ORIGINAL

TAMPA ELECTRIC COMPANY
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(TRUE-UP)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREPARED DIRECT TESTIMONY

OF

GEORGE A. KESELOWSKY

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

A. My name is George A. Keselowsky 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 graduated in 1972 from the University of South Florida with a Bachelor of Science Degree in Mechanical Engineering. I have been employed by Tampa Electric Company in various engineering positions since that time. My current position is that of Senior Consulting Engineer - Energy Supply Engineering.

Q. What are your current responsibilities?

A. I am responsible for testing and reporting unit performance, and the compilation and reporting of generation statistics.

Q. What is the purpose of your testimony?

A. My testimony presents the actual performance results from unit equivalent availability and station heat rate used to determine the Generating Performance Incentive Factor (GPIF) for the period October 1997 through March 1998. I will also compare these results to the targets established prior to the beginning of the period.

Q. Have you prepared an exhibit with the results for this six month period?

A. Yes. Under my direction and supervision and exhibit has been prepared entitled, "Tampa Electric Company, October 1997 - March 1998, Generating Performance Incentive Factor Results" consisting of 28 pages that was filed with this testimony (Have identified as Exhibit GAK-1).

Commission on the Actual Unit Performance data form. Additionally, outage information is reported to the Commission on a monthly basis. A summary of this data for the six months provides the basis for the GPIF.

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

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

<u>Gannon Unit No. 5</u>

On this unit, 504 planned outage hours were originally scheduled to fall within the Winter 1997 period. Due to a reprioritization of the outage schedule additional work was moved forward and accomplished in this period. Consequently, the actual equivalent availability of 53.6% is adjusted to 63.5% as shown on page 7 of my exhibit.

Gannon Unit No. 6

On this unit, 48 planned outage hours were originally scheduled to fall within the Winter 1997 period. Due to a revision of the outage schedule, this work was moved forward to fall completely within the period, and 582.5 planned outage hours fell within the period. Consequently, the actual equivalent availability of 63.7% is adjusted to 72.6%, as shown on page 8 of my exhibit.

Big Bend Unit No. 1

On this unit 336 planned outage hours were originally scheduled to fall within the Winter 1997 period. Due to a revision of the outage schedule no planned outage hours fell within the period. Consequently, the actual equivalent availability of 82.7% is adjusted to 76.3% as shown on page 9 of my exhibit.

Big Bend Unit No. 2

On this unit 336 planned outage hours were originally scheduled to fall within the Winter 1997 period. Due to a revision of the outage schedule, 248.5 planned outage hours fell within the period. Consequently, the actual equivalent availability of 77.3% is adjusted to 75.7% as shown on page 10 of my exhibit.

Big Bend Unit No. 3

On this unit 504 planned outage hours were originally scheduled to fall within the Winter 1997 period. Due to a revision of the outage schedule, outage activities were moved forward and accomplished prior to the period, and no planned outage hours fell within the period. Consequently, the actual equivalent availability of 80.5% is adjusted to 71.2% as shown on page 11 of my exhibit.

Big Bend Unit No. 4

On this unit 504 planned outage hours were scheduled to fall within the Winter 1997 period. Due to a revision of the outage schedule the outage was moved to occur after the end of the period. Consequently, the actual equivalent availability of 92.3% is adjusted to 81.5% as shown on page 12 of my exhibit.

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

A. The final adjusted equivalent availabilities for each unit are shown on page 6, column 4, of my exhibit. This number is entered into the respective Generating Performance Incentive Point (GPIP) Table for each particular unit on pages 21 through 26. Page 4 of my exhibit summarizes the

equivalent availability points to be awarded or penalized.

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

A. The actual heat rate and adjusted actual heat rate for Gannon and Big Bend Station are shown on page 6 of my exhibit. The adjustment was developed based on the guidelines of section 4.3.16 of the GPIF Manual. This procedure is further defined by a letter dated October 23, 1981, from Mr. J.H. Hoffsis of the FPSC Staff. The final adjusted actual heat rates are also shown on page 5 of my exhibit. This heat rate number is entered into the respective GPIP table for the particular unit, shown on pages 21 through 26. Page 4 of my exhibit summarizes the weighted heat rate and equivalent availability points to be awarded.

Q. Were any additional adjustments to heat rate required?

A. In order to assure compatibility of data, Big Bend Unit 3 heat rates have been calculated in the standard fashion, without scrubber power. This methodology has been reviewed and approved by the PSC staff, to be employed until there is sufficient operational history with the

scrubber to meet target preparation guidelines.

Q. Does this assure that the Big Bend 3 heat rate for the period is appropriate for comparison to its target and meets GPIF criteria?

A. Yes.

Q. What is the overall GPIP for Tampa Electric Company during this six month period?

A. This is shown on page 28 of my exhibit. Essentially, the weighting factors shown on page 4, column 3, plus the equivalent availability points and the heat rate points shown on page 4, column 4, are substituted within the equation. This resultant value, -0.911, is then entered into the GPIF table on page 2. Using linear interpolation, a penalty amount of $188,281 is calculated.

Q. Does this conclude your testimony?

A. Yes, it does.

TAMPA ELECTRIC COMPANY
OCTOBER 1997 - MARCH 1998
GENERATING PERFORMANCE INCENTIVE FACTOR
RESULTS
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TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS TABLE
REWARD / PENALTY TABLE - ACTUAL
OCTOBER 1997 - MARCH 1998

ORGINAL SHEET NO. 7.401.98A

GENERATING PERFORMANCE INCENTIVE POINTS (GPIP)	FUEL SAVINGS / (LOSS) ($000)	GENERATING PERFORMANCE INCENTIVE FACTOR ($000)
+10	4,133.5	2,066.8
+9	3,720.2	1,860.1
+8	3,306.8	1,653.4
+7	2,893.5	1,446.7
+6	2,480.1	1,240.1
+5	2,066.8	1,033.4
+4	1,653.4	826.7
+3	1,240.1	620.0
+2	826.7	413.4
+1	413.4	206.7
0	0	0.0
-1	(478.5)	(206.7)
-2	(957.0)	(413.4)
-3	(1,435.5)	(620.0)
-4	(1,914.0)	(826.7)
-5	(2,392.5)	(1,033.4)
-6	(2,870.9)	(1,240.1)
-7	(3,349.4)	(1,446.7)
-8	(3,827.9)	(1,653.4)
-9	(4,306.4)	(1,860.1)
-10	(4,784.9)	(2,066.8)

GPIP Points -0.911

REWARD DOLLARS ($188,281)

TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE FACTOR
CALCULATION OF MAXIMUM ALLOWED INCENTIVE DOLLARS
ACTUAL
OCTOBER 1997 - MARCH 1998

Line 1	Beginning of period balance of common equity end of month common equity:			$1,147,458,353
Line 2	Month of	October	1997	$1,104,883,367
Line 3	Month of	November	1997	$1,112,449,896
Line 4	Month of	December	1997	$1,116,888,102
Line 5	Month of	January	1998	$1,094,346,890
Line 6	Month of	February	1998	$1,143,775,590
Line 7	Month of	March	1998	$1,145,671,810
Line 8	(summation of line 1 through line 7 divided by 7)			$1,123,610,573
Line 9	25 Basis points			0.0025
Line 10	Revenue expansion factor			61.3738%
Line 11	Maximum allowed incentive Dollars (Line 8 times line 9 divided by line 10 times 0.5)			$2,288,457
Line 12	Jurisdictional Sales			697[illegible]189 MWH
Line 13	Total Sales			7019436 MWH
Line 14	Jurisdictional Seperation Factor (Line 12 divided by line 13)			99.34%
Line 15	Maximum Allowed Jurisdictional Incentive Dollars (Line 11 times line 14)			$2,273,380

TAMPA ELECTRIC COMPANY
CALCULATION OF SYSTEM GPIF POINTS
OCTOBER 1997 - MARCH 1998
ACTUAL

PLANT/UNIT	6 MO ADJ ACTUAL PERFORMANCE	WEIGHTING FACTOR %	UNIT POINTS	WEIGHTED UNIT POINTS
GANNON 5	63.5% EAF	1.46%	-10.000	-0.146
GANNON 6	72.6% EAF	1.01%	-10.000	-0.101
BIG BEND 1	76.3% EAF	4.16%	-5.005	-0.208
BIG BEND 2	75.7% EAF	5.22%	-6.945	-0.363
BIG BEND 3	71.2% EAF	7.98%	-4.256	-0.340
BIG BEND 4	81.5% EAF	3.98%	2.000	0.080
GANNON 5	10604 ANOHR	7.40%	-4.763	-0.352
GANNON 6	10453 ANOHR	11.85%	5.157	0.611
BIG BEND 1	9998 ANOHR	10.67%	0.679	0.072
BIG BEND 2	9993 ANOHR	16.14%	0.000	0.000
BIG BEND 3	9786 ANOHR	15.22%	-1.080	-0.164
BIG BEND 4	10011 ANOHR	14.91%	0.000	0.000
				-0.911

GPIF REWARD	($188,281)

TAMPA ELECTRIC COMPANY

GPIF TARGET AND RANGE SUMMARY

OCTOBER 1997 - MARCH 1998

EQUIVALENT AVAILABILITY

PLANT/UNIT	WEIGHTING FACTOR (%)	EAF TARGET (%)	EAF RANGE MAX. (%)	EAF RANGE MIN. (%)	MAX. FUEL SAVINGS ($000)	MAX. FUEL LOSS ($000)	EAF ADJUSTED ACTUAL %	ACTUAL FUEL SAVINGS/ LOSS ($000)
GANNON 5	1.46%	77.3	80.1	71.7	60.3	(115.4)	63.5%	(115.4)
GANNON 6	1.01%	88.4	90.6	84.2	41.8	(106.4)	72.6%	(106.4)
BIG BEND 1	4.16%	79.3	82.3	73.3	172.1	(379.0)	76.3%	(189.7)
BIG BEND 2	5.22%	79.7	82.6	73.9	215.7	(360.7)	75.7%	(250.5)
BIG BEND 3	7.98%	74.1	77.6	67.3	330.0	(311.5)	71.2%	(132.6)
BIG BEND 4	3.98%	81.1	83.2	77.1	164.6	(362.9)	81.5%	32.9
GPIF SYSTEM	23.81%				984.5	(1,635.9)		

AVERAGE NET OPERATING HEAT RATE FOR GPIF COAL GENERATING UNITS

PLANT/UNIT	WEIGHTING FACTOR (%)	ANOHR Btu/kwh	TARGET NOF	ANOHR TARGET RANGE MIN.	ANOHR TARGET RANGE MAX.	MAX. FUEL SAVINGS ($000)	MAX. FUEL LOSS ($000)	ACTUAL ADJUSTED ANOHR	ACTUAL FUEL SAVINGS/ LOSS ($000)
GANNON 5	7.40%	10378	69.1	9986	10770	306.0	(306.0)	10604	(145.8)
GANNON 6	11.85%	10692	66.3	10299	11085	490.0	(490.0)	10453	0.0
BIG BEND 1	10.67%	10084	80.9	9847	10321	441.0	(441.0)	9998	29.9
BIG BEND 2	16.14%	9961	93.6	9616	10306	667.0	(667.0)	9993	0.0
BIG BEND 3	15.22%	9680	91.6	9318	10042	629.0	(629.0)	9786	(67.9)
BIG BEND 4	14.91%	10025	86.3	9710	10340	616.0	(616.0)	10011	0.0
GPIF SYSTEM	76.19%					3,149.0	(3,149.0)		

TAMPA ELECTRIC COMPANY
ACTUAL UNIT PERFORMANCE DATA
OCTOBER 1997 - MARCH 1998

PLANT / UNIT	ACTUAL EAF %	ADJUSTMENTS (1) EAF %	EAF ADJUSTED ACTUAL %
GANNON 5	53.6	9.9	63.5
GANNON 6	63.6	9.0	72.6
BIG BEND 1	82.7	-6.4	76.3
BIG BEND 2	77.3	-1.6	75.7
BIG BEND 3	80.4	-9.2	71.2
BIG BEND 4	92.2	-10.7	81.5

PLANT / UNIT	ACTUAL ANOHR Btu/kwh	ADJUSTMENTS (1) TO ANOHR Btu/kwh	ANOHR ADJUSTED ACTUAL Btu/kwh
GANNON 5	10759	-155	10604
GANNON 6	10472	-19	10453
BIG BEND 1	10083	-85	9998
BIG BEND 2	10103	-110	9993
BIG BEND 3	10069	-283	9786
BIG BEND 4	10025	-14	10011

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

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

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
GANNON UNIT NO. 5
OCTOBER 1997 - MARCH 1998

WEIGHTING FACTOR = 1.46%

	6 MO. TARGET	6 MO. ACTUAL PERFORMANCE	ADJUSTED ACTUAL PERFORMANCE
P.H.	4369.0	4369.0	4369.0
E.A.F.	77.3	53.6	63.5
P.O.H.	504.0	1105.3	504.0
F.O.H. + E.F.O.H	386.0	831.3	984.5
M.O.H. + E.M.O.H	100.0	90.2	106.8
P.O.F.	11.5	25.3	11.5
E.F.O.F.	8.8	19.0	22.5
E.M.O.F.	2.3	2.1	2.4

-10.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

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

$$\frac{4369 - 504}{4369 - 1105} \times (183.5 + 647.8 + 84.2 + 6.0) = 1091.3$$

$$\frac{504 + 1091}{4369} \times 100 = 36.5$$

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
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 1997 - MARCH 1998

WEIGHTING FACTOR = 1.01%

	6 MO. TARGET	6 MO. ACTUAL PERFORMANCE	ADJUSTED ACTUAL PERFORMANCE
P.H.	4369.0	4369.0	4369.0
E.A.F.	88.4	63.7	72.6
P.O.H.	48.0	582.5	48.0
F.O.H. + E.F.O.H	238.0	867.2	589.6
M.O.H. + E.M.O.H	220.0	139.0	158.6
P.O.F.	1.1	13.3	1.1
E.F.O.F.	5.4	19.8	22.7
E.M.O.F.	5.0	3.2	3.6

-10.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

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

$$\frac{4369 - 48}{4369 - 583} \times (244.0 + 623.2 + 94.6 + 44.4) = 1148.2$$

$$\frac{48 + 1148}{4369} \times 100 = 27.4$$

100.0 - 27.4 = 72.6

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

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 1
OCTOBER 1997 - MARCH 1998

WEIGHTING FACTOR = 4.16%

	6 MO. TARGET	6 MO. ACTUAL PERFORMANCE	ADJUSTED ACTUAL PERFORMANCE
P.H.	4369.0	4369.0	4369.0
E.A.F.	79.3	82.7	76.3
P.O.H.	336.0	0.0	336.0
F.O.H. + E.F.O.H	400.0	394.7	364.3
M.O.H. + E.M.O.H	168.0	363.0	335.1
P.O.F.	7.7	0.0	7.7
E.F.O.F.	9.2	9.0	8.3
E.M.O.F.	3.8	8.3	7.7

-5.005 E. A. POINTS

ADJUSTMENTS TO E.A.F.

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

$$\frac{4369 - 336}{4369 - 0} \times (165.4 + 229.3 + 266.3 + 96.7) = 699.4$$

$$\frac{336 + 699}{4369} \times 100 = 23.7$$

100.0 - 23.7 = 76.3

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

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 2
OCTOBER 1997 - MARCH 1998

WEIGHTING FACTOR = 5.22%

	6 MO. TARGET	6 MO. ACTUAL PERFORMANCE	ADJUSTED ACTUAL PERFORMANCE
P.H.	4369.0	4369.0	4369.0
E.A.F.	79.7	77.3	75.7
P.O.H.	336.0	248.5	336.0
F.O.H. + E.F.O.H	353.0	456.6	446.9
M.O.H. + E.M.O.H	196.0	285.5	279.4
P.O.F.	7.7	5.7	7.7
E.F.O.F.	8.1	10.5	10.2
E.M.O.F.	4.5	6.5	6.4

-6.945 E. A. POINTS

ADJUSTMENTS TO E.A.F.

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

$$\frac{4369 - 336}{4369 - 249} \times (157.2 + 299.4 + 215.7 + 69.8) = 726.3$$

$$\frac{336 + 726}{4369} \times 100 = 24.3$$

100.0 - 24.3 = 75.7

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

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 3
OCTOBER 1997 - MARCH 1998

WEIGHTING FACTOR = 7.98%

	6 MO. TARGET	6 MO. ACTUAL PERFORMANCE	ADJUSTED ACTUAL PERFORMANCE
P.H.	4369.0	4369.0	4369.0
E.A.F.	74.1	80.5	71.2
P.O.H.	504.0	0.0	504.0
F.O.H. + E.F.O.H	472.0	503.0	445.0
M.O.H. + E.M.O.H	156.0	351.5	311.0
P.O.F.	11.5	0.0	11.5
E.F.O.F.	10.8	11.5	10.2
E.M.O.F.	3.6	8.0	7.1

-4.256 E. A. POINTS

ADJUSTMENTS TO E.A.F.

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

$$\frac{4369 - 504}{4369 - 0} \times (126.1 + 376.9 + 227.2 + 124.3) = 755.9$$

$$\frac{504 + 756}{4369} \times 100 = 28.8$$

$$100.0 - 28.8 = 71.2$$

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

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO PERFORMANCE
BIG BEND UNIT NO. 4
OCTOBER 1997 - MARCH 1998

WEIGHTING FACTOR = 3.98%

	6 MO. TARGET	6 MO. ACTUAL PERFORMANCE	ADJUSTED ACTUAL PERFORMANCE
P.H.	4369.0	4369.0	4369.0
E.A.F.	81.1	92.3	81.5
P.O.H.	504.0	0.0	504.0
F.O.H. + E.F.O.H	167.0	161.9	143.2
M.O.H. + E.M.O.H	155.0	180.9	160.0
P.O.F.	11.5	0.0	11.5
E.F.O.F.	3.8	3.7	3.3
E.M.O.F.	3.5	4.1	3.7

2.000 E. A. POINTS

ADJUSTMENTS TO E.A.F.

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

$$\frac{4369 - 504}{4369 - 0} \times (83.9 + 78.0 + 76.7 + 104.2) = 303.3$$

$$\frac{504 + 303}{4369} \times 100 = 18.5$$

100.0 - 18.5 = 81.5

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

TAMPA ELECTRIC COMPANY
ADJUSTMENTS TO HEAT RATE
GANNON UNIT NO. 5
HEAT RATE DATA
OCTOBER 1997 - MARCH 1998

WEIGHTING FACTOR = 7.40%

	6 MO. TARGET	6 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	10378	10759
STA. NET GEN. (GWH)	571.3	402.3
OPER. Btu (10^9 btu)	5928.868	4328.681
NET OUTPUT FACTOR	69.1	60.8

-4.763 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-18.7056) + 11670.7 = ANOHR

60.8	(-18.7056) + 11670.7 =			10533
10759	-	10533	=	226
10378	+	226	=	10604

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 1997 - MARCH 1998

WEIGHTING FACTOR = 11.85%

	6 MO. TARGET	6 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	10692	10472
STA. NET GEN. (GWH)	1024.0	863.7
OPER. Btu (10^9 btu)	10949.495	9044.303
NET OUTPUT FACTOR	66.3	65.3

5.157 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-18.7199) + 11933.6 = ANOHR

65.3 (-18.7199) + 11933.6 = 10711

10472 - 10711 = -239

10692 + -239 = 10453

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 1997 - MARCH 1998

WEIGHTING FACTOR = 10.67%

	6 MO. TARGET	6 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	10084	10083
STA. NET GEN. (GWH)	1274.1	1309.1
OPER. Btu (10^9 btu)	12847.814	13199.430
NET OUTPUT FACTOR	80.9	77.1

0.679 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-22.4860) + 11903.0 = ANOHR

77.1 (-22.4860) + 11903.0 = 10169

10083 - 10169 = -86

10084 + -86 = 9998

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 1997 - MARCH 1998

WEIGHTING FACTOR = 16.14%

	6 MO. TARGET	6 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	9961	10103
STA. NET GEN. (GWH)	1316.0	1238.2
OPER. Btu (10^9 btu)	13108.591	12509.280
NET OUTPUT FACTOR	83.6	77.6

0.000 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-18.2305) + 11485.3 = ANOHR

77.6 (-18.2305) + 11485.3 = 10071

10103 - 10071 = 32

9961 + 32 = 9993

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 1997 - MARCH 1998

WEIGHTING FACTOR = 15.22%

	6 MO. TARGET	6 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	9680	10069
STA. NET GEN. (GWH)	1361.9	1334.7
OPER. Btu (10^9 btu)	13183.763	13439.760
NET OUTPUT FACTOR	91.6	75.9

-1.080 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-17.9962) + 11328.8 = ANOHR

75.9	(-17.9962) + 11328.8	=		9963
10069	-	9963	=	106
9680	+	106	=	9786

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 1997 - MARCH 1998

WEIGHTING FACTOR = 14.91%

	6 MO. TARGET	6 MO. TARGET	6 MO ACTUAL PERFORMANCE
ANOHR (Btu/kwh)	10025	10025	10025
STA. NET GEN. (GWH)	1422.3	1422.3	1583.5
OPER. Btu (10^9 btu)	14258.275	14258.275	15875.074
NET OUTPUT FACTOR	86.3	86.3	84.2

0.000 HEAT RATE POINTS

ADJUSTMENTS TO ACTUAL HEAT RATE FOR COMPARISON

CURRENT EQUATION NOF(-6.9608) + 10625.5 = ANOHR

84.2 (-6.9608) + 10625.5 = 10039

10025 - 10039 = -14

10025 + -14 = 10011

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

TAMPA ELECTRIC COMPANY

GPIF PLANNED OUTAGE SCHEDULE - ACTUAL

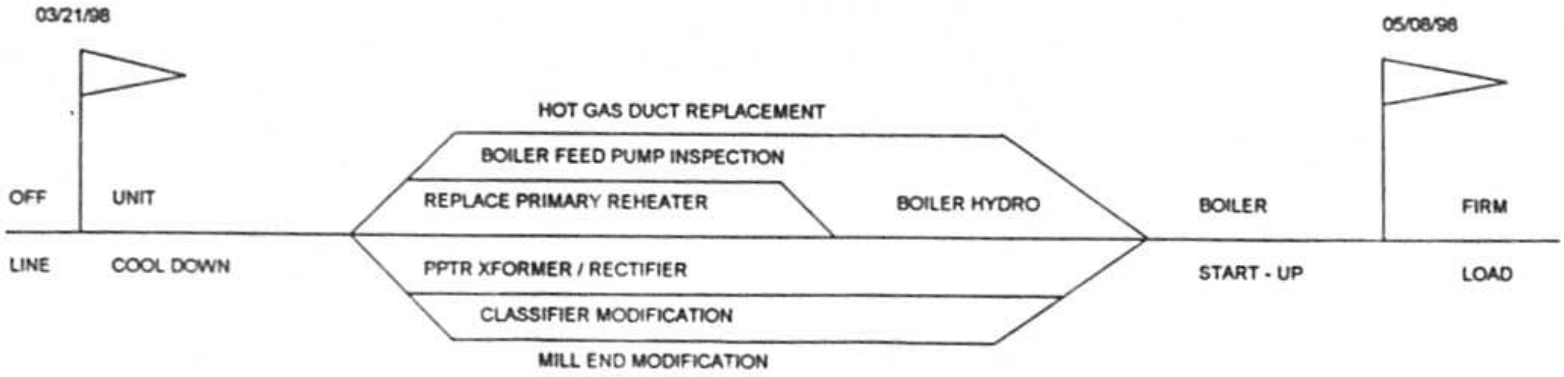
OCTOBER 1997 - MARCH 1998

STATION/UNIT	PLANNED OUTAGE DATES	OUTAGE REASON
GANNON 5	OCT 27 - DEC 12	BOILER FLOOR REPLACEMENT CLASSIFIER MODIFICATIONS
** GANNON 6	FEB 25 - MAR 21	REPAIR COLD GAS DUCT BOILER FEED PUMP INSPECTION
* BIG BEND 2	MAR 21 - MAY 8	REPLACE PRIMARY REHEATER BOILER FEED PUMP INSPECTION PPTR XFORMER/RECTIFIER CLASSIFIER MODIFICATION MILL END MODIFICATION HOT GAS DUCT REPLACEMENT

Milestone or Critical Path Charts of actual schedule are included on page 20.

*Start / End dates outside of GPIF period.

**Outage is conscise and a CPM was not required to outline events.



TAMPA ELECTRIC COMPANY
BIG BEND UNIT NUMBER 2
PLANNED OUTAGE 1998
ACTUAL CPM
04/01/98

TAMPA ELECTRIC COMPANY

GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1997 - MARCH 1998

GANNON 5

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	60.3	80.1	+10	306.0	9986
+9	54.3	79.8	+9	275.4	10018
+8	48.2	79.5	+8	244.8	10049
+7	42.2	79.3	+7	214.2	10081
+6	36.2	79.0	+6	183.6	10113
+5	30.2	78.7	+5	153.0	10145
+4	24.1	78.4	+4	122.4	10176
+3	18.1	78.1	+3	91.8	10208
+2	12.1	77.9	+2	61.2	10240
+1	6.0	77.6	+1	30.6	10271
				0.0	10303
0	0.0	77.3	0	0.0	10378
				0.0	10453
-1	(11.5)	76.7	-1	(30.6)	10485
-2	(23.1)	76.2	-2	(61.2)	10516
-3	(34.6)	75.6	-3	(91.8)	10548
-4	(46.2)	75.1	-4	(122.4)	10580
-5	(57.7)	74.5	-5	(153.0)	10612
-6	(69.2)	73.9	-6	(183.6)	10643
-7	(80.8)	73.4	-7	(214.2)	10675
-8	(92.3)	72.8	-8	(244.8)	10707
-9	(103.9)	72.3	-9	(275.4)	10738
-10	(115.4)	71.7	-10	(306.0)	10770

EAF POINTS -10.000 ← | **Adjusted EAF 63.5%** →

AHR POINTS -4.763 ← | **Adjusted Actual ANOHR 10604** →

Weighting Factor = 1.46%

Weighting Factor = 7.40%

TAMPA ELECTRIC COMPANY

GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1997 - MARCH 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	41.8	90.6	+10	490.0	10299
+9	37.6	90.4	+9	441.0	10331
+8	33.4	90.2	+8	392.0	10363
+7	29.3	89.9	+7	343.0	10394
+6	25.1	89.7	+6	294.0	10426
+5	20.9	89.5	+5	245.0	10458
+4	16.7	89.3	+4	196.0	10490
+3	12.5	89.1	+3	147.0	10522
+2	8.4	88.8	+2	98.0	10553
+1	4.2	88.6	+1	49.0	10585
				0.0	10617
0	0.0	88.4	0	0.0	10692
				0.0	10767
-1	(10.6)	88.0	-1	(49.0)	10799
-2	(21.3)	87.6	-2	(98.0)	10831
-3	(31.9)	87.1	-3	(147.0)	10862
-4	(42.6)	86.7	-4	(196.0)	10894
-5	(53.2)	86.3	-5	(245.0)	10926
-6	(63.8)	85.9	-6	(294.0)	10958
-7	(74.5)	85.5	-7	(343.0)	10990
-8	(85.1)	85.0	-8	(392.0)	11021
-9	(95.8)	84.6	-9	(441.0)	11053
-10	(106.4)	84.2	-10	(490.0)	11085

EAF POINTS -10.000

Adjusted EAF 72.6%

AHR POINTS 5.157

Adjusted Actual ANOHR 10453

Weighting Factor = 1.01%

Weighting Factor = 11.85%

TAMPA ELECTRIC COMPANY

GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1997 - MARCH 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	172.1	82.3	+10	441.0	9847
+9	154.9	82.0	+9	396.9	9863
+8	137.7	81.7	+8	352.8	9879
+7	120.5	81.4	+7	308.7	9896
+6	103.3	81.1	+6	264.6	9912
+5	86.1	80.8	+5	220.5	9928
+4	68.8	80.5	+4	176.4	9944
+3	51.6	80.2	+3	132.3	9960
+2	34.4	79.9	+2	88.2	9977
+1	17.2	79.6	+1	44.1	9993
				0.0	10009
0	0.0	79.3	0	0.0	10084
				0.0	10159
-1	(37.9)	78.7	-1	(44.1)	10175
-2	(75.8)	78.1	-2	(88.2)	10191
-3	(113.7)	77.5	-3	(132.3)	10208
-4	(151.6)	76.9	-4	(176.4)	10224
-5	(189.5)	76.3	-5	(220.5)	10240
-6	(227.4)	75.7	-6	(264.6)	10256
-7	(265.3)	75.1	-7	(308.7)	10272
-8	(303.2)	74.5	-8	(352.8)	10289
-9	(341.1)	73.9	-9	(396.9)	10305
-10	(379.0)	73.3	-10	(441.0)	10321

EAF POINTS -5.005

Adjusted EAF 76.3

AHR POINTS 0.679

Adjusted Actual ANOHR 9998

Weighting Factor = 4.16%

Weighting Factor = 10.67%

TAMPA ELECTRIC COMPANY

GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1997 - MARCH 1998

BIG BEND 2

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) ($ X 1000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY
+10	215.7	82.6
+9	194.1	82.3
+8	172.6	82.0
+7	151.0	81.7
+6	129.4	81.4
+5	107.9	81.2
+4	86.3	80.9
+3	64.7	80.6
+2	43.1	80.3
+1	21.6	80.0
0	0.0	79.7
-1	(36.1)	79.1
-2	(72.1)	78.5
-3	(108.2)	78.0
-4	(144.3)	77.4
-5	(180.4)	76.8
-6	(216.4)	76.2
-7	(252.5)	75.6
-8	(288.6)	75.1
-9	(324.6)	74.5
-10	(360.7)	73.9

EAF POINTS -6.945

Adjusted EAF 75.7%

Weighting Factor = 5.22%

AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) ($ X 1000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	667.0	9616
+9	600.3	9643
+8	533.6	9670
+7	466.9	9697
+6	400.2	9724
+5	333.5	9751
+4	266.8	9778
+3	200.1	9805
+2	133.4	9832
+1	66.7	9859
0	0.0 0.0 0.0	9886 9961 10036
-1	(66.7)	10063
-2	(133.4)	10090
-3	(200.1)	10117
-4	(266.8)	10144
-5	(333.5)	10171
-6	(400.2)	10198
-7	(466.9)	10225
-8	(533.6)	10252
-9	(600.3)	10279
-10	(667.0)	10306

AHR POINTS 0.000

Adjusted Actual ANOHR 9993

Weighting Factor = 16.14%

TAMPA ELECTRIC COMPANY

GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1997 - MARCH 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	330 0	77 6	+10	629 0	9318
+9	297 0	77 3	+9	566 1	9347
+8	264 0	76 9	+8	503 2	9375
+7	231 0	76 6	+7	440 3	9404
+6	198 0	76 2	+6	377 4	9433
+5	165 0	75 9	+5	314 5	9462
+4	132 0	75 5	+4	251 6	9490
+3	99 0	75 2	+3	188 7	9519
+2	66 0	74 8	+2	125 8	9548
+1	33 0	74 5	+1	62 9	9576
				0 0	9605
0	0 0	74 1	0	0 0	9680
				0 0	9755
-1	(31 2)	73 4	-1	(62 9)	9784
-2	(62 3)	72 7	-2	(125 8)	9812
-3	(93 5)	72 1	-3	(188 7)	9841
-4	(124 6)	71 4	-4	(251 6)	9870
-5	(155 8)	70 7	-5	(314 5)	9899
-6	(186 9)	70 0	-6	(377 4)	9927
-7	(218 1)	69 3	-7	(440 3)	9956
-8	(249 2)	68 7	-8	(503 2)	9985
-9	(280 4)	68 0	-9	(566 1)	10013
-10	(311 5)	67 3	-10	(629 0)	10042

EAF POINTS -4.256 ←

→ **Adjusted EAF 71.2%**

← **AHR POINTS -1.080**

→ **Adjusted Actual ANOHR 9786**

Weighting Factor = 7 98%

Weighting Factor = 15 22%

TAMPA ELECTRIC COMPANY

GENERATING PERFORMANCE INCENTIVE POINTS TABLE

OCTOBER 1997 - MARCH 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	164.6	83.2	+10	616.0	9710
+9	148.1	83.0	+9	554.4	9734
+8	131.7	82.8	+8	492.8	9758
+7	115.2	82.6	+7	431.2	9782
+6	98.8	82.4	+6	369.6	9806
+5	82.3	82.2	+5	308.0	9830
+4	65.8	81.9	+4	246.4	9854
+3	49.4	81.7	+3	184.8	9878
+2 ← EAF POINTS 2.000	32.9	Adjusted EAF 81.5% → 81.5	+2	123.2	9902
+1	16.5	81.3	+1	61.6	9926
				0.0	9950
0	0.0	81.1	0 ← AHR POINTS 0.000	0.0 → Adjusted Actual ANOHR 10011	10025
				0.0	10100
-1	(36.3)	80.7	-1	(61.6)	10124
-2	(72.6)	80.3	-2	(123.2)	10148
-3	(108.9)	79.9	-3	(184.8)	10172
-4	(145.2)	79.5	-4	(246.4)	10196
-5	(181.5)	79.1	-5	(308.0)	10220
-6	(217.7)	78.7	-6	(369.6)	10244
-7	(254.0)	78.3	-7	(431.2)	10268
-8	(290.3)	77.9	-8	(492.8)	10292
-9	(326.6)	77.5	-9	(554.4)	10316
-10	(362.9)	77.1	-10	(616.0)	10340
	Weighting Factor =	3.98%		Weighting Factor =	14.91%

TAMPA ELECTRIC COMPANY

COMPARISON OF GPIF TARGETS VS. PRIOR PERIOD ACTUAL PERFORMANCE

OCTOBER 1997 - MARCH 1998

AVAILABILITY

PLANT/UNIT	TARGET WEIGHTING FACTOR	NORMALIZED WEIGHTING FACTOR	TARGET PERIOD OCT 97 - MAR 98 POF	EUOF	EUOR	ACTUAL PERFORMANCE OCT 97 - MAR 98 POF	EUOF	EUOR
BIG BEND 1	4.16%	17.5	7.7	13.0	14.1	0.0	15.9	15.9
BIG BEND 2	5.22%	21.9	7.7	12.6	13.6	5.7	15.1	16.0
BIG BEND 3	7.98%	33.5	11.5	14.4	16.2	0.0	19.9	19.9
BIG BEND 4	3.98%	16.7	11.5	7.4	8.3	0.0	10.5	10.5
GANNON 5	1.46%	6.1	11.5	11.1	12.6	25.1	19.4	25.9
GANNON 6	1.01%	4.2	11.	10.5	10.6	13.1	22.7	26.2
	23.81%	100.0						
GPIF SYSTEM WEIGHTED AVERAGE			9.6	12.2	13.5	3.4	16.7	17.8
GPIF SYSTEM WEIGHTED EQUIVALENT AVAILABILITY				78.2			80.0	

5 PERIOD AVERAGE POF	EUOF	EUOR	5 PERIOD AVERAGE EAF
7.2	11.9	12.9	80.9

AVERAGE NET OPERATING HEAT RATE (Btu/kwh)

PLANT/UNIT	TARGET WEIGHTING FACTOR	NORMALIZED WEIGHTING FACTOR	HEAT RATE TARGET	ADJUSTED ACTUAL HEAT RATE APR 96 - SEP 97
GANNON 5	7.40%	9.7	10378	10759
GANNON 6	11.85%	15.6	10692	10472
BIG BEND 1	10.67%	14.0	10084	10081
BIG BEND 2	16.14%	21.2	9961	10101
BIG BEND 3	15.22%	20.0	9680	10069
BIG BEND 4	14.91%	19.6	10025	10025
	76.19%	100.0		
GPIF SYSTEM WEIGHTED AVERAGE HEAT RATE (Btu/kwh)			10089	10199

TARGET	BB1	BB2 BB3 BB4	GN5 GN6
EFOH	*****	353.0 **********	386.0 *****
EMOH	*****	196.0 **********	100.0 *****
PH	*****	4369.0 **********	4369.0 *****
EUOF	13.0	12.6 14.4 7.4	11.1 10.5
ACTUAL	BB1	BB2 BB3 BB4	GN5 GN6
EFOH	*****	436.6 **********	831.3 *****
EMOH	*****	204.2 **********	15.1 *****
PH	*****	4369.0 **********	4369.0 *****
EUOF	15.9	15.1 19.9 10.5	19.4 22.7

TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE POINTS CALCULATION
OCTOBER 1997 - MARCH 1998

Points are calculated according to the formula:

$$GPIP = \sum_{i}^{n} [(a_i)(EAP_i) + (e_i)(AHRP_i)$$

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 =	1.46%	*	(GN 5 EAP)	+	1.01%	*	(GN 6 EAP)	+	4.16%	*	(BB 1 EAP)
+	5.22%	*	(BB 2 EAP)	+	7.98%	*	(BB 3 EAP)	+	3.98%	*	(BB 4 EAP)
+	7.40%	*	(GN 5 AHRP)	+	11.85%	*	(GN 6 AHRP)	+	10.67%	*	(BB 1 AHRP)
+	16.14%	*	(BB 2 AHRP)	+	15.22%	*	(BB 3 AHRP)	+	14.91%	*	(BB 4 AHRP)

GPIP =	1.46%	*	-10.000	+	1.01%	*	-10.000	+	4.16%	*	-5.005
+	5.22%	*	-6.945	+	7.98%	*	-4.256	+	3.98%	*	2.000
+	7.40%	*	-4.763	+	11.85%	*	5.157	+	10.67%	*	0.679
+	16.14%	*	0.000	+	15.22%	*	-1.080	+	14.91%	*	0.000

GPIP =	-0.146	+	-0.101	+	-0.208	+	-0.363
+	-0.340	+	0.080	+	-0.352	+	0.611
+	0.072	+	0.000	+	-0.164	+	0.000

GPIP = -0.911 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 = ($188,281)