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WILLIAM A. MUNDELL
Chairman
JIM IRVIN
Commissioner
MARC SPITZER
Commissioner

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AZ CORP COMMISSION
DOCUMENT CONTROL

IN THE MATTER OF THE APPLICATION OF)
NAVOPACHE ELECTRIC COOPERATIVE, INC.)
AN ARIZONA NON-PROFIT CORPORATION)
FOR A FINDING OF FAIR VALUE OF ITS)
PROPERTIES AND A FAIR RETURN)
THEREON, AND FOR APPROVAL OF)
CHANGES TO ITS POLICY MANUAL.)

DOCKET NO. E-01787A-01-0063

STAFF'S NOTICE OF FILING
DIRECT TESTIMONY

Staff of the Arizona Corporation Commission hereby files the direct testimony of Darron
Carlson, and Asher Emerson, in the above-referenced matter.

RESPECTFULLY SUBMITTED this 15th day of August, 2001.

for Teena Wolfe
Teena Wolfe
Attorney, Legal Division
Arizona Corporation Commission
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Original and ten (10) copies of the foregoing
filed this 15th day of August, 2001 with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Arizona Corporation Commission
DOCKETED

AUG 15 2001

Copies of the foregoing were mailed
this 15th day of August, 2001 to:

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Assistant to Teena Wolfe

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AZ CORP COMMISSION
DOCUMENT CONTROL

DIRECT TESTIMONY

OF

**DARRON W. CARLSON
ASHER EMERSON**

DOCKET NO. E-01787A-01-0063

August 15, 2001

CARLSON

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL

Chairman

JIM IRVIN

Commissioner

MARC SPITZER

Commissioner

IN THE MATTER OF THE APPLICATION OF)
NAVOPACHE ELECTRIC COOPERATIVE,)
INC., AN ARIZONA NON-PROFIT)
CORPORATION FOR A FINDING OF FAIR)
VALUE OF ITS PROPERTIES AND A FAIR)
RATE OF RETURN THEREON, AND FOR)
APPROVAL OF RATES AND CHARGES, AND)
FOR APPROVAL OF CHANGES TO ITS)
POLICY MANUAL)

DOCKET NO. E-01787A-01-0063

DIRECT

TESTIMONY

OF

DARRON W. CARLSON

SENIOR RATE ANALYST

UTILITIES DIVISION

AUGUST 15, 2001

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EXECUTIVE SUMMARY
NAVOPACHE ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01787A-01-0063

Navopache Electric Cooperative, Inc., ("Navopache" or "Company") is a non-profit electric distribution cooperative providing services to member-customers in Navajo, Apache, Greenlee and Gila Counties, in Arizona, with a small contingent of member-customers in Catron County, New Mexico. Navopache services approximately 27,000 residential and 2,700 commercial member-customers.

Navopache's previous rate case was nine years ago. The Company is requesting an increase of 12.75 percent in total revenues. The Company is seeking enough revenue increase to reverse a deteriorating financial condition. The Company's requested revenue increase is based on the Company's target of a 2.00 operating times interest earned ratio ("OTIER").

Other than removing the effects of the Company including construction work in progress in rate base, Mr. Carlson made only a few minor changes to the Company's claimed Test Year results. However, Mr. Carlson's analysis shows that the Company's financial condition can be adequately improved to cover operations, contingencies and debt service with an OTIER of only 1.50. This translates to an increase in revenues of 8.33 percent, or \$1,140,920 less than the Company's proposal.

Mr. Carlson recommends a \$2,153,519, or 8.33 percent increase in revenue over Test Year revenues of \$25,842,323. Staff's recommendation produces an OTIER of 1.50 and an operating debt service coverage ("ODSC") ratio of 1.67.

1 **INTRODUCTION**

2 Q. Please state your name, occupation, and business address.

3 A. My name is Darron W. Carlson. I am a Senior Rate Analyst employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division. My
5 business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 Q. Briefly describe your responsibilities as a Senior Rate Analyst.

8 A. In my capacity as a Senior Rate Analyst, I provide recommendations to the Commission
9 on mergers, acquisitions, financings and sales of assets. I am responsible for the
10 examination and verification of financial and statistical information included in utility rate
11 applications. I analyze the financial condition of utilities and prepare reports and
12 recommendations on financial and accounting matters, cost of capital, revenue
13 requirements and rate design. I also review requests for financing and the financial
14 considerations of requests for Certificates of Convenience and Necessity ("CC&N"). My
15 responsibilities also include providing expert testimony in formal hearings before the
16 Commission on all of the aforementioned matters.

17
18 Q. How long have you held this position?

19 A. I have held this position since August of 1995. Prior to that, I was a Utilities Auditor III
20 for one and a half years and a Utilities Auditor II for two and a half years.

21
22 Q. Please describe your educational background and professional experience.

23 A. I hold a Bachelor of Arts degree in both Accounting and Business Management from
24 Northeastern Illinois University in Chicago, Illinois. I have participated in a number of
25 seminars and workshops related to utility rate-making, cost of capital and similar issues,
26 sponsored by the National Association of Regulatory Utility Commissioners ("NARUC"),

1 Duke University, Florida State University, Michigan State University, New Mexico State
2 University, and others.

3
4 Prior to my employment with the Commission, I was employed as a Program Compliance
5 Auditor III with the Arizona Department of Agriculture for seven years. My other work
6 experience ranges from Military Payroll Auditor to Controller in private corporations.

7
8 Q. What is the purpose of your testimony in this proceeding?

9 A. The purpose of my testimony in this proceeding is to present Utilities Division ("Staff")
10 position and recommendations regarding the Navopache Electric Cooperative, Inc.
11 ("Navopache" or "Company") rate application and related issues. This application, dated
12 January 19, 2001, and docketed as sufficient on February 20, 2001, requests permanent
13 adjustments to rates and charges for utility service. The application also includes a request
14 for approval of policy manual changes. I believe that pursuant to Commission Decision
15 No. 62612, dated June 9, 2000, the issue of the disposition of funds from the gain on the
16 Plains' sale of transmission and other assets must also be considered in this proceeding.

17
18 **GENERAL INFORMATION**

19 Q. What other Staff witnesses are involved in the presentation of Staff's recommendations or
20 have provided substantial relevant information that you relied upon?

21 A. Mr. Asher Emerson is responsible for the review of the Company's cost-of-service study
22 along with being responsible for the engineering and technical analysis. He is also
23 providing pre-filed testimony in this proceeding.

24
25 Q. Did you perform a regulatory audit of Navopache and include the results in your analysis
26 and recommendations of the rate increase request?

1 A. Yes, I did. I examined the accounting books and records, tested revenue, verified selected
2 expenditures and reviewed the asset and liability accounts. My work also included a
3 review of the Commission's records of Navopache's filings. In addition, I made oral and
4 written requests for data, performed an on-site audit and engaged in discussions with
5 Navopache representatives. As a result of Staff's audit and the recommendations of the
6 aforementioned other Staff witness, I am recommending adjustments to Navopache's rate
7 increase request.

8
9 Q. What is the general condition of Navopache's accounting records?

10 A. Staff's examination revealed that the Company's accounting records are maintained in a
11 satisfactory manner. Amounts in Navopache's general ledger are accurate and generally
12 reliable as verified by supporting documentation.

13
14 Q. Were there any problems with Navopache's books and records?

15 A. Yes. Staff witness Mr. Asher Emerson was unable to properly analyze post-Test Year
16 plant additions attributable to the end of Test Year Construction Work in Progress
17 ("CWIP") account. Navopache was unable to identify exactly which plant accounts and
18 which amounts were completed and in service and thereby transferable from the CWIP
19 account, even though the job order/costing system the Company maintains for the CWIP
20 account may be acceptable under the Rural Utilities Service ("RUS") Uniform System of
21 Accounts - Electric. Staff Engineering was unable to perform the necessary analysis, and
22 therefore, recommended that no post-Test Year plant additions be recognized in this
23 proceeding.

24
25 Q. Is the Company current on its payment of property taxes and sales taxes?

26 A. Yes.

27 ...

1 **SUMMARY OF ADJUSTMENTS**

2 Q. Please summarize the recommendations and adjustments that you address in this pre-filed
3 direct testimony.

4 A. My pre-filed direct testimony addresses the following issues:

5
6 Operating Times Interest Earned Ratio ("OTIER") – This adjustment decreases the
7 Company's revenue requirement by \$1,140,920. Although this figure reflects the effects
8 of all of my recommended adjustments, it primarily reflects my reduction of the
9 Company's OTIER from 2.00 to 1.50.

10
11 Intangible Plant – (Organization) - This adjustment decreases the Company's gross utility
12 plant by \$227,777. This adjustment reflects my removal of unsubstantiated plant
13 additions to this account in 1994 and 1995.

14
15 Intangible Plant – (Acquisition Adjustment) – This adjustment decreases the Company's
16 gross utility plant by \$224,077. This adjustment reflects my removal of an unauthorized
17 plant valuation adjustment.

18
19 General Plant – (Land & Land Rights) – This adjustment decreases the Company's gross
20 utility plant by \$240,091. This adjustment reflects my removal of land determined to be
21 not "used and useful".

22
23 Construction Work in Progress ("CWIP") – This adjustment decreases the Company's
24 gross utility plant by \$4,361,247. This adjustment reflects my removal of plant
25 determined to be not "used and useful".

1 Accumulated Depreciation – This adjustment decreases the Company’s accumulated
2 depreciation by \$362,891. This adjustment has the effect of increasing the Company’s net
3 utility plant by the same \$362,891. This adjustment reflects my removal of accumulated
4 depreciation on the disallowed acquisition adjustment and on the disallowed CWIP.

5
6 Operating Expenses – (Admin. & Gen’l.) – This adjustment decreases the Company’s
7 administrative and general expenses by \$33,093. This adjustment reflects my
8 recommended change in rate case expense amortization period and disallowance of
9 lobbying expenses.

10
11 Operating Expenses – (Depreciation Expense) – This adjustment decreases the Company’s
12 depreciation expense by \$186,142. This adjustment reflects the effects on depreciation
13 expense attributable to the disallowance of an acquisition adjustment, to the disallowance
14 of CWIP, and to the correction of a math error by the Company.

15
16 **REVENUE REQUIREMENT**

17 Q. Please summarize the results of your analysis of Navopache’s application and state your
18 recommended revenue requirement.

19 A. I am recommending a revenue requirement of \$27,995,842 for Navopache. My
20 recommended revenue requirement represents a \$2,153,519 increase from the adjusted
21 Test Year revenue of \$25,842,323. My recommended revenue requirement is \$1,140,920
22 less than the Company’s proposed \$29,136,762. Schedule DWC-1 presents the
23 calculation of the recommended revenue requirement.

24
25 Q. What causes the variance between Navopache and your recommended revenue
26 requirement?

1 A. I have made several minor adjustments to Test Year operating income (explained later in
2 this testimony), which causes some difference in the revenue requirement. However, the
3 primary difference between my recommended revenue requirement and that of the
4 Company is due to the difference between the Company's proposed 2.00 operating times
5 interest earned ratio ("OTIER") and my recommended 1.50 OTIER. I believe that an
6 OTIER of 1.50 gives Navopache all the revenue they need for operations, contingencies
7 and servicing its debt.

8
9 Q. Why did Navopache request an OTIER of 2.00?

10 A. As per Company witness, Mr. Wayne A. Retzlaff, in his pre-filed direct testimony, Page 8,
11 Lines 14 and 15: *"It is my understanding that RUS and CFC prefer rural distribution*
12 *cooperatives maintain at least a 2.0 TIER."*

13
14 Q. Does RUS and/or the National Rural Utilities Cooperative Finance Corporation ("CFC")
15 require a minimum 2.00 OTIER?

16 A. I could find no minimum OTIER requirement in documents supplied to me by Navopache,
17 and Navopache personnel could find no minimum requirement in their loan documents.

18
19 The only written minimum I could find in relation to RUS and CFC was found in the Code
20 of Federal Regulations under the RUS codes. Paragraph 1710.114(b) reads, in part,
21 *"Coverage Ratios. (1) Distribution borrowers. The minimum coverage ratios required of*
22 *distribution borrowers whether applied on an annual or average basis, are a TIER of*
23 *1.25, DSC of 1.25, OTIER of 1.1 and ODSC of 1.1. OTIER and ODSC shall apply to*
24 *distribution borrowers that receive a loan approved on or after January 29, 1996."*

25 ...

26 ...

27 ...

1 I believe that since the only apparent minimum requirement is an OTIER of 1.10 and an
2 operating debt service coverage ("ODSC") ratio of 1.10, that my recommended OTIER of
3 1.50 and the resultant ODSC of 1.67 are sufficient.
4

5 **ORIGINAL COST RATE BASE**

6 **Original Cost Rate Base Summary**

7 Q. What are the results of your analysis of Test Year plant and other items included in
8 original cost rate base?

9 A. As shown on Schedule DWC-2, my analysis resulted in an original cost rate base of
10 \$37,360,051. My recommended original cost rate base is \$4,690,301 less than the
11 Company's proposed \$42,050,352.
12

13 **Gross Utility Plant in Service Summary**

14 Q. What are the results of your analysis of Test Year gross utility plant in service?

15 A. As shown on Schedule DWC-3, my analysis resulted in total plant investment of
16 \$63,205,609. My recommended gross utility plant in service is \$5,053,192 less than the
17 Company's proposed \$68,258,801.
18

19 Q. Did you use these determinations to analyze Navopache's rate application and to
20 determine just and reasonable rates?

21 A. Yes.
22

23 **Gross Utility Plant in Service Adjustment No. 1 - Organization**

24 Q. What has Navopache proposed for the Organization account?

25 A. Navopache proposed an Organization account of \$228,075.
26 ...
27 ...

1 Q. Do you agree with the Company's valuation of the Organization account?

2 A. No. The Organization account includes \$227,777 resulting from 1994 and 1995 adjusting
3 entries ordered by the Company's external accountants. The Company has not
4 substantiated or explained these adjusting entries.

5
6 Q. What adjustment are you recommending for the organization account?

7 A. As shown on Schedule DWC-4, I recommend decreasing the Organization account by
8 \$227,777.

9

10 ***Gross Utility Plant in Service Adjustment No. 2 – Electric Plant Acquisition Adjustment***

11 Q. What has Navopache proposed for the Electric Plant Acquisition Adjustment account?

12 A. Navopache proposed \$224,077 for the Electric Plant Acquisition Adjustment account.

13

14 Q. Do you agree with the Company's valuation of this account?

15 A. No. I believe this account recognizes an unauthorized acquisition adjustment because this
16 Commission normally requires prior approval for any acquisition adjustment, and I could
17 find no record of this Commission authorizing an acquisition adjustment for Navopache in
18 the past. Further, I have been advised by the Company that this account has now been
19 fully amortized, which indicates that this acquisition adjustment was created more than 15
20 years ago, about five years before Navopache's prior rate case. Under these
21 circumstances, it would not be prudent to include this account in plant valuations for this
22 proceeding.

23

24 Q. What adjustment are you recommending for the Electric Plant Acquisition Adjustment
25 account?

26 A. As shown on Schedule DWC-5, I recommend decreasing the Electric Plant Acquisition
27 Adjustment account by \$224,077.

1 ***Gross Utility Plant in Service Adjustment No. 3 – Land and Land Rights***

2 Q. What has Navopache proposed for land and land rights?

3 A. Navopache proposed land and land rights of \$296,246.

4
5 Q. Do you agree with the Company's valuation of this account?

6 A. No. Staff Engineering has determined that a large part of this account is attributable to
7 land that is not "used and useful".

8
9 Q. What adjustment are you recommending for land and land rights?

10 A. As shown on Schedule DWC-6, I recommend decreasing land and land rights by
11 \$240,091.

12
13 ***Gross Utility Plant in Service Adjustment No. 4 – Construction Work In Progress ("CWIP")***

14 Q. What has Navopache proposed for construction work in progress?

15 A. Navopache proposed including \$4,361,247 of CWIP in rate base.

16
17 Q. Do you agree with the Company's valuation of this account?

18 A. I do not dispute the actual valuation of this account.

19
20 Q. Do you agree that CWIP should be included in rate base?

21 A. No. The Commission's normal practice is to exclude CWIP from rate base. Also, CWIP
22 by its nature is not "used and useful".

23
24 Q. What adjustment are you recommending for CWIP?

25 A. As shown on Schedule DWC-7, I recommend completely removing the Company's
26 \$4,361.247 CWIP proposal from rate base.

27 ...

1 **Accumulated Depreciation Summary**

2 *Accumulated Depreciation Adjustment No. 1*

3 Q. What has Navopache proposed for Accumulated Depreciation?

4 A. Navopache proposed Accumulated Depreciation of \$26,785,107.

5
6 Q. Do you agree with the Company's valuation of this account?

7 A. No. I adjusted this account to reflect the adjustments to Electric Plant Acquisition
8 Adjustment and CWIP previously discussed.

9
10 Q. What adjustment are you recommending for Accumulated Depreciation?

11 A. As shown on Schedule DWC-8, I recommend decreasing the Accumulated Depreciation
12 by \$362,891.

13
14 **OPERATING INCOME/MARGIN**

15 **Operating Income/Margin Summary**

16 Q. What are the results of your analysis of Test Year operating income/margin?

17 A. As shown on Schedule DWC-9, my analysis resulted in Test Year operating
18 income/margin of \$746,481. My recommended Test Year operating income/margin is
19 \$219,235 more than the Company's proposed \$527,246.

20
21 *Operating Income/Margin Adjustment No. 1 – Administrative and General Expense*

22 Q. What has Navopache proposed for Test Year Administrative and General expense?

23 A. Navopache proposed Test Year Administrative and General expense of \$2,665,419.

24
25 Q. Do you agree with the Company's valuation of this account?

26 A. No. I have recommended a different amortization period for rate case expense. The
27 Company used a three-year amortization period. I recommend a five-year amortization

1 period because it has been nine years since the Company's prior rate case. A three-year
2 amortization period is too short in consideration of the Company's recent historical filing
3 frequency. I also recommend the removal of fees for lobbying activities.

4
5 Q. Why did you remove fees for lobbying activities?

6 A. It is this Commission's policy to insulate ratepayers from subsidizing a company's
7 political lobbying activities.

8
9 Q. What adjustment are you recommending for Administrative and General Expense?

10 A. As shown on Schedule DWC-10, I recommend decreasing the Administrative and General
11 Expense by \$33,093.

12
13 ***Operating Income/Margin Adjustment No. 2 – Depreciation Expense***

14 Q. What has Navopache proposed for Test Year Depreciation Expense?

15 A. Navopache proposed Test Year Depreciation Expense of \$2,223,660.

16
17 Q. Do you agree with the Company's valuation of this account?

18 A. No. As shown on Schedule DWC-11, I have recommended changes to this account to
19 correct a math error in the 350 series of plan accounts and to remove depreciation claimed
20 on an acquisition adjustment and CWIP items that I have recommended removal from
21 plant.

22
23 Q. What adjustment are you recommending for depreciation expense?

24 A. As shown on Schedule DWC-11, I recommend decreasing Depreciation Expense by
25 \$186,142.

26 ...

27 ...

1 **DISTRIBUTION OF GAIN FROM SALE OF PLAINS' TRANSMISSION ASSETS**

2 Q. What has Navopache proposed for the distribution of its share of the gain from the sale of
3 Plains' transmission and other assets?

4 A. The Company has chosen to recognize the \$860,670 gain as a reduction of its investment
5 in Plains' patronage capital.

6
7 Q. Do you agree with the Company's decision in the disposition of this gain?

8 A. No. Article 7.5.1 of the Settlement Agreement adopted in Commission Decision No.
9 62612, dated June 9, 2000, states, in part, "*At this time, the parties cannot determine*
10 *whether Navopache's share of the gain from Plains' sale of its transmission and other*
11 *assets to PNM should apply to Navopache's distribution rates, generation rates, the CTC,*
12 *or some combination of these.*" The Settlement Agreement calls for the gain to provide an
13 offset to rates. The Company should be compelled to comply with the terms of the
14 Settlement Agreement.

15
16 Q. What disposition are you recommending for the \$860,670 gain that is currently being held
17 in an interest bearing account, awaiting disposition in this rate case?

18 A. I recommend a billing credit to offset the "CTC" charge. The "CTC" charge represents
19 the recovery of stranded costs lost in the same Plains transaction. The Commission
20 authorized Navopache to collect \$1,775,645 each year for ten years via the "CTC" charge.
21 I recommend that a billing credit be established to offset part of the "CTC" charge in an
22 amount that would extinguish the \$860,670 (plus earned interest) over billings for twelve
23 months.

24 ...
25 ...
26 ...

1 **PROPOSED STANDARD OFFER TARIFF**

2 Q. Has Staff reviewed Navopache's proposed standard offer tariffs?

3 A. Yes. Staff has reviewed the tariffs and notes that there are just two technical problems
4 with some of the wording. Following is a listing of Staff concerns:

5
6 1. Standard Offer Tariff Schedule No. 4 fails to include the following wording in the
7 proposed tariff: "*Service is available where the facilities of the cooperative are of*
8 *adequate capacity and are adjacent to the customer's premises.*" Staff recommends
9 inclusion of this wording in the proposed tariff.

10 2. Standard Offer Tariff Schedule No. 7, which is the tariff for cogeneration and small
11 power production facilities, reflects an excessively large increase in the proposed tariff.
12 The Company did not offer cost justification for increasing Basic Service from \$8.00 per
13 month plus \$24.00 per month per each generator meter under the current tariff to \$125.00
14 per month plus \$46.20 per month per each generator meter. Staff recommends a more
15 moderate increase so as not to discourage the small co-generator or small power
16 production facility. Staff recommends a Basic Service charge of \$24.00 per month plus
17 \$46.20 per month per each generator. This will alleviate some rate shock to customers
18 and still allow the Company reasonable recovery of its costs.

19
20 **POLICY MANUAL**

21 Q. Has Staff reviewed Navopache's proposed policy manual?

22 A. Yes. Staff has reviewed the policy manual and notes just two small discrepancies as
23 follows:

24
25 1. RE: 2.10 Definitions: 49. Regular Office Hours. The new manual does not define
26 summer months or winter months. Staff recommends that Navopache issue an
27 addendum to the manual to include this information.

1 2. RE: 2.58 Complaints. The new manual does not reflect the following necessary
2 wording: "*within five working days of receipt*" in addition to "*response shall be made*
3 *twenty-four (24) hours before scheduled or proposed disconnect.*" Without this
4 wording, the Company will not have deadlines by which it must respond to
5 complaints. Staff recommends that Navopache issue an addendum to the manual to
6 include this information.

7

8 **RATE DESIGN**

9 Q. What are the results of your analysis of the Company's proposed rate design?

10 A. I find the Company's rate design to be acceptable as proposed except for two issues:

11

12 1. The previously discussed Staff recommendations regarding the proposed standard
13 offer tariff.

14 2. The proposed tariff needs to be altered to reduce the total revenue by \$1,140,920 to
15 reflect my recommended revenue requirement of \$27,995,842.

16

17 Q. How do you propose to alter Navopache's proposed rate design?

18 A. The Company designed rates based on its own cost-of-service study. I take no exception
19 to the Company's cost-of-service study. Therefore, I recommend a 3.92 percent
20 (\$1,140,920) reduction to all of the Company's proposed rates to produce Staff's proposed
21 revenue requirement of \$27,995,842.

22

23 Q. Does this conclude your pre-filed direct testimony?

24 A. Yes, it does.

SUMMARY OF FILING

LINE NO.	DESCRIPTION	[A]	[B]
		PER COMPANY	PER STAFF
1	Adjusted Rate Base	\$ 42,050,352	\$ 37,360,051
2	Adjusted Operating Margin	\$ 527,246	\$ 746,481
3	Margin After Interest and Other Deductions	\$ (1,451,539)	\$ (1,232,304)
4	Test Year Long-Term Interest Expense	\$ 1,845,553	\$ 1,845,553
5	Proposed Increase in Operating Revenue	\$ 3,294,439	\$ 2,153,519
6	Adjusted Test Year Operating Revenue	\$ 25,842,323	\$ 25,842,323
7	Recommended Operating Revenue (Line 5 + Line 6)	\$ 29,136,762	\$ 27,995,842
8	Percentage Increase in Operating Revenue (Line 5 / Line 6)	12.75%	8.33%
9	Operating Tier (at current rates) (Line 3 + Line 4) / Line 4	0.21	0.33
10	Operating DSC (at current rates)	0.91	0.92
11	Rate of Return (at current rates) (Line 2 / Line 1)	1.25%	2.00%
12	Operating Tier (at proposed rates) (Line 3 + Line 4 + Line 5) / Line 4	2.00	1.50
13	Operating DSC (at proposed rates)	2.06	1.67
14	Rate of Return (at proposed rates) (Line 2 + Line 5) / Line 1	9.09%	7.76%

References:

Column [A]: Company Schedules A-1.0, B-1.0, C-1.0, C-3.0 and D-1.0

Column [B]: Staff Schedules DWC-2 and DWC-9

ORIGINAL COST RATE BASE

LINE NO.	DESCRIPTION	[A]	[B]	REF	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS		STAFF ADJUSTED
1	Gross Utility Plant in Service	\$ 63,673,477	\$ (467,868)	1	\$ 63,205,609
2	Plant Under Construction (short term)	4,361,247	\$ (4,361,247)	1	-
3	Electric Plant Acquisition Adjustment	224,077	\$ (224,077)	1	-
4	Total Utility Plant	68,258,801	(5,053,192)		63,205,609
5	Less: Accumulated Depreciation	(26,785,107)	362,891	2	(26,422,216)
6	Net Utility Plant in Service	\$ 41,473,694	\$ (4,690,301)		\$ 36,783,393
7	Materials and Supplies	1,189,186	-		\$ 1,189,186
8	Prepayments	130,598	-		130,598
9	Cash Working Capital	1,020,703	-		1,020,703
10	Consumer Deposits	(430,130)	-		(430,130)
11	Customer Advances	(1,229,846)	-		(1,229,846)
12	Customer Energy Prepayments	(103,853)	-		(103,853)
13	Total Other Adjustments	\$ 576,658	\$ -		\$ 576,658
14	ORIGINAL COST RATE BASE	\$ 42,050,352	\$ (4,690,301)		\$ 37,360,051

References:

Column [A]: Company Schedule B-1.0

Column [B]: Staff Schedules DWC-3 and DWC-8

Column [C]: Column [A] plus Column [B]

Adjustment No. 1: Schedule DWC-3

Adjustment No. 2: Schedule DWC-8

GROSS UTILITY PLANT IN SERVICE

LINE NO.	ACCOUNT NUMBER	PLANT DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF ADJUSTED
INTANGIBLE PLANT					
1	301.00	Organization	\$ 228,075	\$ (227,777) 1	\$ 298
2	114.00	Electric Plant Acquisition Adjustment	\$ 224,077	\$ (224,077) 2	\$ -
3		Total Intangible Plant	\$ 452,152	\$ (451,854)	\$ 298
TRANSMISSION PLANT					
4	350.00	Land & Land Rights	\$ 9,301		\$ 9,301
5	353.00	Station Equipment	\$ 951,048		\$ 951,048
6	354.00	Poles, Towers	\$ 2,507,823		\$ 2,507,823
7	356.00	Overhead Conductors	\$ 2,934,814		\$ 2,934,814
8	359.00	Rails and Trails	\$ 8,736		\$ 8,736
9		Total Transmission Plant	\$ 6,411,722		\$ 6,411,722
DISTRIBUTION PLANT					
10	360.00	Land & Land Rights	\$ 56,326		\$ 56,326
11	361.00	Structures	\$ 996		\$ 996
12	362.00	Station Equipment	\$ 4,336,653		\$ 4,336,653
13	364.00	Poles, Towers & Fixtures	\$ 9,824,359		\$ 9,824,359
14	365.00	Conductor & Devices	\$ 9,798,151		\$ 9,798,151
15	367.00	Underground Conductor & Devices	\$ 4,523,727		\$ 4,523,727
16	368.00	Transformer	\$ 11,186,971		\$ 11,186,971
17	369.00	Overhead Services	\$ 3,780,635		\$ 3,780,635
18	370.00	Meters	\$ 4,825,532		\$ 4,825,532
19	373.00	Street Lighting	\$ 359,501		\$ 359,501
20		Total Distribution Plant	\$ 48,692,851		\$ 48,692,851
GENERAL PLANT					
21	389.00	Land & Land Rights	\$ 296,246	\$ (240,091) 3	\$ 56,155
22	390.00	Structures and Improvement	\$ 1,182,375		\$ 1,182,375
23	391.00	Office Furniture and Fixtures	\$ 1,046,560		\$ 1,046,560
24	392.00	Transportation Equipment	\$ 1,495,146		\$ 1,495,146
25	393.00	Stores Equipment	\$ 67,411		\$ 67,411
26	394.00	Tools, Shop and Garage	\$ 248,890		\$ 248,890
27	395.00	Laboratory Equipment	\$ 435,949		\$ 435,949
28	396.00	Power Operated Equipment	\$ 1,209,046		\$ 1,209,046
29	397.00	Communications Equipment	\$ 2,248,896		\$ 2,248,896
30	398.00	Miscellaneous	\$ 110,310		\$ 110,310
31		Total General Plant	\$ 8,340,829	\$ (240,091)	\$ 8,100,738
32	107.00	Construction Work in Progress	\$ 4,361,247	\$ (4,361,247) 4	\$ -
33		TOTAL PLANT INVESTMENT	\$ 68,258,801	\$ (5,053,192)	\$ 63,205,609

References:

Column [A]: Company Schedule C-2.0

Column [B]: Staff Schedules DWC-4, DWC-5, DWC-6 and DWC-7

Column [C]: Column [A] plus Column [B]

Adjustment No. 1: Schedule DWC-4

Adjustment No. 2: Schedule DWC-5

Adjustment No. 3: Schedule DWC-6

Adjustment No. 4: Schedule DWC-7

UTILITY PLANT IN SERVICE ADJUSTMENT NO. 1
ACCOUNT NO. 301.00 ORGANIZATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company Organization	\$ 228,075	\$ (227,777)	\$ 298

Explanation of Adjustment:

2	Remove unsubstantiated 1994 plant addition as per Staff Engineering.		\$ (144,386)	
3	Remove unsubstantiated 1995 plant addition as per Staff.		\$ (83,391)	
4	TOTAL:		\$ (227,777)	

References:

Column [A]: Company Schedule C-2.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

NAVOPACHE ELECTRIC COOPERATIVE, INC.
Docket No. E-01787A-01-0063
Test Year Ended October 31, 1999

Schedule DWC-5

UTILITY PLANT IN SERVICE ADJUSTMENT NO. 2
ACCOUNT NO. 114.00 ELECTRIC PLANT ACQUISITION ADJUSTMENT

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company Acquisition Adjustment	\$ 224,077	\$ (224,077)	\$ -

Explanation of Adjustment:

- 2 To remove unauthorized electric plant acquisition adjustment.

References:

Column [A]: Company Schedule C-2.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

UTILITY PLANT IN SERVICE ADJUSTMENT NO. 3
ACCOUNT NO. 389.00 LAND & LAND RIGHTS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company Land & Land Rights	\$ 296,246	\$ (240,091)	\$ 56,155

Explanation of Adjustment:

- 2 To remove land deemed not "used and useful" as per Staff Engineering.

References:

Column [A]: Company Schedule C-2.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

UTILITY PLANT IN SERVICE ADJUSTMENT NO. 4
 ACCOUNT NO. 107.00 CONSTRUCTION WORK IN PROGRESS ("CWIP")

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company CWIP	\$ 4,361,247	\$ (4,361,247)	\$ -

Explanation of Adjustment:

2	To remove CWIP deemed not "used and useful" as per Staff Engineering.		\$ (2,905,625)	
3	To remove CWIP not yet "used and useful" as per Staff.		\$ (1,455,622)	
4	TOTAL:		\$ (4,361,247)	

References:

Column [A]: Company Schedule C-2.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

ACCUMULATED DEPRECIATION ADJUSTMENT NO. 1
ACCUMULATED DEPRECIATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company Accumulated Depreciation	\$ (26,785,107)	\$ 362,891	\$ (26,422,216)

Explanation of Adjustment:

2	To remove accumulated depreciation associated with unauthorized electric plant acquisition adjustment.		\$ 221,587	
3	To remove accumulated depreciation associated with CWIP deemed not "used and useful".		\$ 141,304	
4		TOTAL:	\$ 362,891	

References:

Column [A]: Company Schedule C-3.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

Line 2: Schedule DWC-5 and Company's response (08/02/01) to Staff data request

Line 3: Schedule DWC-7 and Company Schedule A-10.0

OPERATING INCOME/MARGIN STATEMENT

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJS	STAFF ADJUSTED
OPERATING REVENUES:				
1	Base Revenue	\$ 31,324,285	\$ -	\$ 31,324,285
2	PCA Revenue	(5,811,952)	-	(5,811,952)
3	PCA Over/Under Recovery	-	-	-
4	Other	329,990	-	329,990
5	Total Operating Revenues	\$ 25,842,323	\$ -	\$ 25,842,323
OPERATING EXPENSES:				
6	Purchased Power	\$ 14,423,830	-	\$ 14,423,830
7	Transmission O & M	79,022	-	79,022
8	Distribution - Operations	1,799,737	-	1,799,737
9	Distribution - Maintenance	1,211,473	-	1,211,473
10	Consumer Accounting	2,000,091	-	2,000,091
11	Customer Service	339,252	-	339,252
12	Sales	70,633	-	70,633
13	Administrative & General	2,665,419	(33,093)	2,632,326
14	Depreciation Expense	2,223,660	(186,142)	2,037,518
15	Tax	501,960	-	501,960
16	TOTAL OPERATING EXPENSES	\$ 25,315,077	\$ (219,235)	\$ 25,095,842
17	TOTAL OPERATING INCOME/MARGIN	\$ 527,246	\$ 219,235	\$ 746,481
INTEREST AND OTHER DEDUCTIONS:				
18	Interest on Long-term Debt	\$ 1,845,553	\$ -	\$ 1,845,553
19	Other Interest	125,779	-	125,779
20	Other Deductions	7,453	-	7,453
21	TOTAL INTEREST AND OTHER DEDUCT.	\$ 1,978,785	\$ -	\$ 1,978,785
22	MARGIN AFTER INTEREST & OTHER	\$ (1,451,539)	\$ 219,235	\$ (1,232,304)
NON-OPERATING MARGINS:				
23	Interest Income	\$ 141,045	\$ -	\$ 141,045
24	Other Margins	(143,392)	-	(143,392)
25	Other Capital Credits	117,567	-	117,567
26	TOTAL NON-OPERATING MARGINS	\$ 115,220	\$ -	\$ 115,220
27	NET INCOME/MARGINS	\$ (1,336,319)	\$ 219,235	\$ (1,117,084)

References:

Column [A]: Company Schedule A-1.0

Column [B]: Staff Schedules DWC-10 and DWC-11

Column [C]: Column [A] plus Column [B]

Adjustment No. 1: Schedule DWC-10

Adjustment No. 2: Schedule DWC-11

OPERATING INCOME ADJUSTMENT NO. 1
 ADMINISTRATIVE AND GENERAL EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company Admin. & Gen'l. Expense	\$ 2,665,419	\$ (33,093)	\$ 2,632,326

Explanation of Adjustment:

2	To decrease Test Year pro forma rate case expense to reflect Staff's use of a 5-year amortization period rather than the Company's 3-year amortization period. (\$150,000/3 = \$50,000 versus \$150,000/5 = \$30,000) =	\$	(20,000)	
	To remove portion of Test Year membership fee expense paid to organizations for lobbying activities.			
3	1. G.C.S.E.C.A.	\$	(11,362)	
4	2. N.R.E.C.A.	\$	(1,731)	
5	TOTAL:	\$	(33,093)	

References:

Column [A]: Company Schedule A-1.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

Line 3: Schedule DWC-9 and Company's response (06/14/01) to Staff data request DWR 3-34

Line 4: Schedule DWC-9 and Company's supplemental response (07/27/01) to Staff data request DWR 3-34

OPERATING INCOME ADJUSTMENT NO. 2
 DEPRECIATION EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Total Company Depreciation Expense	\$ 2,223,660	\$ (186,142)	\$ 2,037,518
<i>Explanation of Adjustment:</i>				
2	To remove Test Year depreciation expense on unauthorized electric plant acquisition adjustment. (\$224,077 @6.67%).		\$ (14,946)	
3	To decrease Test Year depreciation expense to correct Company mathematical error in addition of sub-total of the 350 series plant accounts' depreciation expense. (Company filed as \$205,718 but should be \$175,826).		\$ (29,892)	
4	To remove depreciation expense on Construction Work in Progress ("CWIP"). (\$4,361,247 @ 3.24%).		\$ (141,304)	
5	TOTAL:		\$ (186,142)	

References:

Column [A]: Company Schedule A-1.0

Column [B]: DWC Direct Testimony

Column [C]: Column [A] plus Column [B]

Line 2: Schedule DWC-5 and Company Schedule A-10.0

Line 3: Company Schedule A-10.0

Line 4: Schedule DWC-7 and Company Schedule A-10.0

EMERSON

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL

Chairman

JIM IRVIN

Commissioner

MARC SPITZER

Commissioner

IN THE MATTER OF THE APPLICATION OF)
NAVOPACHE ELECTRIC COOPERATIVE,)
INC., AN ARIZONA NON-PROFIT)
CORPORATION FOR A FINDING OF FAIR)
VALUE OF ITS PROPERTIES AND A FAIR)
RATE OF RETURN THEREON, AND FOR)
APPROVAL OF RATES AND CHARGES, AND)
FOR APPROVAL OF CHANGES TO ITS)
POLICY MANUAL)

DOCKET NO. E-01787A-01-0063

DIRECT

TESTIMONY

OF

ASHER EMERSON

ELECTRICAL ENGINEER

UTILITIES DIVISION

August 15, 2001

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EXECUTIVE SUMMARY
DIRECT TESTIMONY OF ASHER EMERSON
IN THE MATTER OF THE APPLICATION OF
NAVOPACHE ELECTRICAL COOPERATIVE, INC.
DOCKET NO. E-01787A-01-0063

The Direct Testimony of Engineering Staff (Engineering) witness, Asher Emerson, addresses the cost of service study the Company filed in this proceeding. In Staff's opinion, Navopache Electric Cooperative, Inc.'s ("Navopache" or "Cooperative") cost of service study used appropriate methods to functionalize, classify, and allocate costs. The weighting factors Navopache used were reasonable. Engineering recommends the Commission accept Navopache's cost of service study.

Engineering performed an inspection of Navopache's electric system and concludes that Navopache's facilities are being adequately operated and maintained. There is a low voltage problem with Arizona Public Service (APS) transmission delivery. Navopache should be required to resolve the low voltage problem with APS, and if it is not able to resolve the low voltage problem within six months, then Navopache should report such to the Commission.

Navopache proposed moving \$2,905,624 of Construction Work in Progress ("CWIP") to post Test Year plant additions. Since the essential information of when and if the plant was placed in service and the accounts to which the costs will be transferred from construction were not provided, Engineering cannot determine if these projects are used and useful for providing reliable, efficient, and safe electric service to Navopache customers. Engineering recommends disallowing \$2,905,624 of CWIP.

Navopache listed \$144,386 in 1994 to Account 301 - Organization. Since Navopache has not provided what the charge was for, Engineering can not determine if the item is used and useful for providing reliable, efficient, and safe electric service to Navopache customers.

Navopache also listed \$240,091 in 1993 to Account 389 - Land & Land Rights. The charge was to purchase land for new office and warehouse facilities. Navopache's present offices are old and crowded, and the warehouse facilities are on leased land that Navopache would have to vacate on a month's notice. While Engineering believes that the land will be utilized in the future, the land is not being used at this time.

1 INTRODUCTION

2 Q. Please state your name and business address.

3 A. Asher D. Emerson, 1200 West Washington Street, Phoenix, Arizona 85007.
4

5 Q. By whom and in what capacity are you employed?

6 A. I am employed by the Arizona Corporation Commission ("Commission") as a Utilities
7 Engineer - Electrical in the Utilities Division.
8

9 Q. Please state your educational background.

10 A. I graduated from New Mexico State University in 1974, with a Bachelor of Science
11 degree in Electrical Engineering. I also completed the Management Institution Course
12 through Arizona State University's Center for Executive Development in 1993.
13

14 Q. Please state your pertinent work experience.

15 A. I worked as an Electrical Engineer for Salt River Project for over 23 years. In addition, I
16 managed the Federal Government Contracting section for a Phoenix firm, A. R. Utility
17 Specialists. In May 2000, I joined the Commission as a Utilities Engineer for the
18 Utilities Division. While at the Commission, I have been involved in utility financing
19 and rate cases, power plant and transmission line siting cases, utility reporting procedure
20 reviews, utility safety issues and accidents investigations. I have reviewed applications
21 and prepared staff reports for various electric utility cases.
22

23 Q. As part of your assigned duties at the Commission, did you perform an analysis of the
24 application that is the subject of this proceeding?

25 A. Yes.
26

27 Q. Is your testimony herein based upon that analysis?

28 A. Yes.

1 Q. What is the purpose of your direct testimony in this proceeding?

2 A. I will be providing testimony regarding my analysis of the cost of service study
3 ("COSS") filed in this docket by Navopache Electric Cooperative, Inc. ("Navopache")
4 and results of my inspection of the electric system. Also, I will address the company's
5 proposed additions to plant in service.

6

7 **COST OF SERVICE STUDY**

8 Q. Did Navopache file a cost of service study in this proceeding?

9 A. Yes, Navopache filed an embedded cost of service study.

10

11 Q. What is an embedded cost of service study?

12 A. An embedded cost of service study is an analysis that distributes the costs included in a
13 utility's revenue requirement among the various classes of customers. There are three
14 primary steps to the process: functionalization, classification, and allocation.
15 Functionalization consists of identifying whether costs are related to production,
16 transmission, distribution, or other cost areas. Classification of costs is the determination
17 of whether particular costs are related to the number of kilowatts of peak demand, to the
18 number of kilowatt-hours of energy consumption, or to the number of customers served.
19 Allocation is the process of distributing the costs between the customer classes based on
20 usage characteristics for each class.

21

22 The end result of an embedded cost of service study is a measure of revenue, expenses,
23 and rate base by customer class. These results permit calculation of a rate of return for
24 each class, a profit margin for each class, and some indices of return, such as a return
25 index (class rate of return divided by system rate of return) and a revenue to cost ratio
26 (revenue divided by revenue requirement).

27 ...

28 ...

1 Q. How are costs within a cost of service study allocated?

2 A. All costs are ultimately allocated based on indices of usage. For production plant and
3 power supply costs, the appropriate indices are peak demand usage and energy usage. In
4 the classification step, production and power supply costs are categorized as either
5 "demand" or "energy" related. In selecting an allocation methodology, some combination
6 of demand measures and energy usage are used to allocate those costs; in many cases,
7 energy usage is utilized to allocate the costs that are classified as demand-related.

8
9 Q. Is a cost of service study an exact science?

10 A. No. Although the principles are the same for each system, the allocations may differ on a
11 company-to-company basis. Based on the design and operation of a system, one may
12 allocate more costs to demand and less to commodity and vice versa. This is one of the
13 reasons that a cost of service study should not be used as the sole criteria for rate design
14 purposes. The cost of service study should only be a guide for rate design.

15
16 Q. What was the process you used in your review of the COSS submitted by Navopache?

17 A. There were three steps in my review. First, I reviewed the rate base and expense numbers
18 that Navopache used in its COSS to determine if these numbers matched those in the
19 appropriate schedules of its application. Next, I studied the COSS to gain an
20 understanding of exactly how Navopache had organized the study. I reviewed how the
21 costs were functionalized and classified.

22
23 Finally, I reviewed the cost allocations used by Navopache to determine whether, in my
24 opinion, these were the appropriate methods to use.

25
26 Q. What did you determine from your review of the cost of service study?

27 A. Navopache's cost of service study used appropriate methods to functionalize, classify,
28 and allocate costs. The weighting factors Navopache used were reasonable. Navopache

1 appropriately used the "Sum of 12 Monthly Peaks" to allocate demand charges to each
2 customer classes. A 12-month demand allocation factor was developed using the
3 monthly purchased demand values during the test year as the system monthly total. The
4 allocation of monthly demand responsibility was made to all of the classes with metered
5 demand by applying the appropriate losses and coincidence factor to metered demand
6 values for that class. After the allocation of demand responsibility was made to the
7 classes with metered demand, the remainder of the Coincident Peak (CP) demand was
8 assigned to the non-demand metered classes based on kWh sales and a load factor
9 differential of 5 percent between Residential and Small Commercial.

10
11 Q. Did the methods used by Navopache comply with industry standards?

12 A. Navopache used procedures and methodology that are generally accepted standards
13 throughout the utility industry for the cost of service study. Allocation of invested capital
14 and operating expenses were allocated to the respective customer charges on the basis of
15 demand, energy and customer factors.

16
17 **RECOMMENDATIONS**

18 Q. Do you have a recommendation concerning Navopache's cost of service study?

19 A. I recommend the Commission accept Navopache's cost of service study in this case.
20

21 **EVALUATION OF ELECTRIC SYSTEM**

22 Q. What is Navopache's service area?

23 A. Navopache serves portions of Navajo, Apache, Greenlee, and Gila Counties in Arizona
24 and Catron County in New Mexico. Navopache's service area encompasses 10,000
25 square miles. Navopache's Pinetop/Lakeside service area represents the area of greatest
26 density of customers.

27 ...

28 ...

1 Q. What was the growth rate for Navopache's electric system?

2 A. From 1990 to 1999, Navopache experienced a 30 percent increase in customers. The
3 peak demand for the system increased 16 percent from 1996 to 1999. See Chart 1 for
4 growth in peak demand.

5
6 Q. What were the system losses for Navopache's electric system?

7 A. System losses for 1999 were 7.15 percent, which is less than the Rural Utility Services
8 ("RUS") guideline of 8.5 percent for this type of system. See Chart 2 for annual system
9 losses.

10
11 Q. What price, per kWh, has Navopache been paying for power?

12 A. In 1993, the price was approximately 64 mills per kWh and in 1999, the price was
13 approximately 54.5 mills per kWh, which is a reduction of 15 percent. Navopache
14 presently purchases all of its power from Public Service Company of New Mexico. See
15 Chart 3 for the price paid for power.

16
17 Q. What is the outage history for Navopache's system?

18 A. The five-year Average Outage Hours per Customer was 3.77, which is below the RUS
19 guideline of 5. The year 1995 exceeded the RUS guideline of 5 outage hours per
20 customer with a 9.09. This was due primarily to a storm, with heavy wet snow, hitting
21 the western side of the system. See Chart 4 for Average Outage Hours per Customer.

22
23 Q. Did you inspect Navopache's Electric System?

24 A. Yes, I visited Navopache on July 17, 2001, and met with Mr. Wayne Retzlaff, General
25 Manager, and Mr. Kent Rhoton, Manager of Engineering Services. I was accompanied
26 by Mr. Rhoton when I inspected the system.

27 ...

28 ...

1 Q. What did you discover during the inspection?

2 A. Navopache operates their electric system via a sophisticated Supervisory Control and
3 Data Acquisition ("SCADA") system. Navopache's SCADA system lowers operational
4 costs by giving the Cooperative the ability to monitor and remotely control its
5 transmission and distribution system 24 hours a day, seven days a week. Navopache's
6 SCADA system effectively lowers operational costs by allowing a single operator to
7 remotely control power system circuit breakers and restore service within minutes of a
8 power outage. Remote operations eliminate the need to send a person to remote sites to
9 do the operating. The ability to operate remotely is extremely valuable, especially during
10 major storms and with Navopache's rough terrain. Navopache continues to make
11 enhancements to its SCADA system.

12
13 Navopache also has a pole inspection program that treats poles on an ongoing basis. This
14 program reduces the number of poles that rot below grade and ultimately fail.
15 Navopache also has substation maintenance. In one of the substations, it appeared that
16 several breakers had minor oil leaks. The maintenance records identified the staining as
17 surface rust, which is being monitored. The Company has assured Staff that it will take
18 the necessary corrective action, if needed.

19
20 While discussing system performance, Navopache identified that there was a problem
21 with the Arizona Public Service Company ("APS") transmission service to Navopache.
22 Planning studies show that the transmission voltage could drop to as low as 92 percent of
23 normal voltage, which is below the industry minimum standard of 95 percent. This low
24 voltage indicates a problem with APS' local transmission system. APS' electric system
25 operations department has requested that Navopache reconfigure its system or switch on
26 capacitors to provide voltage support since 1997. Navopache has met with APS in an
27 effort to get APS to upgrade its transmission system to avoid low voltage problems. On
28 July 17, 2001, Navopache faxed Engineering a copy of a letter Navopache had sent to the

1 Commission, on May 3, 2001, stating that "[a]nything the Commission can do to
2 encourage APS to be proactive in reviewing and upgrading its transmission lines
3 interfacing with the Westerly portion of Navopache's distribution system would be
4 appreciated." Since Navopache is working with APS to resolve the low voltage problem,
5 Engineering recommends that if Navopache is not able to resolve the low voltage
6 problem within six months, then Navopache should report such to the Commission.

7
8 **INSPECTION CONCLUSIONS**

9 Q. What were the conclusions you reached from your inspection of Navopache's electric
10 system?

11 A. My review indicates that the Cooperative's facilities are being adequately operated and
12 maintained.

13
14 **DETERMINATION OF USED AND USEFUL PLANT**

15 Q. Did Navopache request any inclusion of post test year plant additions?

16 A. Yes, Navopache has proposed moving \$2,905,624.56 of CWIP to post Test Year plant
17 additions.

18
19 Q. What did Navopache provide in support of its proposal?

20 A. Navopache provided a list of jobs with job numbers, description of work, close date,
21 accounting identification number, and dollar amount. However, the essential information
22 of when and if the plant was placed in service and the accounts to which the costs will be
23 transferred from construction were not provided. Therefore, Engineering cannot
24 determine if these projects are used and useful for providing reliable, efficient, and safe
25 electric service to Navopache customers. Therefore, Engineering recommends that
26 Navopache's request to include post test year plant additions in plant in service at this
27 time be denied.

28 ...

1 Q. Were there any other items Navopache requested be included that should be disallowed?

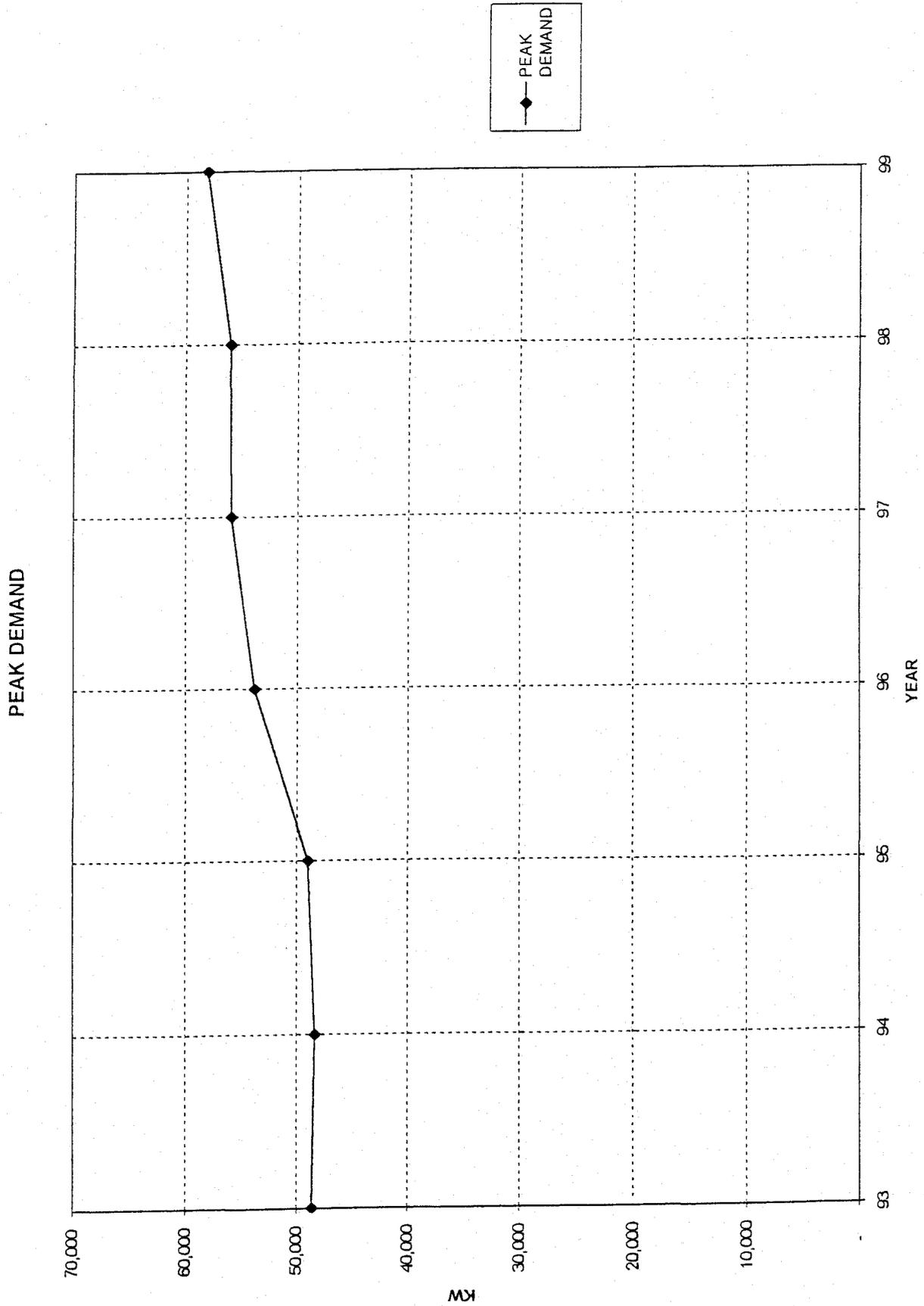
2 A. Yes, there were two other charges. Navopache listed \$144,386 in 1994 to Account 301 -
3 Organization. Since Navopache has not provided what the charge was for, Engineering
4 cannot determine if the item is used and useful for providing reliable, efficient, and safe
5 electric service to Navopache customers.

6
7 Also Navopache listed \$240,091 in 1993 to Account 389 - Land & Land Rights. The
8 charge was to purchase land for new office and warehouse facilities. Navopache's present
9 offices are old and crowded, and the warehouse facilities are on leased land that
10 Navopache would have to vacate on 90 days notice. While Engineering believes that the
11 land will be utilized in the future, the land is not being used at this time.

12
13 Q. Does this conclude your direct testimony?

14 A. Yes, it does.
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CHART 1



NAVOPACHE ELECTRIC COOPERATIVE

CHART 2

SYSTEM LOSSES IN PERCENT

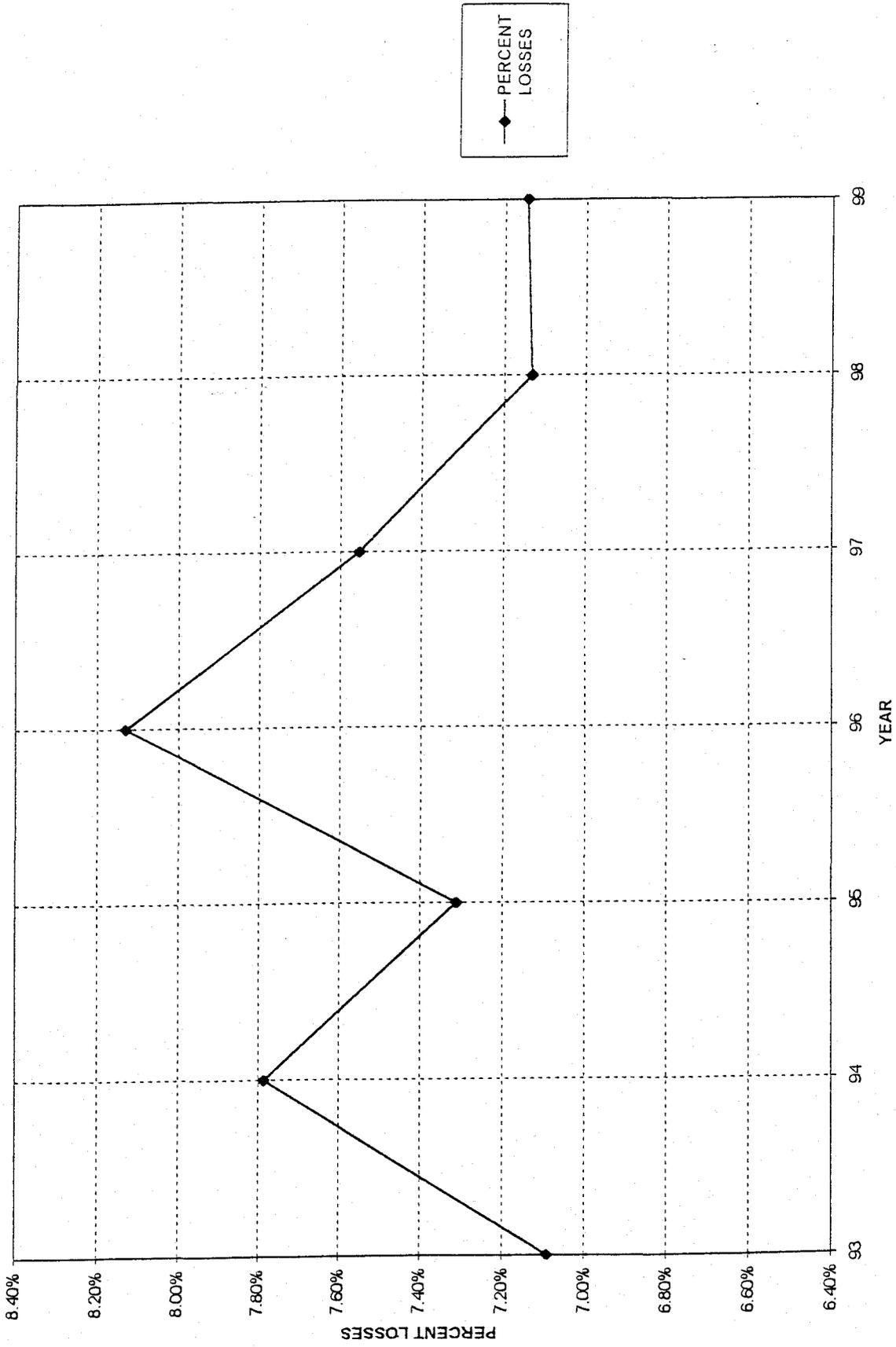


CHART 3

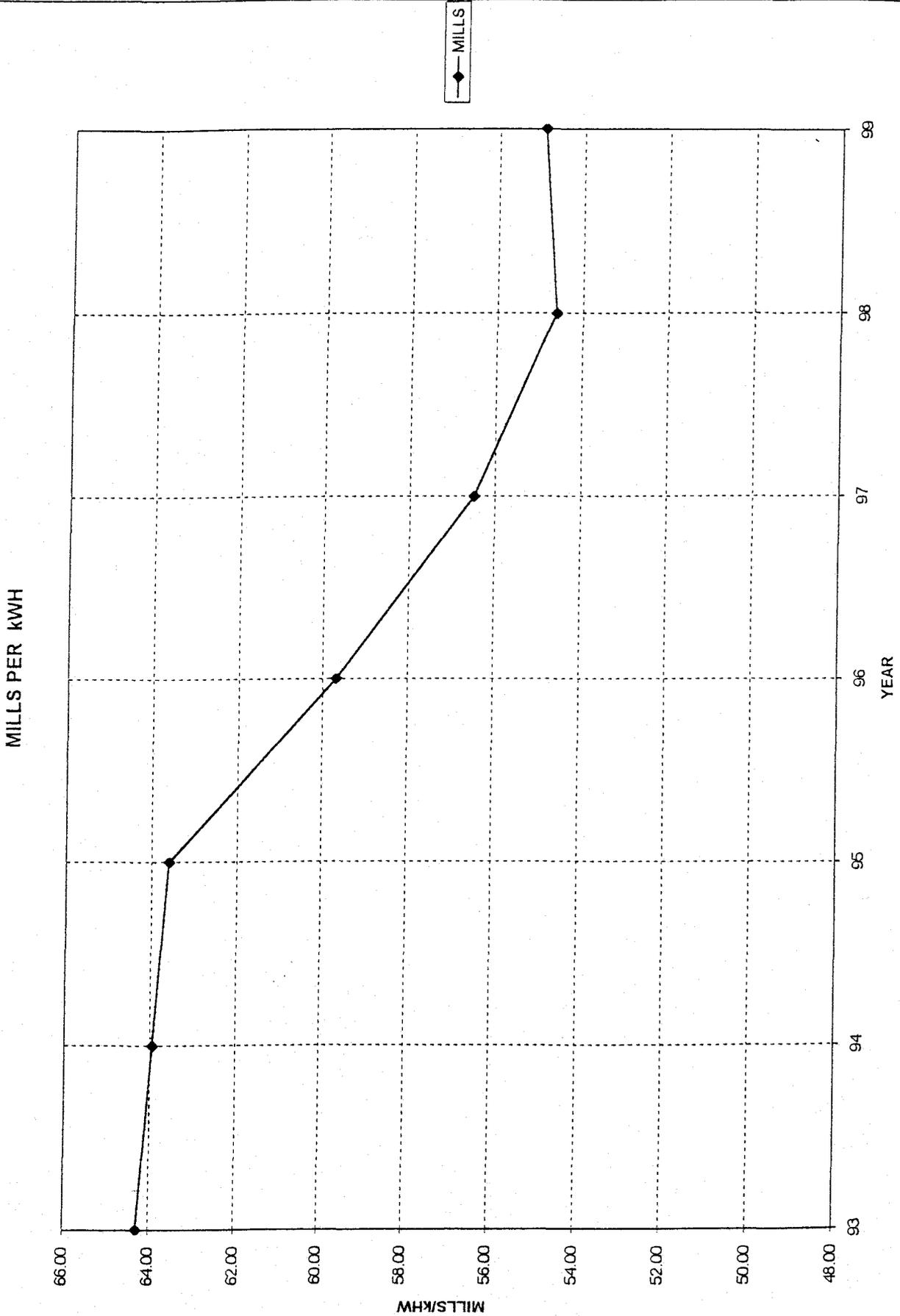


CHART 4

AVERAGE OUTAGE HOUR PER CONSUMER

