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October 27, 1989

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Mr. Steve C. Tribble, Director
Division of Records and Reporting
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 323091

Re: Tampa Electric Company vs.
Florida Power Corporation
FISC Docket No.: 890646-BI

Dear Mr. Tribble:


Enclosed for filing in the above docket are the original and fifteen (15) copies of Prepared Direct Testimony of Don R. Morrow; Bruce C. Kelsey; Kenneth R. Bushea, P.E.; and Graeme R. Addie, P.E.

- ACK
- AFA _____
- APP _____
- CAF _____
- CMH _____
- CTR ary
- EAG 1
- LEG 1
- LIN 6
- OPC ALL Parties of Record (w/encl.)
- RCH _____
- SEC /RCY/rj
- WAS _____
- OTH _____

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,


Roy C. Young

Addie
DOCUMENT NUMBER
10661 OCT 27 1989
PSC-RECORDS/REPORTING

Bushea
DOCUMENT NUMBER DATE

10660 OCT 27 1989

FISC-RECORDS/REPORTING

Kelsey
DOCUMENT NUMBER DATE

10659 OCT 27 1989

FISC-RECORDS/REPORTING

Morrow
DOCUMENT NUMBER DATE

10658 OCT 27 1989

FISC-RECORDS/REPORTING

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AGRICO CHEMICAL COMPANY
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 890646-EI

IN RE: PETITION OF TAMPA ELECTRIC COMPANY FOR RESOLUTION
OF TERRITORIAL DISPUTE WITH FLORIDA POWER CORPORATION

Testimony of
Don Morrow

October 27, 1989

DOCUMENT NUMBER-DATE
10658 OCT 27 1989
FPSC-RECORDS/REPORTING

1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 AGRICO CHEMICAL COMPANY

3 DIRECT TESTIMONY OF DON MORROW

4 DOCKET NO. 890646-EI

5 OCTOBER 27, 1989

6

7

Q. Please state your name and address.

8

9

A. My name is Don Morrow. My address is 5325 Glenmore Drive,
10 Lakeland, Florida : 3813.

11

12

Q. What is your background and experience?

13

14

A. I was graduated from the University of Pittsburgh with a
15 Bachelor of Science degree in Mining Engineering and
16 completed Harvard University's Advanced Management Program.
17 I have been employed by Agrico Chemical Company for the
18 past 15 years in the capacities of technical manager,
19 production manager, general manager, vice president of
20 Florida Operations, and senior vice president of Florida
21 Operations.

22

23

Prior to employment with Agrico, I worked in various
24 management and engineering capacities for Texaco, Pacific

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Power Company, Occidental Chemical Company, and Smith-Douglas Company.

Q. Briefly state your responsibilities at Agrico.

A. I am responsible for Agrico's Fort Green Mine, Payne Creek Mine, the South Pierce Chemical Plant, Agrico's railroad, which joins these facilities, and the Big Bend Terminal. In addition, I am responsible for Agrico's share of the joint-venture U.S. Agri-chemicals (USAC) mine, which is managed and operated by USAC.

Q. Have you prepared any exhibits related to your testimony?

A. Yes. I have attached Exhibit ____, DRM-1, "Current Phosphate Mines That Cross Territorial Boundaries," Exhibit ____, DRM-2, "Fort Green Mine", and Exhibit ____, DRM-3, "Areas Mined by Agrico in FPC's territory Using Power Purchased from TECO." These exhibits were prepared under my supervision.

Q. Would you describe the phosphate industry and how it relates to the public utility industry?

A. The phosphate industry is made up of 14 companies, which

1 operate 13 chemical plants and 21 mines within the state
2 of Florida. The industry is located in Polk, Hillsborough,
3 Hardee, Manatee, and Hamilton counties. The industry owns
4 over 840 square miles of land in the state, employs
5 approximately 10,000 employees directly, and creates
6 employment for approximately 50,000 employees indirectly.
7 The annual payroll of the phosphate industry is
8 approximately \$350 million, and the industry spends about
9 \$1.8 billion on supplies and services, of which
10 approximately \$140 million is spent to purchase electrical
11 power. The industry pays approximately \$100 million per
12 year in state and local taxes.

13
14 The phosphate industry is served by Florida Power
15 Corporation (FPC), Tampa Electric Company (TECO), and
16 Florida Power & Light (FPL). Of the 21 phosphate mines in
17 Florida, TECO is currently delivering power to 10, FPC is
18 delivering power to 10, and FPL delivers power to 1. Also,
19 7 of the 21 mines are located in areas where a least a
20 portion of their lands crosses the utilities' territorial
21 boundaries and power purchased from one of the utilities
22 has been and is being used in another utilities'
23 territorial area. This is illustrated in Exhibit _____,
24 DRM-1.

25

1 Q. Would you please describe Agrico's facilities in Florida?

2

3 A. Agrico Chemical Company operates the South Pierce Chemical
4 Plant, the Fort Green Mine, the Payne Creek Mine, a
5 railroad connecting these facilities, and the Big Bend
6 Terminal. Agrico also has a 50 percent ownership in the
7 USAC mine, which is managed and operated by USAC personnel.
8 These facilities are located in Polk, Hillsborough, Hardee,
9 and Manatee County. Agrico has about 900 employees, an
10 annual payroll of \$34 million, spends about \$74 million for
11 supplies and services, of which about \$24 million is for
12 electrical power, and pays \$12 million in state and local
13 taxes. Until March of 1989, power to all of Agrico's
14 facilities was purchased from TECO. In March 1989 at
15 Agrico's request FPC built a transmission line and metering
16 station in FPC's service area to supply a portion of
17 Agrico's Fort Green Mine.

18

19 Q. Would you describe how a typical phosphate mine operates?

20

21 A. A typical phosphate mine is planned and operated as an
22 integrated facility. The major facilities consist of one
23 or more draglines which move about the entire area of the
24 mine to excavate the ore; the interconnected pipelines and
25 pumps which transport the ore from the area being mined to

1 the processing plant; and the processing plant.

2 The draglines are large machines that remove the topsoil
3 ("overburden") and dig the ore from the ground.

4 Typically, phosphate ore is found about 15-50 feet beneath
5 the surface. The dragline first removes the sand and clay
6 overburden material in order to expose the phosphate ore
7 which is called "matrix". The draglines then mine the
8 matrix and place it in a pit where it is made into a slurry
9 by impinging it with high-pressure water. The slurry is
10 picked up by the suction pipe of a large pump and then
11 pumped through a pipeline from the location of the dragline
12 to the processing plant. These pipelines can be from one
13 to ten miles long. Large booster pumps are placed along
14 the pipeline at intervals of approximately every 3,000 to
15 4,000 feet in order to provide sufficient power to maintain
16 the velocity of the slurry within the pipeline. Proper
17 velocity is necessary in order to keep solids in
18 suspension.

19
20 Upon reaching the processing plant the matrix is washed and
21 screened in order to separate large phosphate particles
22 called "pebble" from the remainder of the matrix which
23 consists of sand, clay and fine phosphate particles. The
24 clay is then removed from the matrix by hydrocyclones and
25 deposited in large clay settling areas. The remaining

1 matrix consists of fine phosphate particles and sand. The
2 fine phosphate particles are separated and recovered in a
3 froth flotation process. Both the pebble and the fine
4 phosphate particles are saleable products. After
5 processing is completed, the sand which remains is then
6 pumped back to the mining area to fill in the mine cut and
7 the clay which is suspended in water is pumped to a clay
8 settling pond.

9
10 A phosphate slurry pipeline is a large, powerful system.
11 The pipelines are usually 20 inches in diameter and each
12 pump is driven by a 1,250-hp electric motor. Because
13 pumping is a major expense, the processing plant is
14 normally located at the centroid of the mine property in
15 order to minimize pumping distances.

16
17 Q. Would you describe the Fort Green Mine and its power supply
18 arrangements?

19
20 A. The Fort Green Mine is a large phosphate mine located in
21 southwest Polk County, northwest Hardee County, and
22 northeast Manatee County. This is shown as Exhibit _____,
23 DRM-2. It spans approximately 55 square miles. About 25
24 square miles are in Polk County, which lies within TECO's
25 territorial boundaries; roughly 26 square miles are in

1 Hardee County, which lies within FPC's territorial
2 boundaries; and about 4 square miles are located in Manatee
3 County, within FPL's territorial boundaries. To my
4 knowledge, Fort Green Mine is the only mine that spans the
5 territorial areas of three utilities; however, other mines
6 span the territorial areas of two utilities.
7

8 The Fort Green Mine is one of the largest phosphate mines
9 in Florida, producing about 4 million tons a year.
10 Approximately 200 employees are located at this mine and
11 are supported by a staff of 80 employees for
12 administration, environmental control, reclamation, human
13 relations, engineering, and planning. Agrico's annual cost
14 to purchase power for this mine is approximately \$10
15 million.
16

17 The Fort Green Mine began operations in March 1975. At
18 that time all of the mining and most of the minable
19 reserves were located in Polk County (TECO's territory).
20 Accordingly, based on the economics of pumping the then
21 minable reserves, the processing plant was centrally
22 located within the mine in Polk County. Since 1975,
23 substantial additional reserves have been acquired in
24 Hardee and Manatee Counties and mining activities have
25 progressed into Hardee County. In fact, in 1979 (10 years

1 ago), the first dragline was moved into Hardee County,
2 which is FPC's territory. Most of the minable reserves in
3 Polk County have already been mined; in fact, as of March
4 1, 1989, only 2,990 acres out of an original total of 9,120
5 acres remain to be mined in Polk County. In the last 10
6 years, without objection from anyone, we have mined 2,265
7 acres in Hardee County within FPC's territory using power
8 purchased from TECO.

9
10 Since March 1, 1989, electricity for Fort Green has been
11 supplied by both TECO and FPC. Prior to that all the
12 electricity was supplied by TECO. Both utility companies
13 supply interruptible service to the Fort Green Mine. TECO
14 delivers power at 69,000 volts to two separate metering
15 stations at the Fort Green Mine. One lies in the northern
16 part of the Polk County property and provides power that
17 Agrico uses to operate its No. 13 dragline and pumping
18 system. The main metering station is located close to the
19 processing plant. Agrico takes ownership of the power at
20 the metering stations and, using its own transformers,
21 transforms the power to either 13,000 or 34,000 volts.
22 Agrico carries the 13,000 volt power on its own
23 distribution lines to the processing plant where it is
24 reduced to 4,000, 480, 240 or 120 volts to operate the
25 equipment in the plant. The 34,000 volt electricity is

1 carried on Agrico's lines throughout the entire mining area
2 and is eventually reduced in Agrico's substations to 4,000
3 480, 240, 120 volts depending on the need of the equipment.
4 All of the power transformers and all of the distribution
5 polelines are owned and operated by Agrico and all of the
6 three permanent and twelve skid-mounted mobile substations
7 used at Fort Green are owned by Agrico and are constructed
8 and moved by Agrico.

9
10 Since Agrico's draglines move continuously, Agrico is
11 continuously relocating its internal distribution system.
12 Agrico has complete responsibility and liability for the
13 use of the power beyond the metering station. The handling
14 of this power by Agrico must comply with the National
15 Electric Code and the National Electric Safety Code as well
16 as the Mine Safety and Health Administration (MSHA). The
17 mine is inspected at least twice a year by MSHA, and a
18 major portion of this inspection involves the proper and
19 safe manner in which Agrico transforms and distributes
20 power.

21
22 Q. Would you, in your words, outline the issue of the
23 complaint filed by TECO regarding the Fort Green Mine?

24
25 A. This dispute arose when Agrico contacted TECO to advise

1 them that Agrico had asked FPC, and FPC had agreed, to
2 provide service for the Fort Green Mine at an Agrico owned
3 substation located within FPC's territorial area in Hardee
4 County. Agrico advised TECO that we intended to use power
5 purchased from FPC throughout the Fort Green Mine. Service
6 would be commenced in March 1989 for the draglines and
7 their associated pipelines, but due to the time necessary
8 to obtain the materials for construction of a 69,000 kv
9 line from our substation in Hardee to our processing plant,
10 we anticipated a final cessation of TECO service about the
11 end of 1989. We told TECO of our plans so that they could
12 factor these matters into their planning. As mentioned
13 above, most of the Fort Green Mine's reserves in Polk
14 County have been mined. The acres remaining to be mined
15 in Polk County are approximately the same as the acres
16 already mined in Hardee County (using TECO power). Due to
17 the acquisition of additional reserves in Hardee County
18 since the mine first opened, our future mining will be
19 predominantly located in Hardee County (FPC's territory).
20 Less investment in electric distribution facilities is
21 required and greater efficiency is achieved when power is
22 received in proximity to actual mining activities. Since
23 Agrico plans and builds its own distribution facilities it
24 made sense to switch to FPC.
25

1 At Fort Green, all that was required for FPC to provide
2 this service was the construction of a short transmission
3 line to Agrico's property. This transmission line is
4 wholly within FPC's territory and it terminates at a
5 metering station on Agrico's property. As I understand
6 this complaint, TECO does not object to FPC supplying power
7 to Fort Green which is consumed in Hardee County (FPC's
8 territory). TECO only objects to Agrico's intent to
9 distribute the power purchased from FPC across Agrico's
10 distribution facilities into Polk County (TECO's territory)
11 to power Agrico's processing plant. It should be noted
12 that the converse situation has existed for the past ten
13 years during which Agrico has purchased power from TECO
14 and, without objection from anyone, distributed it into
15 FPC's territory to power mining activities in Hardee
16 County. As mentioned above, most of the Fort Green Mine's
17 reserves in Polk County have been mined. The acres
18 remaining to be mined in Polk County are approximately the
19 same as the acres already mined in Hardee County. Agrico
20 estimates that it has paid TECO approximately \$7.4 million
21 for power Agrico purchased from TECO and transmitted into
22 Hardee County to mine the approximately 2,265 acres which
23 have already been mined in FPC's territory. The fact that
24 this is approximately the same number as the number of
25 acres left to be mined in TECO's territory (2,990) may be

1 coincidental, but it seems fair under these circumstances
2 for FPC to serve this load.

3
4 Similarly, the location of the processing plant was based
5 on the Fort Green Mine reserves at the time the mine was
6 established. Economics dictate that in the future we will
7 move the washing and clay removal portion of the processing
8 plant into Hardee County so that the pebble and the clay
9 can be removed closer to where the mining occurs, thus
10 saving the costs of pumping this material all the way to
11 Polk County. There are no plans currently to move the
12 froth flotation facilities from Polk County since to do so
13 would be prohibitively expensive. Nonetheless, the
14 processing plant location was established before the Hardee
15 and Manatee County reserves were acquired; it will be
16 processing matrix mined in Hardee County; and it seems
17 reasonable to us that FPC provide the power to process
18 matrix mined in its territory.

19
20 Not only has TECO benefitted from the \$7.4 million Agrico
21 paid them for power used in FPC's territory at the Fort
22 Green Mine, but TECO has also benefitted by selling power
23 to Agrico which was used to mine 2,440 acres in FPC's
24 territory at Agrico's Payne Creek Mine. In 1987 Agrico
25 moved a dragline at its Payne Creek Mine into Hardee County

1 to mine 342 acres in FPC territory. Mining in this area
2 was concluded in July 1989. Agrico paid TECO approximately
3 \$800,000 for the power used in this area. During the
4 period between 1970 and 1982 Agrico mined 2,098 acres in
5 its Payne Creek Mine in Polk County that are located in
6 FPC's territory east of the FPC/TECO territorial boundary.
7 Agrico paid TECO approximately \$3.7 million for power used
8 in this area. Over the history of the two mines Agrico has
9 mined 4,705 acres in FPC's territory using power purchased
10 from TECO. This amount of mined acres is equivalent to 6
11 years of operation at the Fort Green Mine. The areas mined
12 in FPC's territory using power purchased from TECO at both
13 the Fort Green and Payne Creek mines are illustrated in
14 Exhibit _____, DRM-3.

15
16 It has been the history of the phosphate industry to have
17 a single source of electricity for an entire mine site and
18 to carry that power on the mine's own power lines
19 throughout the entire mine without regard to territorial
20 boundaries established by the utilities. To the best of
21 my knowledge, the utilities have uniformly acquiesced in
22 this practice. The phosphate industry has always
23 considered that having paid for the electricity at the
24 metering station it owned the power and could use the power
25 where it was needed. This practice is continuing today in

1 mines owned by Agrico's competitors.

2
3 I think it is important to note that, unlike some
4 controversies in the past, both TECO and FPC are delivering
5 power to Agrico's Fort Green Mine site within their own
6 territorial areas and power is consumed in both
7 territories. The crossing of the territorial boundaries
8 has been and is being done by facilities owned,
9 constructed, moved, and maintained by Agrico. The power
10 that is actually carried across the utilities' territorial
11 boundaries has already been purchased by Agrico and is
12 being transmitted on Agrico's facilities.

13
14 Q. Why is Agrico not satisfied with using power delivered by
15 FPC within the Hardee County area (FPC's territory) and
16 using power delivered by TECO in the Polk County area
17 (TECO's territory) for its facilities in Polk County?

18
19 A. First, it would place Agrico in double jeopardy for power
20 interruptions. Since a phosphate mine is an integrated,
21 interconnected operation, we would be shut down by power
22 interruptions of both utility companies. Second, it could
23 create a safety problem for us. This requires a somewhat
24 lengthy explanation.

25

1 As mentioned above, the nature of phosphate mining requires
2 that the mine be planned and operated as an integrated
3 facility. For example, phosphate ore is pumped long
4 distances from where it is actually mined to the processing
5 plant. The average distance of Agrico's pipelines today
6 is 4.5 miles. This requires a very large, powerful pumping
7 system. The pipelines are 20 inches in diameter, the
8 booster pumps are 20-inch pumps powered by 1,250-hp motors.
9 Very often the total connected horsepower on these systems
10 will exceed 10,000 hp. These pipelines are very efficient
11 as long as they can be operated without unanticipated
12 shutdowns. At the Fort Green Mine it is necessary for
13 these pipelines to cross territorial boundaries due to the
14 location of mining and the location of the processing
15 plant.

16
17 If TECO's position were to be sustained, the pumps on a
18 pipeline serving a dragline operating in Hardee County
19 would have to be powered with electricity purchased from
20 both TECO and FPC since the pumps in Hardee County would
21 be served by FPC, and the pumps in Polk County would be
22 served by TECO. Further, when Agrico mines that portion
23 of the Fort Green Mine reserves located in Manatee County,
24 that single pipeline would have to be served by three
25 utilities since the utilities have agreed that Manatee

1 County is in Florida Power & Light's territory. But it is
2 all one interconnected pipeline and a disturbance at any
3 point affects the entire pipeline.
4

5 The force within these pipelines is provided by very
6 powerful pumps. The pressure provided by the pumps, which
7 is necessary to keep the velocity of the slurry
8 high so the matrix won't settle out and clog the pipeline,
9 makes them susceptible to severe water hammer. Water
10 hammer is a shock wave that can be set off in a system due
11 to a sudden change in velocity of the fluid flowing through
12 it. The shock wave from the water hammer will be
13 transmitted through these long pipelines and often will
14 create sufficient force to blow up pumps.
15

16 This phenomenon will not normally occur if all the pumps
17 are shut down simultaneously. For instance, today the
18 power used for each of these connected pipelines is
19 supplied by one utility. If that utility should have an
20 interruption due to lightning, accidents, problems at the
21 utility's plant, and so forth, the entire pipeline would
22 be shut down simultaneously. This causes us problems
23 because we have to restart the pipeline slowly, putting
24 in a lot of extra water and starting each pump
25 individually, in order to get the matrix off the bottom of

1 the pipeline and moving again. But it usually doesn't
2 cause physical damage to the pipeline and doesn't present
3 a physical hazard to employees. However, if the pumps on
4 a single pipeline were powered with power purchased from
5 more than one utility and one of the utilities had an
6 interruption while the other did not, some of the pumps
7 would continue to operate while others stopped, causing a
8 change in velocity within the pipeline and creating the
9 risk of severe water hammer. Remember, many tons of matrix
10 are moving in the pipeline at any point in time. That
11 moving weight creates a tremendous force.

12
13 Water hammer poses a significant safety threat to Agrico's
14 employees as well as an economic threat due to the loss or
15 destruction of Agrico's equipment and the interruption of
16 Agrico's business. Since the possibility of an unexpected
17 power interruption increases proportionately with the
18 number of utilities supplying power, having more than one
19 utility supply power to a mine not only increases the risk
20 that mining operations will be interrupted, but if two
21 sources of power are required to be used for these
22 connected loads, this can be the cause of water hammer.

23
24 Q. Is there any other reason why Agrico is concerned about
25 having to purchase power from two utilities for its Fort

1 Green Mine?

2
3 A. In addition to increased exposure to power interruptions
4 and the compounding of safety problems, there is the simple
5 matter of having to deal with two suppliers when only one
6 is needed. We have a single, integrated mine and we would
7 prefer to deal with the utility where virtually all of our
8 future mining will take place.

9
10 Q. Are there other mines in the phosphate industry that
11 purchase power from more than one utility?

12
13 A. I have no knowledge of any mines except our Fort Green Mine
14 that purchase power from more than one utility at any
15 particular time. As mentioned above, we do not use power
16 from more than one utility on any of our pipelines and
17 would consider it unsafe to do so. Further, due to the
18 increased risk of having our entire mining operation
19 disrupted by an outage by either utility, it is impractical
20 to continue to have two utilities serve the Fort Green Mine
21 on a long term basis and it is our intent to switch
22 entirely to FPC power upon completion of our 69,000 v
23 line.

24
25 Although we do not know of any other mine receiving power

1 from two utilities, there are other mines that cross
2 territorial boundaries and are distributing power purchased
3 from one utility into the territory of another utility.
4 As a specific example, IMC Fertilizer's Four Corners Mine
5 is using power purchased from TECO to operate its
6 facilities in Manatee County (FPL's territory). TECO is
7 aware of this, and the practice is obviously sanctioned by
8 TECO. IMC is transmitting this power on its own 69,000-
9 volt lines connected to TECO's transmission line
10 approximately 600 feet north of the TECO/FPL territorial
11 boundary. It is then carried approximately 1-1/2 miles
12 into Manatee County (FPL's territory) where it is used for
13 IMC's mining operations.

14
15 This is an identical situation in reverse to that which
16 TECO objects to in its Complaint concerning the Fort Green
17 Mine. Agrico intends to carry power purchased from FPC on
18 its own 69,000-volt line approximately 1-1/2 miles into
19 TECO's territory. At Agrico's Payne Creek Mine we have
20 mined an area in Hardee County using power purchased from
21 TECO which we carried into FPC's territory. Also we have
22 mined land in FPC's territory located in Polk County on
23 the east side of the Payne Creek Mine, again using power
24 purchased from TECO.
25

1 There are at least four other mines that cross the north-
2 south TECO/FPC territorial boundary within Polk County.
3 They are Seminole's Hookers Prairie Mine, Estech's Silver
4 City Mine, IMC's Phosphoria Mine, and IMC's Noralyn Mine.
5 Since the property lines of the mine sites are not the same
6 as the territorial boundary lines in the cases I have just
7 cited, it makes good economic sense for the mining
8 companies to carry power across these territorial
9 boundaries. If that is not allowed, not only will the
10 mining companies have to have some duplicate distribution
11 systems, but the utility companies will have to provide
12 duplicate service even though the amount of area to be
13 mined may not be sufficient to justify that service. To
14 my knowledge, there has not been a complaint in the past.
15 In fact, TECO has never expressed any dissatisfaction about
16 Agrico distributing power purchased from TECO across
17 territorial boundaries but is only complaining about Agrico
18 distributing power purchased from FPC into TECO's
19 territory.

20
21 Q. Presently FPC's interruptible rate is cheaper than TECO's
22 interruptible rate; is the real reason you are changing to
23 FPC to get the lower rate?

24
25 A. At this time FPC's rate is lower but there is no guarantee

1 that it will continue that way. The comparative history
2 indicates that TECO's rates have predominantly been lower
3 than FPC's. Recently there have been several increases in
4 FPC's rate, which would indicate the gap is closing.
5 Agrico is currently at a competitive disadvantage to other
6 phosphate producers in terms of its electric power rates,
7 but the driving reason for Agrico to change to FPC is that
8 the future mining operations will be in FPC's territory,
9 where our power consumption will increase, while it
10 diminishes in TECO's territory.

11
12 Q. In what way is Agrico at a competitive disadvantage to
13 other phosphate producers?

14
15 A. In order for Agrico to continue in the phosphate business,
16 it must be competitive with other phosphate companies. At
17 this particular time there are 10 phosphate mines that
18 purchase power from FPC, whose rates are lower than TECO's.
19 One of these mines (IMC's Phosphoria Mine) is located
20 within TECO's territorial boundaries, and I understand that
21 service to this mine has changed from TECO to FPC and back
22 several times over the life of the mine.

23
24 Agrico's Fort Green Mine is one of ten mines served by
25 TECO. Of those 10, three are shut down and one (IMC's

1 Haynsworth Mine) has announced plans to shut down. All
2 mines served by FPC are operating today. Agrico's largest
3 competitor is IMC's Four Corners Mine, which is the largest
4 mine in the industry. This mine is located in both TECO's
5 and FPL's territories. It is on TECO's service and in the
6 same interruptible service classification as Agrico, but
7 it is purchasing power from TECO at about \$5 per megawatt
8 less than the price for which Agrico can purchase power
9 from TECO. This differential was brought about by TECO's
10 action before the Public Service Commission to establish
11 the supplemental service rider.

12
13 The supplemental service rider allows a lower rate for
14 additional power use beyond a base load that occurred 12
15 months prior to the time a company applies for the
16 supplemental service rider. The Four Corners Mine was shut
17 down for more than a year prior to the time the Public
18 Service Commission approved the supplemental service rider
19 concept, and therefore, all the power it is now consuming
20 qualifies for the SSI service rider, allowing this large
21 mine to enjoy the lower rate on all the power it consumes.
22 In addition, IMC has announced it intends to shut down its
23 Haynsworth Mine and direct that production to the Four
24 Corners Mine, which in effect extends the lower rate to
25 more competing capacity than we experience at this time.

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The supplemental service rider is essentially unavailable to those companies, such as Agrico, that continued to operate their facilities as a reliable consumer compared to mines that were shut down. As a result, not only is Agrico faced with having to compete with mines which purchase their power from FPC at a lower rate, we must compete with mines that are purchasing their power from TEOO at a lower rate due to the supplemental service rider. I cannot believe that the intent of the PSC in approving the supplemental service rider was to cause a competitive disadvantage to companies like Agrico.

Q. What, in your view, are the main issues that this complaint presents to the Public Service Commission?

A. I believe the Public Service Commission must focus on and understand the difference between a large, integrated mining operation and the normal, permanently located industrial plant. The Fort Green Mine is a dynamic consumer, where power will be used at a given time in virtually every part of the 55 square miles that the mine represents. Because of the transitory nature of the mining operation, Agrico has invested in its own power distribution systems, has its own skilled electrical and

1 line crews, and is continually maintaining and moving the
2 entire electrical distribution system to fulfill its own
3 needs. If the Fort Green Mine were the typical large,
4 permanent industrial facility, these services would be
5 provided by the utility that delivers the power.
6

7 I think it is also important for the Public Service
8 Commission to consider that the power that has been carried
9 and will be taken across the utilities' territorial
10 boundaries is power that has already been purchased by
11 Agrico. Agrico owns the power and has all the
12 responsibility and liability for its consumption. The
13 utility company accepts no responsibility or liability
14 after the metering station where the change of ownership
15 actually occurs. The only power crosses the utilities'
16 territorial boundaries is that which is purchased and owned
17 by Agrico, distributed on Agrico's transmission and
18 distribution system, used only on Agrico's property,
19 handled only by Agrico's employees, and which is the sole
20 responsibility and liability of Agrico.
21

22 I also think it is important for the Public Service
23 Commission to realize that Agrico has not requested power
24 from a utility to be delivered outside the utilities'
25 territorial boundaries. The two utilities deliver power

1 within their respective territorial areas at the Fort Green
2 Mine. Once the delivery of the power has been properly
3 made and Agrico has paid the respective utility, then the
4 disposition of the power in its own operations should be
5 left to Agrico. Once the power is purchased, Agrico is the
6 only party accountable for its proper use.

7
8 Q. TECO maintains that if the Commission allows PPC to provide
9 service to Agrico in the present circumstances, other large
10 industrial customers will abandon their points of service
11 with TECO, resulting in a "range war" with other utilities
12 and a "death spiral" of rate increases to its remaining
13 customers. Is that a realistic scenario?

14
15 A. Not at all. TECO's industrial customers would not be
16 affected unless they happened, like Agrico, to have a
17 single, integrated operation that spanned the service areas
18 of two or more utilities. That situation is uncommon and
19 could not represent a large part of TECO's total customer
20 base.

21
22 Q. How is Agrico's situation at Fort Green different from that
23 considered by the Florida Supreme Court in the case between
24 Florida Power & Light (FPL) and Lee County Electric
25 Cooperative (LCEC) involving Florida Mining and Materials

1 (FMM).

2
3 A. There is little similarity. As I understand the Lee County
4 case, FMM was mining at a location completely within the
5 LCEC's territorial area. In fact, it was two miles from
6 FPL's service area. FMM purchased some land within FPL's
7 territorial area so they would have a point of delivery to
8 receive power from FPL. A transmission line was built by
9 FMM from this point of delivery to the point of consumption
10 wholly within LCEC's territory. I believe this line was
11 referred to by the Supreme Court (appropriately, in my
12 opinion) as an "extension cord".

13
14 Agrico does not need to construct an "extension cord"
15 transmission line into FPC's territory. The bulk of
16 Agrico's mine, in terms of minable acres of phosphate
17 reserves, is in FPC's territory. The Florida Supreme Court
18 found that FMM's transmission line was a "transparent
19 device" to avoid the territorial agreement between the two
20 utilities. Without intending to express a legal opinion,
21 I am not aware of anything in the territorial agreement
22 between TECO and FPC that would prevent FPC from supplying
23 power to Agrico at Fort Green or require FPC to restrict
24 the use of such power by Agrico in its mining operations.
25

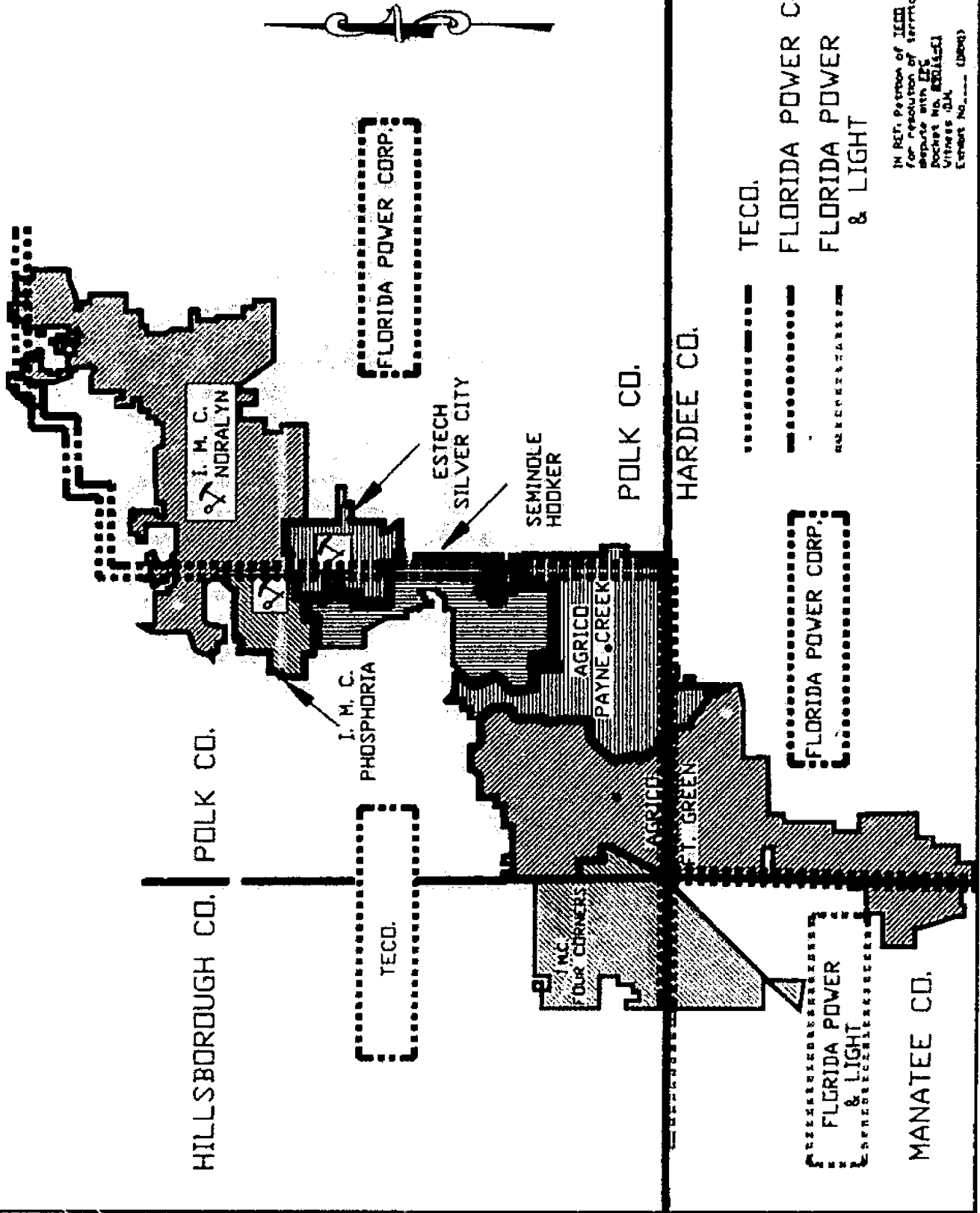
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Q. Is there anything you wish to add.

A. I believe the Commission should bear in mind that TECO was content with Agrico's distributing power purchased from TECO into FPC's territory for almost two decades and protested only when Agrico proposed to distribute power purchased from FPC into TECO's territory.

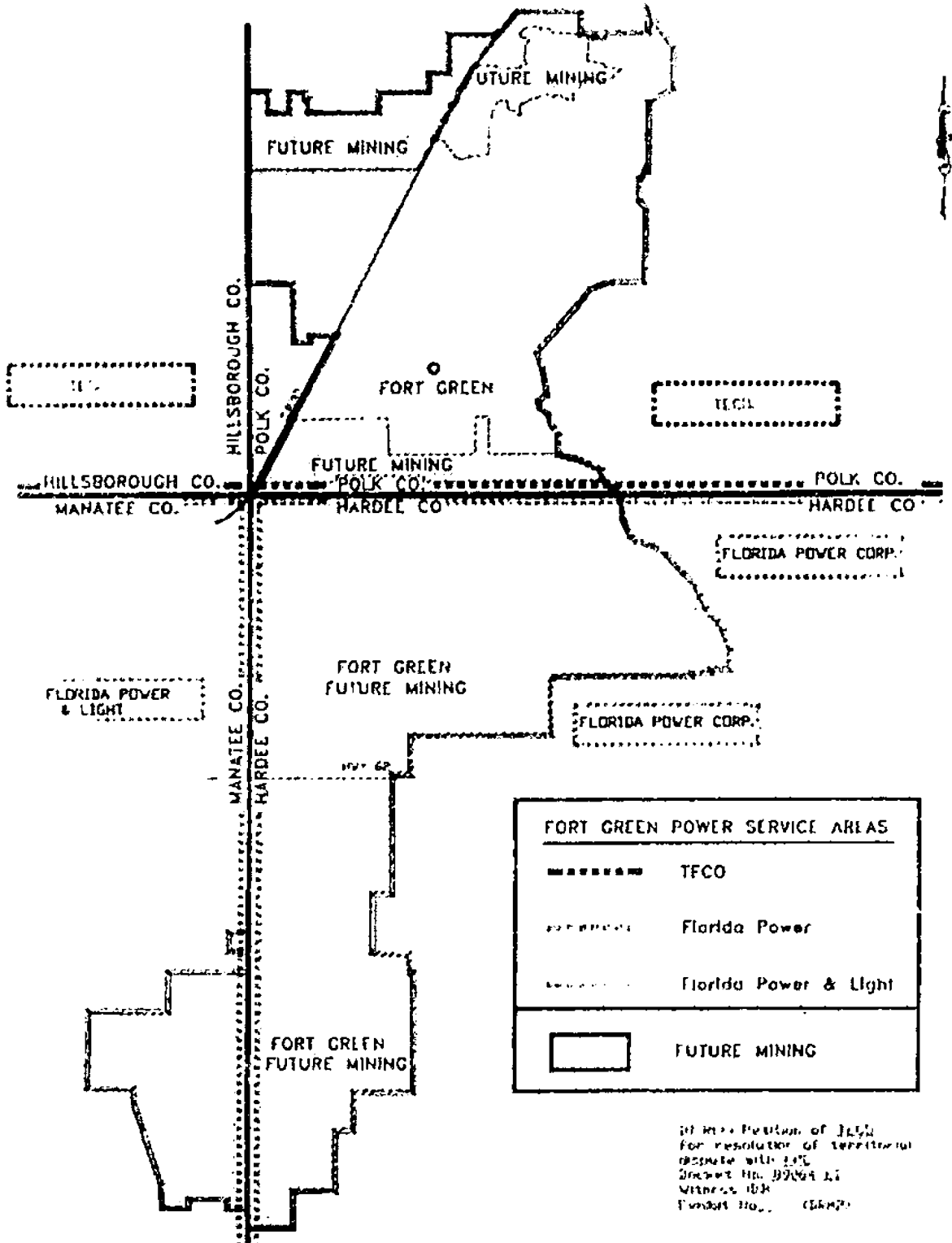
10/27/89





CURRENT PHOSPHATE MINES
CROSSING POWER TERRITORIAL BOUNDARIES



IN RE: Petition of TECD
for resolution of territorial
dispute with FPL
Docket No. 8801251
Witness J.M.
Exhibit No. (0000)

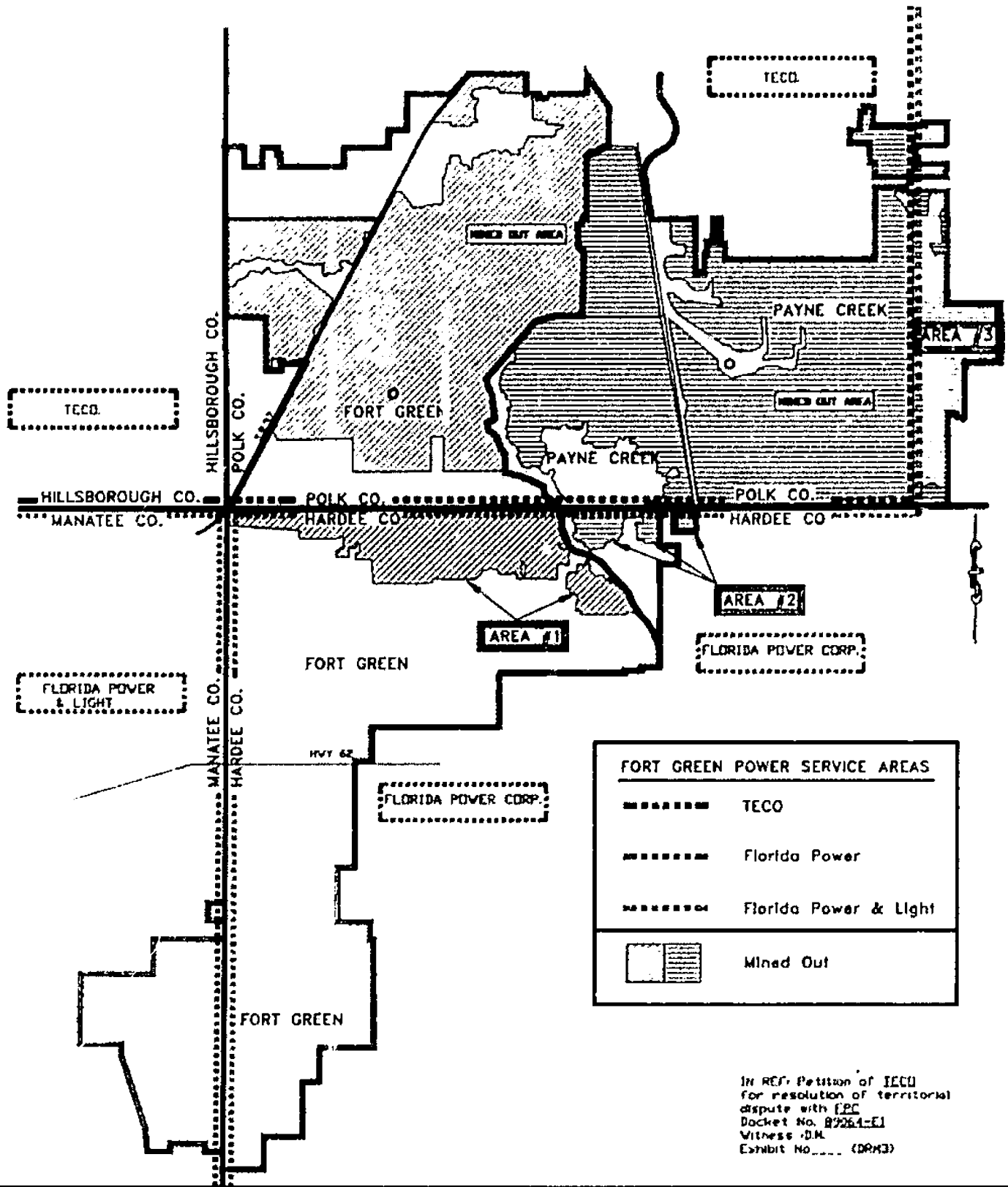
FORT GREEN MINE



FORT GREEN POWER SERVICE AREAS	
	TFCO
	Florida Power
	Florida Power & Light
	FUTURE MINING

in the Position of 1954
 for resolution of territorial
 dispute with 1955
 District No. 92004 11
 Volume 104
 Exhibit No. 104

AREAS MINED BY AGRICO IN FPC'S TERRITORY USING POWER PURCHASED FROM TECO



In RE: Petition of TECO
for resolution of territorial
dispute with FPC
Docket No. 89264-EJ
Witness D.M.
Exhibit No. (DRM3)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

TAMPA ELECTRIC COMPANY,)

Complainant,)

vs.)

FLORIDA POWER CORPORATION,)

Respondent.)

DOCKET NO. 890646-EI

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing Prepared Direct Testimony of Don R. Morrow; Bruce C. Kelsey; Kenneth R. BuShea, P.E.; and Graeme R. Addie, P.E. has been furnished by U.S. Mail to the following parties of record, this 27th day of October, 1989:

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