience with the ZUM Plan the staff recommends that SMRT be implemented on a statewide basis utilizing Pacific's proposed schedule of implementation. At such time as sufficient data are available from actual experience with the ZUM Plan, the staff recommends the implementation of ZUM as the basic statewide rate structure for all areas of the State where measured service is offered.

We agree with the staff that measured service should be expanded to all areas of the State when the capability to provide such measured service is available. We also agree with the staff that SMRT should be the rate structure implemented in the EMS areas. Implementation of SMRT in these EMS areas will make residence measured services available and will promote efficient use and conservation of communications facilities. We shall order the expansion of SMRT on the schedule proposed by Pacific for the implementation of measured services.

Optional Calling Measured Service

OCMS is an optional service offered over certain one-way routes presently to one-party flat rate (1FR) residence customers. OCMS is primarily offered on routes outside of the major metropolitan areas of the State [*203] and/or where ORTS is not offered.

Pacific proposes to expand the offering of OCMS over more than 300 additional routes in 1980, 1981, and 1982. These additional rates represent those routes where customer need is evident. The staff concurs in Pacific's proposal.

Pacific's OCMS is offered only to customers with 1FR residence service. We have herein adopted the expansion of SMRT to all areas of the State where measured service capability will exist. To continue the present limitation of offering OCMS to 1FR customers only would be counter-productive to the growth of customer acceptance of measured services. We shall, therefore, adopt the staff's recommendation of opening the offering of OCMS to one-party measured rate service (1MR) in areas where 1MR service is available. We shall not adopt the staff's recommendation to freeze the offering of OCMS to present 1 FR customers in areas where SMRT is offered. Such a revision would be too restrictive at this time.

The staff recommends that Pacific be authorized to proceed with the implementation of OCMS as proposed by Pacific and that the establishment of each of the new OCMS routes be filed through the advice letter process [*204] at which time the revenue effect of implementing these additional OCMS rates could be considered by the Commission. This recommendation has merit because the revenue effects will be realized primarily outside of the

test year and the public interest will be served by implementing these additional OCMS routes as expeditiously as possible. We shall adopt the staff recommendation.

The staff also recommends that Pacific be ordered to include in Pacific's next major rate proceeding a plan to offer OCMS to business customers. We agree that a study setting forth a plan, including a proposed rate structure, cost analysis, and revenue effects of an OCMS type offering for business, is in the public interest and we shall order Pacific to produce such a study.

Optional Residence Telephone Service

ORTS is an optional service offered in the SF Bay Area and the Los Angeles-Orange County area to 1FR residence customers. ORTS provides various calling options for calling up to 40 air route miles at substantially reduced rates when compared to present MMU and/or message toll rates.

Pacific advises that ORTS is currently under study for conversion to a fully measured service. Upon completion [*205] of such a study, a new ORTS will be forthcoming. The staff concurs with Pacific's intent to restructure ORTS on a fully measured basis but disagrees with Pacific's lack of a time commitment as to when such a restructure could be implemented. The staff recommends that Pacific be ordered to develop, in concert with the Commission staff, a restructured fully measured ORTS offering and that such a fully measured ORTS offering be implemented within 210 days of the effective date of this order. The staff recommends that the revenue effect of the new ORTS offering be held at or near zero and that the new ORTS offering be filed under the advice letter process requesting approval for such revisions by resolution action of the Commission.

The staff also recommends that the present offering of ORTS be revised as follows with the same revisions to be incorporated in any fully measured ORTS offering:

a. In exchanges where ORTS is offered and SMRT or the staff proposed ZUM Plan is offered, all ORTS provided to 1FR customers shall be limited to existing 1FR customers. Future ORTS shall be available only to 1MR customers.

b. In exchanges where ORTS is offered and no measured local exchange [*206] services are offered, ORTS shall continue to be offered to 1 FR customers.

We agree with the staff that the present ORTS offering is counter-productive to the growth of measured service in that ORTS is not available to 1MR customers. We will adopt the staff's recommendation with respect to offering ORTS to present customers.

The staff recommends that Pacific be ordered to develop a fully measured Optional Business Telephone Service (OBTS) and to provide such a plan in Pacific's next major rate application. We agree that a study of an OBTS plan has merit and we will adopt the staff's recommendation.

Measured Foreign Exchange Services

The staff recommends that Pacific be ordered to provide a study for the implementation of local timing on all FEX services. In support of this recommendation the staff indicates that FEX services are optional services commonly selected by customers as an alternative to MMU or message toll service. As optional services, FEX services should be provided in such a manner that the FEX services are not counter-productive to the growth of measured services. All business FEX services are currently offered on either a message basis where local timing [*207] is not available or a measured basis where timing is in use.

We agree with the staff that all FEX services should be measured. As Pacific moves more toward measured services on a statewide basis it would not be appropriate to retain optional services such as FEX services on a flat rate basis. We will adopt the staff's recommendation and order Pacific to provide as a part of Pacific's next major rate application a study for the implementation of local timing on all FEX services. Such a study should include an

implementation schedule, the revenue requirement, a proposed tariff, and the revenue effect of the proposed tariff schedule.

SG-1/SG-1A Studies

Pacific has produced a study which analyzes the revenues and costs associated with the provision of the SG-1/SG-1A PBX. The results of Pacific's studies are submitted in Exhibits Nos. 37 and 38. These studies have been submitted in this proceeding in compliance with Decision No. 85790, dated May 11, 1976.

Decision No. 85790 did not specify the methods by which the revenues and costs of providing SG-1/SG-1A service were to be determined. Accordingly, Pacific chose the contribution analysis method of determining the costs. [*208] As asserted by the staff, this method excludes from the cost calculations a majority of the administrative overheads such as uncollectibles, insurance, general services and licenses, executive salaries, legal salaries, and other miscellaneous expenses.

The fully allocated cost methodology (GE-100 methodology) is the methodology recommended by the staff for determining rates and charges on the basis of cost, the method endorsed by the Commission in decision No. 87962, dated October 12, 1977, for use in determining the rates and charges for the Dimension 400 PBX, and currently utilized by Pacific as the standard methodology for determining rates and charges for new terminal equipment offerings. The GE-100 methodology includes a cost allocation for the administrative costs excluded from Pacific's contribution analysis.

The staff recommends that Pacific be ordered to conduct a new study of SG-1/SG-1A PBX rates and charges utilizing the GE-100 methodology. The resulting rates and charges should be based on fully allocated costs and should be implemented utilizing the advice letter process with authorization by resolution action as required if the new study indicates current rates [*209] and charges should be revised.

We agree with the staff's recommendation. The SG-1/SG-1A PBX service represents a large portion of Pacific's total number of PBX's in service. Since PBX services offered by Pacific compete with PBX's offered by vendors it is imperative that Pacific's rates and charges be monitored and retained at levels which cover the costs of providing such PBX's. As discussed herein, the GE-100 is this Commission's accepted method of determining full cost rates and charges for competitive items of terminal equipment. We shall order Pacific to conduct GE-100 studies of the SG-1/SG-1A PBX service in consultation with the staff and to implement the resulting rates and charges within 180 days of the effective date of this order if the results of the GE-100 studies indicated present rates and charges do not cover the costs of providing the SG-1/SG-1A PBX service.

Private Line Services

Pacific proposes major and basic changes in the monthly rates for a number of private line services and substantial increases in various nonrecurring charges. The services for which major rate changes are proposed include the following:

Private Line Telephone Service (Schedule [*210] Cal. PUC No. 45-T)

Private Line Teletypewriter and Morse Services (No. 46-T)

Channels for Remote Metering, Supervisory Control, and Miscellaneous Signaling Purposes (No. 104-T)

Channels for Data Transmission (No. 115-T)

Channels for the Remote Operation of Private Mobile Radiotelephone Systems (No. 139-T)

Changes in nonrecurring charges only are proposed in the following:

Move and Change Charges (No. 51-T)

Telepak Channels and Services (No. 122-T)Wideband Service (No. 134-T)

The rate revisions sought by Pacific provide, generally, for substantial increases for local loops for all services; for decreases for channel terminals for most services for 0-15 interexchange miles; for increases for channel terminals for most services for 16 and more interexchange miles; and for increases or decreases for interexchange mileage depending on mileage steps. Various other minor changes are also included. This would result in increases in monthly charges for voice grade, or lower grade, private line channels between different premises on noncontiguous property in the same exchange or district area, and generally in increases in monthly charges for interdistrict or interexchange channels [*211] of about 40 miles or less for voice grade services, 120 miles for Type 1001, 55 miles for Type 1002/5, 45 miles for Type 1006, and decreases thereafter, except for Type 1009 metallic signal channels which would increase at all distances. Pacific also proposes to limit the offering of Type 1009 metallic channels to a maximum of 150 miles. Also proposed are increases in all nonrecurring charges associated with channel terminations, service, terminals, and changes in certain other terminations.

The rationale offered by Pacific (except for the increases in nonrecurring charges) is to calculate the costs associated with each element of the various offerings, including return, and to recast the multitude of individual rates to be in approximation to these costs. The resulting rates and charges are contained in Exhibit No. 33-A. The increases proposed in nonrecurring charges were, evidently, calculated on a flat percentage increase basis and are not cost-based in the usual sense of the term.

The underlying development of Pacific's individual proposed rates is shown in Exhibit No. 112, entitled "Exhibit Accompanying Testimony of Arne L. Haynes". This was introduced by Southern Pacific [*212] Communications Company (SPCC) following a protracted procedure of discovery by cross-examination and finally the provision of the substantive material to SPCC by Pacific. This latter, which is the actual content of Exhibit No. 112, is a report entitled "Private Line Cost Study, Fully Allocated Embedded Costs, Year: 1979, Series 1000, 2000, 3000, The Pacific Telephone and Telegraph Company." That report, under its own title, was originally provided to the staff by Pacific as part of the work papers supporting Pacific's proposed rates (and as such, was subject to several corrections not appearing in Exhibit No. 112).

The staff examination of Pacific's private line proposal and the supporting work papers resulted in the identification of several errors and faulty assumptions which tended to overstatement of cost. These factors are detailed in the staff's Exhibit No. 70, Sec. 2.5; a recalculation was performed with the indicated modifications, and the staff's proposed rates were based on this result. The principal exception taken by the staff, however, was to the inordinately large excursion from present levels in many of Pacific's rates. In our Decision No. 88232, dealing with [*213] Pacific's last previous major rate application, we made the following observation:

"We are aware that this rate spread does not produce rates that result in returning full cost . . . This is not possible without major reductions in other rates; and we deem that inadvisable, since to adopt a rate spread on that basis would force abrupt and substantial immediate increases upon . . . customers. It is more appropriate to increase these equipment rates in stages to lessen impact on those affected ratepayers . . ." (83 CPUC 149, 241.)

As stated in the testimony of staff witnesses Dodge and Popenoe, a general rule-of-thumb of avoiding steep increases in excess of 50 percent was applied in the present instance, as being reasonable in the context of our previously enunciated broad principle. We see this constraint as appropriate to the matter at hand, giving due consideration as well to the absolute dollar magnitude of the rates and charges.

The staff's proposed schedule of rates and charges represents a significant revision of the present schedules toward a fit with Pacific's costs, and yet in the interest of the private line ratepayer does not impose extreme change. We note the many [*214] possible combinations of elements which may constitute the service provided to a given customer, and observe that the staff's proposed schedule is directed to a reasonable limitation to changes in cost for a wide variety of services. Accordingly, we favor the staff's approach, and we will adopt the staff's recommended rates and charges.

*Pacific's attempt to achieve a close fit between cost and price is directed to the appropriate ultimate goal, and we do not constrain Pacific from requesting further adjustments towards such a fit in future proceedings. We also, once again, invite the attention of interested parties to the possibility of such future adjustments, which most certainly will increase some rates, although others will likely decrease. In particular we address this remark to the alarm industry, which through its Western Burglar and Fire Alarm Association has objected to increases in rates for metallic circuits both in this proceeding and in its predecessors. In our Decision No. 88232, in December 1977, we advised the alarm industry "to convert to alarms which make use of voice grade circuits as rapidly as possible, since . . . in the event of a large general rate increase, [*215] a substantial raise in subvoice grade local loops would be appropriate." Previously in our Decision No. 74917, of November 1968, we noted similar opposition on the part of the association, noted that Pacific's private line earnings were then at a low level, and observed that: "If the (private line) service does not pay its way, obviously, the burden of its revenue or earnings deficiency falls upon customers of other services. We believe that it is fundamental that specialized services should fully pay their way, including a rate of return thereon at least equal to that realized from basic exchange operations." We find no reason to modify this point of view.*

*Other interested parties, including the California Retailers Association, SPCC, and the U.S. General Services Administration, express concern as to the validity of Pacific's cost methodology for private line and question some aspects of the composition of Pacific's data base. The staff also found difficulty in estimating revenue effects, as a result of uncertainties in the count of services used by Pacific and in the concomitant difficulty in evaluating the repressive or stimulative effects of rate change. The staff found [*216] Pacific's cost information to be acceptable, with corrections as noted above, for our present purpose. In view of the limitation we impose on the magnitude of the changes here, we do not adopt the suggestions that we reject entirely or substitute other data, as it would appear not to affect the present result. We do, however, reach the inescapable conclusion that a more thorough and objective study as to cost allocation by Pacific is required for any future proceeding.*

*SPCC urges us to examine carefully the possible anticompetitive implications of any revisions authorized for Pacific's private line rates. We are aware of SPCC's role as a competitor of Pacific in offering at least some of the same private line services, and we are mindful of our responsibilities in respect to competitive considerations. In [Northern California Power Agency v Public Utilities Commission \(1971\) 5 Cal 3d 370](#), the California Supreme Court points out that as a regulatory agency we "can and do approve actions which violate antitrust policies where other economic, social, and political considerations are found to be of overriding importance. In short, the antitrust laws are merely another tool [*217] which a regulatory agency employs to a greater or lesser degree to give 'understandable content to the broad statutory concept of the public interest'." In adopting the staff's recommended private line rates and charges we strike a reasonable balance among the interests of the ratepayer, of the utility, and of its competitors. We see any modification which results in a closer fit between cost and charges to be generally in the competitive interest, not conversely, and the new rates and charges we adopt are indeed of this sort.*

Mileage Charges

Pacific proposes changes in rates for certain mileage charges in connection with exchange telephone service in the following schedules:

Tie Line Service (Schedule Cal. PUC No. 12-T)

Secretarial Line Service (No. 26-T)

PBX and Extension Station Service (No. 26-T)

Telephone Answering Service (No. 100-T)

The changes proposed derive primarily from those offered by Pacific for private line services, and from the application of the same rationale and methodology in most instances. Fundamentally, Pacific's concept is to recognize that many tie line and extension circuits are, in physical fact, composed of two local loops as opposed to "custom" [*218] line extensions. Given this premise, it follows that it is generally inequitable to price these

offerings on any basis other than the average cost of the loops, considering the corollary decision to price private line local loops, which are physically identical, on an average basis. Pacific refers to the latter concept by the phrase "a loop is a loop", meaning in effect that local loops are fungible and that the physical length of the loop to a given customer is fortuitous.

The staff supports Pacific in this general concept, with the minor exception that in some instances an extension may not, for relatively short distances, require the second physical loop. As pointed out by staff witness Dodge, should the extension be within the same exchange and also be on the route between the central office and the main station, this additional loop would not be necessary. In consideration of this, the staff proposes retention of a mileage basis for charges in limited instances, the maximum charge not to exceed that for a loop.

Objections were made by several parties to Pacific's position that statewide loop statistics should not be disaggregated. We do not share their concern that disaggregation [*219] would affect the level of rates we are adopting in this proceeding. However, we shall require a more detailed showing in support of any further adjustment in local loop rates.

We have adopted the proposal of the staff with respect to private line rates and charges, and we, therefore, likewise adopt the staff proposal for mileage charges for exchange telephone service as a consistent position. We note that the staff has recommended that the change in certain Secretarial Line and Telephone Answering Service rates, requested by Pacific, not be made. We see that no cost showing has been made with respect to these particular rates and we shall not increase them in this proceeding.

Summary of the Adopted Rates and Charges

The following summarizes the adopted rates and charges for Pacific in the 1979 test year:

<i>Items</i>	<i>Revenue Effect</i> (Dollars in Millions)
Foreign Exchange Service	\$1.2
Extended Area Service	2.5
Extensions, Premium Sets and Interior Wiring	21.8
Over Allowance of Lifeline (1MQ)	0.3
Mileage	4.7
Key Telephone Service	26.1
Service Connection Charges	7.3
Private Line Service	1.7
Message Toll Service	(0.2)
Zone Usage Measurement Plan	(105.0)
SMRT Implementation D 83162	(5.2)
Services for the Handicapped	(12.0)
Centrex *	<u>14.6</u>
	\$ (42.2)

(Red Figure)

[*220]

* The \$14.6 million represents the 1979 test year increase in revenue to Pacific resulting from the rates and charges authorized by the Commission in Decision No. 90309.

Services for Persons With Speech or Hearing Impairments, or Other Handicaps

The Deaf Counseling, Advocacy and Referral Agency (DCARA) is a nonprofit corporation promoting the interests of hearing impaired persons in the San Francisco Bay Area. DCARA appeared in these proceedings as an interested party, taking the position that special equipment for deaf and hearing impaired individuals should be provided at the basic exchange monthly rate available to other subscribers.

DCARA contends that the provision of sufficient teletypewriters, at no additional charge, to make the conventional telephone network accessible to the deaf community is required as a matter of law, placing reliance upon Section 451 of the California Public Utilities Code and Section 54.1 of the California Civil Code. Constitutional provisions are also alleged to compel the provision of such supplemental equipment and ancillary services for the benefit of the deaf community.

We agree that it should be the goal of this Commission to provide [*221] supplemental equipment and ancillary services to all handicapped persons on the same basis at a cost included with the cost of the telephone service selected by these persons. Basic exchange rates should be deemed to cover costs of access to the telephone system, including, for example, teleprinters and other devices utilized by the deaf. We will appropriate \$12,000,000 toward the fulfillment of this goal in this proceeding.

[15] We do not agree that constitutional or statutory provisions require this Commission to provide special facilities for the hearing-and speech-impaired at basic exchange rates. Section 54.1 of the Civil Code provides, in part that:

"(a) Blind persons, visually handicapped persons, deaf persons, and other physically disabled persons shall be entitled to full and equal *access, as other members of the general public*, to . . . telephone facilities, . . . subject only to the conditions and limitations established by law, or state or federal regulation, *and applicable alike to all persons*. "As used in this section, 'telephone facilities' means tariff items and other equipment and services which have been approved by the Public Utilities Commission to [*222] be used by physically disabled persons in a manner feasible and compatible with the existing telephone network provided by the telephone companies." (Emphasis added.)

Section 453(b) of the Public Utilities Code addresses the subject with the following:

"No public utility shall prejudice, disadvantage, or require different rates . . . from a person because of . . . physical handicap . . ."

It seems clear to us that "full and equal access, as other members of the general public" to telephone facilities constitutes an express statement by the California Legislature that handicapped persons, including the deaf, will enjoy the same but no greater service than those who are not handicapped.

On September 19, 1978 this Commission, by Resolution No. T-9865, ordered Pacific to provide a special portable visual-type terminal for the deaf to appropriately certified deaf persons at the monthly rate of \$14. The staff cost analysis (GE-100) submitted therein indicated a monthly fully allocated cost to Pacific of \$30.35.

On February 27, 1979, by Resolution No. T-9967, this Commission ordered Pacific to provide a special portable printer-type terminal for the deaf at the rate of \$14 per month [*223] for certified deaf users. Pacific's cost study submitted therein indicated a monthly cost of \$27.25.

Both of the aforesaid resolutions were predicated upon Sections 54.1 of the Civil Code, and 451 and 453(b) of the Public Utilities Code, reference to which sections convinced us that this Commission has discretionary authority to provide special facilities at rates less than fully allocated cost, in order to serve the public interest by providing hearing-impaired and speech-impaired persons the ability to communicate over the telephone network.

In this proceeding, the staff proposes that Pacific set aside \$3 million in the 1979 test year to provide for noncompensatory services to the handicapped, specifically including the services set forth in the two resolutions to which reference has heretofore been made. The staff's Mr. Popenoe was the principal witness with respect to

services for the hearing and speech impaired. He made reference to a 1977 study performed for Pacific by Firing & Associates (Firing), and referred to that study in making his estimate of test year needs for the handicapped. The Firing study was not introduced into evidence and it is criticized by DCARA as [*224] containing unreliable statistical information.

Mr. Popenoe testified that the Firing study gives an estimate of a need of about 15,000 teletypewriters for use by the deaf, and a three-year period for market absorption. Therefore, the staff estimated that 5,000 units would be required in test year 1979, at a subsidy of approximately \$16.50 per month each, for a total test year subsidy of \$1 million. Mr. Popenoe further testified that in 1977 there were, according to the Firing study, approximately 1,170 teletypewriters in use throughout the State of California, these largely being nonportable and obsolete teletypewriters donated by Pacific to the deaf community. Mr. Popenoe admits however, that the Firing study is of little value.

The testimony of DCARA's witnesses estimated California's population at 22 million persons of which approximately 204,820 are deaf. These data were further refined to indicate approximately 70,794 households in California with two or more deaf members. The remaining 89,354 deaf people live either alone or with all hearing people. Thus, there are some 160,148 households with one or more deaf members, according to DCARA.

Staff witness Popenoe also [*225] testified that a 1977 survey of Pacific subscribers showed that the majority would be willing to pay from 5 to 25 per month to provide services at less than cost to handicapped subscribers. It was estimated that there are 9 million main and equivalent main stations in the Pacific system. Thus, for example an additional charge of 10 per main station per month would produce \$10.8 million, annually, and a charge of 25 would produce \$27 million annually. A subsidy of \$54 million would entail a charge of 50 , which approaches one-fourth of the monthly rate for 1MQ or "lifeline" residential service.

DCARA provided an impressive showing of the need of the members of the hearing impaired community to communicate over the telephone network, although its statistical data were lacking in substantiation. At the time of DCARA's presentation, Pacific's position was that it had no objection to rendering any service at less than its cost so long as its total revenue requirements were met through other services. In its brief, however, Pacific argues against DCARA's legal analysis and factual analysis, pointing out that if all of the 160,148 households with deaf members were to order either [*226] the visual or printer type portable terminal for the deaf at no charge the total annual subsidy would approximate \$58 million. Pacific further states that the "subsidy becomes totally astounding if anyone in California who desires the equipment can have it free of charge as proposed by DCARA".

We share in Pacific's concern. We cannot adopt a practice which is free to increase in cost to the general body of ratepayers without upper bounds. We do not agree that we are legally obliged to adopt it.

Still another consideration arises as we address the broad question of providing teletypewriters at no charge above the basic monthly rate, whether to the handicapped alone or to all who desire the machines. As pointed out by staff witness Popenoe, competition exists in the provision of TDD's (portable teletypewriters) in that a number of suppliers offer the devices directly to the deaf community and to others. These firms, within and outside California, advertise their products both for sale and for rent, providing a prospective user with a number of alternatives to obtaining a teletypewriter under Pacific's tariff.

[16][17] DCARA argues tht antitrust issues are not applicable. [*227] We see, however, that the TDD is in fact an item provided by the utility in competition with private firms. Therefore, it is a competitive product, and consideration of the anticompetitive implications of our actions in this field is required, as mandated by [Northern California Power Agency v Public Utilities Commission \(1971\) 5 Cal 3d 370](#) and by [Phonetele Inc. v Public Utilities Commission \(1974\) 11 Cal 3d 125](#). It is inherent that Pacific is in competition with the commercial sellers and renters of all TDD equipment. To the extent Pacific provides TDD's at less than cost, competition is inhibited or destroyed. Moreover, the resulting saturation of the market may well have a devastating effect on incentive for further innovation and development in the field by private industry. This would be an anticompetitive effect directly traceable to state action ([Cantor v Detroit Edison \(1976\) 420 US 579](#)). At the very least, additional specific cost data are necessary to enable us to determine whether the public interest in any further reduction of the tariff rate of \$14

per month for TDD's outweighs the anticompetitive effects of such price reduction to certified deaf or speech [*228] impaired persons. Provision at no charge to all requesters is precluded by these anticompetitive considerations, and we will not order it.

[18] Pacific also offers as tariff items a number of other instruments intended to aid telephone users with physical handicaps other than hearing impairments, including the blind and the motion impaired. We see no rationale or legal basis to treat disabled persons in other categories in a manner different from the deaf and speech impaired. Accordingly, we shall direct that comparably computed special monthly rates for these items for the certified handicapped be instituted by Pacific, and that the so-called "installation charge" associated with each such particular item be eliminated for those users. (Nonrecurring charges in accordance with the tariff schedule of simple residential and business "multi-element" charges may, however, be imposed as appropriate to the actual procedures required to be performed by Pacific.) We shall also require that Pacific make these items available through the Phone Center.

For the presently tariffed teletypewriters we shall require that Pacific prepare and submit revised cost data, in accordance with the [*229] standard "GE-100" methodology, giving specific material costs associated with large quantity procurement. The appropriateness of the present \$14 monthly rates will then be reevaluated by the staff, in the context of these new data; the staff will recommend any tariff revisions indicated, based on the present general policy of reduction of approximately 50 percent to the certified handicapped. We shall further direct that Pacific prepare and submit updated cost data for all other products for the handicapped which have not been repriced within the preceding three years preceding the data of this decision, in support only of the special monthly rates we are now establishing.

The evidence offered by the handicapped community regarding emergency communications services for the deaf, or the lack thereof, has convinced us that a present need exists for a substantially greater level of service than is now provided. The record shows that the Handicapped Centralized Assistance Points, or HCAP's, of Pacific are providing generally only services of a business office nature, and only during daytime business hours. We shall direct Pacific to prepare a plan for promptly expanding the scope [*230] of these services to include full-time HCAP operation, and to provide operating assistance such as toll operator services and handling of messages of emergency nature. The cost of operation will be calculated and provided as part of the plan.

The remaining major issue facing us results from the conflicting information offered on the one hand by the Firing study and on the other by the broad testimony of the representatives of the handicapped community. We shall direct Pacific to contract for the conduct of a more comprehensive and better validated study to update and expand the findings of the Firing study of 1977. In this manner we shall obtain a reliable set of basic data which we may employ in assessing the true magnitude of the problem, and in estimating the costs of various measures which may reasonably be taken in addressing it on a long-term basis.

DCARA also requested reduced rates for intrastate message toll service. We have decided that greater social benefit is provided by allowing reduced charges for terminal equipment which will permit access to the telephone system for as many handicapped persons as possible. Consequently, we direct that the entire \$12 million [*231] provided for service to the handicapped be allocated to reduce rates for all tariff items offered which assist the handicapped in the basic use of the telephone network. We do not allocate any portion of that total to intrastate station dial message toll.

DCARA proposes that certification of eligibility for reduced rates be simplified, or changed to self-certification. Because of the wide potential for abuse, not by the handicapped but by others, we cannot authorize self-certification. It is entirely in the interest of the handicapped users to maintain a reasonable system of certification, as extensive abuse can lead only to the termination of the reduced rates. We share the concern of DCARA that certification not be more complicated or costly than necessary. With respect to the deaf or hearing impaired and the speech impaired, we take notice of the Speech Pathologists and Audiologists Licensure Act as contained in the California Business and Professions Code, and we will direct Pacific to accept certifications by persons licensed under that Act. Similarly, future certifications with respect to vision impairment should be accepted from licensed optometrists, as well as from [*232] physicians or the Department of Rehabilitation.

Finally, we address the proposal of the staff that \$3 million be set aside in the final rate spread for the purpose of meeting the costs of additional services to the handicapped, e.g. the expanded functions of the HCAP's, and to offset the revenue shortfall resulting from reduced rates for equipment. As brought out by DCARA, state subsidy or other taxpayer funds have not been provided, and for the present at least, this basic approach is the best available means of removing the burden of cost from Pacific's shareholders. We shall, however, increase the amount to \$12 million annually in harmony with our stated goal. As experience is gained by Pacific in the actual costs of this broad program we shall adjust this to be a greater or lesser amount in future years, to effect a reasonable balance between the cost to the general ratepayer and the public interest in affording the price reductions to the handicapped.

Finally, Pacific will be ordered to prepare and submit a report within six months setting forth its overall evaluation of the total annual revenue effect of our adoption of all of the foregoing principles so that we may determine [*233] whether our general policy of 50 percent reduction in the cost of special equipment to the handicapped may be revised to meet our objectives of providing access to the telephone system by the handicapped at the same rates as are paid by those without physical disabilities.

VIII. SERVICE ISSUES

Installation Commitments -- Blocked Address Program

Pacific's Blocked Address Program (BAP) consists of providing business offices with a listing of street addresses where there are no available plant facilities. This will aid the service representative in not making installation commitments on a service order in advance of the availability of facilities.

The original intent of monitoring the measure of "missed installation commitments" as required by General Order No. 133 was to ensure that installation commitments were being met. The Commission's concern stemmed from the fact that customers, in the past, had to be present on the date and at the location at which installation was requested so that the customer was considerably inconvenienced when a commitment was missed. The Phone Center concept, instituted in April 1977, obviates the necessity of customer presence on the date [*234] and at the location at which installation is arranged. As the Phone Center concept progresses, the number of premises visits by Pacific's installers will necessarily decline and, proportionately, so will the number of opportunities for customer dissatisfaction through missed service appointments.

Pacific's current reports on the measure of "missed installation commitments" aggregate both those installations that require the customer to be present and those that do not require the customer to be present. As a result, we can no longer assess the degree of inconvenience to those customers who are required to be present at the time of service calls. Accordingly, the staff has recommended that Pacific furnish a report on the effectiveness of the BAP Plan in improving installation commitment performance and on future plans for the program. The staff's recommendation is reasonable and will be adopted.

Trouble Reports in Los Angeles

The staff has expressed concern over the rising customer trouble report rate in the Los Angeles Sector and contends that this high rate indicates deteriorating plant and equipment. Pacific's witness testified that certain offices do have significant [*235] repair problems in the Los Angeles Sector and contended that the high customer trouble rate has occurred for a variety of reasons, which neither Pacific nor the staff have been able to quantitatively evaluate so as to prepare a preventative program.

The staff has recommended that within 90 days, and quarterly thereafter, Pacific submit a report of programs and progress thereon that have been or will be undertaken to reduce the incidence of customer trouble reports in the Los Angeles Sector with their associated cost and effectiveness. These reports should be discontinued only upon approval of the Commission's Executive Director. Pacific, in its closing brief, alleges that this would be unnecessarily duplicative, as it currently furnishes quarterly reports as directed by General Order No. 133.

The staff's recommendation would not be duplicative. The information provided by Pacific in General Order No. 133 reports relates to corrective actions taken after the fact of the occurrence of the problem. It is apparent that the staff is seeking to stimulate preventive steps as well as curative steps to reduce the incidence of customer trouble reports. This would require Pacific to [*236] determine the cause of this high trouble report rate. We concur with the staff's recommendation and will adopt it.

Business Office Accessibility

The staff's witness expressed concern about the economics and reasonableness of high Business Office Accessibility (BOA) service levels. The staff contends that the measure of BOA can be greatly influenced by other factors such as customer contact time and customer waiting time and that service improvements can be achieved in these areas by increasing the number of service representatives. Further, the staff asserts that Pacific's BOA objective is presently unreasonably and uneconomically high.

Pacific, on the other hand, claims that customers consider a high level of BOA as good service. This is undoubtedly true, but Pacific's assertion sheds no light on the trade-off that needs to be made between high and highest quality of BOA service and the related costs. Accordingly, the staff recommends that Pacific establish new objectives for BOA.

Pacific considers this recommendation unwarranted inasmuch as it recently implemented a new plan, Business Office Consistency of Answer Measurement Plan (BOCAMP). It is apparent that the [*237] staff, for the purpose of lowering the BOA level and concomitant expenses, seeks to establish an equivalence in principle to a lower accessibility level rather than a mathematical equivalence as practiced by Pacific.

While perceiving the staff's legitimate concern regarding the economies and reasonableness of the high BOA objective, it is clear that adoption of the staff's recommendation is not now necessary in light of the fact that Pacific's new measurement plan does not readily permit evaluation of BOA.

We note here again that the record shows that Pacific failed to inform the staff in a timely manner that the long-standing BOA service level measurement plan was being replaced by BOCAMP. In short, the issue of BOA service level measurement was made largely moot by BOCAMP, but the staff was not apprised of this circumstance by Pacific so as to prevent waste of man-hours and dollars in this proceeding.

Trouble Report Clearing Time

The staff presented evidence showing customer dissatisfaction with the time taken to clear trouble reports, which evidence is not controverted. The staff recommends that Pacific furnish a report of a program to reduce clearing time of customer [*238] trouble reports within 90 days.

The staff's recommendation is reasonable and will be adopted.

Network Performance

The staff expresses concern over the declining trend of network performance as shown by the record in this proceeding. The staff recommends that Pacific furnish a report explaining such decline in network performance and of actions being taken to remedy the situation.

Pacific's position is that there should be no cause for alarm by reason of the fact that its performance has declined from superior to very good and certainly no cause to initiate special reporting. We strongly disagree.

The record does not disclose whether Pacific's network performance should or could be objectively rated as superior, very good, good, or something less. The record does disclose that network performance is on the way down, and we want to know why.

The staff's recommendation will be adopted.

Phone Center Waiting Time

The staff demonstrated that the Phone Center concept is being well received by the public, but that long waiting lines were reported to our Consumer Affairs staff, specifically in Los Angeles.

It is recommended that Pacific furnish a measurement plan within **[*239]** 90 days which would indicate the degree of seriousness of these customer complaints and proposals to minimize them effectively and promptly.

Pacific does not contest this recommendation and we will adopt it as reasonable.

Held Orders

In Decision No. 86593, issued November 2, 1976 (third interim opinion in Application No. 55492), the Commission found that Pacific had excessive numbers of held orders for primary and regrade service and accordingly reduced Pacific's rate of return by .007 percent "until such time as it makes a showing on this record that its held primary and regrade orders are within normal limits". (Ordering Paragraph 1.)

The record here shows staff concurrence that Pacific is making satisfactory progress in reducing held orders and that "normal limits" for held orders defies precise definition.

We accept the staff's testimony and recommendation that the .007 percent reduction in rate of return by reason of the held order situation be discontinued. Pacific's rate of return will hereafter be the full 9.73 percent we authorize.

The third interim order in Application No. 55492 will be amended in accordance with the views expressed herein.

IX. OTHER **[*240]** ISSUES

Separations

TURN presented Mr. Richard Gabel whose testimony directs the Commission's attention to certain alleged serious informities in the method that Pacific follows in its implementation of the jurisdictional Separations Manual adopted by the FCC.

TURN contends that substantial amounts of costs and revenue requirements which should be assigned to interstate telephone service are instead now assigned to intrastate telephone service by reason of Pacific's erroneous interpretation of the Separations Manual. TURN's witness' recommendations would result in the disallowance of intrastate investments and associated revenue requirements of \$224,944,000 and \$108,745,000, respectively.

TURN's Gabel simply argues that the spirit and intent of the Separations Manual is to achieve proper allocation of intrastate costs and revenues to California operations, and interstate costs and revenues to interstate operations. The Commission should apply this fundamental principle to three areas of misinterpretation by Pacific so as to correct existing equities, according to TURN.

Specifically, TURN's Gabel concentrates on Pacific's investments arising out of the provision of interstate **[*241]** private line service. He testified that at the time of publication of the first telephone Separations Manual the volume of interstate private line service was so nominal that allocation of private line station equipment to interstate jurisdiction was not even recognized (October 1947 Edison, Separations Manual, Section 2, Part 5). The combined Bell System interstate private line revenues in 1947 were only \$7.2 million (1947 Statistics of Communications, Table 24, pp. 45, 147). That condition has been altered with the massive growth of interstate private line communications and the advent of market competition in the provision of this service. In 1976 Bell System private line toll telephone and Telpak (largely voice grade services) was over a billion dollars (1976 FCC Statistics of Communication, Table 16, pp. 30, 121, 124).

Due to the growth of Private Line Service and the competitive market structure, this Commission must be concerned that California ratepayers are not burdened by revenue requirements properly attributable to interstate

operations. Interstate private line telephone services are large and growing larger. This Commission must ascertain that the investment in [*242] this service matches the revenue assignment; that the intent of the Separations Manual is properly implemented; and that plant and expenses necessary for the rendition of interstate private line telephone service is consistent with the assignment of the corresponding revenue. Furthermore, with the advent of market competition and the entry of Specialized Common Carriers which also provide interstate private line voice grade services, it is imperative that costs be properly assigned to the appropriate jurisdictions. To whatever extent the Bell System companies, including Pacific, misassign interstate private line investments to the state jurisdictions, fair and equitable market competition will be impeded.

The witness specifies three sources of misassignment, explaining the first as follows:

"First is the allocation of station apparatus used in the rendition of private line telephone services. The Separations Manual states:

". . . the costs of telephone and miscellaneous station apparatus in Account 231 and telephone and miscellaneous telephone station connections in Account 232 are assigned to Category 2 by applying to these costs in the study area the ratio of (a) the number [*243] of exchange loops used for telephone private line service to (b) the number of message telephone subscriber lines and exchange loops used for telephone private line services combined. (Section 25.121, Separations Manual.)

"Category Two of Section 2 of the Separations Manual applies to station equipment provided for private line services. The Manual states in this regard:

"25.22 Private Line Services -- Category 2 . . . The cost of equipment in this category is allocated among the operations by direct assignment.

"Stated more directly, the Separations Manual specified that station apparatus (Account 231-02) and station connections -- telephone (Account 232-02) be assigned to the interstate jurisdiction on the basis of a relative loop count, interstate private line loops as a proportion of total loops. (A loop is normally a cable pair interconnecting the customer premises to the local central office.) service requires the provision of a local loop. However, almost concurrent with the publication of the 1971 Separations Manual, a number of private line services evolved which do not require the provision of a local loop. For example, when an interstate private line telephone [*244] circuit terminates in a Centrex-CO installation, there is no requirement to provide a local loop for the trunk facility. The Centrex-CO is located on the telephone company premises and access to the private line is provided by the means of cross connection at the company distribution frames.

"Another instance wherein local loop requirements are obviated is when an interstate private line circuit is terminated at a Common Control Switching Arrangement (CCSA). CCSA is a private line switching arrangement which uses a portion of the telephone company No. 5 Crossbar or ESS switching center. Customer access to the switching arrangement is by dial access, thus by-passing any need for separate local private line loops to the customer premises.

"Still a third instance of 'loopless' private line circuits occurs where the telephone company leases space on the premises of a large customer and establishes, in effect, a subsidiary toll test room on site. (Viz., a military base or large industrial enclave.) The interexchange facility is brought to the customer premises at carrier frequency, demultiplexed to voice frequency and made accessible to the customer through riser cable or normal [*245] premise distribution facilities. However, a local loop, conventionally defined, is not required as part of the provision of the service.

"In each of the foregoing examples, the failure to provide a local loop with the provision of the private line voice circuit was consistent with the requirements of the specific technology. However, as we have seen, the relative loop count is the basis for allocation of station apparatus and telephone station connections. These 'loopless' interstate private lines still require station apparatus and connections. However, the failure to assign any such investment to interstate private line telephone service is a clear violation of the spirit and intent of the Separations Manual and should be corrected by this Commission."

We quote the second criticism of Pacific's method of allocating interstate private line telephone costs:

"Section 2, Part 5 of the Separations Manual discusses the allocation and assignment of Station Equipment. Paragraph 25.123 reads as follows:

"Only that station equipment provided under special service tariffs (e.g., special terminating equipment, trunk circuit equipment, idle circuit terminations, signaling equipment, [*246] telephone sets, keys, key sets and turrets which are used for the termination of special service circuits) is assigned to the special service categories. Correspondingly, station equipment used jointly for both special services and message telephone services (e.g., telephone keys, key sets, order turrets, private branch exchange switchboards which are used for the termination of both private lines and exchange lines) and provided under other than special service tariffs is assigned to Category 5.

"The allocation of Category 5 Station Equipment is set forth in Paragraph 25.25 as follows:

"Other Station Equipment -- Category 5 -- This category includes all station equipment not assigned to other categories. The cost of station equipment assigned to this category in the study area is apportioned between state and interstate operations by the application of a subscriber plant factor developed as described in Paragraph 23.444.

"The language of Paragraph 25.123 of the Manual recognizes the distinctive nature of station equipment employed in the use of private line telephone services and the station equipment employed in the residential exchange telephone service. Residential exchange [*247] telephone service can be adequately rendered by means of a conventional 500 type handset with an average embedded investment ranging between \$12 and \$15 per unit. In order to obtain efficient use of a private line telephone circuit, substantially more elaborate and expensive station apparatus is required. This means key systems with multiple phone line terminations, or a Private Branch Exchange to permit common access for incoming and outgoing calls. However, this distinction is not recognized by the telephone company in allocating Station Apparatus (231-02) and Station Connection (232-02) investment to the various service classifications. Company study methods assume complete homogeneity of station-telephone plant for purposes of cost assignment to the various service classifications. The Division of Revenue allocation procedure, followed by Pacific, apportions the account investment pro rata in proportion to the loop count by services. My testimony supports a more equitable basis of allocation of station apparatus and station connection investment to the various services."

We quote the third criticism of Pacific's implementation of the Separations Manual:

"I previously quoted [*248] Paragraph 25.25 of the Manual which deals with the 'Other Station Equipment', that is the residual investment not assigned to the first four categories of station equipment. Category 5 Station Equipment is assigned to the jurisdictions on the basis of relative usage, both interstate and intrastate. The apportionment of this investment to interstate operations is based upon the relative minutes of *interstate message toll* to total state plus interstate message usage.

"The inequity of exchange plant allocation to the state jurisdiction arises here as a by-product of the method followed by Pacific in determining interstate subscriber line usage (SLU). The rapid growth in the number of interstate private lines has been paralleled by the growth of interstate foreign exchange circuits. Interstate foreign exchange circuits terminate at one end at a customer premise, and at the other end in a local central office line circuit in another state. The interstate foreign exchange customer is billed at the standard tariff rate for a Station Terminal for each end of his FEX circuit (or Channel Terminal rate under Telpak FX service). Therefore, there should be no question that this is [*249] an interstate facility and such traffic usage as occurs on the facility is interstate in nature. However, this is not the manner in which Pacific measures such usage. In the calculation of subscriber line usage, the minutes of use transiting the interstate FX circuits are counted as local exchange (state jurisdictional) usage. The effect, of course, is to understate the interstate SLU factor and, correspondingly the interstate subscriber plant factor (SPF), which is the basis for allocation of the non-traffic sensitive portions of

telephone exchange plant. I will propose adjustments to correct for this over-allocation to California state operations.

"It should be pointed out that Pacific's procedure results in a direct mix-match of revenues and expenses. The customer for interstate FX service pays the standard tariff rate at each end of the circuit (a recurring monthly station terminal charge of \$25 is applied to each terminal end under the FCC Tariff 260, Series 2000/3000). The rate is the same whether the customer is furnished a point-to-point private line or an interstate foreign exchange circuit. The tariff component termed 'station terminal' is intended to compensate [*250] the carrier for provisions of the local loop and for provision of the station equipment (Apparatus 231-02; connection 232-02; or PBX Termination 234). However, these investments are assigned to the intrastate (California) operation. Hence the mis-match of revenues and costs."

Pacific's Bruins vigorously challenges TURN's presentation as being of no value to this Commission because (1) it is contrary to the clear language of the Separations Manual, (2) is fundamentally illogical, (3) would destroy the essential uniformity of jurisdictional separations, and (4) is arithmetically incorrect.

Pacific's first and second points are clearly without merit. TURN's Gabel and Pacific's Bruins both quote paragraph 25.121 of the Separations Manual. That paragraph specifies that "loops" are counted to derive a ratio for the assignment of certain station equipment costs between intra- and interstate jurisdictions. A "loop," according to the Separations Manual glossary, is "a pair of wires, or its equivalent, between a customer's station and the central office from which the station is served." (Emphasis added.) TURN's Gabel suggests that all costs associated with interstate service be [*251] assigned to that service and interprets the Separations Manual to accomplish this purpose by counting existing services as well as those having physical "loops". He regards, in other words, so-called "loopless" circuits as being the equivalent of a pair of wires.

Only by employing the most constrained interpretation can the Separations Manual be interpreted to prohibit the method proposed by TURN's Gabel in his first criticism, and it is equally obvious that his other proposals are, indeed, interpretations, rather than contradictions, of the Separations Manual. To accept that efforts to more precisely assign jurisdictional costs are "fundamentally illogical", as urged by Pacific's Bruins is to abdicate our regulatory functions vis-a-vis separations to the Bell System, which we do not propose to do.

In his third objection, Pacific's Bruins makes the valid point that unilateral action by this Commission on separations issues will result in elements of nonuniformity being introduced nationwide. This is, of course, a difficulty which must be faced. The staff's posture, too, is predicated upon this problem:

"The witness for Toward Utility Rate Normalization (TURN), Mr. Gabel, [*252] raised an important issue with respect to telephone separations. At page 5 of the TURN brief it is pointed out that interstate private line service, where calls terminate in a local exchange, does not receive an allocation of local exchange costs.

"In the TURN brief at pages 26-28 an attempt was made to identify such costs. The staff has not been able to verify these estimates, however.

"It should be noted that this matter is now being given consideration by the National Association of Regulatory Utility Commissioners (NARUC) and the Federal Communications Commission (FCC). Additionally, separation issues have been the subject of a separate inquiry following the main case in Application No. 55492. The separate inquiry has been submitted and is now pending before the Commission.

"It appears that this matter raises questions of major importance to the California ratepayer. The Commission should pursue this matter further in the joint NARUC/FCC inquiry as well as assuring that the submitted record in Application 55492 is complete."

We think the underlying principle is best expressed by the [*U.S. Supreme Court in Smith v Illinois Bell Telephone Company \(1930\) 282 US 133*](#): [*253]

"While the difficulty in making an exact apportionment of the property is apparent, and extreme nicety is not required, only reasonable measures being essential . . . it is quite another matter to ignore altogether the actual uses to which the property is put. It is obvious that, unless an apportionment is made, the intrastate service to which the exchange property is allocated will bear an undue burden . . . We think . . . that by some practical method the different uses of the property may be recognized and the return properly attributable to the intrastate service may be ascertained accordingly."

There the Court held that telephone terminal plant must be recognized in joint plant and joint expenses in the separations procedure. State commissions were no longer to ignore the uses to which telephone property was utilized in jurisdictional apportionment. Thus, in 1947, with the publication of the Separations Manual, the factor of relative use was established as the basis for allocation of jointly used property between interstate and intrastate jurisdictions. Section 11.13 of the Manual provides that the "fundamental basis on which separations are made is the use of telephone [*254] plant in each of the operations."

We see no reason why interstate service should not be assigned its fair share of the large portion of Pacific's investment which is jointly used for all services and for its portion of joint expenses. Consistency with the basic underlying principle of the Manual and with the *Smith* decision requires that all use which has a significant impact on the allocation process should be counted in dividing costs between the state and interstate jurisdictions. It is only reasonable to assign the interstate jurisdiction a fair share based on total "use" instead of the now existing preferred treatment to interstate service which ignores substantial common costs.

Pacific's Bruins decries the size of TURN's proposed reassignment of costs, computing it to be 16 times the current assignment. But this simply emphasizes the enormity of the present alleged errors in quantitative terms. In relative terms, the suggested correction is 10 to 12 percent.

We are, however, impressed with Pacific's Bruins comments and analysis of the estimates prepared by TURN's Gabel. We are not satisfied that TURN has carried its burden of proof as to specific adjustments although, [*255] as with the staff, Pacific has evidently withheld source data from TURN until its own rebuttal.¹

It appears, as Pacific states in its brief, that Mr. Gabel has in one situation assigned the same revenue requirement to the interstate operations twice by two allocation methods.

Also it seems that if Mr. Gabel were to have carried his recommendations to their logical conclusion he would have also assigned additional revenue requirement to the interstate operations by the application of the revised SPF to the subscriber outside plant (the local loop plant) and by the revised SLU applied to the traffic sensitive portion of the Central Office.

These same issues are being addressed in a pending decision in Application No. 55492 and we will defer to that forthcoming decision.

Management Audit

The staff recommends a management audit for reasons that will be [*256] apparent in the reading of this decision. Since the closing of the record in this case, however, Pacific has communicated to our Executive Director a desire to explore and remedy any and all existing problems relating to the exchange of data between Pacific, the staff, and other parties. While not meeting all of the reasons for the staff recommendation, the Pacific proposal is, in our view, a sufficient vehicle for progress for the present.

Full, complete, and timely disclosure of all relevant data among all parties is essential to the prompt processing of general rate cases. The records show that such did not occur in this case.

¹ For example, see Table 6, Exhibit 93A, line 7, where TURN's Gabel estimates California interstate foreign exchange circuits at 23,918, stating that Pacific provided no response to information request 8 which posed the question. At page 22 of Pacific Bruins statements, we are informed that the "true number" is 3,000.

We hereby put Pacific on notice that future failures by it to cooperate with the staff and parties so as to achieve the goal of the Regulatory Lag Plan will be considered as grounds for dismissal of applications in progress of hearing.

We will not order a management audit at this time.

Pacific's Cost of Service Studies

Mr. Turk, Pacific's witness, produced exhibits and testimony on six studies. The studies were:

1. Embedded direct analysis of Pacific's total California operations (EDA).
2. Embedded direct cost studies of exchange service [*257] by class of service (ECS).
3. A cost study of private line service, Series 1000, 2000, and 3000.
4. Embedded direct cost study of intrastate DDD message cost by mileage band (EDDD).
5. Multi-element nonrecurring cost study.
6. A description of the GE-100 cost study methodology.

Various parties including the staff took issue with Mr. Turk's studies either through cross-examination or direct testimony. Staff witness Evans commented on three of the studies, the EDA, the ECS, and the EDDD.

Pacific submitted the results of the three cost studies on its own initiative to indicate the historical relationship between revenues and direct costs by broad category of the various services offered. Pacific conceded that the result of the studies were not appropriate for pricing decisions but were useful as a management tool.

The staff pointed out that there were deficiencies in the studies such as the absence of separations and Commission rate-fixing adjustments and the fact that exchange rates are set residually. There is value in the studies in tracking direct cost/revenue relationships, but in order to set rates the larger picture must be shown, including allocation of common [*258] corporate costs, recognition of rate-fixing adjustments and jurisdictional separations.

While the record is lengthy on the three cost studies, we agree with staff witness, Mr. Evans, that the EDA, ECS, and EDDD studies are not appropriate for setting rates in this proceeding.

Pending Motions

All motions not heretofore granted or denied should be denied. No other matters require discussion.

Findings of Fact -- Results of Operations

1. The total California rate base is \$8,779,945,000.
2. The total intrastate rate base is \$6,759,837,000.
3. The capital ratios, cost factors, and weighted costs reflective of test year conditions are shown in Table I of this decision.
4. Job development investment credit is not included in the ratios shown in Table I of this decision as it is inconsistent for it to be capitalized where rate base is derived from the weight of average depreciated balances.
5. An authorized return on rate base of 9.73 percent and return on equity of 12.25 percent is reasonable and will allow Pacific the opportunity to realize adequate earnings.
6. Total company operations, including operating revenues, operating expenses, taxes, and rate base as developed [*259] on the record by the staff, by Pacific, and as adopted, as reflective of test year conditions, by this

Commission are shown in Table II, Summary of Earnings. Table II also shows separated intrastate operating revenues, operating expenses and taxes, rate base, and rate of return adopted in this decision.

7. Given the adopted test year results of operation (set forth in Table II) and the return on rate base and common equity found reasonable, Pacific's jurisdictional revenue requirement should be reduced by approximately \$42.2 million annually.

8. Except for Proposition 13 effects, local service revenues as estimated by Pacific are reasonable. Intrastate toll revenues and interstate toll revenues as estimated by the staff are reasonable and reflect anticipated test year conditions.

9. Uncollectible revenue as estimated by the staff methodology is reasonable.

10. Pacific's estimate of operating revenues excludes an adjustment for Proposition 13 tax effects, and, to that extent, is not reflective of known test year conditions.

11. It is reasonable to reduce estimated test year revenues by the effects of rate reductions ordered by this Commission as a result of the passage [*260] of Proposition 13 as the staff has done.

12. Pacific has included in its revenue estimates an amount for increased revenues due to the establishment and operation of Phone Centers.

13. The proposed increase in revenues because of Phone Center operations proposed by the staff is not reflective of test year conditions.

14. The staff's estimate of intrastate toll customer billings is reasonable and its estimate of interstate toll revenue is likewise reasonable, being calculated by standard settlement procedures.

15. It is not true that the budgeting and estimating procedures which underly Pacific's October 1977 budget estimates, (which estimates form the basis for its application in this case) are the procedures regularly pursued by Pacific to direct the actual operations of the business.

16. Pacific has had little experience in forecasting operating results two years in advance.

17. The staff's estimates for the entire results of operation shown in Table II of this decision were developed and finally prepared approximately eight months after Pacific's estimates were made and prepared.

18. The staff had the benefit of more current information upon which to develop its estimates [*261] in this proceeding.

19. Many of Pacific's expense estimates as shown on Table II of this decision are distorted in that Pacific made no effort during the course of the proceedings to respond to known changes not involving estimates, as, for example, the ad valorem tax effect on revenues and expenses.

20. Pacific and the staff both updated and corrected their estimates predicated upon the change in the federal income tax rate for corporations from 48 percent to 46 percent effective January 1, 1979.

21. We adopt the federal income tax rate of 46 percent for corporations whose earnings are in excess of \$100,000 in this proceeding.

22. Pacific's basic estimates for expenses are overstated by reason of a failure to properly account for increased productivity levels.

23. The staff's expense estimates made reasonable provision for increased productivity levels in the various expense categories.

24. The staff's estimate for electric power for the test year is \$34,537,000 as compared with Pacific's estimate of \$46,600,000. The staff's estimate is more realistic and reflective of the expenditure level likely to be realized in a normal year of operation.
25. The staff estimated [*262] maintenance expense by reason of Phone Center activity to be \$11,789,000 less than Pacific's estimate. The staff estimate is the more realistic because it recognizes a known productivity and efficiency gain.
26. The staff's estimate of the effect of Pacific's main frame program is \$37,832,000, not included in Pacific's estimate. We find the staff's estimate to be more reflective of maintenance expenditures considering a conservation recognition to known productivity gains during the period for which we are setting rates.
27. The staff's estimate of the test year effect of the Western Electric adjustment on maintenance expense is \$8,538,000 less than that of Pacific. We find the staff's estimate to be more accurate and is reflective of Commission policy. We find that Pacific should make a reevaluation of the survivor curve used in developing the Western Electric adjustment and submit same to the staff prior to tendering any future NOI for any future rate case.
28. The staff's estimate for general traffic supervision expense is reasonable because it includes an allowance for productivity increases.
29. The staff's estimate for operators' wages is reasonable. Pacific's estimate [*263] overstates the expense effect of salary increases and fails to recognize known changes in operating procedures that will reduce such expense.
30. The staff's estimate for lunchroom expenses is reasonable.
31. The staff's estimate for operator employment and training is more reasonable because it recognizes a consistent pattern of increase for this expense.
32. The staff's estimate for inhouse printing services is reasonable.
33. The staff's estimate for miscellaneous traffic expenses is reasonable.
34. The staff's estimate for service inspection and customer instruction is unreasonable because it anticipates test year conditions that will not occur, and will not be adopted.
35. The staff's adjustment for automated coin telephone service (ACTS) is unreasonable because the anticipated expense savings will occur far beyond the test year. Pacific can begin to implement ACTS by December 31, 1981, and commence to realize expense savings.
36. The staff's adjustment for Phone Center advertising is unreasonable, because increased public awareness of this program can reduce expenses.
37. Pacific's test year service information advertising estimate is not duplicative of other [*264] programs. The program can benefit customers and reduce expenses.
38. Building signs advertising should be capitalized; accordingly no allowance in commercial expense will be made for the \$77,000 Pacific budgeted as operating expense.
39. The staff's adjustment for automated dialer advertising is reasonable because the program is either being phased out or is discontinued.
40. Pacific's advertising campaign called "The system is the solution" can stimulate sales of competitive terminal equipment and is not, on balance, primarily corporate image or institutional advertising.
41. Pacific's long distance advertising campaign may tend to have the net effect of increasing revenues.

42. The staff's adjustment for national residential advertising is reasonable because Pacific did not fully explain its test year program. Also, to avoid a duplicative allowance for this expense it should be recovered as rates are set for decorative phones.
43. The adjustment to advertising salaries recommended by the staff is not reflective of test year conditions.
44. The staff's adjustment for directory assistance advertising is reasonable because Pacific has discontinued the program.
45. **[*265]** The staff's adjustment for other advertising expense is reasonable and will be adopted.
46. Pacific's test year Phone Power Program is reasonable and will be adopted because it will generate increased net revenues.
47. The staff's adjustment for general commercial expense is unreasonable in view of Pacific's competitive marketing position and the need for more detailed tracking studies.
48. The staff's adjustment for computer output expense (COMBO) is, on balance, unreasonable because Pacific's estimate accounts for productivity gains.
49. The staff's adjustment for business office expense is unreasonable because Pacific's estimate accounts for productivity gains.
50. The staff's adjustment for automated payment expense is unreasonable because the procedure will not be in effect until well beyond the test year.
51. The staff's adjustment for Phone Center stores expense associated with local commercial operations is unreasonable because it has not been demonstrated that the average transaction will be reduced.
52. Pacific's estimate for centralization expense in local commercial operations is reasonable and reflects anticipated conditions.
53. The staff's adjustment **[*266]** for residential service centers in local commercial operations is unreasonable and will not be adopted.
54. The staff's adjustment for national yellow pages directory expenses is reasonable because there will be known expense savings that Pacific did not reflect in its estimate.
55. The staff's adjustment for reduction in expense due to new page design of the directories is unreasonable because an expense savings has not been demonstrated.
56. The staff's adjustment of the directories is unreasonable and will not be adopted.
57. The staff's adjustment for photo composition expense in directories is unreasonable and will not be adopted.
58. The staff's adjustment of mechanization expense savings in directory production is unreasonable and will not be adopted.
59. The staff's adjustment for teleprocessing in the commercial expense category is premature and will not be adopted.
60. Pacific can begin to implement teleprocessing within six months of the date of this order and should, accordingly, present a full showing in its next general rate case with respect to the progress of implementation and the expense and economies flowing therefrom.
61. The staff's adjustment **[*267]** for PBX inventory as a reduction of general office expense is reasonable and uncontroverted by Pacific.

62. The staff's adjustment increasing Pacific's estimate of law department expenses is more reflective of the level of law department activity.
63. The staff's adjustment decreasing law department expenses by 50 percent for the cost of defending the Justice Department antitrust suit is reasonable and will be adopted because it is not certain that Pacific ratepayers will benefit if Pacific and the Bell System is successful in its defense of that suit.
64. The staff's adjustment disallowing general office expenses associated with "citizenship activities" is reasonable because the program is not directly related to providing utility service.
65. The staff's adjustment increasing the ratemaking deduction for legislative advocacy expenses is unreasonable and will not be adopted.
66. The staff's proposed adjustment for abandoned projects was not fully developed by the evidence.
67. Pacific's estimate for treasury department expenses is reasonable and in keeping with recent expense experience.
68. Pacific's estimate for other general office expenses is reflective of [*268] test year expenditure levels and is reasonable.
69. The staff's adjustment for operating rents is based on more recent expense experience.
70. The staff's adjustment for dues and donations expense is reasonable because it includes the expense of loaning executives for charitable work and more accurately reflects recent expense levels for this expense category.
71. The staff's adjustment for insurance expense is reasonable because it reflects cancellation of some liability policies.
72. The staff's adjustment for items charged to construction is reasonable because it is consistent with other adjustments adopted herein.
73. The staff's proposed adjustment to increase the earnings rate on Pacific's pension funds has not been demonstrated as reasonable based on the evidence.
74. The staff's adjustment to dental plan expenses is reasonable because the dental plan rate has been decreasing in recent years.
75. The staff's adjustment increasing extraordinary medical expenses is reflective of recent expense conditions.
76. The staff's adjustment to basic medical insurance is reasonable.
77. The staff's estimates of group life insurance and special medical expense [*269] are more accurate because they are based on the latest available information.
78. The staff's estimate for payroll taxes, including the base rate difference and the rate difference, is reasonable because it is based on more refined and accurate estimating procedures.
79. The staff's adjustment for state and local taxes is reasonable because it is more reflective of current conditions.
80. The staff's adjustment for removal expense is reasonable and will be adopted. It is appropriate and reasonable to predicate this decision upon the treatment of liberalized tax depreciation on a normalized basis pending the outcome of litigation in the federal courts with respect to the Commission's adopted ratemaking treatment of this item.

81. Rates herein should be established on a full normalization basis subject to refund, pending the disposition of the ratemaking treatment for Pacific's federal income taxes in the legal proceedings which have not yet been concluded.
82. The staff's methodology for treatment of the investment credit in this proceeding is reasonable.
83. The staff's proposed adjustment for interest expense allocated from American to Pacific will not be adopted [*270] in this proceeding but deferred until completion of Order Instituting Investigation No. 24.
84. The staff's adjustment for fixed charges is reasonable because it is consistent with the adopted capital structure. The net-to-gross multiplier to be used in determining revenue requirement in this proceeding is 1.894. That multiplier reflects the current federal corporate tax rate and an incremental allowance for CCFT of 1.25 percent which realistically reflects net-to-gross revenue requirement factor components.
85. The staff's estimate of California corporation franchise tax is reasonable and will be adopted.
86. The staff's adjustment to the deferred tax reserve by reason of the reduction in the federal income tax from 48 percent to 46 percent, with parallel adjustments to Pacific's federal income tax expense over a 10-year period reflects current developments and will be adopted.
87. In Decision No. 90316, issued May 22, 1979 in Order Instituting Investigation No. 33, it was ordered that Pacific's ratepayers would receive the benefit of the net reduction in the federal corporate tax rate from 48 percent to 46 percent.
88. In Decision No. 90316, it was ordered that [*271] the savings of federal taxes resulting from the rate reduction incorporated in the Revenue Act of 1978 would be passed through to the ratepayers in our decision in these proceedings by consolidating Order Instituting Investigation No. 33 with these matters.
89. Pacific's Tax Initiative Account established pursuant to our orders in Order Instituting Investigation No. 19 should be reviewed when the rates in this case go into effect, Pacific and the staff then determining the appropriate charge or credit to affected ratepayers to effect the closing of the account.
90. The staff recommendation that deductions disallowed by this Commission for ratemaking purposes be recognized in the computation of Pacific's income tax is deferred for consideration in Order Instituting Investigation No. 24, which will address that, among other, general ratemaking propositions.
91. The staff's computation of the license contract expense to be allowed in this proceeding as modified pursuant to Decision No. 90362, issued June 5, 1979, and contained in Tables III and IV of this decision is reasonable and is adopted pursuant to stipulation by staff and Pacific.
92. The adjustments to rate base and [*272] expenses opposed by TURN in this proceeding were not adequately supported by evidence and cannot be adopted.
93. A pending decision in Application No. 55492 addresses the separations issues raised by TURN.
94. The issue of the appropriate treatment of interstate separations raised by TURN in this proceeding can and should be pursued by the staff on behalf of the Commission on a nationwide basis through NARUC pending the receipt of Pacific's filing in its next general rate case.
95. The staff's basic higher estimate of telephone plant in service is more reasonable because it is based on more reliable estimating.
96. The staff's estimate of property held for future use is reasonable and will be adopted.

97. Decision No. 90362 will be modified to confirm its refund order and to provide that future rates contemplated by that decision are those adopted herein to become effective contemporaneously with the tariffs in Appendix B of this decision.

98. The staff's treatment of interest during construction and taxes on land during construction is consistent with the policy adopted in Decision No. 88232 and is reasonable and will be adopted.

99. The staff's recommendation [*273] with respect to the FFRC formula in computing the IDC rate is unreasonable because it has not been demonstrated that telephone utilities warrant the same IDC treatment.

100. The staff's treatment of plant verification matters is reasonable because it would not allow Pacific to earn a return on nonexistent telephone plant.

101. The staff's estimate of working cash is more realistic because it is based on later information with respect to days of lag in making required payments.

102. The staff's estimate of materials and supplies reflects current inventory management procedures and circuit pack costs.

103. The staff's estimate of depreciation and depreciation reserve is adopted as being more reasonable because it is based on the latest view of plant accounts and reflects reasonable adjustments for Western Electric.

104. The staff's adjustment for the transfer of circuit pack cost of materials and supplies would ensure against a double accounting of such expenses.

105. Pacific is making satisfactory progress to cure the held order service problem addressed by us in Decision No. 8653 and the rate of return penalty therein imposed should be discontinued.

Findings [*274] of Fact -- Rate of Design and Other Issues

1. The staff presented three rate designs: the first based upon an annual revenue decrease of \$234.1 million, the second based upon an annual revenue increase of \$200 million, and the third based upon a zero change in annual revenues.

2. Pacific presented a rate design to produce an annual revenue increase of \$469.8 million.

3. Both Pacific and the staff have, in their respective rate designs, attempted to meet our established goals of matching the price of the service rendered to the cost of the service rendered so that each class of service will be paying rates which will cover the fully embedded costs to render that service.

4. Several other parties to this proceeding have presented evidence with respect to particular rates and charges.

5. The rate design which we have adopted in this proceeding for Pacific is set forth in summary form at the close of our discussion on Rate Design, page 150 of this decision.

6. It has been a long-standing Commission policy to eliminate multi-message unit (MMU) rates as such rates no longer serve a useful or practical purpose and contribute to subscriber confusion.

7. There are remaining [*275] three MMU and four MMU routes in the SF-EBEA and in the LAEA which should be eliminated.

8. Conversion of remaining MMU routes to message toll service would substantially increase the cost to the affected customers so that they would make a disproportionate contribution to the total to Pacific's total revenue. Therefore, such conversion would not be in the public interest and will not be adopted.

9. Conversion of the remaining MMU routes to zones of local calling is consistent with this Commission's previous order which eliminated two MMU routes.

10. Basic exchange rates are residually priced and are not based upon costs.
11. The conversion of the remaining MMU rates should be made in a manner consistent with established patterns of calling distances.
12. The Zone Usage Measurement (ZUM) Plan adopted herein is consistent with established patterns of calling distances and will result in the least disruption of present rates for those subscribers to telephone service now using MMU routes.
13. The ZUM Plan provides for measuring service and can be adopted for the SF-EBEA and the LAEA at the present time as practicalities permit.
14. It is practical for Pacific and [*276] General to convert the MMU unit routes to the ZUM Plan for within 90 days of the effective date of this order, except that General will not be required to implement the timing of local calls under Zone 1 of the ZUM Plan by reason of its present lack of facilities to do so.
15. The conversion by Pacific and General of certain present free-calling routes to Zones 2 and 3 of the ZUM Plan or to message toll will require additional facilities.
16. The ZUM Plan incorporates off-peak and weekend rate differentials similar to those now in effect on long-distance calls.
17. The ZUM Plan is usage sensitive so that the callers who make the longer calls both in distance and in time will bear a larger portion of the cost of the service than those whose calling patterns are less extensive.
18. The ZUM Plan will achieve a closer fit of costs of service to the price charged for the service.
19. Pacific can be directed to collect, analyze, and report to the Commission on a quarterly basis all pertinent data gained from actual experience from offering the ZUM Plan in the specified areas. The format of the quarterly reports on the ZUM Plan should be developed in consultation with the [*277] Commission's staff.
20. Application No. 58223, filed by Pacific, contains notice of the intended conversion of three MMU and four MMU routes to message toll. OII No. 21 provides that the Commission has jurisdiction to adopt the proposal by Pacific or some other and different proposal in the public interest.
21. MMU service is more complicated than the ZUM Plan.
22. The ZUM Plan is reasonable, is in the public interest, and will be adopted.
23. Competitive services offered by Pacific are not now priced to recover full cost of providing the services. The rate design adopted here provides for increases in the rates for such competitive services within the framework of an overall net reduction in annual revenues of \$42.2 million.
24. There is no change in the rate for residence lifeline service for the first 30 calls.
25. The present rate of \$2.50 a month for the first 30 calls will remain unchanged, but a rate of 10 cents per call will be applicable to calls between 30 and 40 per month and a rate of 15 cents per call will be applicable for calls over 40 per month.
26. Increases in the lifeline rate for calls in excess of 30 are reasonable because lifeline is not [*278] subject to single-message-rate timing (SMRT), and was never intended to provide unlimited, unmeasured calling to subscribers who would otherwise utilize a telephone service which will yield a greater contribution to the costs to Pacific to render the service.
27. The present 30-call allowance for lifeline (1MQ) service is advantageously priced as compared to the 60-call allowance lifeline service which is subject to SMRT.

28. Increasing the charge for lifeline service calls in excess of 30 will encourage only those customers who have limiting calling requirements to elect 1MQ service.
29. It is in the interest of the general body of ratepayers that low cost services rendered should be limited to the actual and established needs of those persons to whom such service is rendered. Lifeline service should not be unrestricted as to the number of calls at the low basic rate of \$2.50 per month.
30. Without imposing the adopted lifeline surcharges on calls over 30, lifeline service would offer a basic grade of service attracting potentially most residential subscribers through the use of a low message rate that would apply regardless of the number of or length of calls made. **[*279]**
31. The staff proposed revisions to the message toll schedule incorporate a one-minute schedule for operator-handled messages except coin, surcharges on operator-handled calls, discounts similar to the interstate discounts for evening and night calls, and reduction in the number of toll rate bands would result in equitable usage sensitive rates.
32. The staff proposals set forth in the finding above will result in a simplification of the applicability of message toll rates at a cost which is commensurate with the constraints of the gross revenue reduction ordered in this proceeding.
33. Our policy to expand SMRT is set forth in Decision No. 83162 as modified by Decision No. 86593.
34. We have previously ordered the withdrawal of business two-party flat, residence two-party, and four-party flat rate services from exchanges in Bakersfield, Fresno, Modesto, Riverside, Santa Rosa, and Stockton as being counterproductive to the successful introduction of SMRT.
35. The offering of business flat rate service in conjunction with measured service featuring usage sensitive pricing (SMRT), will result in a lessening of incentive for business subscribers to elect measured service **[*280]** (subject to SMRT).
36. SMRT encourages efficient use of network facilities by discouraging long-call holding times resulting in less need to construct basic exchange call processing facilities.
37. The business flat rate services will be withdrawn in the six exchanges mentioned above and we will adopt the staff's proposal to implement SMRT in these exchanges to be completed on or before July 1, 1981.
38. In Decision No. 77311 we established the extended area service rate plan for nonmetropolitan areas which has been referred to Pacific and the staff in this proceeding as the Salinas Formula.
39. The Salinas Formula accomplishes uniformity in rate design where calling areas are extended in the various exchanges throughout the State of California.
40. The Salinas Formula cost elements have not been increased for a number of years, and it is reasonable to recognize such increased costs as such recognition is consistent with our past decisions granting increases in message toll rates.
41. An increase in the Salinas Formula extended area rate elements will result in rates that are closer to the cost of providing the service and is in the public interest.
42. The staff's **[*281]** proposal for Salinas Formula increments will be adopted.
43. Pacific and the staff have proposed revisions to the multi-element service connection charges including increases in the charge levels and revisions of the multi-element charge structure.
44. Neither Pacific's nor the staff's proposed service connection charge levels attempt to recover full cost, but each recognizes that some increase in these costs is warranted at this time.

45. In increasing the multi-element service connection charges in this proceeding, we are striking a balance between the needs of new telephone subscribers to obtain service at reasonable costs and the needs of the general body of ratepayers to share no more of the total cost burden of telephone service than is justified.
46. The staff's proposed multi-element charges, predicated on 50 percent of estimated costs, are preferable to Pacific's proposed charges predicated on 65 percent of estimated costs because they will not unduly burden ratepayers initiating service.
47. The purpose of balancing the needs of the general body of subscribers can result if we limit the increase for service connection charges on a simple residence service **[*282]** to 25 percent.
48. The service connection charges, move and change charges, and in-place connection charges applicable to complex services will be increased by 10 percent in harmony with the above stated objectives.
49. The station handling charge, as revised herein, is reasonable and will be retained.
50. A premises visit multi-element service charge will recover cost not directly recognized by present charges and is adopted.
51. The premises visit charges should apply only when a visit by Pacific to the customer's premises is actually required for the installation of service or equipment. A premises visit's charge element, based upon cost, may not be applicable if the customer utilized Phone Center facilities, and would be directly related to a work activity.
52. The adopted rates and charges for Pacific will result in reduced revenues of \$22.6 million to General in the 1979 test year. It is reasonable to recognize the reduced revenues to General by authorizing the filing of tariffs providing for increases in rates and charges for services provided by General in harmony with the rate design action we take in this proceeding.
53. The adopted rates and charges for **[*283]** Pacific will result in negligible changes in revenue to the independent telephone companies other than General, and, therefore, no offsetting rate relief is required for these independents.
54. In order to insure uniformity of rate treatment for telephone subscribers throughout the State of California, the proposed offsetting increases in rates and charges for services provided by General should be concentrated in the areas of competitive services and service connection charges, as we have done with Pacific.
55. General was a party to this proceeding and submitted evidence as to the rate categories in which it would request rate increases in eventuality that our rate decisions for Pacific had a negative effect upon General.
56. Except for directory advertising rates, the recommendations for offsetting rate relief by General and the staff are very similar.
57. As increases in directory advertising rates will not be consistent with our 90-day implementation period for the ZUM Plan, we will anticipate the rate relief to be granted to General to be in the areas of competitive items and service connection charges.
58. Competitive items and service connection charges for **[*284]** General have not been increased for a number of years and are generally well below the costs to serve.
59. We will authorize General to file increases in rates and charges as set forth in summary form on page 129 of this decision.
60. Competitive items of terminal equipment were the subject of testimony by several parties in this proceeding.

61. In this proceeding the items included in the category of the competitive items of terminal equipment are extensions, premium sets, and key telephone service equipment. This Commission has consistently applied the "GE-100" methodology in determining cost for competitive items of terminal equipment.
62. Many existing rates and charges not proposed for change in this proceeding are predicated upon the "GE-100" methodology.
63. It is not reasonable to depart from use of the constant net plant factor in the "GE-100" methodology in favor of a variable plant factor for the reason that such departure would result in nonuniformity of rates charged among otherwise equivalent users of telephone service.
64. The net plant factors utilized by Pacific and the staff in the "GE-100" cost methodology in this proceeding are reasonable and **[*285]** will be adopted.
65. It is impracticable at the present time to develop a net plant factor for each item of equipment, and no such net plant factors have been presented in this proceeding.
66. Pacific is attempting to develop a net plant factor by major plant accounts and/or subaccounts. The development of net plant factors by major plant accounts will be an improvement in the costing process and result in a better fitting of cost-to-serve to price-to-serve in the various customer category groups, and we will consider development of this methodology in future proceedings.
67. It is unreasonable to reflect separation effects in the "GE-100" methodology for the determination of rates and charges for cost-based terminal equipment in this proceeding.
68. The inclusion of separation effects would result in credits being provided to customers who utilize customer-provided equipment, which credits would create a positive revenue requirement which must then be made up in higher rates to the general body of ratepayers.
69. Inclusion of separation effects in the development of rates and charges for competitive items of terminal equipment would result in anticompetitive rates. **[*286]**
70. "GE-100" methodology provides for the inclusion of only 50 percent of nonrecoverable costs, and this methodology has been utilized for many years in the pricing of terminal equipment by Pacific.
71. It is unreasonable to increase the amount of percentage of nonrecoverable cost to be included in the "GE-100" methodology to 100 percent as there is no study presented to show the quantitative effects of such change, and such change would cause a reduction in monthly rates for present customers with no associated reduction in cost.
72. Changes in cost methodology must be made upon a uniform basis so that uniformity of rates and charges will not be disrupted, and there is insufficient evidence in the record of this proceeding to permit such a revision.
73. Extensions, premium sets, and inside wiring are proposed for rate increases in this proceeding, both by the staff and by Pacific.
74. There is competition with Pacific in the furnishing of such equipment as touch-tone telephone sets, princess telephone sets, and trim-line telephone sets.
75. A positive effort should be made to price competitive terminal equipment of Pacific appropriately in relationship to its costs **[*287]** where such terminal equipment is met by competition from other suppliers.
76. Pacific proposes that its rates for extension sets, premium sets, and inside wiring should be based upon fully allocated costs as such costs are developed using the "GE-100" methodology, but on a stand-alone basis. The staff's proposed rates and charges for extension sets and premium sets are likewise based upon "GE-100" fully allocated costs but on an incremental basis consistent with past Commission policy.

77. It is reasonable to develop rates for extensions and premium sets predicated upon the incremental costs over the cost of the standard rotary telephone as recommended by the staff.
78. We adopt the staff proposed treatment of the rates and charges for touch-tone sets as reasonable and as being consistent with our adoption of the staff's proposed revisions in service connection, move and change, in-place connection, and multi-element service charges.
79. The staff's proposed rates and charges for extensions and premium sets reflect more recent Phone Center data and are therefore more reliable.
80. We do not adopt any increase for residence interior wiring, but adopt the staff's recommendation **[*288]** for the elimination of the residence interior wiring rates.
81. Elimination of the residence interior wiring rates will simplify the rate structure and will also pass reduction in rates associated with the overall reduction in revenue requirement as ordered herein to Pacific's customers on a statewide basis.
82. We will not eliminate the interior wiring rates applicable to business services and shall adopt the staff's proposed rates for business inside wiring.
83. The record shows that insufficient data are available to properly separate the costs of business inside wiring.
84. The staff's recommendation that Pacific be ordered to develop cost data on segregation of the cost of business inside wiring will be adopted.
85. The matter of business inside wiring will be considered again by us in Pacific's next general rate application upon Pacific's presentation of a full showing of the costs associated with business inside wiring for extensions.
86. We will not exempt from any increases in rates and charges for equipment and/or services provided by Pacific to the University of California, or any other governmental agency, for to do so would result in discriminatory ratemaking. **[*289]**
87. Key telephone service rates will be increased in accordance with the staff's recommendation, such rates being recognized to be far below cost.
88. Because of the constraints of the overall revenue requirement authorized by this order, we cannot authorize increases in rates and charges for key telephone equipment to the levels recommended by either Pacific or the staff. Key telephone service rates are increased for a revenue effect of \$26.1 million in harmony with our policy of gradual revision of rates to avoid sudden and steep disruption.
89. Our adopted levels of rates and charges for key telephone equipment are based on increasing installation charges for this equipment to the levels proposed by the staff, and our adopted rates are developed in a manner to recover the necessary revenues to match the adopted revenue requirement.
90. Foreign exchange service (FEX) rates are increased in order to insure that the service is more fully supported in the rate structure provided for it, and not by other toll users.
91. Our adoption of FEX rates also results in the alignment of Pacific's tariff revisions with respect to FEX with those of General.
92. Application of **[*290]** intrastate FEX rates and charges to the local exchange access lines of interstate FEX services will eliminate present discrimination and is reasonable.
93. The adoption of FEX rates in this proceeding does not create a discriminatory rate disparity because the services involved are optional and cross-elastic with message toll service.

94. In Decision No. 87584 we ordered Pacific to supply a study and schedule for further implementation of SMRT.
95. Pacific proposes and the staff agrees that SMRT should be expanded to all areas of the State; we concur.
96. There is a lack of data reflecting experience with the ZUM Plan which we are inaugurating in this proceeding. Therefore, we will adopt the staff's and Pacific's recommendation that SMRT be continued to be implemented as the fulfillment of our policy of achieving usage sensitive telephone rates throughout the State.
97. The implementation schedule proposed by Pacific is incorporated in Exhibit No. 34 in this proceeding (pages 11-33), is reasonable, and will be adopted.
98. Optional calling measured service (OCMS) is an optional service offered over certain one-way routes presently to one-party flat rate (1FR) residence [*291] customers.
99. It is reasonable that OCMS should be expanded in its offering to an additional approximately 300 routes as proposed by Pacific and concurred in by the staff.
100. A policy of continuing the present limitation of offering OCMS to 1FR customers only would be counterproductive to the growth of customer acceptance of measured service.
101. The staff recommends that Pacific be ordered to present a study in its next major rate proceeding with respect to the provision of OCMS to business customers; we agree and adopt that recommendation.
102. Optional residence telephone service (ORTS) is an optional service offered in the San Francisco Bay Area and the Los Angeles-Orange County Area to 1FR residence customers.
103. ORTS provides various calling options for calling up to 40 air route miles at substantially reduced rates when compared to present MMU and/or message toll rates.
104. Pacific advises that ORTS is currently under study for conversion to a fully measured service.
105. The staff recommends that Pacific be ordered to develop a fully measured optional business telephone service and to provide such a plan in Pacific's next major rate application; [*292] we agree and we will so order.
106. All FEX services should be measured in order to achieve a closer matching of costs and revenues for such service.
107. The staff recommends that Pacific include in its next general rate application a study including an implementation schedule, revenue requirement, and a proposed tariff showing a revenue effect for offering all foreign exchange service on a fully measured basis; we concur and will so order.
108. Pacific has presented a study in this proceeding in compliance with Decision No. 85790, dated May 11, 1976, wherein it analyzes the revenues and costs associated with the provision of the SG-1/SG-1A PBX.
109. The staff contends that such study is deficient in that fully allocated costs are not included therein and recommends that a new study be ordered.
110. Pacific should be ordered to conduct GE-100 studies of the SG-1/SG-1A PBX service in consultation with the staff and to implement the resulting rates and charges within 180 days of the effective date of this order if the results of the GE-100 studies indicate present rates and charges do not cover the cost of providing this service.
111. Pacific's present private line [*293] rates and charges are, in many instances, significantly above or below fully allocated costs.
112. It is in the interest of all parties to adjust Pacific's private line rates and charges in such a manner as to achieve a better fit between their cost and these rates and charges.

113. In the interest of the affected ratepayers, Pacific's individual private line rates and charges should not in general be increased more than 50 percent in this proceeding.
114. With respect to private line rates as well as many other categories, we are aware that this rate spread does not produce rates that result in returning full costs, as this is not possible without major reductions in other rates and would force abrupt and substantial immediate increases upon certain customers.
115. A policy consideration continued in this decision on rate spread is to increase equipment rates in stages in order to lessen the impact on those ratepayers affected.
116. We adopt the staff's recommendations on private line services as striking a reasonable balance among the interests of ratepayers, Pacific, and its competitors.
117. We view any modification which results in a closer fit between costs [*294] and charges to be generally in the competitive interest, and the rates and charges we adopt are of this sort.
118. The rates applicable to the alarm industry are below costs, and we have repeatedly placed the industry on notice that these rates must be increased.
119. It is not in the public interest to exempt the alarm industry from bearing its fair share of cost for services it uses.
120. We adopt the rates recommended by the staff for alarm industry services in this proceeding.
121. Southern Pacific Communications Company (SPCC) is a competitor of Pacific in the provision of some interexchange private line services.
122. The data base used by Pacific in pricing its private line services is in need of improvement for use in any future proceedings.
123. It is reasonable to derive exchange telephone service mileage rates and charges in a manner consistent with the derivation of private line rates and charges.
124. It is reasonable for Pacific to aggregate the population of local loops for the derivation of local loop costs in this proceeding.
125. For any future rate adjustments, a more detailed showing will be required in validation of this procedure.
126. [*295] It is reasonable to retain the mileage basis for pricing some extension services of relatively short distances.
127. No showing has been made to justify increases in flatrate secretarial line or telephone answering service mileage charges in this proceeding.
128. It is reasonable to offset the reduced revenues to General of \$22.6 million by permitting General to file by advice letter increases in rates and charges for services provided by it, subject to Commission authorization by resolution action. General should provide notice to all its subscribers affected by such proposed changes.
129. Pacific's costs of service studies are inadequate for ratesetting purposes in this proceeding.
130. The deaf, hearing-impaired, and speech-impaired require teletypewriters or comparable devices to have access to the telephone network.
131. Teletypewriter devices suitable for use by the deaf are available both from Pacific as tariff items and competitively from commercial sources by purchase or rental.

132. The deaf do not presently have adequate teletypewriter access to emergency service via the telephone network.
133. Pacific's service offices available to the handicapped [*296] do not provide continuous service and do not provide sufficient range of emergency access.
134. The deaf presently do not adequate teletypewriter access to Pacific's network services which require operator assistance.
135. No public subsidy is generally available to the physically disabled for the purchase or rental of specialized telecommunications equipment.
136. The blind and other persons with physical disabilities should benefit on the same basis as the deaf in any program of assistance provided by or through Pacific.
137. There are approximately 160,000 households in the State of California with deaf persons, the overwhelming majority of which do not have access to the telephone system.
138. The earnings level of the deaf and the physically handicapped is generally lower than that of the general population.
139. Increasing the number of special devices available to the deaf and other handicapped persons will stimulate the subscription to such devices by nonhandicapped persons and businesses.
140. Handicapped persons are not being discriminated against by reason of Pacific's present tariffs.
141. It is in the public interest to provide special telecommunications [*297] facilities and services to the handicapped at basic exchange rates.
142. It is in the public interest that Pacific's handicapped Centralized Assistance Points be operated on a 24-hour basis.
143. A reasonable, but reliable, means of certification of handicapped or disabled persons is necessary to establish eligibility for reduced rates.
144. Pacific and the staff agree that the handicapped should be assisted in the form of lower rates and tariffs and disagree only as to the amount of such assistance.
145. It is in the public interest to set aside funds in Pacific's rate spread to offset the revenue shortfall from reduced rates for supplementary services for the handicapped.
146. There is no generally accepted source of data defining the telecommunications needs of the handicapped and disabled in the State of California.
147. \$12 million is a reasonable amount to be set aside for services for the handicapped in this proceeding, based upon the record herein.
148. Pacific's current reports on the measure of commitments made by telephone personnel for premises visits aggregate both installations where the customer is required to be present and installations where [*298] the customer is not required to be present.
149. It is in the public interest that a report be rendered with respect to Pacific's efforts to minimize the measure of missed installment commitments as required by General Order No. 133.
150. Pacific will be ordered to furnish a report on the effectiveness of its "Blocked Address Program" (BAP) in improving installation commitment performance and on future plans for the program.

151. Staff has recommended that Pacific report within 90 days, and quarterly thereafter, on its programs and progress with respect to the incidence of reported customer trouble reports in the Los Angeles Sector.

152. The staff recommendation with respect to trouble reports in Los Angeles will be adopted and the report ordered.

153. The record shows that there is customer dissatisfaction with the time taken to clear trouble reports, and the staff recommends that Pacific furnish a report of a program to reduce clearing time of such reports within 90 days; we agree and will adopt the report requirement.

154. Pacific's network performance is declining.

155. We will adopt the staff's recommendation that Pacific furnish a report explaining such decline [*299] in network performance and of action being taken to remedy the situation.

156. Our Consumers Affairs staff, specifically in Los Angeles, has reported customer complaints of long waiting lines at Phone Centers.

157. The staff recommends and we will order that Pacific furnish a measurement plan within 90 days which will indicate the degree of seriousness of these customer complaints and proposals to minimize them effectively and promptly.

158. Pacific should publicize the options made available to its subscribers pursuant to this decision to inform them in their choice of available services.

159. Pacific should provide a continuing residential consumer advisory service, at customer request, to explain which rate plans would be most cost advantageous to the inquirer. A plan to implement such service should be presented within 60 days.

160. Touch-Tone instruments more efficiently utilize the switching capabilities of the Electronic Switching System than do rotary dial instruments and, therefore, reduce calling costs and defer central office capacity additions.

161. In the interest of improving efficiency of operation of Electronic Switching Systems, Pacific should present [*300] a program and rate plan for accelerated conversion of rotary dial instruments to Touch-Tone in electronic offices. The first step in such plan should embody Touch-Tone installation only on new telephone installations with a later conversion of rotary dial sets. The rate plan should include an equalization of the monthly line charge for rotary dial and Touch-Tone services. The plan should include a comparison of the full cost for Touch-Tone and rotary service.

Conclusions of Law

1. Pacific's application should be denied to the extent that it seeks an increase in gross revenue requirements based upon test year 1979.

2. Pacific's gross revenue requirements should be decreased by \$42.2 million pursuant to OII No. 21 and based upon the test year 1979.

3. Rates and charges of Pacific should be modified and changed in accordance with Appendix B pursuant to the application and order instituting investigation.

4. OII Nos. 33 and 21 should be discontinued.

5. The rates authorized herein by Appendix B are just and reasonable. Any other rates applied after the rates in Appendix B are in effect are unjust and unreasonable.

ORDER

IT IS ORDERED that:

1. The Pacific [*301] Telephone and Telegraph Company (Pacific) is directed to file with this Commission, within fifteen days after the effective date of this order and in conformity with the provisions of General Order No. 96-A, revised tariff schedules with rates, charges, and conditions modified as set forth in Appendix B. The effective date of the revised tariff sheets shall be five days after the date of filing. The revised tariff schedules shall apply to service rendered on and after the effective date of the revised schedules, and the charges shall be collected subject to refund pending final determination of appeals with respect to the ratemaking treatment of accelerated depreciation in determining a reasonable allowance for federal income tax expense.
2. General Telephone Company of California (General) may file with this Commission, after the effective date of this order and in conformity with the provisions of General Order No. 96-A, advice letters and revised proposed tariff schedules with rates, charges, and conditions modified as set forth in Appendix C, subject to approval of the Commission by resolution action. The effective date of any revised tariff sheets shall be coincident with [*302] the implementation of the Zone Usage Measurement Plan or as otherwise authorized by Commission resolution. The revised tariff schedules shall apply to service rendered on and after the effective date of the revised schedule. At or prior to the time of filing said advice letter, General shall notify all affected customers of the proposed rate changes specified therein.
3. General and Pacific shall provide written notice of the conversion of all present free local calling routes to Zones 2 or 3 under the Zone Usage Measurement Plan or message toll service to all customers affected by said conversions within ninety days after the effective date of this order and ninety days prior to implementation of said conversions as said conversions are ordered herein.
4. Business flat-rate services as offered in the exchanges of Bakersfield, Fresno, Modesto, Riverside, Santa Rosa, and Stockton shall be withdrawn coincident with the offering of measured rate services in each said exchange. Business and residence measured services shall be implemented in conformance with the schedule and structure of rates shown for said exchanges in Appendix B. The implementation of such business and residence [*303] measured rate services shall be completed on or before July 1, 1981.
5. Pacific is authorized to implement Single Message Rate Timing in the exchanges and on schedule set forth in Exhibit No. 3-A (pages 11 through 33).
6. Pacific shall, within sixty days after the effective date of this order, offer Optional Calling Measured Service (OCMS) to customers with individual line 60-unit allowance measured rate residence (IMR) service in areas where IMR service is available and OCMS is offered.
7. Pacific is authorized to expand the offering of OCMS as set forth in Exhibit No. 34 (pages 40 through 42).
8. Pacific shall revise the present offering of Optional Residence Telephone Service (ORTS) to a fully measured basis. Such a fully measured ORTS offering shall be developed in consultation with the Commission staff and shall be filed by advice letter, within two hundred and ten days after the effective date of this order, to become effective upon authorization by Commission resolution. Coincident with the offering of a fully measured ORTS offering, Pacific shall offer ORTS to customers with IMR service in areas where IMR service is available and ORTS is offered.
9. Pacific [*304] shall collect, analyze, and report to the Commission on a quarterly basis all pertinent data gained from actual experience with the Zone Usage Measurement Plan in the San Francisco-East Bay and Los Angeles Extended Areas. The format of the quarterly reports shall cover the period from date of implementation of the Zone Usage Measurement Plan to March 31, 1980 and shall be filed on May 31, 1980. Quarterly reports shall be filed for each calendar quarter thereafter within sixty days after the end of the quarter covered by each report.
10. Pacific shall conduct GE-100 studies of the SG-1/SG-1A PBX service in consultation with the Commission staff and shall file tariffs to implement the resulting rates and charges within two hundred and ten days after the effective

date of this order if the results of the GE-100 studies indicate present rates and charges do not cover the costs of providing the SG-1/SG-1A PBX service.

11. Pacific shall develop and include as a part of its next general rate application the following studies together with proposed rates where indicated by the study:

a. An implementation schedule, revenue requirement, a proposed tariff, and the revenue effect of **[*305]** the proposed tariff for offering all foreign exchange services on a fully measured basis.

b. A study setting forth a feasible plan, including a proposed rate structure, cost analysis, and revenue effects of an OCMS type offering for business customers.

c. A study on the feasibility and costs associated with the offering of a fully measured Optional Business Telephone Service.

d. A multi-element service charge cost study based solely upon Pacific's actual cost experience. Said cost study shall be developed in consultation with the Commission staff.

e. A cost study for business inside wiring for extensions. Said cost study shall be developed in consultation with the Commission staff.

12. Pacific shall implement an Automated Coin Telephone Service System in California no later than December 31, 1981 to accomplish the economies available therefrom.

13. Pacific shall:

a. Within sixty days, furnish a report on a full evaluation of the effectiveness of the "Blocked Address Program" in improving installation commitment performance and future plans for the program.

b. Within ninety days and quarterly thereafter, submit a report of programs and progress thereon to reduce **[*306]** the incidence of customer trouble reports in the Los Angeles Sector, as well as their associated cost and resulting effectiveness; these reports to be discontinued upon approval of the Commission's Executive Director.

c. Within ninety days, furnish a report of a program to reduce clearing time of customer trouble reports.

d. Within ninety days, furnish a report explaining the decline, from 1976 through June 1978, of network performance and of actions being taken through 1979 to improve this performance.

e. Within ninety days, furnish a measurement plan that would be indicative of "customer waiting time" at Phone Centers, as well as a program to correct inadequacies in this service where required.

14. Pacific shall implement a teleprocessing system for its service representatives no later than December 31, 1982 to realize the economies available therefrom. In the next general rate proceeding Pacific shall submit a complete showing on its teleprocessing implementation schedule including the plant expense and force effects, including estimated net savings.

15. Within sixty days after the effective date hereof, Pacific shall file, and place into effect on not less than **[*307]** five days' notice, tariff revisions to provide services to handicapped persons as follows:

(a) Special reduced rates, for the certified handicapped only, for all tariff items offered which assist the handicapped in the use of the telephone network. Nonrecurring charges shall not be imposed, except for charges in accordance with the tariff schedule of multi-element charges for simple residential and business services.

(b) Tariff revisions authorizing the certification of persons as deaf, speech-impaired, or blind by licensed Audiologists, Speech Pathologists, and Optometrists, respectively, as well as by physicians and government agencies.

16. Pacific shall prepare cost and pricing data for the MCM/D and Krown Porta-Printer II teletypewriter devices based on large quantity procurement, e.g., 2,000 to 5,000 annually. These data shall be submitted to the Commission within ninety days from the date of this decision.
17. Pacific shall make all user-connectable equipment items for the handicapped available to the handicapped users through the Phone Centers on specific request by the customer, if not regularly stocked in the appropriate Phone Center.
18. Pacific shall prepare [*308] and submit within ninety days from the date of this decision, a plan for expanding the services provided by the Handicapped Centralized Assistance Points to include, at least, continuous 24 hour per day 7 day a week service, operator assistance in calling, and assistance in reaching emergency service. The cost of providing these additional functions on a continuing basis shall also be included. This plan will be placed in effect following Commission approval thereof.
19. Pacific shall contract for the conduct of a survey to determine on a current basis the special needs of the handicapped population of California in using the telephone network. Particular attention shall be given to developing a reliable estimate of the number of handicapped and their communications requirements in each particular category of disability. The study shall address at least the topics covered in the study performed for Pacific by Firing & Associates in 1976 and 1977. A report shall be submitted to the Commission presenting the findings no later than six months from the effective date of this decision.
20. Within six months after the effective date of this order, Pacific shall prepare and file [*309] with this Commission a report setting forth the revenue effects of reduced rates for the handicapped and the cost effects of the special services for the handicapped, as authorized herein, and shall propose adjustments in rates and revisions in services for the handicapped to the extent required to bring the entire cost of handicapped programs to the sum of \$12 million annually at the 1979 level of business. Upon approval by the Commission, Pacific shall establish the services and file appropriate tariffs to place into effect such rates.
21. Pacific shall, within sixty days after the effective date of this decision, submit to the Commission staff a proposal for keeping its books and accounts (including memorandum accounts) in compliance with Ordering Paragraph 12 of Decision No. 88232.
22. Pacific shall conduct a study to determine an appropriate survivor curve to be utilized in conjunction with the Western Electric adjustment in any future rate case. Such study shall be submitted to the staff at least sixty days in advance of tendering an NOI for any future rate case.
23. Pacific shall, within thirty days of the effective date hereof, compute and submit to the Executive [*310] Director for his review and approval a computation of the appropriate amount of negative surcharge, consistent with the opinion and order in Decision No. 90136, to be applied to customer's bills in order to pass through any over-collection in revenues for the period from January 1, 1979 to the effective date of rates ordered herein. Upon approval by the Executive Director, Pacific shall proceed forthwith to apply said negative surcharge to customer's bills.
24. Pacific shall publicize the options available to its subscribers within one hundred and twenty days.
25. Pacific shall provide a continuing residential consumer advisory service, at customer request, to explain which rate plans would be most cost advantageous to the inquirer. A plan to implement such service should be presented within sixty days.
26. All motions not heretofore ruled on are hereby denied.
27. Orders Instituting Investigation Nos. 21 and 33 are hereby discontinued.
28. The relief requested in Application No. 58223, to the extent that it requested a revenue requirement increase, is denied.

29. Pacific shall, within 90 days after the effective date of this decision, submit to the Commission a [*311] plan for accelerating the conversion of rotary dial instruments to Touch-Tone instruments where Electronic Switching Systems are employed. This plan shall include an immediate provision of Touch-Tone for all new main stations, new extension stations, and service location changes, and immediate conversion -- when requested -- of in-place rotary dial instruments to Touch-Tone. The plan shall also include later replacement of in-place rotary dial instruments with Touch-Tone. Pacific shall submit a rate plan to equal line charges for rotary and Touch-Tone service. The plan shall include a comparison of the full cost for Touch-Tone and rotary service, including the increased switching efficiency associated with Touch-Tone.

Dated July 31, 1979, at San Francisco, California

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

Dissent By: Sturgeon, Vernon L

Dissent:

The opinion is unrealistic in its acceptance of projected reductions in expenses for Pacific in test year 1979. The evidence of alleged future savings involves pure guesswork and ignores the actual experience of the company.

Further, the order reflects a downward adjustment in the test-year estimates of revenues upon [*312] the basis of information made available after the company's initial estimates. At the same time, the order does not consider later information which also shows increases in the company's expenses to be greater than original estimates. In my opinion both revenues and expenses must be estimated at the same time to reach a fair and proper result.

Now that the Federal courts have made it clear that it is too late for them to resolve the accelerated depreciation and investment tax issues, we should take extra care to assure a fair result. Instead of doing all that is necessary to assure the integrity of telephone service in California, the order adds to the economic duress of the company and directs a rate reduction in the face of spiraling double-digit inflation and interest rates.

Never in my memory has an order denied a utility a recovery of test-year expenses based solely upon guesswork and optimistic speculation about potential expense savings in years beyond the test year. Such speculation is improper. The situation is made far worse when these projected future savings are not matched against future expense increases which, in the real world, are far more certain to occur. [*313]

The order has created an authorized return on capital which is purely fictional and unattainable. The adoption of an unreasonably and artificially low expense estimate effectively precludes Pacific from earning the authorized return. Such a return may only be attainable through reductions and cuts in Pacific's service -- a service deterioration which the ratepayers of the company can ill afford.

Appendix

(Appendices B and C not included in printing)

Appendix E

CPUC D.85-06-112 (1985)

1985 Cal.PUC.LEXIS 457

1985 Cal. PUC LEXIS 457; 18 CPUC2d 132

California Public Utilities Commission

June 12, 1985

Decision No. 85-06-112, Application No. 82-02-40 (Filed February 18, 1982; amended December 1, 1982 and October 4, 1983), Application No. 82-03-63, Application No. 83-10-36, Application No. 83-10-12, Application No. 83-11-19

CA Public Utilities Commission

Decisions

Reporter

1985 Cal. PUC LEXIS 457 *; 18 CPUC2d 132

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY, for Authority to establish a Major Additions Adjustment Clause, to implement a Major Additions Adjustment Billing Factor and an Annual Major Additions Rate to recover the costs of owning, operating and maintaining San Onofre Nuclear Generating Station Unit No. 2 and to adjust downward net Energy Cost Adjustment Clause rates to equal the increase in Major Additions Adjustment Clause rates; And Related Matters

Core Terms

staff, song, pre hearing, phase, rebuttal testimony, expeditious, was, case in chief, rebuttal

Panel: Donald Vial, President; Victor Calvo, Priscilla C. Grew, Frederick R. Duda, Commissioners

Opinion

ORDER RE PUBLIC STAFF'S MOTION TO REQUIRE ESTABLISHMENT OF EVIDENTIARY GUIDELINES FOR SONGS 2 & 3 PHASE II AND SCHEDULING OF PREHEARING CONFERENCE

On May 3, 1985, the Public staff (Staff) filed its Motion to Require Establishment of Evidentiary Guidelines for San Onofre Units 2 and 3 Reasonableness Review. Based on the March 22, 1985 prehearing conference, the Staff believes that there are vital issues that must be resolved prior to the commencement of hearings. These issues concern the fundamental obligation of the Southern California Edison Company (Edison) and San Diego Gas & Electric Company (SDG&E) to demonstrate their basis for requesting recovery of the ownership costs of SONGS 2 & 3.

Specifically the Staff requests that the following guidelines be established for the evidentiary presentations in this case:

1. While the applicants are free to determine the manner in which they best present their cases in support of the reasonableness of their respective SONGS 2 & 3 investment-related costs, they must be required to make their principal demonstration in their opening case.

Elliott Henry

2. While [*2] the applicants should be accorded the right to rebuttal testimony in addressing claimed errors in the presentation of the Staff or other parties, applicants must not be permitted to delay their main showing in support of the reasonableness of SONGS 2 & 3 investment-related costs until the rebuttal stage.

3. In order to protect the fairness of the proceeding, the Staff and other parties must be accorded the right of surrebuttal, that is, the right to present evidence and argument in response to the applicant's rebuttal testimony.

Edison and SDG&E filed responses to the Staff motion on May 28, 1985. Edison in its response indicated that it proposes to serve testimony of its Chief Executive Officer on July 1, 1985 and testimony concerning the management of the planning and construction of SONGS 2 & 3, and testimony concerning the management of the licensing process over the 14 year life of the project on August 1, 1985. A Prehearing Conference was held on Monday, June 3, 1985 for the purpose of scheduling the Phase II hearings. At the Prehearing Conference, Commissioner Grew indicated that she would issue a Commissioner's Ruling on the Staff Motion and also to schedule the Phase [*3] II evidentiary hearings. At the conclusion of the conference she announced that the initially planned hearing dates for Phase II evidentiary hearings for July 1985 would be canceled and reset for August 1985 to enable the applicants to make their direct case in chief filing by August 1, 1985, including the above-mentioned proposed testimony.

On June 5, 1985, Commissioner Priscilla C. Grew circulated a proposed order entitled "Order re Public Staff's Motion to Require Establishment of Evidentiary Guidelines for SONGS 2 & 3 Phase II and Scheduling of Prehearing Conference". The Commissioner requested that any party wishing to comment on the proposed order should make certain that the comments are physically received in San Francisco not later than 5:00 p.m., June 10, 1985. Comments on the oral ruling made at the June 3, 1985 prehearing conference were filed by Edison on June 6, 1985 titled "Proposal of Southern California Edison Company for the Prompt Commencement of Phase II hearings". In addition, comments on the proposed order were filed by SDG&E and the staff. The staff with its comments filed a motion to reduce MAAC rates. We will defer action on this latter motion until [*4] later.

The August 1, 1985 date was selected so that we can proceed expeditiously with the Phase II hearings while still being sensitive to the issues of due process and fairness to all parties.

By way of background we should remember that Edison filed its original Cost and Controls Study Report on February 18, 1982 with its original application. This report was prepared by its consultants, Pickard, Lowe and Garrick, Inc., to justify the reasonableness of its investment in SONGS 2 & 3. This report was revised on March 22, 1985. On May 7, 1985 the Staff and the staff's consultants served their reasonableness report. At the June 3, 1985 prehearing conference, the Staff announced that the remaining staff reports are expected to be distributed by the end of July 1985 with the possible exception of a report concerning the financial ramifications of the recommended disallowances on applicants. By selecting the August 1, 1985 deadline for the filing of applicant's direct case in chief, we are recognizing that applicants have had the staff and staff's consultants proposed exhibits since May 7, 1985 and that applicants certainly have been aware of the areas that staff and staff's consultants [*5] have been exploring with data requests over the past several years. In seeking orderly and expeditious hearings for Phase II we are mindful that ratepayers are currently being asked to bear the full recorded investment in SONGS 2 & 3 in current rates, subject to balancing account treatment, and are entitled to expeditious resolution as to the reasonableness of the investment in SONGS 2 & 3. We are also aware that there is a substantial undercollected balance in the MAAC balancing accounts, the disposition of which cannot be finalized until the reasonable review issues are resolved. We believe our August 1, 1985 deadline is both fair to ratepayers and applicants.

Another issue raised by the Staff motion and at the prehearing conference was the scope of rebuttal testimony to be permitted in these proceedings. At the March 22, 1985 prehearing conference Edison's counsel stated that applicant in its opening case would make the assertion that the investment in SONGS 2 & 3 was reasonable and that in the rebuttal phase it would be responding to all the challenges made by the other parties. Edison suggested that this was the only way that the Commission would be able to obtain a reasonable [*6] and manageable record in this proceeding. We agree with Staff that Applicants have the burden of presenting their principal case justifying the reasonableness of their investment in SONGS 2 & 3 in their direct case and not rely on

presenting their case in chief in the rebuttal phase. (See Pacific Tel. & Tel. Co., 2 CPUC 2d 102 (1979).) In Decision 60615 the Commission stated that "A fundamental principle involving public utilities and their regulation by governmental authority is that the burden rests heavily upon a utility to prove that it is entitled to rate relief and not upon the Commission, the Commission staff, or any interested party, or protestant to prove the contrary. In this proceeding the burden is upon applicant to establish all necessary facts which would justify the requested increase in rates."

We recognize that a proceeding such as this, a prudency review of unprecedented levels of expenditures incurred over a number of years, presents the challenge of how best to insure fair and complete hearings. So that no party can mistake our intent, we want to make clear the following: (1) We will insist on an expeditious proceeding, and will not tolerate unnecessary delays. [*7] The fact that the costs of SONGS 2 & 3 are already reflected in rates through the MAAC procedure requires, out of fairness to ratepayers, a prompt resolution of the prudency review. (2) We will take all steps necessary to insure development of a full and complete record so that the Commission can best make the decisions it will be required to make. (3) We will not tolerate any effort by any party to use tactical ploys that would frustrate our goal of expeditiously developing a complete record. (4) We expect that there will be differences among staff, the utilities, and possibly intervenors as to whether certain testimony may be admitted as rebuttal, but we believe this is not a new issue for our proceedings and that we have demonstrated an ability to fairly and promptly resolve such disputes. (5) We will hold en banc hearings as necessary to insure our full understanding of the complex issues in this case, and to insure that procedural disputes do not delay completion of a full and thorough record.

At this time we will not rule on the Staff's request to present surrebuttal testimony. We believe it would be premature to make such ruling now. Parties may request the opportunity [*8] to present surrebuttal testimony at the appropriate time and such request will be considered at that time.

After all of applicants' direct case has been filed on August 1, 1985 or earlier, we will schedule another prehearing conference on August 9, 1985 at 10:30 a.m. at San Francisco, California. The purpose of the prehearing conference will be to schedule future hearing days and to determine the order of witnesses.

In scheduling future hearings we place parties on notice that we are contemplating a July 1986 decision date. This will require that oral arguments be held soon after the Administrative Law Judge's (ALJ) proposed decision is completed in early June 1986. In order to allow a reasonable briefing schedule and time for the ALJ to prepare his decision, it will be necessary to complete hearings by mid-February 1986. By starting hearings in mid-August all parties will have a reasonable opportunity to present testimony and cross-examine witnesses and to present rebuttal testimony.

We will not schedule hearings during the period December 16, 1985 - January 3, 1986. At all other times all parties should expect to attend hearings as the need and the hearing schedule require. [*9] This will provide for a potential 23 weeks of hearing time over seven months to complete the evidentiary portion of this proceeding, which we think is ample to assure a full and complete record.

Findings of Fact

1. An August 1, 1985 date for applicants to file their direct case in chief to support the reasonableness of their investment in SONGS 2 & 3 will enable this Commission to proceed with its Phase II reasonableness review in a reasonably expeditious manner.
2. Such date will enable applicants to file any additional exhibits and or testimony to meet its burden of proof as to the reasonableness of their investment in SONGS 2 & 3 and at the same time be fair to ratepayers who are presently carrying in rates the full recorded investment in SONGS 2 & 3 in arriving at an expeditious determination as to the reasonable investment.
3. Applicants will be allowed to present rebuttal testimony of the type normally allowed in Commission proceedings. Applicants will be entitled to produce evidence in rebuttal to meet new facts put in evidence by other parties in accordance with prior practice of the Commission.

4. A prehearing conference on August 9, 1985 in San Francisco, California [*10] starting at 10:30 a.m. should be held to discuss future hearing days and to determine the order of witnesses.

Conclusions of Law

1. Applicants should be allowed until August 1, 1985 to file their direct case in chief to meet its burden of proof on the reasonableness of their investment in SONGS 2 & 3.

2. Applicants will be permitted to present rebuttal testimony in the manner typically allowed in Commission proceedings.

3. A Prehearing Conference should be held on August 9, 1985 at 10:30 a.m. in San Francisco, California to schedule future hearing days and to determine the order of witnesses for Phase II.

4. Notice of the following order did not appear on the Commission's public agenda as required by the Government Code. This matter is an unforeseen emergency in that the issues arose in the prehearing conference of June 3, 1985 which requires immediate Commission action, so that all parties may be able to plan and proceed with the August 1, 1985 deadline set in this order. Our action today is taken under the emergency provision of the Public Utilities Code Section 306(b).

IT IS ORDERED that:

1. Southern California Edison Company (Edison) and San Diego Gas & Electric [*11] Company (SDG&E) shall file their direct case in chief supporting their investment in SONGS 2 & 3 no later than August 1, 1985.

2. Edison and SDG&E will be permitted to present rebuttal testimony in the manner typically allowed in Commission proceedings.

3. The Staff's motion is granted in part as set forth in Ordering Paragraphs 1 & 2.

4. A Prehearing Conference will be held on Friday, August 9, 1985, starting at 10:30 a.m. in the Commission Courtroom, 350 McAllister Street, San Francisco, California.

This order is effective today.

Dated June 12, 1985, at San Francisco, California.

Commissioner William T. Bagley, being necessarily absent, did not participate.

Appendix F

**SoCalGas's Response to Sierra Club's
6th Data Request to SoCalGas (Served
4/30/2026)**

**SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS)
SIERRA CLUB-SCG-06
WOODY BIOMASS PILOT PROJECT APPLICATION (A.25-10-008)
DATE REQUESTED: April 16, 2026
RESPONSE DUE: April 30, 2026**

QUESTION 6-1:

Please indicate the relevant qualifications of Witness James Lucas.

QUESTION 6-1:

The qualifications of Witness James Lucas are provided in the Direct Testimony of Lucas/Summers (Chapter 2) at JLMS-21.

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QUESTION 6-2:

Please indicate the relevant qualifications of Witness Matthew Summers.

RESPONSE 6-2 (WBF):

The qualifications of Witness Dr. Matthew Summers are provided in the Direct Testimony of Lucas/Summers (Chapter 2) at JLMS-22.

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QUESTION 6-3:

In Rebuttal Testimony at JLMS-12 footnote 44, SoCalGas states that “[t]hese percentages are derived from CI scores of 36.1 g CO₂e/MJ (without CCS) and -49.7 g CO₂e/MJ (with CCS), as presented in the Lucas/Summers Testimony, which was updated to have consistent treatment of biogenic carbon.”

QUESTION 6-3a:

Please state the basis for the alteration of the CI scores indicated in the Corrected Revised Testimony on pages JLMS-17.

RESPONSE 6-3a (WBF):

After reviewing Sierra Club’s Prepared Testimony, the CI scores were revised to 36.1 g CO₂e/MJ (without CCS) and -49.7 g CO₂e/MJ (with CCS) to promote a mathematically consistent treatment of biogenic carbon across all lifecycle scenarios. The updated scores remove this tailpipe credit in Table 3 of Lucas/Summers Testimony (Chapter 2), treating the biogenic content of the Bio-SNG as a positive emission at the tailpipe.

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QUESTION 6-3b:

Please provide the modeling spreadsheet that was used to determine the new CI scores in the Corrected Revised Testimony.

RESPONSE 6-3b(WBF):

There is no spreadsheet used to calculate the new CI scores because the calculation only involved removing the row that contained the -55.0 gCO₂e/MJ in Table 3 of Lucas/Summers Testimony (Chapter 2).

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QUESTION 6-3-c:

Please indicate which witness conducted the modeling that led to this revision.

RESPONSE 6-3c:

As stated in the response to Question 6-3b, there was no modeling involved in removing the row with the -55.0 gCO₂e/MJ in Table 3. Dr. Matthew Summers is the witness.

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QUESTION 6-3d:

Please indicate which witness is responsible for this answer.

RESPONSE 6-3d:

Dr. Matthew Summers, in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

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QUESTION 6-4:

Please state the basis for the assertion in Corrected Revised Testimony at JLMS-17 that “[p]roducing and utilizing the Bio-CNG fuel from this project will be a net carbon sink over its lifecycle” when the proposed Project without CCS has a revised CI of 36.1 CO₂e/MJ.

RESPONSE 6-4 (WBF):

As stated in NREL’s memorandum titled *GREET Analysis for Bio-SNG Project at the CCAGA Facility*,¹ “Producing and utilizing the Bio-CNG fuel from this project is estimated to be a net carbon sink over its lifecycle with avoided emissions considered”. The designation of “net carbon sink” reflects a comparison between the lifecycle emissions associated with producing Bio-CNG (as shown in Table 3), which include avoided emissions, and the carbon intensity (CI) of conventional natural gas (also shown in Table 3). Because the CI associated with producing Bio-CNG is approximately 49% lower than the CI of natural gas,² the project achieves net lifecycle emission reductions.

¹ Revised Direct Testimony of Lucas/Summers, Attachment 1.

² Direct Rebuttal Testimony of Lucas/Summers at JLMS-11.

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QUESTION 6-5:

Rebuttal Testimony at JLMS-14 that “[w]ith biogenic and non-biogenic emissions fully accounted for in both the base case and use cases in the lifecycle analysis, the net CI remains the most important factor for compliance with 17 CCR §95893(d)(5).”

QUESTION 6-5a:

What is meant by “net CI.”

RESPONSE 6-5a (WBF):

As stated in the Rebuttal Testimony of Lucas/Summers, Net CI is described as “Net CI evaluates the emissions delta between the SB 1440 Pilot Project and “business-as-usual” waste disposal baseline.”³

³ Rebuttal Testimony of Lucas/Summers at JLMS-14.

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QUESTION 6-5b:

Please state the basis for “net CI” being an indicator of compliance with 17 CCR §95893(d)(5).

RESPONSE 6-5b:

As provided in the Rebuttal Testimony of Lucas/Summers, “D.22-02-025 does not prescribe any particular lifecycle emissions model, such as CA-GREET, for evaluating SB 1440 Pilot Projects. Similarly, 17 CCR §95893 requires only that allowance auction proceeds be used for projects that demonstrably reduce GHG emissions. The regulation is outcome-based, not method-prescriptive. It imposes no obligation to use CA-GREET, or any other specific modeling platform, but rather focuses on demonstrable emissions reductions.”⁴ Accordingly, SoCalGas and West Biofuels concluded that evaluating net carbon intensity on a lifecycle basis provides the most accurate and transparent method for demonstrating the greenhouse gas emission reductions achieved by the project.

⁴ Direct Rebuttal Testimony of Lucas/Summers at JLMS-13.

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QUESTION 6-5c:

Please indicate the witness responsible for this answer.

RESPONSE 6-5c:

The witness for the response to Question 6-5a is Dr. Matthew Summers and for Question 6-5b is James Lucas.

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QUESTION 6-6:

Rebuttal Testimony at JLMS-19 and in Attachment 1 indicates reliance on “U.S. EPA (1995). Protocol for Equipment Leak Emission Estimates. EPA-453/R-95-017. November 1995” for a “component-level analysis” of methane leakage at the facility.

QUESTION 6-6a:

Where, if at all, does this U.S. EPA document indicate that the leakage emissions factors used in the Protocol are relevant for methane?

RESPONSE 6-6a (WBF):

The U.S. EPA Protocol (EPA-453/R-95-017) is the industry-standard guidance for estimating equipment leaks from valves, flanges, and connectors in pressurized gas systems. While the factors are often expressed as "Total Organic Compounds" (TOC), they are technically valid for methane, the primary component of the gas in this facility, and are used to generate defensible engineering estimates for fugitive methane leakage.

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QUESTION 6-6b:

Please indicate the witness responsible for this answer.

RESPONSE 6-6b:

Dr. Matthew Summers.

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QUESTION 6-7:

Rebuttal Testimony at JLMS-31 states that “[b]y replacing high emission agricultural burning with controlled and permitted operations, the SB 1440 Pilot Project 3 supports the Commission’s ESJ and clean air objectives.”

QUESTION 6-7a:

Please note, this question does not have a question number associated with it.

Please explain what is meant by “high emission agricultural burning” and the extent to which it differs, if at all, from “open burning” and “agricultural burning” as described in the following two publications by San Joaquin Valley Air Quality Management District
<https://www.valleyair.org/agriculture/agricultural-burning>
<https://www.valleyair.org/media/hjgh03mb/2024-final-ag-burnreport.pdf>.

RESPONSE 6-7a (WBF):

As of January 1, 2025, San Joaquin Valley Air Pollution and District reached the end of a multiyear tiered phase-out of nearly all agricultural open burning in the San Joaquin Valley. While the completion of these phase-outs marks a significant reduction in open agricultural burning in the San Joaquin Valley, there are limited exceptions for which agricultural burning will continue to be permitted.⁵ “High emission agricultural burning” references air curtain burning which is still in practice for disposal (e.g., diseased material). As shown in Table 1 of the Revised Testimony of Lucas/Summers (page JLMS-15), “air curtain inc.” exhibits the highest criteria pollutant emissions in three of the five categories and the second-highest emissions in the remaining two categories. With funding running out for the San Joaquin Valley Air Pollution Control District Ag Burn Alternatives Grant Program, which provides incentives to whole-orchard recycling operations in the San Joaquin Valley, there may be upward pressure to use agricultural burning for disposal.

⁵ CARB, *San Joaquin Valley Agricultural Burning – Phase Down*, available at: <https://ww2.arb.ca.gov/our-work/programs/agricultural-burning/san-joaquin-valley-agricultural-burning>

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QUESTION 6-7b:

Please note, this question is listed as, “Question 6-7a”

Please describe how, if at all, emissions from “high emission agricultural burning” as referenced in the Rebuttal Testimony are reflected in the “base case” emissions presented in SoCalGas’s Testimony.

RESPONSE 6-7b (WBF):

As shown in Table 1 of the Revised Testimony of Lucas/Summers (page JLMS-15), “air curtain inc.” exhibits the highest criteria pollutant emissions in three of the five categories and the second-highest emissions in the remaining two categories.

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QUESTION 6-7c:

Please note, this question is listed as, “Question 6-7b”

If “high emission agricultural burning” is assumed in the base case, please provide the geographic coordinates of the assumed burning.

RESPONSE 6-7c (WBF):

The placement of air curtain burners will vary annually based on the geographic location of the woody biomass generated in each year.

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QUESTION 6-8:

SoCalGas indicates in Rebuttal Testimony that “[a]t a distance of approximately 7-8 miles, incremental concentrations from an individual stationary source are indistinguishable from regional background levels and do not materially affect lifetime cancer risk or chronic hazard indices. Accordingly, air toxics impacts at the population center from this project are less than significant under CARB and SJVAPCD risk evaluation frameworks.” Rebuttal testimony also states at JLMS-29, “the San Joaquin Valley Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line and nearest sensitive receptors as part of the permitting process.”

QUESTION 6-8a:

Please provide the analysis conducted to reach the above conclusions regarding lifetime cancer risk, chronic hazard indices, and air toxic impacts from the proposed Project.

RESPONSE 6-8a (WBF):

The conclusion is based on standard air dispersion modeling principles and the West Biofuels facility’s 7-to-8-mile distance from the populated areas. Concentrations of toxic air contaminants decrease rapidly with distance. At 7-to-8 miles, incremental impacts from a stationary source of this small scale are indistinguishable from regional background levels. Formal Health Risk Assessments (HRA) will be finalized during the SJVAPCD permitting process.

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QUESTION 6-8b:

Has SoCalGas identified the sensitive receptors relevant to evaluating the impact of the proposed Project's emissions?

RESPONSE 6-8b (WBF):

The specific sensitive receptors (schools, hospitals, residences) is a mandatory component of the SJVAPCD Rule 2201 review and will be identified after the CPUC issues a decision on this application.

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QUESTION 6-8c:

If the answer to the above question is yes, please provide the geographic coordinates of the sensitive receptors that have been evaluated, if any, to reach the above conclusions.

RESPONSE 6-8c (WBF):

Not applicable.

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QUESTION 6-8d:

Does SoCalGas's conclusion assume that the current geographic locations of sensitive receptors and population areas will not change in the future?

RESPONSE 6-8d (WBF):

Not applicable.

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QUESTION 6-8e:

Please indicate the witness responsible for this answer.

RESPONSE 6-8e:

Dr. Matthew Summers.

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QUESTION 6-8f:

Please detail the witness's experience in evaluating the impact of air toxics from emitting stationary sources.

RESPONSE 6-8f (WBF):

Dr. Matthew Summers is a former Air Resources Engineer, understands the methodology of dispersion modeling, and has direct experience with permitting facilities of this type in multiple California air districts, including permits that include health risk assessment.

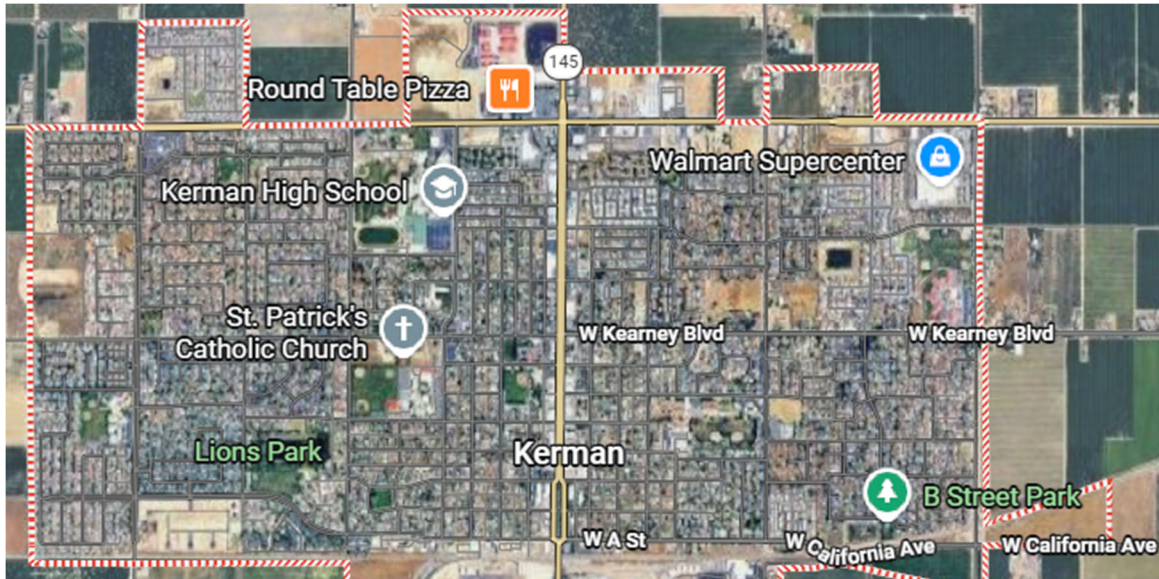
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QUESTION 6-9:

Please provide the geographic coordinates of the “populated areas” and the “population center” to which SoCalGas refers in Rebuttal Testimony at JLMS-29 and JLMS-30, respectively. Please indicate the witness responsible for this answer.

RESPONSE 6-9 (WBF):

Below provides the location of the populated areas/center of the City of Kerman. An example of one geographic coordinate is 36.72756493376932, -120.06664485083795 (St Patrick’s Catholic Church). Dr. Matthew Summers is the witness.



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QUESTION 6-10

Rebuttal Testimony at JLMS-19 states that the proposed Project would displace emissions from “air curtain burning, biomass power generation, and diesel-intensive handling operations.”

QUESTION 6-10a:

Please provide the geographic coordinates of the air curtain burners that the proposed Project purports to displace.

RESPONSE 6-10a (WBF):

The geographic coordinates are not known as the placement of air curtain burners will vary annually based on the geographic location of the woody biomass generated in each year.

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QUESTION 6-10b:

What are the distances of these air curtain burners relative the “populated areas” in the City of Kerman to which SoCalGas refers in Rebuttal Testimony at JLMS-29.?

RESPONSE 6-10b (WBF):

See response to Question 6-10a.

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QUESTION 6-10c:

Please provide the geographic coordinates of diesel-intensive handling operations that the project purports to displace?

RESPONSE 6-10c (WBF):

The geographic coordinates are not known as the location of the diesel-intensive handling operations will vary annually based on the geographic location of the woody biomass generated and placement of the wood chips in each year.

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QUESTION 6-10d:

What are the distances of the diesel-intensive handling operations to the populated areas in the City of Kerman to which SoCalGas refers in Rebuttal Testimony at JLMS-29.?

RESPONSE 6-10d (WBF):

See response to Question 6-9c.

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QUESTION 6-10e:

What are the names of the biomass plants the emission from which the proposed Project purports to displace?

RESPONSE 6-10e (WBF):

DTE Stockton.

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QUESTION 6-10f:

Figure 3 of the Corrected Revised testimony indicates “cogeneration plant”. What is the name of the cogeneration plant?

RESPONSE 6-10f (WBF):

DTE Stockton.

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QUESTION 6-10g:

What are the addresses of the biomass and/or cogeneration facilities, the emissions from which that the project purports to displace?

RESPONSE 6-10g (WBF):

The DTE Stockton biomass plant address is listed at 2526 W Washington St., Stockton, CA 95203.

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QUESTION 6-10h:

Please indicate the witness responsible for this answer.

RESPONSE 6-10h:

Dr. Matthew Summers.

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QUESTION 6-11:

The modeling spreadsheet provided by SoCalGas indicates in the “Baseline Case” sheet, in cells D7, D8, D10, and D13 that “West Biofuels design data” is the “Source” for several assumptions used in the modeling of emissions.

QUESTION 6-11a:

Please provide all “West Biofuels design data” that provided the basis for these modeling assumptions.

RESPONSE 6-11a (WBF):

The reference in cells D7, D8, D10, and D13 indicate that West Biofuels has designed the facility to process the mass quantities of biomass mentioned in cells B7, B8, B10, and B13. For example, the facility is designed to process 3038 dry kg/hr of almond biomass, which appears in cell B7 and equates to a daily throughput rate of 80 dry tons per day.

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QUESTION 6-11b:

Please indicate the witness responsible for this answer.

RESPONSE 6-11b:

Dr. Matthew Summers.

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QUESTION 6-12:

The modeling spreadsheet provided by SoCalGas indicates in the “Baseline case” sheet, in cells D9, D11, D12, D14, D15 and D16 that “CCAGA communication of current disposal practices” is the “Source” for the percentages assigned to baseline uses of woody biomass feedstock.

QUESTION 6-12a:

Please provide all “CCAGA communications of current disposal practices” that were relied upon for the values entered in the spreadsheet at cells A9, A11, A12, A14, A15, A16 and B9, B11, B12, B14, B15, B16.

RESPONSE 6-12a (WBF):

The President and Chief Operating Officer of CCAGA communicated verbally in a meeting in August of 2025 with West Biofuels the current disposal practices for the types of biomass to be used in the project. As previously provided in the response to SIERRA CLUB-SCG-01 Question 1-5b, Base case disposal methods and quantities were developed based on conversations with the CCAGA and what they are currently doing with their almond biomass. The project plans to procure all of its almond biomass from CCAGA and its members, so these percentages are representative of where the biomass is currently going and projected to go in the future.

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QUESTION 6-12b:

Please indicate the witness responsible for this answer.

RESPONSE 6-12b:

Dr. Matthew Summers.

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QUESTION 6-13:

The modeling spreadsheet provided by SoCalGas indicates in the “Baseline case” sheet, in cell I26 that “Chipping and Loading” is the “Source” for the emissions factors for “biomass preprocessing” reports in cells B26-G26.

QUESTION 6-13a:

Please provide the relevant source used for the associated modeling assumptions.

RESPONSE 6-13a (WBF):

The source for these emissions factors is R&D GREET 2024 category “Chipping and Loading”.

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QUESTION 6-13b:

Please indicate the assumed make and model of the diesel equipment used in calculating the “biomass preprocessing” emissions.

RESPONSE 6-13b (WBF):

The emissions for "Chipping and Loading" are determined using a representative composite rather than a single specific "make and model" of commercial machinery. Instead of naming a brand, Argonne National Laboratory bases the emission factors on U.S. EPA NONROAD model emission standards for specific engine power categories and tiers. The model assumes the following technical parameters for the diesel equipment used in forest residue processing:

- Equipment Type: The "Chipping" component typically assumes a Horizontal Grinder or Drum Chipper powered by a heavy-duty diesel engine.
- Engine Size: The default assumption is usually a 300–600 horsepower (hp) engine for high-volume chipping operations.
- Emission Tier: GREET 2024 assumes a fleet-average mix or Tier 4 Final standards for new pathway simulations, reflecting current U.S. EPA regulations for off-road diesel engines.
- Fuel Consumption: The model uses an energy intensity factor of approximately 0.35 to 0.50 gallons of diesel per dry ton of biomass processed for chipping and loading combined.

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QUESTION 6-13c:

Please indicate assumed annual operating time of the diesel equipment used in calculating the “biomass preprocessing” emissions.

RESPONSE 6-13c (WBF):

The emission factor for 'Chipping and Loading' is sourced from the GREET 2024 model and is defined as, e.g., in g CO₂e/kg of biomass. Because this is a throughput-dependent variable, the resulting emission is a function of total biomass processed, making it mathematically independent of the annual operating hours of the machinery. (Note: In GREET, the g/kg factor is usually derived from an hourly fuel consumption rate divided by an hourly processing rate.)

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QUESTION 6-13d:

Please indicate the witness responsible for this answer.

RESPONSE 6-13d:

Dr. Matthew Summers in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

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QUESTION 6-14:

The modeling spreadsheet provided by SoCalGas indicates in sheet “Baseline case” cell I29 “NREL data” as the source for the emissions factors for “Dairy Bedding Direct” presented in cell B29.

QUESTION 6-14a:

Please provide the relevant “NREL data.”

RESPONSE 6-14a (WBF):

The Dairy Bedding Direct emission was determined by NLR (formerly NREL) based on values in the study by Carman et al (2021):

Carman, J., Severy, M., Barrientos, C., Blasdel, M., Geronimo, C., Harris, A., Hsu, C., Kane, J., Rios-Romero, S., Wright, M., and Fingerman, K. California Biomass Residue Emissions Characterization (C-BREC) Model Framework: Version 1.2. EPC-16-047. Humboldt, CA: Schatz Energy Research Center. Available at:
<https://schatzcenter.org/pubs/2021-biomass-R2.pdf>.

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QUESTION 6-14b:

Please indicate the witness responsible for this answer.

RESPONSE 6-14b:

Dr. Matthew Summers in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

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QUESTION 6-15:

The modeling spreadsheet provided by SoCalGas indicates in the “Baseline case” sheet, in cell I31, that “EPA Biomass Air Curtain Incinerator” is the “Source” for the emissions factors for “Air Curtain Incinerator Direct” presented in cells B31 -G31.

QUESTION 6-15a:

Please provide the relevant emissions factor source

RESPONSE 6-15a (WBF):

The citation for the air curtain incinerator emissions factor source is below:

SJVAPCD, Air Curtain Incinerator Emission Factor Determination, March 10, 2017, available at:

<https://www.valleyair.org/media/dpipwseq/criteria-air-incinerator-ef-determination-analysis.pdf>

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QUESTION 6-15b:

Please indicate the witness responsible for this answer.

RESPONSE 6-15b:

Dr. Matthew Summers.

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QUESTION 6-16:

The modeling spreadsheet provided by SoCalGas includes in the “Baseline Case” sheet “Table 1”.

QUESTION 6-16a:

Please provide the sources for the percentages listed in columns B and C in Table 1.

RESPONSE 6-16a (WBF):

As previously provided in the response to SIERRA CLUB-SCG-01 Question 1-5b, “Base case disposal methods and quantities were developed based on conversations with the CCAGA and what they are currently doing with their almond biomass. The project plans to get all almond biomass from CCAGA, so these percentages are representative of where the biomass is currently going and projected to go in the future.”

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QUESTION 6-16b:

Please indicate the witness responsible for this answer.

RESPONSE 6-16b:

Dr. Matthew Summers.

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QUESTION 6-17:

Rebuttal testimony at JLMS-31 states “West Biofuels has successfully executed two interconnected distributed energy projects of the same scale as the proposed SB 1440 Pilot Project. These projects have achieved high-capacity factors of greater than 90%, demonstrating that West Biofuel’s systems are engineered for high availability commercial service rather than sporadic research use.”

QUESTION 6-17a:

Please indicate the names of both projects referenced.

RESPONSE 6-17a (WBF):

The projects are the Hat Creek Bioenergy Facility (Burney, CA), commissioned in 2025, and the Rice Hull Bioenergy Facility (Williams, CA), commissioned in 2022.

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QUESTION 6-17b:

Do either of these two projects include methanation?

RESPONSE 6-17b (WBF):

No.

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QUESTION 6-17c:

Do either of these two projects use a flare?

RESPONSE 6-17c (WBF):

No.

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QUESTION 6-17d:

If the answer to the above question (c) is yes, please provide data on the duration and amount of gases that have been flared from these facilities since they began operations.

RESPONSE 6-17d (WBF):

Not applicable.

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QUESTION 6-17e:

Please provides the calculations used to conclude that these projects operate at “90% capacity factors.”

RESPONSE 6-17e (WBF):

These facilities have a design capacity of 3000 kW net. Capacity factor for a given period of time is calculated as follows:

Capacity Factor (%) = Generated Electricity (kWh) / [3000kW x Time(h)] x 100%

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QUESTION 6-17f:

For each facility, please indicate the span of time during which a 90% capacity factor was achieved.

RESPONSE 6-17f (WBF):

Hat Creek Bioenergy Facility – 6/30/2025 – Present.

Rice Hull Bioenergy Facility – During commissioning and initial operations ~ June to August 2022. Facility is currently operated by another party.

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QUESTION 6-17g:

Please indicate the witness responsible for this answer.

RESPONSE 6-17g:

Dr. Matthew Summers.

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QUESTION 6-18:

Revised Corrected Testimony at JLMS-13 lists permits and CEQA review that is still pending. Rebuttal Testimony at JLMS-29 indicates that “[t]he San Joaquin Valley Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line and nearest sensitive receptors as part of the permitting process.” Please indicate the status of the following permits and reviews and when their completion is expected:

QUESTION 6-18a:

Applicable Air Quality Permit(s) from the San Joaquin Air Pollution Control District, including the air toxic impact analysis.

RESPONSE 6-18a (WBF):

As provided in the Testimony of Lucas/Summers (Chapter 2 at JLMS-13), “While the permitting process for this project has not yet begun....”. The permit process will not start until after the CPUC issues a decision on this Application.

As provided in the Testimony of Lucas/Summers (Chapter 2 at JLMS-13), “WBF estimates that it will take 8 to 12 months to obtain all required permits after submitting finalized facility drawings and a detailed description of planned operations with an application for a Conditional Use Permit with Fresno County.”

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QUESTION 6-18b:

Building Permit from Fresno County

RESPONSE 6-18b (WBF):

See response to Question 6-18a.

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QUESTION 6-18c:

Applicable CEQA review initiated by Fresno County.

RESPONSE 6-18c (WBF):

See response to Question 6-18a.

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QUESTION 6-18d:

Please indicate the witness responsible for this answer.

RESPONSE 6-18d:

Dr. Matthew Summers.

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QUESTION 6-19:

Please indicate the fate of the CO₂ that will be captured from the proposed Project through the CCS process.

QUESTION 6-19a:

If any of the CO₂ will be stored, please indicate where the storage will occur.

RESPONSE 6-19a (WBF):

As provided in Lucas/Summers Testimony (Chapter 2), "Continuously capturing CO₂ for long term onsite storage will not be practical so implementation of CDR will be dependent on having an offtake partner for carbon dioxide." WBF does not plan on pursuing an offtake partner until after the CPUC issues a decision on the Application.

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QUESTION 6-19b:

If the CO₂ will be stored, please indicate the leakage rates of the storage reservoir and whether the CO₂ storage facility is permitted.

RESPONSE 6-19b (WBF):

See response to Question 6-19a.

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QUESTION 6-19c:

Please indicate the witness responsible for this answer.

RESPONSE 6-19c:

Dr. Matthew Summers.

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QUESTION 6-20:

Rebuttal Testimony at JLMS-19 refers to “commercial CCS data,” “Industry data from established global technology suppliers” and “commercial benchmarks” Testimony cites the following projects and companies: GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean.

QUESTION 6-20a:

Please indicate which, if any, of the cited examples have both captured CO2 emissions from biomass gasification and been deployed commercially.

RESPONSE 6-20a (WBF):

West Biofuels has not surveyed all cited examples to determine if any have both captured CO2 emissions from biomass gasification and been deployed commercially. Suppliers like GE Vernova and Shell CANSOLV have commercially deployed CCS systems for industrial gas streams with similar CO2 profiles to those to be produced for this project. The project’s 78-80% capture target is a conservative design floor compared to the 90-95% benchmarks demonstrated by these providers.

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QUESTION 6-20b:

Please indicate the witness responsible for this answer.

RESPONSE 6-20b:

Dr. Matthew Summers.

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QUESTION 6-20c:

Please indicate witness's experience in evaluating and implementing CCS projects.

RESPONSE 6-20c (WBF):

Dr. Matthew Summers has participated in R&D projects that have included CO₂ separation from syngas, tailgas, and flue gas. For the proposed project, West Biofuels plans to partner with one of the companies mentioned in the Direct Rebuttal Testimony of Lucas/Summers to supply CCS technology.

Appendix G

**SoCalGas's Response to Sierra Club's
7th Data Request to SoCalGas (Served
5/1/2026)**

**SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS)
SIERRA CLUB-SCG-07
WOODY BIOMASS PILOT PROJECT APPLICATION (A.25-10-008)
DATE REQUESTED: April 17, 2026
RESPONSE DUE: May 1, 2026**

QUESTION 7-1:

In the modeling spreadsheet provided by SoCalGas, in the Baseline Case sheet, cells C25 to B32 list GHG emissions factors attributable to different activities or fates of the woody biomass.

QUESTION 7-1a:

Please provide gas-specific data on each GHG emissions factors (i.e. disaggregate the methane, N₂O, CO₂, and any other gases)

RESPONSE 7-1a (WBF):

See response to Sierra Club-SCG-04 Question 4.2.

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SIERRA CLUB-SCG-07
WOODY BIOMASS PILOT PROJECT APPLICATION (A.25-10-008)
DATE REQUESTED: April 17, 2026
RESPONSE DUE: May 1, 2026**

QUESTION 7-1b:

Please indicate the witness responsible for this answer.

RESPONSE 7-1b:

Witness is Dr. Matthew Summers.

SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS)
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RESPONSE DUE: May 1, 2026

QUESTION 7-2:

In Rebuttal Testimony at JLMS-14, SoCalGas testifies that its approach is consistent with “CARB Policy” and “CARB’s approach to low-carbon fuels and waste diversion strategies.”

QUESTION 7-2a:

Please describe both the scientific basis and precedent in carbon accounting methods generally accepted for CI calculations in California for assuming that changing the location, timing, and responsibility for emissions of CO₂ confers a credit for negative emissions.

RESPONSE 7-2a (SCG):

The scientific basis for crediting avoided emissions is a standard practice in lifecycle assessment (LCA) methodology and California’s established CI framework, which evaluates net atmospheric impact relative to a counterfactual baseline. Under 17 CCR § 95893(d)(5) and CARB’s Low Carbon Fuel Standard (LCFS), carbon intensity can be calculated as the difference between project emissions and a defined business-as-usual baseline. Crediting avoided emissions is standard practice for waste-diversion projects and dairy projects to quantify the real-world atmospheric benefit of finding an alternative solution to manage the feedstock. Similarly, the SB 1440 Pilot Project is replacing baseline practices like air curtain burning or natural decomposition (incorporation) and replacing it with a gasification to biomethane solution.

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QUESTION 7-2b:

Please specifically address the rationale, precedent, and consistency with other California CI calculations for assuming that if CO₂ is emitted when a Bio-SNG/CNG user burns the SNG/CNG all at once rather than when woody biomass decomposes in a field over time, no CO₂ emissions have occurred

RESPONSE 7-2b:

SoCalGas objects to this question as seeking information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence because it exceeds the scope of this proceeding. The question is also vague and ambiguous as to the meaning of the term “other California CI calculations.” SoCalGas further objects to this question because it calls for speculation regarding “the rationale, precedent, and consistency with other California CI calculations” and assumes SoCalGas has knowledge of all “other California CI calculations.”

Notwithstanding and subject to these objections, SoCalGas responds as follows: SoCalGas is unable to respond to this question because it lacks sufficient specificity to provide an accurate Net CI based response. As provided in Tables 1, 2 and 3 in the Corrected Revised Testimony of Lucas/Summers (Chapter 2), there are non-biogenic emissions (e.g., transportation of feedstock and Bio-SNG/CNG, diesel equipment for Whole Orchard Recycling) from the production of Bio-SNG/CNG and from Whole Orchard Recycling and other alternative woody biomass that need to be accounted for to determine Net CI.

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QUESTION 7-2c:

Please indicate the witness responsible for this answer.

RESPONSE 7-2c:

Dr. Matthew Summers.

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QUESTION 7-3:

Does SoCalGas agree with the following statement: the climate impact of sequestering a unit of captured CO₂ via a CCS facility is identical to that of shifting a unit of CO₂ emissions associated with biomass decomposition from a field to an end user's flue stack? If it does not agree, please explain in detail SoCalGas' basis for not agreeing with this statement. Please indicate the witness responsible for this answer.

RESPONSE 7-3:

SoCalGas objects to this question as seeking information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence because it exceeds the scope of this proceeding. SoCalGas also objects to this request on the grounds that it calls for speculation and is based on an incomplete hypothetical.

Subject to and without waiving the foregoing objections, SoCalGas responds as follows: SoCalGas is unable to agree or disagree with the above statement because SoCalGas is not familiar with a technology or solution (and any associated emissions) that can collect CO₂ emissions associated with biomass decomposition from an agricultural field and pipe those emissions into some type of end-user's flue stack.

Witness: Dr. Matthew Summers

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QUESTION 7-4:

In Rebuttal Testimony at JLMS-14, SoCalGas references “avoided” emissions.

QUESTION 7-4a:

Please explain in detail what emissions are “avoided” (rather than relocated in time and space) to calculate a net CI for Bio-SNG/CNG.

RESPONSE 7-4a (WBF):

SoCalGas objects to this request on the grounds the question is ambiguous and calls for speculation because the phrase “rather than relocated in time and space” is also not defined and can have many meanings.

Subject to and without waiving the foregoing objections, SoCalGas responds as follows: The "avoided" emissions are those generated by the current disposal fate of the biomass: air curtain burning, biomass power generation, and diesel-intensive chipping/loading operations, etc. Without the SB 1440 Pilot Project, these practices will release criteria air pollutants and GHGs into the San Joaquin Valley.

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QUESTION 7-4b:

Describe in detail the fate of the carbon atoms embodied in the “avoided” emissions referenced in Rebuttal Testimony.

RESPONSE 7-4b (WBF):

SoCalGas objects to this request on the grounds the question is ambiguous and calls for speculation because the phrase “carbon atoms embodied in the “avoided” emissions” is not defined and can have many meanings. Also, SoCalGas’s Rebuttal Testimony does not discuss the term “carbon atoms.”

Subject to and without waiving the foregoing objections, SoCalGas responds as follows: Table 1 in the Corrected Revised Direct Testimony of Lucas/Summers (Chapter 2) give a detailed estimate the greenhouse gas emissions for biogenic and non-biogenic carbon in the baseline case that are then compared as “avoided” emissions with the biogenic and non-biogenic carbon generated in the SB 1440 Pilot Project case.

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QUESTION 7-4c:

Does emitting biogenic CO₂ from Bio-SNG/CNG combustion rather than via Whole Orchard Recycling and other alternative woody biomass fates result in a negative CI? If so, please explain the basis for this response.

RESPONSE 7-4c:

SoCalGas objects to this request on the grounds the question is ambiguous and calls for speculation on the various sources of non-biogenic emissions (e.g. – transportation of feedstock and Bio-SNG/CNG, diesel equipment for Whole Orchard Recycling) from the production of Bio-SNG/CNG and from Whole Orchard Recycling and other alternative woody biomass.

Subject to and without waiving the foregoing objection, SoCalGas responds as follows: SoCalGas is unable to respond to this question because it lacks sufficient specificity to provide an accurate Net CI based response.

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QUESTION 7-4d:

Please indicate the witness responsible for this answer.

RESPONSE 7-4d:

Dr. Matthew Summers.

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QUESTION 7-5:

Please explain in detail the life cycle assessment and GREET experience of the preparer of Table 3 at JLMS-17 in the Amended Corrected Revised Prepared Direct Testimony. Please indicate the witness responsible for this answer.

RESPONSE 7-5 (WBF):

Table 3 at JLMS-17 was prepared based on the analysis of Dr. Eric Tan, a Senior Research Engineer at the National Renewable Energy Laboratory (NREL). Dr. Tan is a licensed Life Cycle Assessment Certified Professional (LCACP) and an AIChE Fellow with extensive experience in utilizing the GREET model for energy systems. James Lucas is the witness for this answer.

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QUESTION 7-6:

SoCalGas in Rebuttal Testimony states at JLMS-15 that “the GREET methodology may be validly applied as long as the analysis relies on identical mathematical calculations and validated emission factors.”

QUESTION 7-6a:

Please demonstrate that the analysis provided for the proposed Project relies on “identical mathematical calculations and validated emission factors.”

RESPONSE 7-6a (WBF)

The analysis provided for the SB 1440 Pilot Project utilizes validated emission factors sourced directly from the 2024 R&D GREET model released by Argonne National Laboratory. These factors cover all standard lifecycle activities, including biomass preprocessing, trucking, and grid electricity. To demonstrate the mathematical calculations, a full lifecycle model in Excel format containing active cells and formulas was developed. These formulas trace the emissions for each production step (Lanes 1–10) using the same logic as the Argonne GREET framework—multiplying mass/energy throughput by the validated factors to arrive at the carbon intensity. This workbook was specifically formatted to improve transparency and traceability by excluding extraneous information present in the larger Argonne tool that is not relevant to this specific pilot.

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QUESTION 7-6b:

Please identify to which GREET model these calculations are “identical.”

RESPONSE 7-6b (WBF):

The calculations utilize the mathematical framework and validated emission factors of the 2024 R&D GREET model released by Argonne National Laboratory.

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QUESTION 7-6c:

Please explain whether the original or the updated WTW CI values provided in SoCalGas' testimony are the values relying on "identical mathematical calculations and validated emission factors" from a GREET methodology.

RESPONSE 7-6c (WBF):

Both the original and updated WTW CI values rely on the identical mathematical framework and validated emission factors of the 2024 R&D GREET model. The difference between the original values and the updated values (36.1 gCO₂e/MJ without CCS) is not a change in methodology, but a revision to the accounting treatment for biogenic carbon.

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QUESTION 7-6d:

Is a change in Bio-SNG/CNG CI from -18.9 to 36.1 gCO₂e/MJ is consistent with use of a fully validated, trusted methodology?

RESPONSE 7-6d (WBF):

SoCalGas objects to this request on the grounds the question is ambiguous and calls for speculation as to the term “fully validated, trusted methodology”.

Subject to and without waiving the foregoing objection, SoCalGas responds as follows: The change reflects a revision to the accounting treatment for biogenic carbon (treating tailpipe emissions as positive rather than neutral) to promote mathematical consistency for the treatment of carbon for both the base case and use case. The underlying GREET methodology and emission factors for the processes remain the same; only the framing of biogenic neutrality changed.

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QUESTION 7-6e:

Please indicate the witness responsible for this answer.

RESPONSE 7-6e:

Dr. Matthew Summers in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

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QUESTION 7-7:

Rebuttal Testimony at JLMS-14 references “high-emissions practices, such as air curtain burning.”

QUESTION 7-7a:

Please explain whether conversion of carbon to CO₂ is more or less complete for air curtain burning than Bio-CNG/SNG burning.

RESPONSE 7-7a (WBF):

SoCalGas objects to this request on the grounds the question is overly broad, vague and ambiguous, and calls for speculation as to the type of natural gas vehicle or appliance that will combust the Bio-CNG/SNG and the make/model/size of the air curtain burner.

Subject to and without waiving the foregoing objections, SoCalGas responds as follows: Conversion of carbon to CO₂ is expected to be more complete and controlled in Bio-SNG/CNG combustion. Air curtain burning is expected to have lower efficiency and minimal emission controls, whereas Bio-SNG is burned in high-efficiency end-use equipment or engines with stringent criteria pollutant controls.

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QUESTION 7-7b:

Please describe the fate of the unburned carbon in either case and explain its impact on CI.

RESPONSE 7-7b (WBF):

SoCalGas objects to this request on the grounds the question is overly broad, vague and ambiguous, and calls for speculation as to the type of natural gas vehicle or appliance that will combust the Bio-CNG/SNG and the make/model/size of the air curtain burner.

Subject to and without waiving the foregoing objections, SoCalGas responds as follows:

Air curtain incineration is anticipated to produce biomass ash containing a small amount of unburned carbon. Unburned carbon in a natural gas vehicle is accounted for in the GREET model emissions factors that were used in the analysis.

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QUESTION 7-7c:

Please indicate the witness responsible for this answer.

RESPONSE 7-7c:

Dr. Matthew Summers.

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QUESTION 7-8:

Does SoCalGas agree with the following statement: the climate impact of emitting one unit of CO2 now is identical to the impact of emitting one unit of CO2 in 20 years? Please indicate the witness responsible for this answer.

RESPONSE 7-8:

SoCalGas objects to this question as seeking information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence because it exceeds the scope of this proceeding.

Subject to and without waiving the foregoing objections, SoCalGas responds as follows:

Taken over a standard 100-year window (GWP-100), the radiative forcing of a single unit of CO2 in year 1 has the same ultimate atmospheric impact of emitting one unit of CO2 in year 20. The Net CI analysis for the SB 1440 Pilot Project uses a GWP-100.

Witness: Dr. Matthew Summers

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QUESTION 7-9:

Does SoCalGas agree with the following statement: the climate impact of biogenic CO₂ emissions is identical to that of fossil CO₂ emissions? Please indicate the witness responsible for this answer.

RESPONSE 7-9:

SoCalGas objects on the grounds this question calls for information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence because it raises issues related to fossil CO₂ emissions and their climate impacts, which are outside the scope of SoCalGas's Corrected Revised Direct Testimony and Rebuttal Testimony.

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QUESTION 7-10:

Please provide any empirical evidence that facilities comparable to the proposed Project have successfully maintained 0 methane emissions over their lifespan. Please indicate the witness responsible for this answer.

RESPONSE 7-10 (WBF):

As stated in the Rebuttal Testimony of Lucas/Summers, to SoCalGas's knowledge, there is no commercial-scale gasification system in the United States capable of converting woody biomass into biomethane and interconnecting with a utility pipeline.¹ Consequently, longitudinal empirical data for this specific technology class in a U.S. commercial context is not yet available in the public record.

However, as detailed in the Rebuttal Testimony of Lucas/Summers and the accompanying Calculation Memorandum of Dr. Matthew Summers (Attachment 1), the SB 1440 Pilot Project's design utilizes thermochemical methanation in a fully enclosed, pressurized industrial system. This technology is more accurately compared to refinery hydrogenation units or ammonia plants rather than the low-pressure biological anaerobic digestion systems cited by Intervenors. Using industry-standard U.S. EPA protocols for equipment leak estimates, Dr. Summers calculated that controlled methane leakage for the facility is estimated at just 1.84 kg/day, or 0.0685 gCO₂e/MJ. This represents a negligible 0.06% of the facility's direct plant emissions, justifying its treatment as *de minimis* in the lifecycle modeling.

Furthermore, the CPUC specifically set aside Cap-and-Invest (C&I) funding for the SB 1440 Pilot Project to address the absence of such empirical data by requiring the project to study and report on fugitive methane, criteria pollutants, and particulate matter emissions.² This rigorous monitoring framework is a core objective of the pilot so that the technology's performance is documented to inform future Commission decisions and California energy policy.

Witnesses: James Lucas and Dr. Matthew Summers.

¹ Rebuttal Testimony of Lucas/Summers at JLMS-3.

² D.22-02-025 at OP 43.

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QUESTION 7-11

What are the life cycle methane emissions from the proposed Project? Please indicate the witness responsible for this answer.

RESPONSE 7-11 (WBF):

As provided in the response to Data Request Sierra Club-SCG-04, Question 4-2, the broken-out greenhouse gas emission factors for methane across various lifecycle activities were enumerated.

Additionally, in response to concerns regarding fugitive emissions from the facility itself, West Biofuels provided a facility-specific "component-level analysis" in the Rebuttal Testimony of Lucas/Summers (Attachment 1, Methane Leakage Memo). Using industry-standard U.S. EPA protocols (EPA-453/R-95-017) to estimate leaks from valves, flanges, and connectors, Dr. Summers calculated the controlled methane leakage for the SB 1440 Pilot Project is estimated at 1.84 kg/day. Expressed in terms of global warming potential, this leakage equates to 0.0685 gCO₂e/MJ, representing a negligible 0.06% of the facility's direct plant greenhouse gas emissions. This quantitative data confirms that fugitive methane is *de minimis* and supports its exclusion as a major emission source in lifecycle modeling.

Witness: Dr. Matthew Summers.

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QUESTION 7-12:

Rebuttal Testimony at JLMS-19 refers to the following projects and companies: GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean.

QUESTION 7-12a:

Please provide the names and addresses of operating, commercial scale CCS facilities associated with biomass gasification that have demonstrated 90%+ CO₂ capture via the GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean systems referenced by SoCalGas.

RESPONSE 7-12a (WBF):

West Biofuels has not asked these companies if they have operating commercial scale CCS facilities associated with biomass gasification. As specified in the Rebuttal Testimony of Lucas/Summers,³ the capture rates cited for GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean are advertised capture efficiencies⁴ routinely marketed by these established global technology suppliers.

For example:

- GE Vernova specifies that its post-combustion, amine-based solutions can achieve more than 95% capture.
- SLB Capturi markets modular CCS plants, such as "Just Catch™," designed for a standard performance of ~90% capture.
- Baker Hughes and Shell CANSOLV similarly market systems with ~90% capture efficiency.

While these systems have been commercially demonstrated in various power and industrial applications—such as the Shell CANSOLV system at Boundary Dam Unit 3, which was designed to capture ~90% of from a coal-fired unit— the selection of a specific supplier and site-specific engineering design for the SB 1440 Pilot Project will occur after CPUC issues a final decision for this Application.

³ Lucas/Summers Rebuttal Testimony at JLMS 19.

⁴ ⁴ The following are webpage links to leading CCS industry suppliers providing advertised carbon capture rates:

<https://www.gevernova.com/gas-power/future-of-energy/carbon-capture-storage>

<https://capturi.slb.com/>

<https://www.bakerhughes.com/carbon-capture-use-and-storage-ccus/carbon-capture>

<https://www.carbonclean.com/insights/solvent-based-carbon-capture-refineries>

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QUESTION 7-12b:

Please provide any evidence that the facilities with CCS referenced at JLMS-19 have demonstrated at least 78% mitigation of GHG emissions relative to pre-CCS conditions – i.e. successfully sequestered all excess GHGs induced by the use of CCS, in addition to at least 78% of the emissions associated with pre-CCS conditions, with at least 100-year demonstrated storage.

RESPONSE 7-12b (WBF):

The SB 1440 Pilot Project's 78–80% capture target is a conservative design floor for this technology class, purposefully set below the 90–95% capture rates advertised by leading industry suppliers⁵ to support the credibility and achievability of the Project's GHG reduction estimates.

Evidence for the ability to mitigate GHG emissions while accounting for parasitic loads (excess GHGs induced by CCS) is found in the commercial deployment of modular systems like those from SLB Capturi, which are engineered for thousands of operating hours across multiple facilities with a standard ~90% capture performance. Additionally, Shell's CANSOLV technology at Boundary Dam Unit 3 provides a commercial benchmark for high-efficiency capture in a large-scale industrial setting.

⁵ The following are webpage links to leading CCS industry suppliers providing advertised carbon capture rates:

<https://www.gevernova.com/gas-power/future-of-energy/carbon-capture-storage>

<https://capturi.slb.com/>

<https://www.bakerhughes.com/carbon-capture-use-and-storage-ccus/carbon-capture>

<https://www.carbonclean.com/insights/solvent-based-carbon-capture-refineries>

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QUESTION 7-12c:

Please indicate the witness responsible for this answer.

RESPONSE 7-12c:

Dr. Matthew Summers.

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QUESTION 7-13:

Please clarify whether SoCalGas agrees that CCS capture efficiency is sufficient to demonstrate GHG mitigation potential via CCS. If not, please describe what other information is necessary to prove mitigation potential. Please indicate the witness responsible for this answer.

RESPONSE 7-13 (WBF):

SoCalGas objects to this request on the grounds the question is ambiguous and calls for speculation as to the term “demonstrate GHG mitigation potential via CCS”

Subject to and without waiving the foregoing objection, SoCalGas responds as follows: Capture efficiency is a critical metric, but the full lifecycle GHG mitigation potential is demonstrated by accounting for the energy required for the CCS unit, the permanence of storage, and the change compared with counterfactual baseline which is currently venting or burning that carbon. The SB 1440 Pilot Project's 80% target is a conservative design floor for this technology class.

Witness: Dr. Matthew Summers.