

## Intracompany Memo

Southern Company Services



I-46

USNRC

DATE: September 15, 1989

FROM: M. T. Brown, Jr.

RE: GPC Rate Case Testimony

TO: Mr. J. M. Farley  
Mr. R. P. McDonald  
Mr. W. G. Hairston  
Mr. J. T. Beckham  
Mr. L. B. Long  
Mr. C. K. McCoy  
Mr. C. D. McCrary  
Mr. R. M. Gilbert

'95 JAN 30 P3:14

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

Attached for your information is the first draft of the major elements of the proposed performance standards. Please note that Item 4 will be changed to include the comparison plants submitted by the project VP's.

The attorneys have requested that we submit our comments by 4:30 today.

If you have any questions, please let me know.

*Mew*

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Attachment

cc: Mr. T. S. Marvin ✓  
Mr. S. E. DeWitt  
Ms. M. J. Childs

## NUCLEAR REGULATORY COMMISSION

50-424-OLA-3

Docket No. 50-425-OLA-3 Official Exh. No. 46

In the matter of GA Power units 1+2

Staff IDENTIFIED

Applicant RECEIVED ✓

Intervenor ✓ REJECTED

Contg. Offr. DATE 1-12-95

Contractor DATE 1-12-95

Other Witness

Reporter C. Riner

Exhibit 46, page 1 of 13

## MAJOR ELEMENTS OF PROPOSED PERFORMANCE STANDARD

1. Capacity Factor Criterion: Capacity Factor is the measure proposed by GDS (testimony, p. 30, l. 5-13).
2. Evaluation Period: Three year average Capacity Factor, with the first evaluation covering the 1990-92 period being conducted in early 1993, as proposed by GDS (testimony, p. 38, l. 17-19).
3. Capacity Factor Data Source: NRC NUREG 0020 (the NRC "gray book"), as proposed by GDS (testimony, p. 30, l. 11-13). This feature will permit Georgia PSC staff to compute Capacity Factors.
4. Separate Comparison Groups for Hatch and Vogtle: Three-year averages will be developed separately for Hatch based upon boiling water reactors (BWRs) and for Vogtle (PWRs), as proposed by GDS (testimony, p. 32, l. 16-18). Also as proposed by GDS, only units which are in commercial operation for each year of the three-year evaluation period shall be considered in computing the Capacity Factor averages (testimony, p. 31, l. 13-15). Further distinction in the comparison groups is supported by Fitzpatrick's statistical analyses. More representative comparison groups consist of BWR-4 reactors with over five years since commercial operation for Hatch (to account for Hatch's vintage and design) and post-TMI PWRs over 1,000 MW gross for Vogtle (e.g., GDS's Exhibit PS-10, p. 2 of 2). Lists of comparison units are attached.
5. Exclusions from Comparison Group: Observations for Hatch and Vogtle would be excluded from the three-year average Capacity Factor, as proposed by GDS (testimony, p. 31, l. 11). Exclusions from the comparison group also would be made for units whose three-year average Capacity Factor is not representative of a nuclear plant performing under normal operating conditions (GDS p. 31, l. 24-25). Fitzpatrick proposes that deletion of the three-year average for any particular unit be based on a review of the facts specific to the observation (e.g., facility shut down in order to make modifications mandated by the NRC or whose retirement resulted in only a partial year of operation) and concluded that the 50% exclusion criterion proposed by GDS was illogical and not supported by statistical analyses (Fitzpatrick testimony, p. 24, l. 17 - p. 28, l. 2). The Company believes that its representatives and representatives of the Commission staff could agree on exclusions based upon factual review. In the event of an inability to reach a consensus, those units whose three-year average Capacity Factors fall below 35% would be considered representative of a nuclear plant not performing under normal operating conditions.
6. Acceptance Band: GDS proposed a 3% dead band around the average Capacity Factor targets (testimony, p. 33, l. 26 - p.

34, 1. 1). GDS believed that the dead band issue "tends to be very arbitrary" (Hearing transcript, p. 2346, 1. 7-8) and was unaware of detailed statistical analyses to show a better range (Hearing transcript, p. 2346? 1. 7-10). Fitzpatrick performed an analysis of the variation captured within a 3% dead band (Fitzpatrick testimony, p. 28, 1. 4 - p. 29, 1. 7). From a statistical standpoint, Fitzpatrick would recommend a performance standard dead band in the range of plus or minus 5-7 percentage points (Fitzpatrick testimony, p. 32, 1. 1-3). The Company concurs with this statistical perspective, and suggests that the 7% dead band is appropriate in order to 1) account for normal variation of units' performance which does not reflect substandard or exemplary performance, and 2) provides a broader range of "reasonable" performance and, thereby, lessen the potential for undue influence on decisions important to the safe operation of the plants.

7. Calculation of Amount of Reward or Penalty: The Company concurs with the 50:50 sharing of reward and penalties, as proposed by GDS (testimony, p. 37, 1. 25). The Company concurs with GDS's alternative recommendation that the Company's marginal energy cost be used to compute rewards or penalties (GDS testimony, p. 40, 1. 23 - p. 41, 1. 6). The Commission staff and Georgia Power have used this approach with little difficulty in the past, such as in determining outage costs associated with the 1988 administrative outage at Plant Hatch.

8. Maximum Reward or Penalty: GDS calculated a maximum reward of \$21,000,000 and a maximum penalty of \$30,000,000 for the three-year period 1990 through 1992. In order to achieve a "balanced" standard, the Company proposes that the maximum reward and penalty be equal (i.e., \$20,000,000 over the three-year evaluation timeframe). We note that the likelihood of the maximum reward is substantially less than the potential for the maximum penalty (Fitzpatrick Exhibit GLF-4, p. \_\_\_\_ of \_\_\_\_).

9. Exclusion from Incentive Program: The performance incentive program of GDS provides that any Georgia Power unit which operates with an average Capacity Factor of lower than 50% for the three-year period will be excluded from the program automatically and that the Commission would also retain the flexibility to exclude any unit from the program for purposes of performing a separate prudence evaluation (testimony, p. 5, 1. 21 - p. 6, 1. 2). As explained by GDS, if the NRC were to require "backfits" or other very unusual circumstances occurred, the Company could request the Commission to exclude the affected units even if the Capacity Factor for the unit does not fall below 50% over the three-year period (Hearing transcript, p. 2370, 1. 2 - p. 2371, 1. 24). With the understanding that very unusual circumstances connote events or factors substantially outside of current management's control and which historically have not been experienced to a significant degree in the

operation of these power plants, the Company concurs with the suggested approach of GDS. The Company suggests that the Commission consider the adoption of a more specific definition of these unusual circumstances, and proposed language is attached.

#### Additional Observations.

Several aspects of the foregoing approach are noteworthy. First, the 1986-1988 average for GDS's more representative peer group of PNRs is 67.5%, comparable to the 68% which Georgia Power felt "very comfortable with" in the Vogtle financing case (Docket No. 3554-U, Hearing transcript, p. 258, April 28, 1986). Consequently, there is reason to believe that this performance standard will address the Commissioners' desire for Company accountability. Second, the maximum reward/penalty, dead band width and potential for Commission review mitigates, to some degree, the Company's concerns regarding the use of a performance standard which may adversely affect the safe operation of the plant or undue concern for short-term economics. Third, to the extent that the domestic nuclear industry improves its performance, the performance standard will be higher, as applied in 1993, to Georgia Power's plants. Fourth, the outlined performance standard approach is somewhat simpler to administer than that originally proposed by GDS. Specifically, GDS's alternative means of determining the amount of reward or penalty is proposed, which should eliminate what the Company believes would be inappropriate use of computer cost estimates (PROMOD). In addition, the Commission staff and the Company have had sufficient experience to agree on incremental system production costs for the nuclear plants resulting from a plant not operating (for example, the costs determined for Hatch and Vogtle outage durations alleged to have been imprudently incurred in Docket 3741-U). Finally, the GDS proposed performance incentive program is the basis for this proposed standard. The Company has limited its adjustments to GDS's proposal only to the extent necessary to achieve a fair and equitable standard and which confers some ability on the Company to preclude the program from having unintended results.



# COMPARISON UNITS FOR PLANT HATCH

UNIT	BWR TYPE	LICENSED THERMAL POWER	MAXIMUM DEPENDABLE CAPACITY NET	COMMERCIAL OPERATION	THREE YEAR AVG ENDING IN 1988
BROWNS FERRY 1	4	3293	1065	8/1/74	0.0
BROWNS FERRY 2	4	3293	1065	3/1/75	0.0
BROWNS FERRY 3	4	3293	1065	3/1/77	0.0
BRUNSWICK 1	4	2436	790	3/18/77	69.7
BRUNSWICK 2	4	2436	790	11/3/75	60.3
COOPER STATION	4	2381	764	7/1/74	68.5
DUANE ARNOLD	4	1658	538	2/1/75	63.9
FITZPATRICK	4	2436	757	7/28/75	70.0
HATCH 1	4	2436	757	12/31/75	64.5
HATCH 2	4	2436	768	9/5/79	67.6
PEACH BOTTOM 2	4	3293	1051	7/5/74	30.6
PEACH BOTTOM 3	4	3293	1035	12/23/74	23.2
SUSQUEHANNA 1	4	3293	1032	6/8/83	75.0
VERMONT YANKEE 1	4	1593	504	11/30/72	73.2

## SELECTION CRITERIA:

1. GENERAL ELECTRIC BOILING WATER REACTORS (BWR)
2. BWR TYPE 4 UNITS
3. COMMERCIAL OPERATION DATE WITHIN FIVE YEARS OF HATCH 1 & 2  
COMMERCIAL OPERATION DATE

## NOTE:

1. DATA FROM NUREG 0020

GROUP AVERAGE THREE YEAR CAPACITY FACTOR  
(EXCLUDING PLANT HATCH) = 44.5%

GROUP AVERAGE THREE YEAR CAPACITY FACTOR ABOVE 35%  
(EXCLUDING PLANT HATCH) = 68.7%

PLANT HATCH THREE YEAR CAPACITY FACTOR = 66.0%

# COMPARISON UNITS FOR PLANT VOGTLE

UNIT	LICENSED THERMAL POWER	MAXIMUM DEPENDABLE CAPACITY NET	COMMERCIAL OPERATION	THREE YEAR AVG ENDING IN 1988
BRAIDWOOD 1	3411	1120	7/29/88	NOTE 3
BRIARWOOD 2	3411	1120	10/17/88	NOTE 3
BYRON 1	3411	1105	9/16/85	64.4
BYRON 2	3411	1105	8/21/87	NOTE 3
CALLAWAY 1	3565	1118	12/19/84	76.2
CATAWBA 1	3411	1129	6/29/85	64.1
CATAWBA 2	3411	1129	8/19/86	NOTE 3
COMMANCHE PEAK 1	NOTE 2	NOTE 2	NOTE 2	NOTE 2
COMMANCHE PEAK 2	NOTE 2	NOTE 2	NOTE 2	NOTE 2
DIABLO CANYON 1	3338	1073	5/7/85	66.7
DIABLO CANYON 2	3411	1087	3/13/86	NOTE 3
MILLSTONE 3	3411	1142	4/23/86	NOTE 3
VOGTLE 1	3411	1083	6/1/87	71.3
VOGTLE 2	3411	1083	5/20/89	N/A
WATTS BAR 1	NOTE 2	NOTE 2	NOTE 2	NOTE 2
WATTS BAR 2	NOTE 2	NOTE 2	NOTE 2	NOTE 2
WOLF CREEK 1	3411	1135	9/3/85	67.8

## SELECTION CRITERIA:

1. WESTINGHOUSE FOUR LOOP PRESSURIZED WATER REACTORS
2. ELECTRICAL CAPACITY RATING OF 1000 MEGAWATTS AND OVER
3. COMMERCIAL OPERATION DATE WITHIN THREE YEARS OF VOGTLE 1 & 2  
COMMERCIAL OPERATION DATE

## NOTES:

1. DATA FROM NUREG 0020
2. THESE ARE FUTURE PLANTS WHICH MUST BEGIN COMMERCIAL  
OPERATION BY 5/20/92 TO BE INCLUDED AS COMPARISON UNITS.
3. UNIT NOT IN COMMERCIAL OPERATION FOR THE FULL THREE YEAR PERIOD.
4. LIFETIME CAPACITY FACTORS ARE SHOWN FOR PLANT VOGTLE.

GROUP AVERAGE THREE YEAR CAPACITY FACTOR  
(EXCLUDING PLANT VOGTLE) = 69.9%

GROUP AVERAGE THREE YEAR CAPACITY FACTOR ABOVE 35%  
(EXCLUDING PLANT VOGTLE) = 69.9%

PLANT VOGTLE LIFETIME CAPACITY FACTOR = 71.3%

DATE: September 15, 1989  
FROM: M. T. Brown, Jr.  
RE: GPC Rate Case Testimony  
TO: Mr. J. M. Farley  
Mr. R. P. McDonald  
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Mr. J. T. Beckham  
Mr. L. B. Long  
Mr. C. K. McCoy  
Mr. C. D. McCrary  
Mr. R. M. Gilbert  
Mr. W. B. Shipman  
Mr. D. M. Crowe  
Mr. M. J. Amick  
Mr. M. D. Barker  
Mr. E. D. Hicks  
Mr. M. K. Tate

Attached for your information is a copy of Thursday's transcript of comments by Commissioners Lovett and Andrews regarding performance standards.

If you have any questions, please let me know.

*Mew*

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Attachment

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## BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION

In the Matter of:

The Application of GEORGIA POWER  
COMPANY for authority to increase  
its rates and charges for retail  
electric service to produce annual  
revenues in the amount of  
approximately \$492,206,000 with the  
rate increase to be phased in over  
a two-year period.

Docket No. 3840-U.

Room 177  
244 Washington Street  
Atlanta, Georgia

Thursday, September 14, 1989

The above-entitled matter convened pursuant  
to adjournment, at 10:04 a.m.

## BEFORE:

ROBERT PAFFORD, Chairman  
GARY ANDREWS, Commissioner  
CAS ROBINSON, Commissioner  
BILLY LOVETT, Commissioner  
ROBERT ROWAN, Commissioner

## APPEARANCES:

On behalf of the Applicant Georgia Power Co.:

JAMES E. JOINER, Attorney  
DOUGLAS MILLER, Attorney  
Troutman, Sanders, Lockerman & Ashmore  
1400 Candler Building  
Atlanta, Georgia 30043

Exhibit 46, page 8 of 13



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1 MR. MILLER: Mr. Chairman, might I --

2 CHAIRMAN PAFFORD: Just a moment. Mr. Lovett.

3 COMMISSIONER LOVETT: Mr. Miller, I have a request  
4 for you, please, sir.

5 MR. MILLER: Yes, sir.

6 COMMISSIONER LOVETT: Thinking back through the  
7 last few days and the issue of performance standards -- and  
8 I just want to bring it up now because I don't want you to  
9 be blind-sided and I want you to have some time to think  
10 about this.

11 About several years ago, I had numerous  
12 conversations with personnel in your company, and I've  
13 checked with them since then and they've confirmed that,  
14 that we had a standing request in and I think it's a matter  
15 of record in different proceedings, that the company come  
16 forward before the end of this case with their offering of  
17 performance standards. The company has not done that.

18 I'm frankly concerned about it. It puts me in an  
19 impossible position. I want to have all the information, I  
20 want to have all the facts, I want to properly judge your  
21 company and its performance in its plant, and frankly it  
22 just puts me in an impossible position to do that without  
23 the company's recommendation on performance standards.

24 I don't want to be put in a posture -- and I'm  
25 just speaking for myself and not for the Commission

Page 3772

1 obviously -- I don't want to be put in a posture of  
2 requiring the company to do something that they say is  
3 unsafe, and I don't think any member of the Commission wants  
4 that.

5 Here we're getting down, we've only got a short  
6 time left and you may -- it may take the company three  
7 months or six months before it can properly come up with the  
8 study that it needs. Maybe it could be done in a shorter  
9 time -- that I don't know.

10 But I wish you would communicate -- and again I  
11 just want it on the record, I wish you would communicate to  
12 the President of the company my concern that if he feels  
13 that it would be necessary to suspend this case, to  
14 withdraw, put it in suspension for three months or six  
15 months -- I don't know that the Commission could order that  
16 to be done or that it should, but if it could be done  
17 voluntarily, it would certainly be something that I think  
18 you ought to think about, if you could respond back to us to  
19 see if that is feasible.

20 Secondly, not -- it's important, and I know it  
21 doesn't reflect directly on the case but you've got this  
22 issue of the grand jury investigation. I don't know that it  
23 has any impact at all on the case, but it certainly has a  
24 cloud over the case. And for us to make a decision and  
25 something come down later on that could be embarrassing to

Page 3772

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Page 3773

1 the Commission that we've left out, or to the company, it  
2 hurts us both with the public, and I just wonder if it's a  
3 good idea to proceed from that standpoint.

4 But there's nothing that we can do that I know of,  
5 technically. There's no information that anybody has, so  
6 really that's something that I would just as to be  
7 considered on a voluntary basis.

8 In three months or six months, we may know  
9 something more that we don't know today. But time is  
10 growing short, and I just wanted to make that personal  
11 request that you communicate my concerns to Mr. Dahlberg,  
12 and then we can discuss them further on the record.

13 MR. MILLER: I will communicate your concerns to  
14 Mr. Dahlberg, Mr. Lovett.

15 COMMISSIONER LOVETT: Thank you.

16 COMMISSIONER ANDREWS: Could I make a brief  
17 comment?

18 CHAIRMAN PAFFORD: Yes.

19 COMMISSIONER ANDREWS: I would just comment that  
20 it appears to me that the company has knowingly and  
21 willfully put the Commission to the choice of the staff's  
22 performance plan or none. And at this point in time I  
23 believe that this Commission is going to have to live with  
24 that and the company is going to have to live with it.

25 CHAIRMAN PAFFORD: Mr. Hawes, do you have

DATE: September 19, 1989  
FROM: M. T. Brown, Jr.  
RE: GPC Rate Case  
Proposed Performance Standards  
TO: Mr. J. M. Farley  
Mr. R. P. McDonald  
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Mr. R. M. Gilbert  
Mr. W. B. Shipman  
Mr. D. M. Crowe  
Mr. E. F. Cobb  
Mr. M. D. Barker  
Mr. E. D. Hicks  
Mr. P. H. Wells

Attached is Georgia Power Company's recommendations for changes to the major elements of GDS's proposed performance standards. These will be submitted to the Georgia Public Service Commission for consideration during deliberation of the rate case.

If you have any questions or comments, please let me know.

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Attachment

cc: Mr. T. S. Marvin  
Mr. S. E. DeWitt  
Ms. M. J. Childs