1.		BEFORE THE PUBLIC SERVICE COMMISSION
2.		GULF POWER COMPANY and
3.		GULF COAST ELECTRIC COOPERATIVE, INC.
4.		DOCKET NO.
5.		DIRECT TESTIMONY OF
6.		ARCHIE W. GORDON
7.	Q.	State your name.
8.	Α.	Archie W. Gordon.
9.	Q.	State your address.
1 <b>0.</b>	A.	Post Office Box 877, 1815 NE Jacksonville Road, Ocala, Florida
11.		34478-0877.
12.	Q.	State your profession.
13.	Α.	I am a professional engineer certified to practice in the States of
14.		Alabama, Florida and Georgia.
15.	Q.	State your educational background.
16.	Α.	I graduated from local schools in Ocala, Florida and then
17.		attended the University of Miami in Coral Gables, Florida: Miami
18.		University at Oxford, Ohio; and, the University of Florida at
19.		Gainesville, Florida. I received a Bachelor of Electrical
20.		Engineering degree from the University of Florida which was bestowed
21.		"with honors" in June, 1948.
22.	Q.	State your professional and employment background.
23.	A.	I was employed in September, 1948, by Marion Engineering Associates,
24.		Inc., of Ocala, Florida. That firm was engaged in engineering and
25.		surveying, and had outstanding contracts with various rural

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1. electrification projects over the State of Florida. I was placed 2. in charge of electrical engineering, and finally, the total 3. engineering department of that firm. After approximately five (5) 4. years of professional experience, I became a Registered Professional 5. Engineer. I left that firm in September, 1966, to form Gordon 6. Engineering Associates, Inc., of which I am now president. 7. Are you associated with Gulf Coast Electric Cooperative? Q. 8. Α. Yes. 9. What is Gulf Coast Electric Cooperative, Inc. 0 10. Α. It is an REA cooperative organized pursuant to Chapter 425, Florida 11. Statutes. 12. How long have you been associated with Gulf Coast Electric Q. 13. Cooperative? 14. Α. Since July 9, 1949, when Marion Engineering Associates was named 15. system engineer. Gordon Engineering was subsequently selected during the fall of 1966 to succeed the prior firm. 16. 17. In what capacity have you been associated with Gulf Coast Electric Q. Cooperative? 18. 19. A. I served as resident engineer, both in person and as representative 20. of the professional companies which employed me. I have served as 21. engineer of record, advisor, consultant, supervisor, foreman, assistant, etc., on various matters affecting the Cooperative during 22. 23. the past 45 years. 24. What has been the scope of your duties or responsibilities with Gulf Q. 25. Coast Electric Cooperative?

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1. A. I have represented Gulf Coast Electric on project of long range 2. planning, area coverage, surveys, preparation of plans and 3. specifications, supervision of contractors and force account 4. construction, financial forecasting, preparation of current work plans, feasibility reports, loan applications, power requirement 5. б. studies, rate studies, etc. I have also been invited and designated 7. by various board of trustees and managers to represent Gulf Coast 8. in negotiations and deliberations concerning power supply, service 9. areas, service reliability, maintenance programs, etc. As a result, 10. I have become the individual with the longest tenure of service who 11. can provide a complete historical chronology of events and details concerning Gulf Coast Electric Cooperative. 12.

13. Q. Are you familiar with Gulf Coast Electric Cooperative's distribution
14. system and its facilities?

15. A. Yes, I have been so familiar for the past 45 years.

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16. Q. How did you become familiar with Gulf Coast Electric's distribution17. system and facilities?

18. A. By physically riding the many roads through the service area, mapping
19. the electric facility, both existing and proposed; periodically
20. updating construction records, examining historical records of the
21. Cooperative, attending formal and informal meetings of the Board of
22. Trustees and its committies, attending other meetings and projects
23. assigned to me, such as law suits, consumer complaints, consumer
24. affairs, hearings, service negotiations, etc.

25. Q. When you first became associated with the cooperative in 1949, what,

1. if anything, did you have to do with the design and long range 2. planning of Gulf Coast Electric's distribution facilities? 3. Α. Both were under my direct control and responsibility. The results 4. reflect my methodology, thinking and recommendation. 5. Q. Are you familiar with the area of south Washington County, Florida, б. generally from the Bay-Washington County line, west of State Road 7. 77, and southeast of the community of Vernon, Florida? 8. Α. Yes.

9. Q. How did you first become familiar with it?

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10. A. During the years 1949 and 1950, I travelled all the roads in that
11. area in order to locate unelectrified residences. At the same time,
12. I corrected a set of system maps which were provided to me by Gulf
13. Coast Electric. These maps indicated some existing construction that
14. had occurred prior to my presence in the area, and I made field
15. additions and/or revisions to reflect the electric distribution
16. system as I found it in the field.

17. Q. At that time, how many paved roads extended west of State Road 77?
18. A. None. The next existing paved road west was State Road 79, which
19. ran northerly and northeasterly from West Bay to Ebro, and then to
20. Vernon. State Road 278 was paved from Vernon to Wausau.

21. Q. What kind of maps were provided to you by Gulf Coast Electric, and22. how and when were they drawn?

A.The maps were a complete set of drafting ink on linen media
drawings that generally covered the entire area in which Gulf Coast
provided service. The roads and topographic features shown on the

maps had been reproduced from State Road Department maps of 1. 2. Washington County, and the dates of these State Road Department base 3. maps were shown to be from 1945 through 1948. Did you have any other type of map of this vicinity? 4. Q. 5. Yes, the U.S. Geological Survey, Washington, D.C., was preparing maps Α. 6. of the area, and I was fortunate to secure an advance set of USGS 7. work prints to actually avoid becoming lost. There was a great 8. inaccuracy in the State Road Department products of 1945 through 9. 1948. 10. Are you specifically familiar with the roads that left State Road Q. 11. 77 in the vicinity of the Greenhead Cemetary, the ones that went northerly towards Vernon? 12. 13. Α. Yes. What was along these roads when your first travelled them? 14. Q. There were Gulf Coast Electric Cooperative power lines along the 15. A. 16. general course of the existing roads. These lines and prompt 17. subsequent extensions served all unelectricified residences in the 18. area. 19. Can you tell us where the Gulf Coast Electric power lines were Q. located? 20. 21. Α. In the fall of 1950, there was one line that went west along a 22. straight graded road known as "Red Sapp Road" through the center of 23. land Sections 4 and 5, west of State Road 77. This line served residences on the south side of Martin Lake, a residence or so on 24.

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to the south, two residences on Martin Lake at its west side, another

1. residence up on the west side of Bowen Pond. It then went north and passed between Horselot Pond and Dunford Pond. There was a residence 2. 3. on the west side of the road that was receiving service, and it was 4. occupied by A. M. Everett. The line then went around the south and 5. east side of Payne Pond and continued on north where it had served two other residences which were disconnected when I viewed them. 6. 7. A new service to Thomas Payne was on this line just east of the 8. Everett service.

9. Q. Mr. Gordon, how can you be so specific about all of this? 10. The detail of the original maps in this vicninty, and the previous Α. 11. construction mapping prior to my arrival in this area in 1950 was 12. badly at odds with the actual topography and location of the facilities. It required that I totally revise the base maps to more 13. 14. accurately reflect the line and area which I have just described to 15. you.

16. Q. Do you still have copies of this?

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17. A. Yes, here is a xeroxed composite of a portion of two adjacent maps
18. which are combined to illustrate the problem. You can still detect
19. the presence of earlier mapping by the erasure shadows and the
20. different styles and shading of the ink work. I attach this print
21. to my testimony as Exhibit "1".

22. Q. Where is the disputed area in regard to this map?

23. A. The disputed area is twofold. First, it is all of south Washington
24. County which lies south of a general line drawn from Moss Hill Church
25. on State Road No. 279 to a point just south of Wausau on State Road

No. 77 and this line extends to both east and west in Washington
 County. The area then extends southerly and easterly to the
 boundaries of Bay County. This includes areas to the west of S.R.
 279 and east of S.R. 77.

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Second, it is the site of the Washington County Correctional
 Institute which lies north of the junction of S.R. 279 and S.R. 77
 in a portion of land sections 4 and 5 which we have previously
 discussed. The Correctional Institute does not extend easterly,
 westerly or southerly from these two roads.

10. The disputed area is not formally indicated as such on Exhibit "1"
11. because all of the area indicated thereon is in south Washington
12. County and it does not indicate State Road 279 as even existing.

13. Q. Were there any other Gulf Coast powerlines between Greenhead Cemetery14. and Vernon?

15. Yes, there was a major side tap that served the Pleasant Hill Α. 16. vicinity which is west of State Road No. 77 and another which was 17. known as the "Double Branch" tap. The Double Branch tap left the main powerline on State Road No. 77 approximate to the forestry 18. 19. lookout tower and went westerly to Spring Hollow and Double Branch Pond. I personally staked a westerly extension of this tap to the 20. vicinity of the Moss Hill Church which is about 2 miles southeast 21. of Vernon. 22.

23. Q. Were these lines which you have described originally joined together24. along their western extremities?

25. A. No. There were no reliable all weather roads available for easy

1. traverse of the area.

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Q. What happened to this area to change it, and how did the Gulf
 Coast power lines fit in with the changes?

4. Α. The State Road Department built new State Road No. 279 from the 5. Greenhead Cemetery to Vernon by way of Dunford Pond and Moss Hill б. Church. I believe this was done just prior to 1970. This State Road 7. has more recently become a County road and I use the term State Road 8. as interchangeable with County Road as may be applicable on recent 9. dates. The new road utilized the old route generally, but by-passed 10. portions of the old road and the adjacent electrical facilities of 11. Gulf Coast which provided traditional retail electric service to the 12. entire area south of the Moss Hill Church.

13. Q. What happened next?

14. A. Next, came the Deltona development at Sunny Hills, and this was
15. followed by the first intrusive electrical construction by Gulf Power
16. Company along the east right of way of State Road No. 279, and west
17. right of way of State Road No. 77 in the year 1971 for the purpose
18. of making initial service to Sunny Hills.

19. Q. Did this new line cross the facilities of Gulf Coast Electric?

20. A. Yes it did at numerous places, but at that time it did not serve any
21. electrical load south of the Moss Hill Church vicinity. My memory
22. is that it crossed over Gulf Coast facilities 13 times and crossed
23. under two times. It served nothing enroute until it reached Sunny
24. Hills and entered into that property.

25. Q. Has Gulf Power provided electric service to any of the disputed

area around the intersection of S.R. 279 and S.R. 77 during the years
 since 1971, or has any Gulf Power electric facility ever been located
 thereon?

No sir, but they have since and approximate to 1984 built an 4. Α. intrusive electrical facility into the Leisure Lakes area. 5. This 6. facility was constructed southerly from the north side of the S.R. 7. 279 - S.R. 77 intersection and through the community of "Green Head". 8. It serves no electrical load. It prevents the Gulf Coast Electric 9. main 30 feeder line on the east side of S.R. 77 from having 10. unobstructed access to its active member accounts on the west side 11. of S.R. 77 and it crosses the Gulf Coast facilities four times.

12. Q. How does this handicap Gulf Coast Electric?

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13. A. It leaves a Gulf Power feeder line in location where it effectively
14. serves as a barrier to Gulf Coast's access to areas where Gulf Coast
15. has actively and continuously provided electric service since before
16. 1949.

17. Q. Has Gulf Coast provided electric service to any of the disputed area
18. of the Correctional Institute during the 44 years since 1950, or had
19. any electric facility located thereon?

20. A. Yes, sir, they have. At the time of the siting process for the
21. Correctional Institute, the service located on the south side of
22. Martin Lake was still active. The main tap along Red Sapp Road was
23. still energized and provided electric service beyond and to the west.
24. Portions of this same tap are still existing on the institute site
25. and are currently providing construction power to the contractors.

Q. Can you tell us some of the details of Gulf Coast's facilities and
 operations?

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A. Currently, Gulf Coast provides electrical service to approximately
 12,450 active member/consumers which is delivered over about 1940
 miles of electrical distribution line. About 90% of the distribution
 lines operate at 25/12.5 KV.

7. Gulf Coast receives its supply of electrical energy from 8. Alabama Electric Cooperative, a generating and transmission 9. cooperative. Electricity is delivered to Gulf Coast through 115 KV 10. and 46 KV transmission lines and the delivery points consist of seven (7) substations with a combined capacity of 68,000 KVA (normal rating 11. 12. at 55° rise OA. Other ratings at 65° rise OA and 65° FA are higher.) 13. Gulf Coast's electrical peak was 37,987 KW during the winter of 1993 and 42,098 KW during the summer of 1993. The summer peak was 14. 15. approximately 50% of the higher transformer ratings. Normal load 16. growth will not require additinal substation capacity until approximately year 2000. A one line diagram of the A.E.C. facility 17. is attached as Exhibit "2". 18.

19. Gulf Coast provides, owns and maintains all secondary bus,
20. switches, reclosers, etc. within the 7 substations. The secondary
21. distribution structures and circuitry are designed to accomodate
22. multiple outgoing feeder lines from each substation. This means
23. fewer consumers without power during outages and convenient means
24. of normal switching and load transfer. A one line diagram of the
25. Gulf Coast secondary bus, switches and reclosers as well as the load

transfer switches is attached as Exhibit "3".

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2. The Crystal Lake Substation (rated 7,500 KVA; 8,400 KVA; 10,500 3. KVA) is located near the junction of S.R. 20 & S.R. 77 and supplies 4. electrical current to the disputed area in south Washington County 5. and the site of the Washington County Correctional Institute at S.R. 279 and S.R. 77. The substation circuit is designated #3101C and 6. 7. consists of 25 KV, 30 construction of 2/0 ACSR which has a continuous 8. current rating of 270 amperes. Continuous current circuit rating 9. is therefore approximately 11,660 KW. Current peak load on circuit 10. #3101C approximates 1900 KW. A one line diagram of this distribution circuit is attached as Exhibit "4". 11.

12. A similar circuit of 25 KV, 30. 2/0 ACSR ties the Crystal Lake
13. Substation to the Southport Substation and that substation is rated
14. 15,000 KVA; 16,800 KVA; 21,800 KVA. Southport Substation is
15. similarly connected to Bayou George South Substation by means of a
16. feeder of 4/0 ACSR and that substation is connected to Wewahitchka
17. Substation by means of a feeder of 1/0 Cu (3/0 ACSR, equivalent).

18. This network of substations, transformer capacities, feeder 19. capacities, load break gang operated switches, etc. etc. is capable 20. of total load transfer of the Crystal Lake Substation load through 21. the year 2000 without any additional substation capacity. Adequate 22. capacity exists to add 2500 KW of unnamed potential load to the 23. Crystal Lake Substation without upsetting its existing capacity or 24. affecting the system backup capabilities.

25. Q. Have you assisted in the preparation of comparative rates to serve

1. the Correctional Institute?

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A. Yes, I assisted Mr. Roy Barnes, Gulf Coast Office Manager in such
 a comparison.

4. Q. How did you go about such a task?

5. A. We accepted the load as being 372 demand and 163,450 KWH usage/mo.
6. and then applied Gulf Coast standard large power rate to the terms
7. of the required tariff.

- 8. Q. How much would the average monthly estimated bill be?
- 9. A. \$8,284.14 per month.
- 10. Q. How much was the average monthly estimated Gulf Power bill?
- 11. A. We accepted their calculation of \$7,442.66 per month.

12. Q. What was the difference between the two?

- 13. A. \$841.48 per month or \$10,097.76 per year, this difference was in
  14. favor of Gulf Power.
- 15. Q. But the amount is less than indicated by the Gulf Power estimate16. submitted?

17. A. Yes it is. The reduction in the Gulf Coast estimated bill results
18. from a variation in how the Cost of Power Sold adjustment is applied
19. over a year, it is seasonal and may go up and down and how the
20. capital credit policy is applied whereby margins are member equity
21. and are returned to the members.

22. Q. Do you have a copy of the Gulf Coast comparison?

23. A. Yes, I'll attach the copy as Exhibit "5".

24. Q. Have you attended any negotiations between Gulf Power and Gulf Coast
25. that were intended to resolve this territorial dispute?

1	A.	Yes, initially representatives of both parties met, exchanged views and compared
2		consumer data associated with the conflicting facilities in South Washington County.
3		Gulf Power received the data from Gulf Coast and carried it back consultation.
4	Q.	What happened then?
5	A.	Gulf Power representatives returned to inform Gulf Coast that a resolution might be made if
6		Gulf Coast agreed to included Bay County in the mediation.
7	Q.	Was this done?
8	A.	Yes, Gulf Coast prepared a supplemental map of Bay County showing each company's facilities
9		and the areas where there was natural division existing between these facilities. The companies
10		shared consumer counts and then prepared maps indicating areas where conditional agreement
11		might be reached.
12	Q.	What were the final results?
13	Α.	Neither company could agree with the others line drawn on the Bay County map.
14	Q.	Do you have an exhibit that shows each company's facilities generally in Bay and South
15		Washington Counties?
16	A.	Yes, Exhibit(AWG-6) and Exhibit(AWG-7). These are not final
17		engineering diagrams, but you can see where the facilities are generally and observe the potential
18		for continuing territorial disputes.
19	Q.	Does this conclude your testimony?
20	Α.	Yes.
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### AFFIDAVIT

STATE OF FLORIDA ) COUNTY OF MARION )

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Docket No. 930885-EU

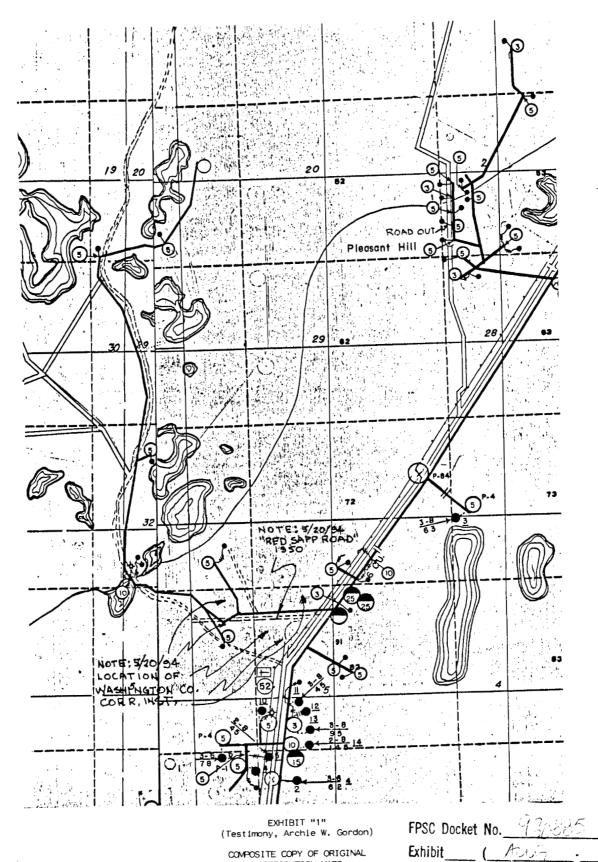
Before me the undersigned authority, personally appeared Archie W. Gordon, who being first duly sworn, deposes and says that he is the President of Gordon Engineering Associates, Inc. of Ocala, Florida, that the foregoing is true and correct to the best of his knowledge, information and belief. He is personally known to me.

Archie W. Gordon, President Gordon Engineering Associates, Inc.

Sworn to and subscribed before me this  $23^{\mu\nu}$  day of May, 1994.

orsherg Notary Public

THERESA A. FORSBERG Notary Public, State of Florida My comm. expires May 23, 1995 Comm. No. CC 112530



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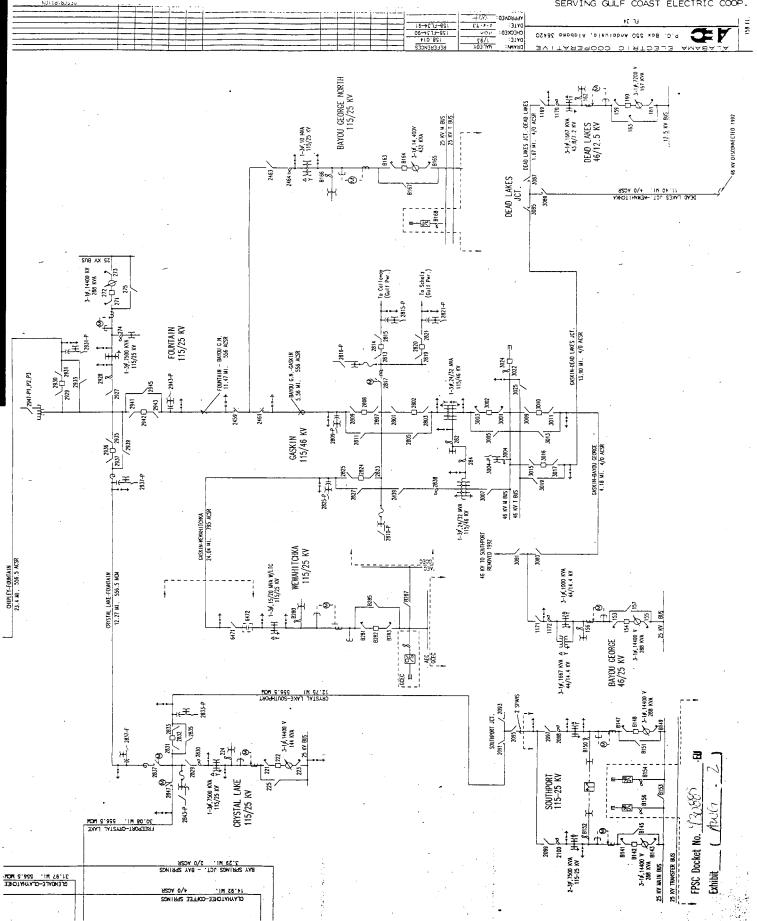
DISTRIBUTION MAPS

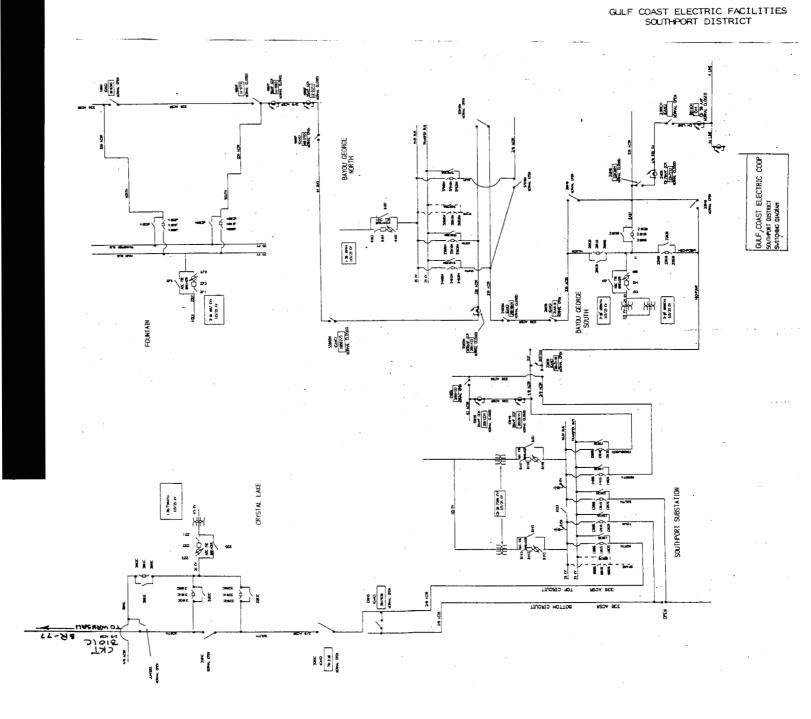
GULF COAST ELECTRIC COOPERATIVE

-EU

#### EXHIBIT "2" (Testimony, Archie W. Gordon) ONE LINE SUBSTATION AND SWITCHING DIAGRAM

ALABAMA ELECTRIC COOPERATIVE FACILITIES SERVING GULF COAST ELECTRIC COOP.





FPSC Docket No. <u>13-CKES</u> -EU Exhibit (<u>AUC)</u> -3)

EXHIBIT "3" (Testimony, Archie W. Gordon) ONE LINE SUBSTATION AND MAIN FEEDER SWITCHING DIAGRAM

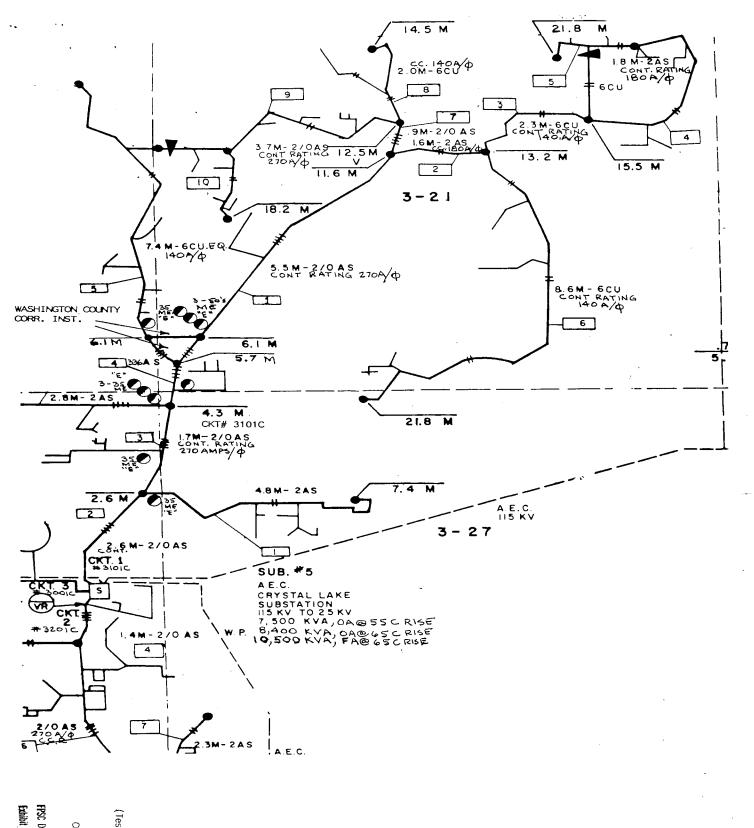


EXHIBIT "4" (Testimony, Archie W. Gordon) ONE LINE DIAGRAM DISTRIBUTION CAT CRYSTAL LAVE - S.R. 279 FRSC Docket No. 930085 -EU Emilit (11/1/15 - 4)

# GULF COAST ELECTRIC COOPERATIVE, INC. May 14, 1993

## ESTIMATED ELECTRICAL LOAD FOR PROPOSED STATE PRISON IN WASHINGTON COUNTY

Based on conversations with Department of Corrections officials, estimates indicate that the proposed Washington County facility would use 372 KW demand and 163,450 KWH/month. It is also our understanding that primary service (12 KV) will be requested.

## ESTIMATED MONTHLY BILL

## Gulf Coast Electric Co-op

\$12.00 customer charge \$4.00/KW demand charge \$.04950/KWH energy charge \$.00110/KWH C.D.P.S.A. charge

Discount 7% of customer charge

for primary voltage Discount 7% of demand charge for primary voltage Discount 7% of energy charge for primary voltage

TOTAL ESTIMATED MONTHLY BILL:

Gulf Power Company

\$40.35 customer charge \$4.56/KW demand charge \$.01300/KWH energy charge \$.02243/KWH fuel charge \$.00015/KWH ECCR charge \$.00036/KWH PPCC charge

- Discount \$.35/KW for primary voltage
- Discount 1% of demand charge for primary voltage
- Discount 1% of energy charge for primary voltage

TOTAL ESTIMATED MONTHLY BILL:

#### \$7,442.66

\$9,103.45 \*\* -819.31 \$8,284.14

\$8,284.14
-7,442.66
-----\$41.48 monthly difference
X 12 months
----\$10,097.76 yearly difference

\* The Cost of Power Sold Adjustment (C.O.P.S.A.) is calculated monthly and includes such factors as load factor, meter reading dates, line loss, etc. and is carried as a rolling average and is therefore seasonally variable. Our best estimate for an annual average charge is 1.1 mils/KWH.

**\*\* Gulf Coast Electric Cooperative's return of patronage capital to its members is an important part of the Cooperative's corporate structure.** With patronage capital credited back to the State of Florida account directly related to the Washington County Correctional Institute patronage, we anticipate a return of approximately 9%.

Gulf Coast Electric Cooperative's bill is then 11% higher than Gulf Power Company's bill.

> Prefiled testimony, Archie W. Gordon EXHIBIT "5" COMPARATIVE ESTIMATED BILLING

FPSC Docket No. <u>いえをき</u> -EU Exhibit (<u>AlceCo</u>・5)

