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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

CHONTA T.A. HAYNES

Q. Will you please state your name, business address, and employer?

A. My name is Chonta T.A. Haynes and my business address is Post Office Box 111, Tampa, Florida 33601. I am employed by Tampa Electric Company.

Q. Please furnish us with a brief outline of your educational background and business experience.

A. I am an Electrical Engineering graduate of Georgia Institute of Technology and the University of Miami (FL). My bachelors degree was obtained in 1983 from Georgia Tech and I received my masters degree in 1991 from U of M. My career spans 15 years with various engineering positions in the utility and automotive industries. I am currently employed by Tampa Electric Company as a Senior Engineer in the Operation Services group.

1 Q. What are your current responsibilities?
2
3 A. I am responsible for unit performance analysis and
4 reporting of generation statistics.
5
6 Q. What is the purpose of your testimony?
7
8 A. My testimony presents the actual performance results from
9 unit equivalent availability and station heat rate used to
10 determine the Generating Performance Incentive Factor
11 (GPIF) for the period October 1998 through December 1998.
12 I will also compare these results to the targets
13 established prior to the beginning of the period.
14
15 Q. Have you prepared an exhibit with the results for this six
16 month period?
17
18 A. Yes. The exhibit entitled "Tampa Electric Company, October
19 1998 - December 1998, Generating Performance Incentive
20 Factor Results" consists of 28 pages and is filed with this
21 testimony (Have identified as Exhibit CTAH-1).
22
23 Q. Have you calculated the results of Tampa Electric Company
24 for its performance under the GPIF during this period?
25

1 A. Yes, I have. This is shown on page 4 of my exhibit. Based
2 upon -0.398 GPIF points, the result is a penalty amount of
3 \$46,977 for the period.

4
5 Q. Please proceed with your review of the actual results for
6 the October 1998 - December 1998 period.

7
8 A. On page 3 of my exhibit, the actual average common equity
9 for the period is shown on line 5 as \$1,165,449,094. This
10 produces the maximum penalty or reward figure of \$1,180,318
11 as shown on line 12, page 3.

12
13 Q. Will you explain how you arrived at the actual equivalent
14 availability results for the six units included within the
15 GPIF?

16
17 A. Yes, I will. Operating data on each of our units is filed
18 monthly with the Florida Public Service Commission on the
19 Actual Unit Performance data form. Additionally, outage
20 information is reported to the Commission on a monthly
21 basis. A summary of this data for the six months provides
22 the basis for the GPIF.

23
24
25

1 Q. Are the equivalent availability results shown on page 6,
2 column 2, directly applicable to the GPIF table?

3
4 A. Not exactly. Adjustments to equivalent availability may be
5 required as noted in section 4.3.3 of the GPIF Manual. The
6 actual equivalent availability including the required
7 adjustment is shown on page 6 of my exhibit. The necessary
8 adjustments as prescribed in the GPIF Manual are further
9 defined by a letter dated October 23, 1981, from Mr. J.H.
10 Hoffsis of the Commission's Staff. The adjustments for
11 each unit are as follows:

12
13 Gannon Unit No. 5

14 On this unit, 336 planned outage hours were originally
15 scheduled to fall within the Winter 1998 period. Due to a
16 revision in the outage schedule 575.8 hours fell within the
17 period. Consequently, the actual equivalent availability
18 of 62.3% is adjusted to 71.5% as shown on page 7 of my
19 exhibit.

20
21 Gannon Unit No. 6

22 On this unit no planned outage hours were originally
23 scheduled to fall within the Winter 1998 period and none in
24 fact occurred. Consequently, the actual equivalent
25 availability of 68.6% needs no adjustment, as shown on page

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8 of my exhibit.

Big Bend Unit 1

On this unit, 606 planned outage hours were originally scheduled to fall within the Winter 1998 period. Due to a small revision of the outage schedule, 601 outage hours actually occurred in the Winter period. Consequently, the actual equivalent availability of 55.4% is adjusted to 55.3% as shown on page 9 of my exhibit.

Big Bend Unit No. 2

On this unit no planned outage hours were originally scheduled to fall within the Winter 1998 period and in fact none occurred. Consequently, the actual equivalent availability of 76.9% needs no adjustment as shown on page 10 of my exhibit.

Big Bend Unit No. 3

On this unit no planned outage hours were originally scheduled to fall within the Winter 1998 period and in fact none occurred. Consequently, the actual equivalent availability of 79.6% needs no adjustment as shown on page 11 of my exhibit.

1 Big Bend Unit No. 4

2 On this unit, 504 planned outage hours were scheduled to
3 fall within the Winter 1998 period. Due to a revision in
4 the schedule 555.8 hours actually occurred. Consequently,
5 the actual equivalent availability of 61.6% is adjusted to
6 63.5% as shown on page 12 of my exhibit.

7

8 Q. How did you arrive at the applicable equivalent
9 availability points for each unit?

10

11 A. The final adjusted equivalent availabilities for each unit
12 are shown on page 6, column 4, of my exhibit. This number
13 is entered into the respective Generating Performance
14 Incentive Point (GPIP) Table for each particular unit on
15 pages 21 through 26. Page 4 of my exhibit summarizes the
16 equivalent availability points to be awarded or penalized.

17

18 Q. Would you please explain the heat rate results relative to
19 the GPIF?

20

21 A. The actual heat rate and adjusted actual heat rate for the
22 Gannon Units and Big Bend Station are shown on page 6 of my
23 exhibit. The adjustment was developed based on the
24 guidelines of section 4.3.16 of the GPIF Manual. This
25 procedure is further defined by a letter dated October 23,

1 1981, from Mr. J.H. Hoffsis of the FPSC Staff. The final
2 adjusted actual heat rates are also shown on page 5 of my
3 exhibit. This heat rate number is entered into the
4 respective GPIIP table for the particular unit, shown on
5 pages 21 through 26. Page 4 of my exhibit summarizes the
6 weighted heat rate and equivalent availability points to be
7 awarded.

8

9 Q. What is the overall GPIIP for Tampa Electric Company during
10 this three month period?

11

12 A. This is shown on page 28 of my exhibit. Essentially, the
13 weighting factors shown on page 4, column 3, plus the
14 equivalent availability points and the heat rate points
15 shown on page 4, column 4, are substituted within the
16 equation. This resultant value, -0.398, is then entered
17 into the GPIIF table on page 2. Using linear interpolation,
18 a penalty amount of \$46,977 is calculated.

19

20 Q. Does this conclude your testimony?

21

22 A. Yes, it does.

23

24

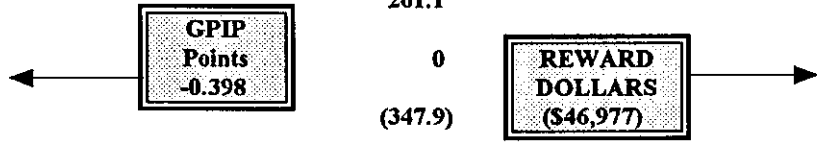
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**TAMPA ELECTRIC COMPANY
OCTOBER 1998 - DECEMBER 1998
GENERATING PERFORMANCE INCENTIVE FACTOR
RESULTS
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TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE
REWARD / PENALTY TABLE - ACTUAL
OCTOBER 1998 - DECEMBER 1998

GENERATING PERFORMANCE INCENTIVE POINTS (GPIP)	FUEL SAVINGS / (LOSS) (\$000)	GENERATING PERFORMANCE INCENTIVE FACTOR (\$000)
+10	2,610.5	1,180.3
+9	2,349.5	1,062.3
+8	2,088.4	944.3
+7	1,827.4	826.2
+6	1,566.3	708.2
+5	1,305.3	590.2
+4	1,044.2	472.1
+3	783.2	354.1
+2	522.1	236.1
+1	261.1	118.0
0	0	0.0
-1	(347.9)	(118.0)
-2	(695.8)	(236.1)
-3	(1,043.6)	(354.1)
-4	(1,391.5)	(472.1)
-5	(1,739.4)	(590.2)
-6	(2,087.3)	(708.2)
-7	(2,435.2)	(826.2)
-8	(2,783.0)	(944.3)
-9	(3,130.9)	(1,062.3)
-10	(3,478.8)	(1,180.3)



**TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE FACTOR
CALCULATION OF MAXIMUM ALLOWED INCENTIVE DOLLARS
ACTUAL
OCTOBER 1998 - DECEMBER 1998**

Line 1	Beginning of period balance of common equity end of month common equity:	\$1,195,743,419
Line 2	Month of October 1998	\$1,150,863,113
Line 3	Month of November 1998	\$1,158,608,255
Line 4	Month of December 1998	\$1,156,581,588
Line 5	(summation of line 1 through line 4 divided by 4)	\$1,165,449,094
Line 6	25 Basis points	0.0025
Line 7	Revenue expansion factor	61.3738%
Line 8	Maximum allowed incentive Dollars (Line 5 times line 6 divided by line 7 times 0.25)	\$1,186,835
Line 9	Jurisdictional Sales	3968646 MWH
Line 10	Total Sales	3990557 MWH
Line 11	Jurisdictional Separation Factor (Line 9 divided by line 10)	99.45%
Line 12	Maximum Allowed Jurisdictional Incentive Dollars (Line 8 times line 11)	\$1,180,318

**TAMPA ELECTRIC COMPANY
CALCULATION OF SYSTEM GPIF POINTS
OCTOBER 1998 - DECEMBER 1998
ACTUAL**

<u>PLANT/UNIT</u>	<u>3 MO ADJ ACTUAL PERFORMANCE</u>	<u>WEIGHTING FACTOR %</u>	<u>UNIT POINTS</u>	<u>WEIGHTED UNIT POINTS</u>
GANNON 5	71.5% EAF	4.17%	10.000	0.417
GANNON 6	68.6% EAF	6.13%	-10.000	-0.613
BIG BEND 1	55.3% EAF	6.73%	-6.494	-0.437
BIG BEND 2	76.9% EAF	6.48%	-10.000	-0.648
BIG BEND 3	79.6% EAF	9.09%	-3.194	-0.290
BIG BEND 4	63.5% EAF	4.16%	-10.000	-0.416
GANNON 5	9919 ANOHR	8.81%	5.586	0.492
GANNON 6	10270 ANOHR	11.76%	3.541	0.416
BIG BEND 1	10449 ANOHR	8.54%	-2.266	-0.194
BIG BEND 2	10300 ANOHR	11.65%	0.000	0.000
BIG BEND 3	9967 ANOHR	14.14%	0.288	0.041
BIG BEND 4	9694 ANOHR	<u>8.34%</u>	10.000	<u>0.834</u>
				-0.398

GPIF REWARD	(\$46,977)
--------------------	-------------------

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY

OCTOBER 1998 - DECEMBER 1998

EQUIVALENT AVAILABILITY

<u>PLANT/UNIT</u>	<u>WEIGHTING FACTOR (%)</u>	<u>EAF TARGET (%)</u>	<u>EAF MAX. (%)</u>	<u>RANGE MIN. (%)</u>	<u>MAX. FUEL SAVINGS (\$000)</u>	<u>MAX. FUEL LOSS (\$000)</u>	<u>EAF ADJUSTED ACTUAL %</u>	<u>ACTUAL FUEL SAVINGS/LOSS (\$000)</u>
GANNON 5	4.17%	66.2	70.7	57.3	108.9	(220.0)	71.5%	220.0
GANNON 6	6.13%	82.6	86.1	75.6	159.9	(284.4)	68.6%	(284.4)
BIG BEND 1	6.73%	60.3	64.1	52.6	175.6	(306.0)	55.3%	(198.7)
BIG BEND 2	6.48%	85.4	88.3	79.6	169.2	(271.3)	76.9%	(271.3)
BIG BEND 3	9.09%	81.9	85.5	74.7	237.3	(420.5)	79.6%	(134.3)
BIG BEND 4	4.16%	69.6	72.3	64.3	<u>108.6</u>	<u>(325.6)</u>	63.5%	(108.6)
GPIF SYSTEM	36.76%				959.5	(1,827.8)		

**AVERAGE NET OPERATING HEAT RATE
FOR
GPIF COAL GENERATING UNITS**

<u>PLANT/UNIT</u>	<u>WEIGHTING FACTOR (%)</u>	<u>ANOHR Btu/kwh</u>	<u>TARGET NOF</u>	<u>ANOHR TARGET RANGE</u>		<u>MAX. FUEL SAVINGS (\$000)</u>	<u>MAX. FUEL LOSS (\$000)</u>	<u>ACTUAL ADJUSTED ANOHR</u>	<u>ACTUAL FUEL SAVINGS/LOSS (\$000)</u>
				<u>MIN.</u>	<u>MAX.</u>				
GANNON 5	8.81%	10242	86.2	9723	10761	230.0	(230.0)	9919	128.5
GANNON 6	11.76%	10453	83.6	10073	10833	307.0	(307.0)	10270	0.0
BIG BEND 1	8.54%	10311	72.2	9958	10664	223.0	(223.0)	10449	(50.5)
BIG BEND 2	11.65%	10311	71.6	9948	10674	304.0	(304.0)	10300	0.0
BIG BEND 3	14.14%	10051	82.5	9664	10438	369.0	(369.0)	9967	10.6
BIG BEND 4	<u>8.34%</u>	9945	94.2	9702	10188	<u>218.0</u>	<u>(218.0)</u>	9694	218.0
GPIF SYSTEM	63.24%					1,651.0	(1,651.0)		

**TAMPA ELECTRIC COMPANY
ACTUAL UNIT PERFORMANCE DATA
OCTOBER 1998 - DECEMBER 1998**

<u>PLANT / UNIT</u>	<u>ACTUAL EAF %</u>	<u>ADJUSTMENTS (1) EAF %</u>	<u>EAF ADJUSTED ACTUAL %</u>
GANNON 5	62.3	9.2	71.5
GANNON 6	68.6	-0.0	68.6
BIG BEND 1	55.4	-0.1	55.3
BIG BEND 2	76.9	0.0	76.9
BIG BEND 3	79.6	0.0	79.6
BIG BEND 4	61.6	1.9	63.5

<u>PLANT / UNIT</u>	<u>ACTUAL ANOHR Btu/kwh</u>	<u>ADJUSTMENTS (2) TO ANOHR Btu/kwh</u>	<u>ANOHR ADJUSTED ACTUAL Btu/kwh</u>
GANNON 5	10166	-247	9919
GANNON 6	10399	-129	10270
BIG BEND 1	10487	-38	10449
BIG BEND 2	10335	-35	10300
BIG BEND 3	10231	-264	9967
BIG BEND 4	9794	-100	9694

(1) Documentation of adjustments to Actual EAF on pages 7 - 12

(2) Documentation of adjustments to Actual ANOHR on pages 13 - 18

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
GANNON UNIT NO. 5
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 4.17%

	<u>3 MO. TARGET</u>	<u>3 MO. ACTUAL PERFORMANCE</u>	<u>ADJUSTED ACTUAL PERFORMANCE</u>
P.H.	2209.0	2209.0	2209.0
E.A.F.	66.2	62.3	71.5
P.O.H.	336.0	575.8	336.0
F.O.H. + E.F.O.H	362.0	211.5	242.6
M.O.H. + E.M.O.H	49.0	44.7	51.3
P.O.F.	15.2	26.1	15.2
E.F.O.F.	16.4	9.6	11.0
E.M.O.F.	2.2	2.0	2.3

10.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

$$\frac{\text{P.H.} - \text{TGT POH}}{\text{P.H.} - \text{ACT POH}} \times (\text{FOH} + \text{EFOH} + \text{MOH} + \text{EMOH}) = \text{ADJUSTED EUOH}$$

$$\frac{2209 - 336}{2209 - 576} \times (69.2 + 142.3 + 20.7 + 24.0) = 293.8$$

$$\frac{336 + 294}{2209} \times 100 = 28.5$$

$$100.0 - 28.5 = 71.5$$

PH = PERIOD HOURS
EAF = EQUIVALENT AVAILABILITY FACTOR
POH = PLANNED OUTAGE HOURS
FOH = FORCED OUTAGE HOURS
MOH = MAINTENANCE OUTAGE HOURS
POF = PLANNED OUTAGE FACTOR
EFOF = EQUIVALENT FORCED OUTAGE FACTOR
EMOF = EQUIVALENT MAINTENANCE OUTAGE FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
GANNON UNIT NO. 6
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 6.13%

	<u>3 MO. TARGET</u>	<u>3 MO. ACTUAL PERFORMANCE</u>	<u>ADJUSTED ACTUAL PERFORMANCE</u>
P.H.	2209.0	2209.0	2209.0
E.A.F.	82.6	68.6	68.6
P.O.H.	0.0	0.0	0.0
F.O.H. + E.F.O.H	292.0	578.5	578.5
M.O.H. + E.M.O.H	93.0	116.0	116.0
P.O.F.	0.0	0.0	0.0
E.F.O.F.	13.2	26.2	26.2
E.M.O.F.	4.2	5.3	5.3

-10.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

$$\frac{P.H. - TGT POH}{P.H. - ACT POH} \times (FOH + EFOH + MOH + EMOH) = \text{ADJUSTED EUOH}$$

$$\frac{2209 - 0}{2209 - 0} \times (240.7 + 337.8 + 74.4 + 41.6) = 694.5$$

$$\frac{0 + 695}{2209} \times 100 = 31.4$$

$$100.0 - 31.4 = 68.6$$

- PH = PERIOD HOURS
- EAF = EQUIVALENT AVAILABILITY FACTOR
- POH = PLANNED OUTAGE HOURS
- FOH = FORCED OUTAGE HOURS
- MOH = MAINTENANCE OUTAGE HOURS
- EUOH = EQUIVALENT UNPLANNED OUTAGE HOURS
- POF = PLANNED OUTAGE FACTOR
- EFOF = EQUIVALENT FORCED OUTAGE FACTOR
- EMOF = EQUIVALENT MAINTENANCE OUTAGE FACTOR
- EUOF = EQUIVALENT UNPLANNED OUTAGE FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 1
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 6.73%

	<u>3 MO. TARGET</u>	<u>3 MO. ACTUAL PERFORMANCE</u>	<u>ADJUSTED ACTUAL PERFORMANCE</u>
P.H.	2209.0	2209.0	2209.0
E.A.F.	60.3	55.4	55.3
P.O.H.	606.0	601.0	606.0
F.O.H. + E.F.O.H	158.0	211.2	210.5
M.O.H. + E.M.O.H	114.0	171.8	171.3
P.O.F.	27.4	27.2	27.4
E.F.O.F.	7.2	9.6	9.5
E.M.O.F.	5.2	7.8	7.8

-6.494 E. A. POINTS

ADJUSTMENTS TO E.A.F.

$$\frac{\text{P.H. - TGT POH}}{\text{P.H. - ACT POH}} \times (\text{FOH} + \text{EFOH} + \text{MOH} + \text{EMOH}) = \text{ADJUSTED EUOH}$$

$$\frac{2209 - 606}{2209 - 601} \times (61.5 + 149.7 + 73.5 + 98.3) = 381.8$$

$$\frac{606 + 382}{2209} \times 100 = 44.7$$

$$100.0 - 44.7 = 55.3$$

PH = PERIOD HOURS
EAF = EQUIVALENT AVAILABILITY FACTOR
POH = PLANNED OUTAGE HOURS
FOH = FORCED OUTAGE HOURS
MOH = MAINTENANCE OUTAGE HOURS
EUOH = EQUIVALENT UNPLANNED OUTAGE HOURS
POF = PLANNED OUTAGE FACTOR
EFOF = EQUIVALENT FORCED OUTAGE FACTOR
EMOF = EQUIVALENT MAINTENANCE OUTAGE FACTOR
EUOF = EQUIVALENT UNPLANNED OUTAGE FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 2
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 6.48%

	<u>3 MO. TARGET</u>	<u>3 MO. ACTUAL PERFORMANCE</u>	<u>ADJUSTED ACTUAL PERFORMANCE</u>
P.H.	2209.0	2209.0	2209.0
E.A.F.	85.4	76.9	76.9
P.O.H.	0.0	0.0	0.0
F.O.H. + E.F.O.H	212.0	300.1	300.1
M.O.H. + E.M.O.H	110.0	211.3	211.3
P.O.F.	0.0	0.0	0.0
E.F.O.F.	9.6	13.6	13.6
E.M.O.F.	5.0	9.6	9.6

-10.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

$$\frac{\text{P.H.} - \text{TGT POH}}{\text{P.H.} - \text{ACT POH}} \times (\text{FOH} + \text{EFOH} + \text{MOH} + \text{EMOH}) = \text{ADJUSTED EUOH}$$

$$\frac{2209 - 0}{2209 - 0} \times (15.6 + 284.5 + 186.9 + 24.4) = 511.4$$

$$\frac{0 + 511}{2209} \times 100 = 23.1$$

$$100.0 - 23.1 = 76.9$$

PH = PERIOD HOURS
EAF = EQUIVALENT AVAILABILITY FACTOR
POH = PLANNED OUTAGE HOURS
FOH = FORCED OUTAGE HOURS
MOH = MAINTENANCE OUTAGE HOURS
EUOH = EQUIVALENT UNPLANNED OUTAGE HOURS
POF = PLANNED OUTAGE FACTOR
EFOF = EQUIVALENT FORCED OUTAGE FACTOR
EMOF = EQUIVALENT MAINTENANCE OUTAGE FACTOR
EUOF = EQUIVALENT UNPLANNED OUTAGE FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 3
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 9.09%

	<u>3 MO. TARGET</u>	<u>3 MO. ACTUAL PERFORMANCE</u>	<u>ADJUSTED ACTUAL PERFORMANCE</u>
P.H.	2209.0	2209.0	2209.0
E.A.F.	81.9	79.6	79.6
P.O.H.	0.0	0.0	0.0
F.O.H. + E.F.O.H	271.0	398.3	398.3
M.O.H. + E.M.O.H	128.0	53.9	53.9
P.O.F.	0.0	0.0	0.0
E.F.O.F.	12.3	18.0	18.0
E.M.O.F.	5.8	2.4	2.4

-3.194 E. A. POINTS

ADJUSTMENTS TO E.A.F.

$$\frac{\text{P.H.} - \text{TGT POH}}{\text{P.H.} - \text{ACT POH}} \times (\text{FOH} + \text{EFOH} + \text{MOH} + \text{EMOH}) = \text{ADJUSTED EUOH}$$

$$\frac{2209 - 0}{2209 - 0} \times (245.4 + 152.9 + 0.0 + 53.9) = 452.2$$

$$\frac{0 + 452}{2209} \times 100 = 20.4$$

$$100.0 - 20.4 = 79.6$$

PH = PERIOD HOURS
EAF = EQUIVALENT AVAILABILITY FACTOR
POH = PLANNED OUTAGE HOURS
FOH = FORCED OUTAGE HOURS
MOH = MAINTENANCE OUTAGE HOURS
EUOH = EQUIVALENT UNPLANNED OUTAGE HOURS
POF = PLANNED OUTAGE FACTOR
EFOF = EQUIVALENT FORCED OUTAGE FACTOR
EMOF = EQUIVALENT MAINTENANCE OUTAGE FACTOR
EUOF = EQUIVALENT UNPLANNED OUTAGE FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 4
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 4.16%

	<u>3 MO. TARGET</u>	<u>3 MO. ACTUAL PERFORMANCE</u>	<u>ADJUSTED ACTUAL PERFORMANCE</u>
P.H.	2209.0	2209.0	2209.0
E.A.F.	69.6	61.6	63.5
P.O.H.	504.0	555.8	504.0
F.O.H. + E.F.O.H	78.0	267.9	276.3
M.O.H. + E.M.O.H	89.0	24.2	25.0
P.O.F.	22.8	25.2	22.8
E.F.O.F.	3.5	12.1	12.5
E.M.O.F.	4.0	1.1	1.1

-10.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

$$\frac{P.H. - TGT POH}{P.H. - ACT POH} \times (FOH + EFOH + MOH + EMOH) = ADJUSTED EUOH$$

$$\frac{2209 - 504}{2209 - 556} \times (229.2 + 38.7 + 7.5 + 16.7) = 301.3$$

$$\frac{504 + 301}{2209} \times 100 = 36.5$$

$$100.0 - 36.5 = 63.5$$

PH = PERIOD HOURS
EAF = EQUIVALENT AVAILABILITY FACTOR
POH = PLANNED OUTAGE HOURS
FOH = FORCED OUTAGE HOURS
MOH = MAINTENANCE OUTAGE HOURS
EUOH = EQUIVALENT UNPLANNED OUTAGE HOURS
POF = PLANNED OUTAGE FACTOR
EFOF = EQUIVALENT FORCED OUTAGE FACTOR
EMOF = EQUIVALENT MAINTENANCE OUTAGE FACTOR
EUOF = EQUIVALENT UNPLANNED OUTAGE FACTOR

**TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
GANNON UNIT NO. 5
HEAT RATE DATA
OCTOBER 1998 - DECEMBER 1998**

WEIGHTING FACTOR = 8.81%

	3 MO. TARGET	3 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	10242	10166
STA. NET GEN. (GWH)	300.6	259.8
OPER. Btu (10⁹ btu)	3078.853	2640.760
NET OUTPUT FACTOR	86.2	74.0

5.586 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION	$\text{NOF}(-20.2694) + 11988.9 = \text{ANOHR}$		
74.0	$(-20.2694) +$	11988.9	$= 10489$
10166	$-$	10489	$= -323$
10242	$+$	-323	$= 9919$

ANOHR = AVERAGE NET OPERATING HEAT RATE
NOF = NET OPERATING FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
GANNON UNIT NO. 6
HEAT RATE DATA
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 11.76%

	<u>3 MO. TARGET</u>	<u>3 MO ACTUAL PERFORMANCE</u>
ANOHR (Btu/kwh)	10453	10399
STA. NET GEN. (GWH)	561.6	484.1
OPER. Btu (10 ⁹ btu)	5870.665	5033.506
NET OUTPUT FACTOR	83.6	67.0

3.541 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION	NOF(-7.7732)+ 11102.5 = ANOHR		
	67.0 (-7.7732)+	11102.5	= 10582
	10399 -	10582	= -183
	10453 +	-183	= 10270

ANOHR = AVERAGE NET OPERATING HEAT RATE
NOF = NET OPERATING FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
BIG BEND UNIT NO. 1
HEAT RATE DATA
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 8.54%

	<u>3 MO. TARGET</u>	<u>3 MO ACTUAL PERFORMANCE</u>
ANOHR (Btu/kwh)	10311	10487
STA. NET GEN. (GWH)	455.3	444.3
OPER. Btu (10 ⁹ btu)	4694.915	4659.415
NET OUTPUT FACTOR	72.2	70.0

-2.266 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-17.5714) + 11579.4 = ANOHR

70.0 (-17.5714) + 11579.4 = 10349

10487 - 10349 = 138

10311 + 138 = 10449

ANOHR = AVERAGE NET OPERATING HEAT RATE
NOF = NET OPERATING FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
BIG BEND UNIT NO. 2
HEAT RATE DATA
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 11.65%

	<u>3 MO. TARGET</u>	<u>3 MO ACTUAL PERFORMANCE</u>
ANOHR (Btu/kwh)	10311	10335
STA. NET GEN. (GWH)	606.4	595.8
OPER. Btu (10 ⁹ btu)	6252.956	6157.393
NET OUTPUT FACTOR	71.6	69.7

0.000 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

$$\begin{array}{rcll} \text{CURRENT EQUATION} & \text{NOF}(-18.2412) + 11617.3 & = & \text{ANOHR} \\ 69.7 (-18.2412) + & 11617.3 & = & 10346 \\ 10335 - & 10346 & = & -11 \\ 10311 + & -11 & = & 10300 \end{array}$$

ANOHR = AVERAGE NET OPERATING HEAT RATE
NOF = NET OPERATING FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
BIG BEND UNIT NO. 3
HEAT RATE DATA
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 14.14%

	<u>3 MO. TARGET</u>	<u>3 MO ACTUAL PERFORMANCE</u>
ANOHR (Btu/kwh)	10051	10231
STA. NET GEN. (GWH)	705.8	632.5
OPER. Btu (10 ⁹ btu)	7093.380	6471.437
NET OUTPUT FACTOR	82.5	73.5

0.288 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION	NOF(-29.4092) + 12476.8 = ANOHR		
	73.5	(-29.4092) +	12476.8 = 10315
	10231	-	10315 = -84
	10051	+	-84 = 9967

ANOHR = AVERAGE NET OPERATING HEAT RATE
NOF = NET OPERATING FACTOR

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
BIG BEND UNIT NO. 4
HEAT RATE DATA
OCTOBER 1998 - DECEMBER 1998

WEIGHTING FACTOR = 8.34%

	<u>3 MO. TARGET</u>	<u>3 MO ACTUAL PERFORMANCE</u>
ANOHR (Btu/kwh)	9945	9794
STA. NET GEN. (GWH)	660.2	550.1
OPER. Btu (10 ⁹ btu)	6565.235	5387.663
NET OUTPUT FACTOR	94.2	86.9

10.000 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION	NOF(-13.6351) + 11229.4 = ANOHR		
86.9 (-13.6351) +	11229.4	=	10045
9794 -	10045	=	-251
9945 +	-251	=	9694

ANOHR = AVERAGE NET OPERATING HEAT RATE
NOF = NET OPERATING FACTOR

TAMPA ELECTRIC COMPANY
GPIF PLANNED OUTAGE SCHEDULE - ACTUAL
OCTOBER 1998 - DECEMBER 1998

<u>STATION/UNIT</u>	<u>PLANNED OUTAGE DATES</u>	<u>OUTAGE REASON</u>
** GANNON 5	OCT 20 - NOV 12	AIR PREHEATER REPAIR & CLEANING
** BIG BEND 1	NOV 28 - DEC 23	CLASSIFIER MODIFICATION AIR PREHEATER
** BIG BEND 4	NOV 4 - NOV 27	FUEL SYSTEM AIR PREHEATER

** CPM is not generated for outages less than 4 weeks

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TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE
OCTOBER 1998 - DECEMBER 1998
GANNON 6

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	159.9	86.1	+10	307.0	10073
+9	143.9	85.8	+9	276.3	10104
+8	127.9	85.4	+8	245.6	10134
+7	111.9	85.1	+7	214.9	10165
+6	95.9	84.7	+6	184.2	10195
+5	80.0	84.4	+5	153.5	10226
+4	64.0	84.0	+4	122.8	10256
+3	48.0	83.7	+3	92.1	10287
+2	32.0	83.3	+2	61.4	10317
+1	16.0	83.0	+1	30.7	10348
0	0.0	82.6	0	0.0	10378
-1	(28.4)	81.9	-1	(30.7)	10453
-2	(56.9)	81.2	-2	(61.4)	10528
-3	(85.3)	80.5	-3	(92.1)	10559
-4	(113.8)	79.8	-4	(122.8)	10589
-5	(142.2)	79.1	-5	(153.5)	10620
-6	(170.6)	78.4	-6	(184.2)	10650
-7	(199.1)	77.7	-7	(214.9)	10681
-8	(227.5)	77.0	-8	(245.6)	10711
-9	(256.0)	76.3	-9	(276.3)	10742
-10	(284.4)	75.6	-10	(307.0)	10772
					10803
					10833

← EAF POINTS -10.000	Adjusted EAF 68.6% →	← AHR POINTS 3.541	Adjusted Actual ANOHR 10270 →
Weighting Factor =	6.13%	Weighting Factor =	11.76%

TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE
OCTOBER 1998 - DECEMBER 1998

BIG BEND 1

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	175.6	64.1	+10	223.0	9958
+9	158.0	63.7	+9	200.7	9986
+8	140.5	63.3	+8	178.4	10014
+7	122.9	63.0	+7	156.1	10041
+6	105.4	62.6	+6	133.8	10069
+5	87.8	62.2	+5	111.5	10097
+4	70.2	61.8	+4	89.2	10125
+3	52.7	61.4	+3	66.9	10153
+2	35.1	61.1	+2	44.6	10180
+1	17.6	60.7	+1	22.3	10208
0	0.0	60.3	0	0.0	10236
				0.0	10311
				0.0	10386
-1	(30.6)	59.5	-1	(22.3)	10414
-2	(61.2)	58.8	-2	(44.6)	10442
-3	(91.8)	58.0	-3	(66.9)	10469
-4	(122.4)	57.2	-4	(89.2)	10497
-5	(153.0)	56.5	-5	(111.5)	10525
-6	(183.6)	55.7	-6	(133.8)	10553
-7	(214.2)	54.9	-7	(156.1)	10581
-8	(244.8)	54.1	-8	(178.4)	10608
-9	(275.4)	53.4	-9	(200.7)	10636
-10	(306.0)	52.6	-10	(223.0)	10664

← EAF POINTS -6.494	Adjusted EAF 55.3 →	← AHR POINTS -2.266	Adjusted Actual ANOHR 10449 →
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Weighting Factor =	6.73%	Weighting Factor =	8.54%
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TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE
OCTOBER 1998 - DECEMBER 1998
BIG BEND 2

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	169.2	88.3	+10	304.0	9948
+9	152.3	88.0	+9	273.6	9977
+8	135.4	87.7	+8	243.2	10006
+7	118.4	87.4	+7	212.8	10034
+6	101.5	87.1	+6	182.4	10063
+5	84.6	86.9	+5	152.0	10092
+4	67.7	86.6	+4	121.6	10121
+3	50.8	86.3	+3	91.2	10150
+2	33.8	86.0	+2	60.8	10178
+1	16.9	85.7	+1	30.4	10207
0	0.0	85.4	0	0.0	10236
-1	(27.1)	84.8	-1	(30.4)	10311
-2	(54.3)	84.2	-2	(60.8)	10386
-3	(81.4)	83.7	-3	(91.2)	10415
-4	(108.5)	83.1	-4	(121.6)	10444
-5	(135.7)	82.5	-5	(152.0)	10472
-6	(162.8)	81.9	-6	(182.4)	10501
-7	(189.9)	81.3	-7	(212.8)	10530
-8	(217.0)	80.8	-8	(243.2)	10559
-9	(244.2)	80.2	-9	(273.6)	10588
-10	(271.3)	79.6	-10	(304.0)	10616
					10645
					10674

← EAF POINTS -10.000	Adjusted EAF 76.9% →	← AHR POINTS 0.000	Adjusted Actual ANOHR 10300 →
Weighting Factor =	6.48%	Weighting Factor =	11.65%

TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE
OCTOBER 1998 - DECEMBER 1998

BIG BEND 3

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	237.3	85.5	+10	369.0	9664
+9	213.6	85.1	+9	332.1	9695
+8	189.8	84.8	+8	295.2	9726
+7	166.1	84.4	+7	258.3	9758
+6	142.4	84.1	+6	221.4	9789
+5	118.7	83.7	+5	184.5	9820
+4	94.9	83.3	+4	147.6	9851
+3	71.2	83.0	+3	110.7	9882
+2	47.5	82.6	+2	73.8	9914
+1	23.7	82.3	+1	36.9	9945
0	0.0	81.9	0	0.0	9976
-1	(42.1)	81.2	-1	(36.9)	10051
-2	(84.1)	80.5	-2	(73.8)	10126
-3	(126.2)	79.7	-3	(110.7)	10157
-4	(168.2)	79.0	-4	(147.6)	10188
-5	(210.3)	78.3	-5	(184.5)	10220
-6	(252.3)	77.6	-6	(221.4)	10251
-7	(294.4)	76.9	-7	(258.3)	10282
-8	(336.4)	76.1	-8	(295.2)	10344
-9	(378.5)	75.4	-9	(332.1)	10376
-10	(420.5)	74.7	-10	(369.0)	10407
					10438

<div style="border: 1px solid black; padding: 2px; display: inline-block;">EAF POINTS 3.194</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Adjusted EAF 79.6%</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">AHR POINTS 0.288</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Adjusted Actual ANOHR 9967</div>
Weighting Factor =	9.09%	Weighting Factor =	14.14%

TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1998 - DECEMBER 1998

BIG BEND 4

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) (\$ X 1000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	108.6	72.3	+10	218.0	9702
+9	97.7	72.0	+9	196.2	9719
+8	86.9	71.8	+8	174.4	9736
+7	76.0	71.5	+7	152.6	9752
+6	65.2	71.2	+6	130.8	9769
+5	54.3	71.0	+5	109.0	9786
+4	43.4	70.7	+4	87.2	9803
+3	32.6	70.4	+3	65.4	9820
+2	21.7	70.1	+2	43.6	9836
+1	10.9	69.9	+1	21.8	9853
0	0.0	69.6	0	0.0	9870
				0.0	9945
-1	(32.6)	69.1	-1	(21.8)	10037
-2	(65.1)	68.5	-2	(43.6)	10054
-3	(97.7)	68.0	-3	(65.4)	10070
-4	(130.2)	67.5	-4	(87.2)	10087
-5	(162.8)	67.0	-5	(109.0)	10104
-6	(195.4)	66.4	-6	(130.8)	10121
-7	(227.9)	65.9	-7	(152.6)	10138
-8	(260.5)	65.4	-8	(174.4)	10154
-9	(293.0)	64.8	-9	(196.2)	10171
-10	(325.6)	64.3	-10	(218.0)	10188

← EAF POINTS -10.000	Adjusted EAF 63.5% →	← AHR POINTS 10.000	Adjusted Actual ANOHR 9694 →
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Weighting Factor =	4.16%	Weighting Factor =	8.34%
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TAMPA ELECTRIC COMPANY

COMPARISON OF GPIF TARGETS VS. PRIOR PERIOD ACTUAL PERFORMANCE

OCTOBER 1998 - DECEMBER 1998

AVAILABILITY

<u>PLANT/UNIT</u>	<u>TARGET WEIGHTING FACTOR</u>	<u>NORMALIZED WEIGHTING FACTOR</u>	<u>TARGET PERIOD OCT 98 - DEC 98</u>			<u>ACTUAL PERFORMANCE OCT 98 - DEC 98</u>		
			<u>POF</u>	<u>EUOF</u>	<u>EUOR</u>	<u>POF</u>	<u>EUOF</u>	<u>EUOR</u>
BIG BEND 1	6.73%	18.3	27.4	12.3	17.0	27.2	17.3	23.8
BIG BEND 2	6.48%	17.6	0.0	14.6	14.6	0.0	23.2	23.2
BIG BEND 3	9.09%	24.7	0.0	18.1	18.1	0.0	20.5	20.5
BIG BEND 4	4.16%	11.3	22.8	7.6	9.8	25.2	13.2	17.7
GANNON 5	4.17%	11.3	15.2	18.6	21.9	26.1	11.6	15.7
GANNON 6	<u>6.13%</u>	<u>16.7</u>	<u>0.0</u>	<u>17.4</u>	<u>17.4</u>	<u>0.0</u>	<u>31.4</u>	<u>31.4</u>
	36.76%	100.0						
GPIF SYSTEM WEIGHTED AVERAGE			9.3	15.2	16.6	10.8	20.4	22.5
GPIF SYSTEM WEIGHTED EQUIVALENT AVAILABILITY			<u>75.5</u>			<u>68.8</u>		
			<u>5 PERIOD AVERAGE</u>			<u>5 PERIOD AVERAGE</u>		
			<u>POF</u>	<u>EUOF</u>	<u>EUOR</u>	<u>EAF</u>		
			9.3	12	13.4	71.5		

AVERAGE NET OPERATING HEAT RATE (Btu/kwh)

<u>PLANT/UNIT</u>	<u>TARGET WEIGHTING FACTOR</u>	<u>NORMALIZED WEIGHTING FACTOR</u>	<u>HEAT RATE TARGET</u>	<u>ACTUAL HEAT RATE OCT 98 - DEC 98</u>
GANNON 5	8.81%	13.9	10242	10166
GANNON 6	11.76%	18.6	10453	10399
BIG BEND 1	8.54%	13.5	10311	10487
BIG BEND 2	11.65%	18.4	10311	10335
BIG BEND 3	14.14%	22.4	10051	10231
BIG BEND 4	<u>8.34%</u>	<u>13.2</u>	<u>9945</u>	<u>9794</u>
	63.24%	100.0		
GPIF SYSTEM WEIGHTED AVERAGE HEAT RATE (Btu/kwh)			10221	10249

**TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS CALCULATION
OCTOBER 1998 - DECEMBER 1998**

Points are calculated according to the formula:

$$\text{GPIP} = \sum_{i=1}^n [(a_i) (\text{EAP}_i) + (e_i) (\text{AHRP}_i)]$$

Where:

$i=1,n$

a = Unit equivalent availability weighting factor

EAP = Unit equivalent availability points

e = Station average heat rate weighting factor

AHRP = Station average heat rate points

Weighting factors and point values are listed in separate tables.

GPIP =	4.17%	*	(GN 5 EAP)	+	6.13%	*	(GN 6 EAP)	+	6.73%	*	(BB 1 EAP)		
	+		6.48%	*	(BB 2 EAP)	+	9.09%	*	(BB 3 EAP)	+	4.16%	*	(BB 4 EAP)
	+		8.81%	*	(GN 5 AHRP)	+	11.76%	*	(GN 6 AHRP)	+	8.54%	*	(BB 1 AHRP)
	+		11.65%	*	(BB 2 AHRP)	+	14.14%	*	(BB 3 AHRP)	+	8.34%	*	(BB 4 AHRP)

GPIP =	4.17%	*	10.000	+	6.13%	*	-10.000	+	6.73%	*	-6.494		
	+		6.48%	*	-10.000	+	9.09%	*	-3.194	+	4.16%	*	-10.000
	+		8.81%	*	5.586	+	11.76%	*	3.541	+	8.54%	*	-2.266
	+		11.65%	*	0.000	+	14.14%	*	0.288	+	8.34%	*	10.000

GPIP =	0.417	+	-0.613	+	-0.437	+	-0.648		
	+		-0.290	+	-0.416	+	0.492	+	0.416
	+		-0.194	+	0.000	+	0.041	+	0.834

GPIP = -0.398 POINTS

REWARD/PENALTY dollar amounts of the Generating Performance Incentive Factor (GPIF) are determined directly from the table for the corresponding Generating Performance Points (GPIP) - see page 2.

GPIP = (\$46,977)