

ORIGINAL



BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 040001-EI
IN RE: FUEL & PURCHASED POWER COST RECOVERY
AND
CAPACITY COST RECOVERY

GENERATING PERFORMANCE INCENTIVE FACTOR
PROJECTIONS

JANUARY 2005 THROUGH DECEMBER 2005

TESTIMONY AND EXHIBIT

OF

DAVID R. KNAPP

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1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 PREPARED DIRECT TESTIMONY

3 OF

4 DAVID R. KNAPP

5
6 **Q.** Please state your name, business address, occupation and
7 employer.

8
9 **A.** My name is David R. Knapp. My mailing and business
10 address is 702 N. Franklin Street, Tampa, Florida 33602.
11 I am employed by Tampa Electric Company ("Tampa Electric"
12 or "company") as a Senior Engineer in the Resource
13 Planning Department.

14
15 **Q.** Please provide a brief outline of your educational
16 background and business experience.

17
18 **A.** I received a Bachelor of Marine Engineering degree in
19 1986 from the Maine Maritime Academy and a Master of
20 Business Administration from the University of Tampa in
21 2002. Prior to joining Tampa Electric, I worked in the
22 areas of operations engineering and management. In
23 January 1996, I joined Tampa Electric and worked in field
24 operations and power plant engineering. In April 2000, I
25 transferred to the Resource Planning department where I

1 provide engineering and technical support in the
2 development of Tampa Electric's integrated resource
3 planning process and business planning activities.
4

5 Q. What is the purpose of your testimony?

6

7 A. My testimony presents Tampa Electric's methodology for
8 determining the various factors required to compute the
9 Generating Performance Incentive Factor ("GPIF") as
10 ordered by the Commission.
11

11

12 Q. Have you prepared any exhibits to support your testimony?

13

14 A. Yes, Exhibit No. _____ (DRK-1), consisting of two
15 documents, was prepared under my direction and
16 supervision. Document No. 1 contains the GPIF schedules.
17 Document No. 2 is a summary of the GPIF targets for the
18 2005 period.
19

19

20 Q. Which generating units on Tampa Electric's system are
21 included in the determination of the GPIF?

22

23 A. Four of the company's coal-fired units and one integrated
24 gasification combined cycle unit are included. These are
25 Big Bend Station Units 1, 2, 3, and 4, and Polk Power

1 Station Unit 1.

2

3 **Q.** Do the exhibits you have prepared comply with Commission-
4 approved GPIF methodology?

5

6 **A.** Yes, the documents are consistent with the GPIF
7 Implementation Manual previously approved by the
8 Commission, with the exception of the criterion that the
9 company shall include generating units that will represent
10 not less than 80 percent of projected system net
11 generation.

12

13 **Q.** Why does Tampa Electric not include units that represent
14 80 percent of projected system net generation?

15

16 **A.** Due to the repowering of Gannon Units 5 and 6 to H. L.
17 Culbreath Bayside ("Bayside") Units 1 and 2, the remaining
18 GPIF units do not represent 80 percent of projected system
19 net generation. Although Bayside Units 1 and 2 began
20 commercial operation in 2003 and 2004, respectively, the
21 repowered units are not included in the GPIF calculations
22 because the company does not have the historical
23 operational data required by the GPIF Implementation
24 Manual to set GPIF targets. Tampa Electric has no other
25 base load generating units to substitute for Gannon Units

1 5 and 6. Section 3.2 of the GPIF Implementation Manual
2 states that the Commission will approve exclusion of units
3 from the calculation of the GPIF on a case-by-case basis,
4 and the Commission approved this exception for Tampa
5 Electric's 2003 and 2004 projected GPIF. Therefore, Tampa
6 Electric requests approval of its 2005 GPIF calculation
7 excluding the repowered units.
8

9 **Q.** Please describe how Tampa Electric developed the various
10 factors associated with the GPIF.
11

12 **A.** Targets were established for equivalent availability and
13 heat rate for each unit considered for the 2005 period. A
14 range of potential improvements and degradations was
15 determined for each of these parameters.
16

17 **Q.** How were the target values for unit availability
18 determined?
19

20 **A.** The Planned Outage Factor or POF and the Equivalent
21 Unplanned Outage Factor or EUOF were subtracted from 100
22 percent to determine the target Equivalent Availability
23 Factor or EAF. The factors for each of the five units
24 included within the GPIF are shown on page 5 of Document
25 No. 1.

1 To give an example for the 2005 period, the projected
2 Equivalent Unplanned Outage Factor for Big Bend Unit 4 is
3 17.48 percent, and the Planned Outage Factor is 3.84
4 percent. Therefore, the target equivalent availability
5 factor for Big Bend Unit 4 equals 78.68 percent or:

$$6 \quad 100\% - [(17.48\% + 3.84\%)] = 78.68\%$$

8
9 This is shown on page 4, column 3 of Document No. 1.

10
11 **Q.** How was the potential for unit availability improvement
12 determined?

13
14 **A.** Maximum equivalent availability is derived by using the
15 following formula:

$$16 \quad \text{EAF}_{\text{MAX}} = 100\% - [0.8 (\text{EUOF}_T) + 0.95 (\text{POF}_T)]$$

17
18
19 The factors included in the above equations are the same
20 factors that determine the target equivalent availability.
21 To determine the maximum incentive points, a 20 percent
22 reduction in Equivalent Forced Outage Factor or EUOF and
23 Equivalent Maintenance Outage Factor or EMOF, plus a five
24 percent reduction in the Planned Outage Factor are
25 necessary. Continuing with the Big Bend Unit 4 example:

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$$EAF_{MAX} = 100\% - [0.8 (17.48\%) + 0.95 (3.48\%)] = 82.4\%$$

This is shown on page 4, column 4 of Document No. 1.

Q. How was the potential for unit availability degradation determined?

A. The potential for unit availability degradation is significantly greater than the potential for unit availability improvement. This concept was discussed extensively during the development of the incentive. To incorporate this biased effect into the unit availability tables, Tampa Electric uses a potential degradation range equal to twice the potential improvement. Consequently, minimum equivalent availability is calculated using the following formula:

$$EAF_{MIN} = 100\% - [1.4 (EUOF_T) + 1.10 (POF_T)]$$

Again, continuing with the Big Bend Unit 4 example,

$$EAF_{MIN} = 100\% - [1.4 (17.48\%) + 1.10 (3.84\%)] = 71.31\%$$

The equivalent availability maximum and minimum for the other four units are computed in a similar manner.

1 Q. How did Tampa Electric determine the Planned Outage,
2 Maintenance Outage, and Forced Outage Factors?

3

4 A. The company's planned outages for January 2005 through
5 December 2005 are shown on page 17 of Document No. 1.
6 Since only one GPIF unit has a major outage (28 days or
7 greater) in 2005, one Critical Path Method diagram is
8 provided in this testimony. Planned Outage Factors are
9 calculated for each unit. For example, Big Bend Unit 4 is
10 scheduled for a planned outage from February 27, 2005 to
11 March 12, 2005. **There are 336 planned outage hours**
12 scheduled for the 2005 period, and a total of 8,760 hours
13 during this 12-month period. Consequently, the Planned
14 Outage Factor for Unit 4 at Big Bend is 3.84 percent or:

15

$$16 \quad \frac{336}{8,760} \times 100\% = 3.84\%$$

17

18

19 The factor for each unit is shown on pages 5 and 12
20 through 16 of Document No. 1. Big Bend Unit 1 has a
21 Planned Outage Factor of 15.34 percent. **Big** Bend Unit 2
22 has a Planned Outage Factor of 3.84 percent. Big Bend 3
23 has a Planned Outage Factor of 3.84 percent. Polk Unit 1
24 has a Planned Outage Factor of 3.77 percent.

25

1 Q. How did you determine the Forced Outage and Maintenance
2 Outage Factors for each unit?

3
4 A. Graphs for both factors, adjusted for planned outages,
5 versus time were prepared. Monthly data and 12-month
6 rolling average data were recorded. For each unit the
7 most current 12-month ending value, June 2004, was used as
8 a basis for the projection. This value was adjusted by
9 analyzing trends and causes for recent forced and
10 maintenance outages. All projected factors are based upon
11 historical unit performance, engineering judgment, time
12 since last planned outage, and equipment performance
13 resulting in a forced or maintenance outage. These target
14 factors are additive and result in an Equivalent Unplanned
15 Outage Factor of 17.48 percent for Big Bend Unit 4. The
16 Equivalent Unplanned Outage Factor for Big Bend Unit 4 is
17 verified by the data shown on page 15, lines 3, 5, 10 and
18 11 of Document No. 1 and calculated using the following
19 formula:

$$\text{EUOF} = \frac{(\text{EFOH} + \text{EMOH})}{\text{Period Hours}} \times 100$$

22
23 Or

$$\text{EUOF} = \frac{(994.1 + 537.1)}{8,760} \times 100 = 17.48\%$$

1 Relative to Big Bend Unit 4, the EUOF of 17.48 percent
2 forms the basis of the equivalent availability target
3 development as shown on pages 4 and 5 of Document No. 1.

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Big Bend Unit 1

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Big Bend Unit 2

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Big Bend Unit 3

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The projected Equivalent Unplanned Outage Factor for this unit is 35.61 percent. This unit will have a planned outage in 2005, and the Planned Outage Factor is 3.84 percent. Therefore, the target equivalent availability for this unit is 60.55 percent.

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Big Bend Unit 4

The projected Equivalent Unplanned Outage Factor for this unit is 17.48 percent. This unit will have a planned outage in 2005, and the Planned Outage Factor is 3.84 percent. Therefore, the target equivalent availability for this unit is 78.68 percent.

Polk Unit 1

The projected Equivalent Unplanned Outage Factor for this unit is 16.41 percent. This unit will have a planned outage in 2005, and the Planned Outage Factor is 3.77 percent. Therefore, the target equivalent availability for this unit is 79.76 percent.

Q. Please summarize your testimony regarding Equivalent Availability Factor.

A. The GPIF system weighted Equivalent Availability Factor of 68.54 percent is shown on Page 5 of Document No. 1. This target is approximately ten percent higher than the July 2003 through June 2004 GPIF period.

Q. Why are Forced and Maintenance Outage Factors adjusted for planned outage hours?

1 **A.** The adjustment makes the factors more accurate and
2 comparable. Obviously, a unit in a planned outage stage
3 or reserve shutdown stage will not incur a forced or
4 maintenance outage. Since the units in the GPIF are
5 usually base loaded, reserve shutdown is generally not a
6 factor.

7
8 To demonstrate the effects of a planned outage, note the
9 Equivalent Unplanned Outage Rate and Equivalent Unplanned
10 Outage Factor for Big Bend Unit 4 on page 15 of Document
11 No. 1. During January and the months April through
12 December, the Equivalent Unplanned Outage Rate and the
13 Equivalent Unplanned Outage Factor are equal. This is
14 because no planned outages are scheduled during these
15 months. During the months of February and March,
16 Equivalent Unplanned Outage Rate exceeds Equivalent
17 Unplanned Outage Factor due to the scheduling of a planned
18 outage. Therefore, the adjusted factors apply to the
19 period hours after the planned outage hours have been
20 extracted.

21
22 **Q.** Does this mean that both rate and factor data are used in
23 calculated data?

24
25 **A.** Yes. Rates provide a proper and accurate method of

1 determining the unit parameters, which are subsequently
2 converted to factors. Therefore,

3

4

$$\text{FOF} + \text{MOF} + \text{POF} + \text{EAF} = 100\%$$

5

6 Since factors are additive, they are easier to work with
7 and to understand.

8

9 **Q.** Has Tampa Electric prepared the necessary heat rate data
10 required for the determination of the GPIF?

11

12 **A.** Yes. Target heat rates as well as ranges of potential
13 operation have been developed as required.

14

15 **Q.** How were these targets determined?

16

17 **A.** Net heat rate data for the three most recent July through
18 June annual periods formed the basis of the target
19 development. The historical data and the target values
20 are analyzed to assure applicability to current conditions
21 of operation. This provides assurance that any periods of
22 abnormal operations or equipment modifications having
23 material effect on heat rate can be taken into
24 consideration.

25

1 Q. How were the ranges of heat rate improvement and heat rate
2 degradation determined?

3

4 A. The ranges were determined through analysis of historical
5 net heat rate and net output factor data. This is the
6 same data from which the net heat rate versus net output
7 factor curves have been developed for each unit. This
8 information is shown on pages 25 through 29 of Document
9 No. 1.

10

11 Q. Please elaborate on the analysis used in the determination
12 of the ranges.

13

14 A. The net heat rate versus net output factor curves are the
15 result of a first order curve fit to historical data. The
16 standard error of the estimate of this data was
17 determined, and a factor was applied to produce a band of
18 potential improvement and degradation. Both the curve fit
19 and the standard error of the estimate were performed by
20 computer program for each unit. These curves are also
21 used in post-period adjustments to actual heat rates to
22 account for unanticipated changes in unit dispatch.

23

24 Q. Please summarize your heat rate projection (Btu/Net kWh)
25 and the range about each target to allow for potential

1 improvement or degradation for the 2005 period.

2

3 **A.** The heat rate target for Big Bend Unit 1 is 10,853 Btu/Net
4 kWh. The range about this value, to allow for potential
5 improvement or degradation, is ± 529 Btu/Net kWh. The heat
6 rate target for Big Bend Unit 2 is 10,672 Btu/Net kWh with
7 a range of ± 421 Btu/Net kWh. The heat rate target for Big
8 Bend Unit 3 is 10,663 Btu/Net kWh, with a range of ± 657
9 Btu/Net kWh. The heat rate target for Big Bend Unit 4 is
10 10,350 Btu/Net kWh with a range of ± 483 Btu/Net kWh. The
11 heat rate target for Polk Unit 1 is 10,342 Btu/Net kWh
12 with a range of ± 718 Btu/Net kWh. A zone of tolerance of
13 ± 75 Btu/Net kWh is included within the range for each
14 target. This is shown on page 4, and pages 7 through 11
15 of Document No. 1.

16

17 **Q.** Do the heat rate targets and ranges in Tampa Electric's
18 projection meet the criteria of the GPIF and the
19 philosophy of the Commission?

20

21 **A.** Yes.

22

23 **Q.** After determining the target values and ranges for average
24 net operating heat rate and equivalent availability, what
25 is the next step in the GPIF?

1 A. The next step is to calculate the savings and weighting
2 factor to be used for both average net operating heat rate
3 and equivalent availability. This is shown on pages 7
4 through 11. The baseline production costing analysis was
5 performed to calculate the total system fuel cost if all
6 units operated at target heat rate and target availability
7 for the period. This total system fuel cost of
8 \$781,574,600 is shown on page 6, column 2.

9
10 Multiple production costing simulations were then
11 performed to calculate total system fuel cost with each
12 unit individually operating at maximum improvement in
13 equivalent availability and each station operating at
14 maximum improvement in average net operating heat rate.
15 The respective savings are shown on page 6, column 4 of
16 Document No. 1.

17
18 After all of the individual savings are calculated, column
19 4 totals \$35,060,860 which reflects the savings if all of
20 the units operated at maximum improvement. A weighting
21 factor for each parameter is then calculated by dividing
22 individual savings by the total. For Big Bend Unit 1, the
23 weighting factor for equivalent availability is 15.68
24 percent as shown in the right-hand column on page 6.
25 Pages 7 through 11 of Document No. 1 show the point table,

1 the Fuel Savings/(Loss) and the equivalent availability or
2 heat rate value. The individual weighting factor is also
3 shown. For example, on Big Bend Unit 4, page 10, if the
4 unit operates at 82.4 percent equivalent availability,
5 fuel savings would equal \$4,096,800, and ten equivalent
6 availability points would be awarded.

7
8 The GPIF Reward/Penalty Table on page 2 is a summary of
9 the tables on pages 7 through 11. The left-hand column of
10 this document shows the incentive points for Tampa
11 Electric. The center column shows the total fuel savings
12 and is the same amount as shown on page 6, column 4,
13 \$35,060,860. The right hand column of page 2 is the
14 estimated reward or penalty based upon performance.

15

16 **Q.** How was the maximum allowed incentive determined?

17

18 **A.** Referring to page 3, line 14, the estimated average common
19 equity for the period January through December 2005 is
20 \$1,464,070,542. This produces the maximum allowed
21 jurisdictional incentive of \$5,807,604 shown on line 21.

22

23 **Q.** Are there any other constraints set forth by the
24 Commission regarding the magnitude of incentive dollars?

25

1 A. Yes. Incentive dollars are not to exceed 50 percent of
2 fuel savings. Page 2 of Document No. 1 demonstrates that
3 this constraint is met.

4
5 Q. Please summarize your testimony on the GPIF.

6
7 A. Tampa Electric has complied with the Commission's
8 directions, philosophy, and methodology in its
9 determination of the GPIF. The GPIF is determined by the
10 following formula for calculating Generating Performance
11 Incentive Points (GPIP):

12
13 GPIF: = (0.1568 EAP_{BB1} + 0.1744 EAP_{BB2}
14 + 0.1830 EAP_{BB3} + 0.1168 EAP_{BB4}
15 + 0.0544 EAP_{PK1} + 0.0527 HRP_{BB1}
16 + 0.0472 HRP_{BB2} + 0.0740 HRP_{BB3}
17 + 0.0774 HRP_{BB4} + 0.0634 HRP_{PK1})

18
19 Where:

20 GPIF = Generating Performance Incentive Points.

21 EAP = Equivalent Availability Points awarded/deducted for
22 Big Bend Units 1, 2, 3 and 4 and Polk Unit 1.

23 HRP = Average Net Heat Rate Points awarded/deducted for
24 Big Bend Units 1, 2, 3 and 4 and Polk Unit 1.

25

1 Q. Have you prepared a document summarizing the GPIF targets
2 for the January 2005 - December 2005 period?

3

4 A. Yes. Document No. 2 entitled "Summary of GPIF Targets"
5 provides the availability and heat rate targets for each
6 unit.

7

8 Q. Does this conclude your testimony?

9

10 A. Yes.

11

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EXHIBIT TO THE TESTIMONY OF
DAVID R. KNAPP

DOCKET NO. 040001-EI

GENERATING PERFORMANCE INCENTIVE FACTOR
JANUARY 2005 - DECEMBER 2005

DOCUMENT NO. 1

GPIF SCHEDULES

**TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE FACTOR
JANUARY 2005 - DECEMBER 2005
TARGETS
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**TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE FACTOR
REWARD / PENALTY TABLE - ESTIMATED
JANUARY 2005 - DECEMBER 2005**

GENERATING PERFORMANCE INCENTIVE POINTS (GPIP)	FUEL SAVINGS / (LOSS) (\$000)	GENERATING PERFORMANCE INCENTIVE FACTOR (\$000)
+10	35,060.9	5,807.6
+9	31,554.8	5,226.9
+8	28,048.7	4,646.1
+7	24,542.6	4,065.4
+6	21,036.5	3,484.6
+5	17,530.4	2,903.8
+4	14,024.3	2,323.1
+3	10,518.3	1,742.3
+2	7,012.2	1,161.5
+1	3,506.1	580.8
0	0.0	0.0
-1	(6,036.0)	(580.8)
-2	(12,072.0)	(1,161.5)
-3	(18,108.0)	(1,742.3)
-4	(24,144.0)	(2,323.1)
-5	(30,180.0)	(2,903.8)
-6	(36,216.0)	(3,484.6)
-7	(42,252.0)	(4,065.4)
-8	(48,288.0)	(4,646.1)
-9	(54,324.0)	(5,226.9)
-10	(60,360.0)	(5,807.6)

**TAMPA ELECTRIC COMPANY
GENERATING PERFORMANCE INCENTIVE FACTOR
CALCULATION OF MAXIMUM ALLOWED INCENTIVE DOLLARS
(ESTIMATED)
JANUARY 2005 - DECEMBER 2005**

Line 1	Beginning of period balance of common equity:		\$	1,404,189,000	
	End of month common equity:				
Line 2	Month of January	2005	\$	1,448,158,351	
Line 3	Month of February	2005	\$	1,462,338,234	
Line 4	Month of March	2005	\$	1,476,656,963	
Line 5	Month of April	2005	\$	1,418,647,933	
Line 6	Month of May	2005	\$	1,432,538,860	
Line 7	Month of June	2005	\$	1,446,565,803	
Line 8	Month of July	2005	\$	1,490,821,253	
Line 9	Month of August	2005	\$	1,505,418,878	
Line 10	Month of September	2005	\$	1,520,159,438	
Line 11	Month of October	2005	\$	1,461,450,698	
Line 12	Month of November	2005	\$	1,475,760,736	
Line 13	Month of December	2005	\$	1,490,210,893	
Line 14	(Summation of line 1 through line 13 divided by 13)		\$	1,464,070,542	
Line 15	25 Basis points			0.0025	
Line 16	Revenue Expansion Factor			61.38%	
Line 17	Maximum Allowed Incentive Dollars (line 14 times line 15 divided by line 16)		\$	5,963,066	
Line 18	Jurisdictional Sales			19,176,209	MWH
Line 19	Total Sales			19,689,398	MWH
Line 20	Jurisdictional Separation Factor (line 18 divided by line 19)			97.39%	
Line 21	Maximum Allowed Jurisdictional Incentive Dollars (line 17 times line 20)		\$	5,807,644	

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY
JANUARY 2005 - DECEMBER 2005

EQUIVALENT AVAILABILITY

<u>PLANT / UNIT</u>	<u>WEIGHTING FACTOR (%)</u>	<u>EAF TARGET (%)</u>	<u>EAF RANGE</u>		<u>MAX. FUEL SAVINGS (\$000)</u>	<u>MAX. FUEL LOSS (\$000)</u>
			<u>MAX. (%)</u>	<u>MIN. (%)</u>		
BIG BEND 1	15.68%	52.6	59.8	38.3	5,498.6	(12,805.0)
BIG BEND 2	17.44%	61.6	68.7	47.5	6,112.9	(12,376.3)
BIG BEND 3	18.30%	60.6	67.9	45.9	6,414.7	(13,384.7)
BIG BEND 4	11.68%	78.7	82.4	71.3	4,096.8	(6,982.3)
POLK 1	5.44%	79.8	76.9	65.5	1,906.3	(3,780.1)
GPIF SYSTEM	68.54%					

AVERAGE NET OPERATING HEAT RATE

<u>PLANT / UNIT</u>	<u>WEIGHTING FACTOR (%)</u>	<u>ANOHR Btu/kwh</u>	<u>TARGET NOF</u>	<u>ANOHR RANGE</u>		<u>MAX. FUEL SAVINGS (\$000)</u>	<u>MAX. FUEL LOSS (\$000)</u>
				<u>MIN.</u>	<u>MAX.</u>		
BIG BEND 1	5.27%	10,853	76.8	10,324	11,382	1,848.1	(1,848.1)
BIG BEND 2	4.72%	10,672	77.2	10,251	11,093	1,656.1	(1,656.1)
BIG BEND 3	7.40%	10,663	72.0	10,006	11,319	2,593.2	(2,593.2)
BIG BEND 4	7.74%	10,350	85.7	9,868	10,833	2,712.8	(2,712.8)
POLK 1	6.34%	10,342	89.1	9,624	11,060	2,221.4	(2,221.4)
GPIF SYSTEM	31.46%					11,031.6	(11,031.6)

TAMPA ELECTRIC COMPANY
COMPARISON OF GPIF TARGETS VS PRIOR PERIOD ACTUAL PERFORMANCE

EQUIVALENT AVAILABILITY (%)

PLANT / UNIT	WEIGHTING FACTOR (%)	NORMALIZED WEIGHTING FACTOR	TARGET PERIOD JAN 05 - DEC 05			TARGET PERIOD JUL 03 - JUN 04			TARGET PERIOD JUL 02 - JUN 03			TARGET PERIOD JUL 01 - JUN 02		
			POF	EUOF	EUOR	POF	EUOF	EUOR	POF	EUOF	EUOR	POF	EUOF	EUOR
BIG BEND 1	15.68%	22.9%	15.3	32.0	37.8	7.9	33.8	36.7	0.0	28.9	28.9	4.5	24.8	26.0
BIG BEND 2	17.44%	25.4%	3.8	34.5	35.9	0.0	37.8	37.8	23.3	24.4	31.8	0.0	28.2	28.2
BIG BEND 3	18.30%	26.7%	3.8	35.6	37.0	0.0	37.4	37.4	0.0	28.6	28.6	16.2	27.7	33.0
BIG BEND 4	11.68%	17.0%	3.8	17.5	18.2	10.6	15.8	17.7	6.1	16.0	17.1	0.0	12.4	12.4
POLK 1	5.44%	7.9%	3.8	16.5	17.1	3.3	18.7	19.3	11.1	7.1	8.0	0.7	14.3	14.4
GPIF SYSTEM	68.54%	100.0%	6.5	29.9	32.1	3.9	31.5	32.5	7.8	23.7	25.9	5.4	23.5	25.2
GPIF SYSTEM WEIGHTED EQUIVALENT AVAILABILITY (%)			<u>63.6</u>			<u>64.6</u>			<u>68.4</u>			<u>71.1</u>		

24

3 PERIOD AVERAGE			3 PERIOD AVERAGE
POF	EUOF	EUOR	EAF
5.7	26.3	27.9	68.0

AVERAGE NET OPERATING HEAT RATE (Btu/kwh)

PLANT / UNIT	WEIGHTING FACTOR (%)	NORMALIZED WEIGHTING FACTOR	TARGET HEAT RATE	ADJUSTED PRIOR HEAT RATE	ADJUSTED PRIOR HEAT RATE	ADJUSTED PRIOR HEAT RATE
			JAN 05 - DEC 05	JUL 03 - JUN 04	JUL 02 - JUN 03	JUL 01 - JUN 02
BIG BEND 1	5.27%	16.8%	10,853	10,748	10,920	10,693
BIG BEND 2	4.72%	15.0%	10,672	10,658	10,803	10,426
BIG BEND 3	7.40%	23.5%	10,663	10,831	10,752	10,395
BIG BEND 4	7.74%	24.6%	10,350	10,356	10,293	10,331
POLK 1	6.34%	20.1%	10,342	10,024	10,039	10,373
GPIF SYSTEM	31.46%	100.0%				
GPIF SYSTEM WEIGHTED AVERAGE HEAT RATE (Btu/kwh)			<u>10,555</u>	<u>10,512</u>	<u>10,531</u>	<u>10,429</u>

**TAMPA ELECTRIC COMPANY
DERIVATION OF WEIGHTING FACTORS
JANUARY 2005 - DECEMBER 2005
PRODUCTION COSTING SIMULATION
FUEL COST (\$000)**

<u>UNIT PERFORMANCE INDICATOR</u>	<u>AT TARGET (1)</u>	<u>AT MAXIMUM IMPROVEMENT (2)</u>	<u>SAVINGS (3)</u>	<u>WEIGHTING FACTOR (% OF SAVINGS)</u>
EQUIVALENT AVAILABILITY				
EA ₁ BIG BEND 1	781,574	776,075	5,499	15.68%
EA ₂ BIG BEND 2	781,574	775,461	6,113	17.44%
EA ₃ BIG BEND 3	781,574	775,159	6,415	18.30%
EA ₄ BIG BEND 4	781,574	777,477	4,097	11.68%
EA ₇ POLK 1	781,574	779,667	1,906	5.44%
AVERAGE HEAT RATE				
AHR ₁ BIG BEND 1	781,574	779,726	1,848	5.27%
AHR ₂ BIG BEND 2	781,574	779,918	1,656	4.72%
AHR ₃ BIG BEND 3	781,574	778,980	2,593	7.40%
AHR ₄ BIG BEND 4	781,574	778,861	2,713	7.74%
AHR ₇ POLK 1	781,574	779,352	2,221	6.34%
TOTAL SAVINGS			<u><u>35,061</u></u>	<u><u>100.00%</u></u>

- (1) Fuel Adjustment Base Case - All unit performance indicators at target.
(2) All other units performance indicators at target.
(3) Expressed in replacement energy cost.

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY
JANUARY 2005 - DECEMBER 2005

BIG BEND 1

<u>EQUIVALENT AVAILABILITY POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL EQUIVALENT AVAILABILITY</u>	<u>AVERAGE HEAT RATE POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL AVERAGE HEAT RATE</u>
+10	5,498.6	59.8	+10	1,848.1	10,324
+9	4,948.7	59.1	+9	1,663.3	10,369
+8	4,398.9	58.4	+8	1,478.5	10,415
+7	3,849.0	57.6	+7	1,293.6	10,460
+6	3,299.2	56.9	+6	1,108.8	10,506
+5	2,749.3	56.2	+5	924.0	10,551
+4	2,199.4	55.5	+4	739.2	10,596
+3	1,649.6	54.8	+3	554.4	10,642
+2	1,099.7	54.1	+2	369.6	10,687
+1	549.9	53.3	+1	184.8	10,733
					10,778
0	0.0	52.6	0	0.0	10,853
					10,928
-1	(1,280.5)	51.2	-1	(184.8)	10,973
-2	(2,561.0)	49.8	-2	(369.6)	11,019
-3	(3,841.5)	48.3	-3	(554.4)	11,064
-4	(5,122.0)	46.9	-4	(739.2)	11,109
-5	(6,402.5)	45.5	-5	(924.0)	11,155
-6	(7,683.0)	44.0	-6	(1,108.8)	11,200
-7	(8,963.5)	42.6	-7	(1,293.6)	11,246
-8	(10,244.0)	41.2	-8	(1,478.5)	11,291
-9	(11,524.5)	39.7	-9	(1,663.3)	11,336
-10	(12,805.0)	38.3	-10	(1,848.1)	11,382

Weighting Factor = 15.68%

Weighting Factor = 5.27%

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY
JANUARY 2005 - DECEMBER 2005

BIG BEND 2

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE HEAT RATE POINTS	FUEL SAVINGS / (LOSS) (\$000)	ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	6,112.9	68.7	+10	1,656.1	10,251
+9	5,501.6	68.0	+9	1,490.5	10,286
+8	4,890.3	67.3	+8	1,324.9	10,320
+7	4,279.0	66.6	+7	1,159.2	10,355
+6	3,667.7	65.9	+6	993.6	10,389
+5	3,056.5	65.2	+5	828.0	10,424
+4	2,445.2	64.5	+4	662.4	10,459
+3	1,833.9	63.8	+3	496.8	10,493
+2	1,222.6	63.1	+2	331.2	10,528
+1	611.3	62.4	+1	165.6	10,562
					10,597
0	0.0	61.6	0	0.0	10,672
					10,747
-1	(1,237.6)	60.2	-1	(165.6)	10,782
-2	(2,475.3)	58.8	-2	(331.2)	10,816
-3	(3,712.9)	57.4	-3	(496.8)	10,851
-4	(4,950.5)	56.0	-4	(662.4)	10,886
-5	(6,188.2)	54.5	-5	(828.0)	10,920
-6	(7,425.8)	53.1	-6	(993.6)	10,955
-7	(8,663.4)	51.7	-7	(1,159.2)	10,989
-8	(9,901.0)	50.3	-8	(1,324.9)	11,024
-9	(11,138.7)	48.9	-9	(1,490.5)	11,059
-10	(12,376.3)	47.5	-10	(1,656.1)	11,093

Weighting Factor =

17.44%

Weighting Factor =

4.72%

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY

JANUARY 2005 - DECEMBER 2005

BIG BEND 3

<u>EQUIVALENT AVAILABILITY POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL EQUIVALENT AVAILABILITY</u>	<u>AVERAGE HEAT RATE POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL AVERAGE HEAT RATE</u>
+10	6,414.7	67.9	+10	2,593.2	10,006
+9	5,773.2	67.2	+9	2,333.9	10,064
+8	5,131.8	66.4	+8	2,074.6	10,122
+7	4,490.3	65.7	+7	1,815.3	10,181
+6	3,848.8	65.0	+6	1,555.9	10,239
+5	3,207.3	64.2	+5	1,296.6	10,297
+4	2,565.9	63.5	+4	1,037.3	10,355
+3	1,924.4	62.8	+3	778.0	10,413
+2	1,282.9	62.0	+2	518.6	10,471
+1	641.5	61.3	+1	259.3	10,530
					10,588
0	0.0	60.6	0	0.0	10,663
					10,738
-1	(1,338.5)	59.1	-1	(259.3)	10,796
-2	(2,676.9)	57.6	-2	(518.6)	10,854
-3	(4,015.4)	56.2	-3	(778.0)	10,912
-4	(5,353.9)	54.7	-4	(1,037.3)	10,970
-5	(6,692.4)	53.2	-5	(1,296.6)	11,028
-6	(8,030.8)	51.8	-6	(1,555.9)	11,087
-7	(9,369.3)	50.3	-7	(1,815.3)	11,145
-8	(10,707.8)	48.9	-8	(2,074.6)	11,203
-9	(12,046.2)	47.4	-9	(2,333.9)	11,261
-10	(13,384.7)	45.9	-10	(2,593.2)	11,319

Weighting Factor = 18.30%

Weighting Factor = 7.40%

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY
JANUARY 2005 - DECEMBER 2005

BIG BEND 4

<u>EQUIVALENT AVAILABILITY POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL EQUIVALENT AVAILABILITY</u>	<u>AVERAGE HEAT RATE POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL AVERAGE HEAT RATE</u>
+10	4,096.8	82.4	+10	2,712.8	9,868
+9	3,687.1	82.0	+9	2,441.6	9,908
+8	3,277.4	81.7	+8	2,170.3	9,949
+7	2,867.8	81.3	+7	1,899.0	9,990
+6	2,458.1	80.9	+6	1,627.7	10,031
+5	2,048.4	80.5	+5	1,356.4	10,071
+4	1,638.7	80.2	+4	1,085.1	10,112
+3	1,229.0	79.8	+3	813.9	10,153
+2	819.4	79.4	+2	542.6	10,194
+1	409.7	79.1	+1	271.3	10,235
					10,275
0	0.0	78.7	0	0.0	10,350
					10,425
-1	(698.2)	77.9	-1	(271.3)	10,466
-2	(1,396.5)	77.2	-2	(542.6)	10,507
-3	(2,094.7)	76.5	-3	(813.9)	10,548
-4	(2,792.9)	75.7	-4	(1,085.1)	10,589
-5	(3,491.2)	75.0	-5	(1,356.4)	10,629
-6	(4,189.4)	74.3	-6	(1,627.7)	10,670
-7	(4,887.6)	73.5	-7	(1,899.0)	10,711
-8	(5,585.8)	72.8	-8	(2,170.3)	10,752
-9	(6,284.1)	72.0	-9	(2,441.6)	10,793
-10	(6,982.3)	71.3	-10	(2,712.8)	10,833

Weighting Factor =

11.68%

Weighting Factor =

7.74%

TAMPA ELECTRIC COMPANY
GPIF TARGET AND RANGE SUMMARY
JANUARY 2005 - DECEMBER 2005

POLK 1

<u>EQUIVALENT AVAILABILITY POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL EQUIVALENT AVAILABILITY</u>	<u>AVERAGE HEAT RATE POINTS</u>	<u>FUEL SAVINGS / (LOSS) (\$000)</u>	<u>ADJUSTED ACTUAL AVERAGE HEAT RATE</u>
+10	1,906.3	76.9	+10	2,221.4	9,624
+9	1,715.7	77.2	+9	1,999.2	9,688
+8	1,525.0	77.5	+8	1,777.1	9,753
+7	1,334.4	77.8	+7	1,555.0	9,817
+6	1,143.8	78.0	+6	1,332.8	9,881
+5	953.1	78.3	+5	1,110.7	9,945
+4	762.5	78.6	+4	888.5	10,010
+3	571.9	78.9	+3	666.4	10,074
+2	381.3	79.2	+2	444.3	10,138
+1	190.6	79.5	+1	222.1	10,203
					10,267
0	0.0	79.8	0	0.0	10,342
					10,417
-1	(378.0)	78.3	-1	(222.1)	10,481
-2	(756.0)	76.9	-2	(444.3)	10,546
-3	(1,134.0)	75.5	-3	(666.4)	10,610
-4	(1,512.0)	74.1	-4	(888.5)	10,674
-5	(1,890.0)	72.6	-5	(1,110.7)	10,739
-6	(2,268.1)	71.2	-6	(1,332.8)	10,803
-7	(2,646.1)	69.8	-7	(1,555.0)	10,867
-8	(3,024.1)	68.4	-8	(1,777.1)	10,931
-9	(3,402.1)	66.9	-9	(1,999.2)	10,996
-10	(3,780.1)	65.5	-10	(2,221.4)	11,060

Weighting Factor =

5.44%

Weighting Factor =

6.34%

TAMPA ELECTRIC COMPANY

ESTIMATED UNIT PERFORMANCE DATA

JANUARY 2005 - DECEMBER 2005

PLANT/UNIT	MONTH OF: Jan-05	MONTH OF: Feb-05	MONTH OF: Mar-05	MONTH OF: Apr-05	MONTH OF: May-05	MONTH OF: Jun-05	MONTH OF: Jul-05	MONTH OF: Aug-05	MONTH OF: Sep-05	MONTH OF: Oct-05	MONTH OF: Nov-05	MONTH OF: Dec-05	PERIOD	
BIG BEND 1													2005	
1. EAF (%)	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	0.0	10.4	62.2	52.6
2. POF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	83.3	0.0	0.0	15.34
3. EUOF	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	0.0	6.3	37.8	32.03
4. EUOR	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.8	0.0	37.8	37.8	37.8
5. PH	744	672	744	720	744	720	744	744	720	744	744	720	744	8,760
6. SH	503	454	503	486	503	486	498	503	486	0	81	491	491	4,993
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8. UH	241	218	241	234	241	234	246	241	234	744	639	253	253	3,767
9. POH	0	0	0	0	0	0	0	0	0	744	600	0	0	1,344
10. FOH & FROH	201	181	201	194	201	194	201	201	194	0	32	201	201	2,001
11. MOH & EMOH	81	73	81	78	81	78	81	81	78	0	13	81	81	804
12. OPER BTU (GBTU)	1,769	1,601	1,778	1,715	1,771	1,717	1,753	1,775	1,716	0	286	1,732	1,732	17,612
13. NET GEN (MWH)	162,706	147,304	163,593	158,191	163,292	158,331	161,642	163,676	158,300	0	26,428	159,316	159,316	1,622,779
14. ANOHR (Btu/kwh)	10,874	10,871	10,867	10,844	10,845	10,843	10,846	10,842	10,843	0	10,840	10,870	10,870	10,853
15. NOF (%)	75.6	75.8	76.1	77.3	77.2	77.3	77.1	77.4	77.3	0.0	77.4	75.9	75.9	76.8
16. NPC (MW)	428	428	428	421	421	421	421	421	421	421	421	421	428	423
17. ANOHR EQUATION	ANOHR = NOF(-18.920) +												12,306	

TAMPA ELECTRIC COMPANY
ESTIMATED UNIT PERFORMANCE DATA
JANUARY 2005 - DECEMBER 2005

PLANT/UNIT	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	PERIOD
BIG BEND 2	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	2005
1. EAF (%)	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	35.2	64.1	64.1	61.6
2. POF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	3.84
3. EUOF	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	19.7	35.9	35.9	34.52
4. EUOR	35.9	35.9	35.9	35.9	35.9	35.9	5.9	35.9	35.9	1.9	35.9	35.9	35.9
5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8,760
6. SH	512	459	515	498	398	499	508	515	499	481	499	393	5,575
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0
8. UH	232	213	229	222	346	221	236	229	221	462	221	351	3,185
9. POH	0	0	0	0	0	0	0	0	0	336	0	0	336
10. FOH & EFOH	192	173	192	186	192	186	192	192	186	105	186	192	2,171
11. MOH & EMOH	75	68	75	73	75	73	75	75	73	41	73	75	853
12. OPER BTU (GBTU)	1,740	1,567	1,792	1,702	1,326	1,732	1,770	1,797	1,731	987	1,742	1,317	19,205
13. NET GEN (MWH)	162,435	146,301	167,531	159,571	124,053	162,710	166,275	168,837	162,599	92,788	63,679	122,729	1,799,508
14. ANOHR (Btu/kwh)	10,714	10,710	10,695	10,664	10,686	10,648	10,644	10,644	10,648	10,641	10,642	10,727	10,672
15. NOF (%)	73.3	73.7	75.1	77.9	75.9	79.4	79.7	79.7	79.4	79.9	79.9	72.1	77.2
16. NPC (MW)	433	433	433	411	411	411	411	411	411	411	411	433	418
17. ANOHR EQUATIC	ANOHR = NOF(-10.937) +	11,516								

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TAMPA ELECTRIC COMPANY
ESTIMATED UNIT PERFORMANCE DATA
JANUARY 2005 - DECEMBER 2005

PLANT/UNIT	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	PERIOD
BIG BEND 3	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	2005
1. EAF (%)	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	33.6	63.0	60.6
2. POF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	3.84
3. EUOF	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	19.7	37.0	35.61
4. EUOR	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8,760
6. SH	531	479	531	514	531	514	531	531	514	531	274	531	6,010
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0
8. UH	213	193	213	206	213	206	213	213	206	213	446	213	2,750
9. POH	0	0	0	0	0	0	0	0	0	0	336	0	336
10. FOH & EFOH	190	171	190	184	190	184	190	190	184	190	98	190	2,148
11. MOH & EMOH	86	78	86	83	86	83	86	86	83	86	44	86	972
12. OPER BTU (GBTU)	1,750	1,587	1,711	1,681	1,742	1,679	1,764	1,774	1,687	1,860	943	1,792	19,973
13. NET GEN (MWH)	163,376	148,282	158,870	157,495	163,327	157,257	165,852	167,114	158,160	176,305	88,982	168,191	1,873,211
14. ANOHR (Btu/kwh)	10,712	10,702	10,767	10,673	10,665	10,676	10,633	10,617	10,664	10,552	10,600	10,652	10,663
15. NOF (%)	70.3	70.6	68.3	71.6	71.9	71.5	73.0	73.6	71.9	75.8	74.1	72.3	72.0
16. NPC (MW)	438	438	438	428	428	428	428	428	428	438	438	438	433
17. ANOHR EQUATION	ANOHR = NOF(-28.859) +	12,740								

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TAMPA ELECTRIC COMPANY

ESTIMATED UNIT PERFORMANCE DATA

JANUARY 00: - DECEMBER 00:

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PLANT/UN	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	PERIOD
BIG BEND	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	2005
1. EAF (%)	81.8	76.0	50.1	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	78.7
2. POF	0.0	7.1	38.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.84
3. EUOF	18.2	16.9	11.1	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	17.48
4. EUOR	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8,760
6. SH	613	514	376	594	613	594	603	611	590	613	594	598	6,908
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0
8. UH	131	158	368	126	131	131	141	133	130	131	126	146	1,852
9. POH	0	48	288	0	0	0	0	0	0	0	0	0	336
10. FOH & EFOH	88	74	54	85	88	85	88	88	85	88	85	88	994
11. MOH & EMOH	47	40	29	46	47	46	47	47	46	47	46	47	537
12. OPER BTU (GBT	2,465	2,083	1,536	2,403	2,460	2,337	2,418	2,455	2,341	2,510	2,412	2,432	27,857
13. NET GEN (MWH	16,427	10,430	148,540	233,261	237,711	224,607	233,663	237,383	225,031	245,054	234,610	234,589	2,691,339
14. ANOHR (Btu/kwh	10,427	10,390	10,342	10,340	10,348	10,403	10,347	10,341	10,402	10,242	10,280	10,367	10,350
15. NOF (%)	83.8	84.7	85.9	85.9	85.7	84.4	85.8	85.9	84.4	88.4	87.4	85.3	85.7
16. NPC (MW)	460	460	460	452	452	452	452	452	452	452	452	460	455
17. ANOHR EQUAT	ANOHR = NOF(-40.19208525) +				13,794								

TAMPA ELECTRIC COMPANY
ESTIMATED UNIT PERFORMANCE DATA
JANUARY 2005 - DECEMBER 2005

PLANT/UNIT	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	PERIOD
POLK 1	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	2005
1. EAF (%)	82.9	82.9	82.9	55.3	82.9	82.9	82.9	82.9	82.9	80.0	75.4	82.9	79.76
2. POF	0.0	0.0	0.0	35.3	0.0	0.0	0.0	0.0	0.0	3.5	9.0	0.0	3.77
3. EUOF	17.1	17.1	17.1	11.4	17.1	17.1	17.1	17.1	17.1	16.5	15.6	17.1	16.47
4. EUOR	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8,760
6. SH	628	567	628	405	628	607	628	628	607	466	202	628	6,621
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0
8. UH	116	105	116	315	116	113	116	116	113	278	518	116	2,139
9. POH	0	0	0	240	0	0	0	0	0	26	65	0	330
10. FOH & EFOH	24	22	24	16	24	24	24	24	24	24	22	24	277
11. MOH & EMOH	103	93	103	66	103	100	103	103	100	99	91	103	1,166
12. OPER BTU (GBTU)	1,531	1,383	1,531	957	1,445	1,398	1,445	1,445	1,398	1,126	493	1,530	15,711
13. NET GEN (MWH)	153,110	138,375	153,209	93,330	135,391	131,023	135,391	135,391	131,023	110,743	49,283	152,874	1,519,143
14. ANOHR (Btu/kwh)	9,997	9,993	9,992	10,249	10,673	10,673	10,673	10,673	10,673	10,170	10,012	10,008	10,342
15. NOF (%)	93.8	93.9	93.9	90.4	84.6	84.6	84.6	84.6	84.6	91.5	93.6	93.7	89.1
16. NPC (MW)	260	260	260	255	255	255	255	255	255	260	260	260	257
17. ANOHR EQUATION	ANOHR = NOF(-73.21622695) +		16,866						

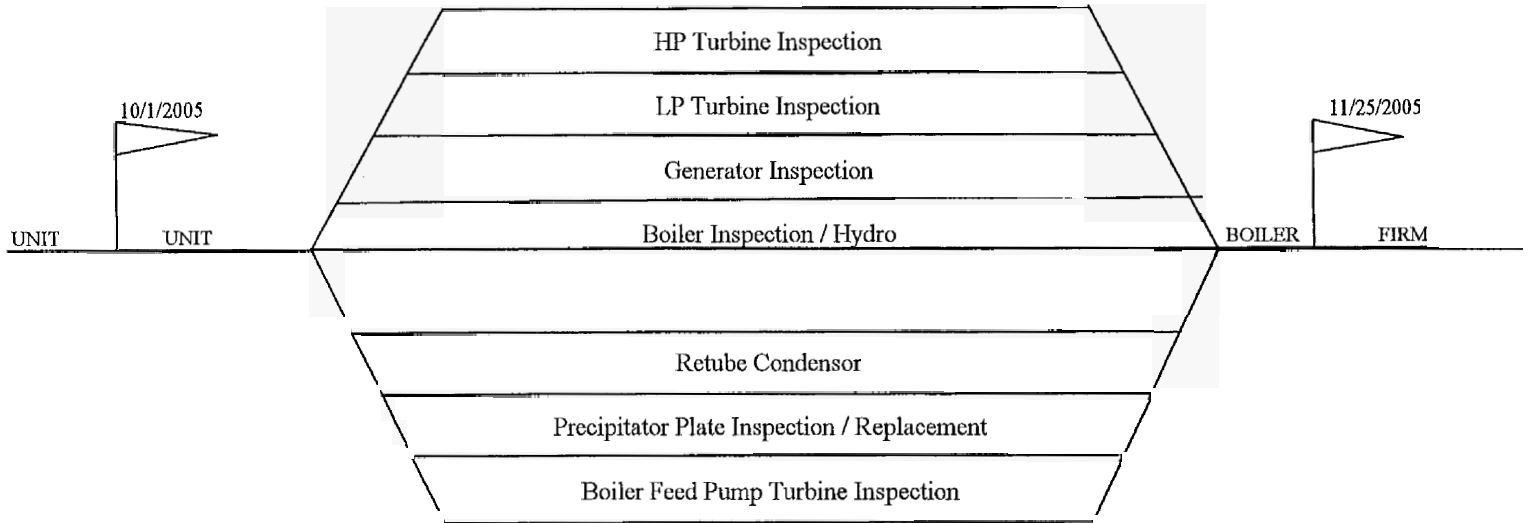
35

**TAMPA ELECTRIC COMPANY
PLANNED OUTAGE SCHEDULE (ESTIMATED)
GPIF UNITS
JANUARY 2005 - DECEMBER 2005**

<u>PLANT / UNIT</u>	<u>PLANNED OUTAGE DATES</u>	<u>OUTAGE DESCRIPTION</u>
BIG BEND 1	Oct 01 - Nov 25	Fuel System Clean-up
+ BIG BEND 2	Oct 15 - Oct 28	Fuel System Clean-up
+ BIG BEND 3	Nov 05 - Nov 18	Fuel System Clean-up
+ BIG BEND 4	Feb 27 - Mar 12	Fuel System Clean -up
+ POLK 1	Apr 09 - Apr 18	#1CT Combustion Path

+ Critical Path Method diagrams for units with outages of less than 4 weeks are not included.

**TAMPA ELECTRIC COMPANY
CRITICAL PATH METHOD DIAGRAM
GPIF UNITS ≥ FOUR WEEKS
JANUARY 2005 - DECEMBER 2005**

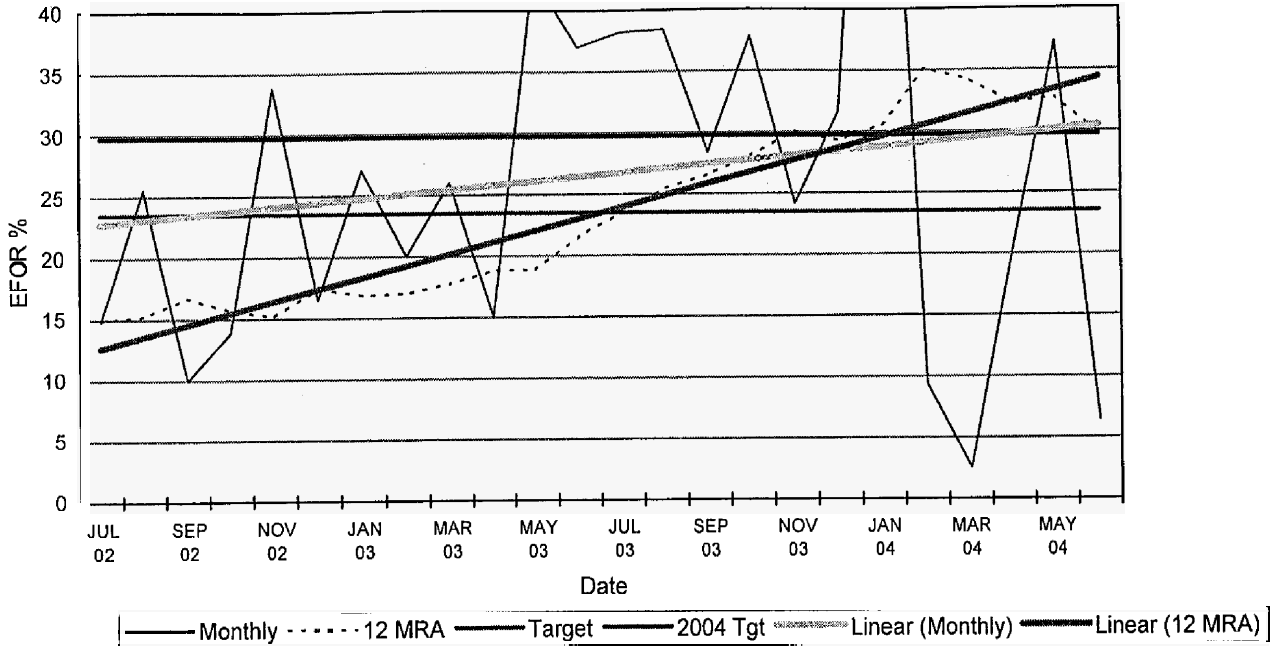


TAMPA ELECTRIC COMPANY
BIG BEND UNIT NUMBER 1
PLANNED OUTAGE 2005
PROJECTED CPM
08/24/2004

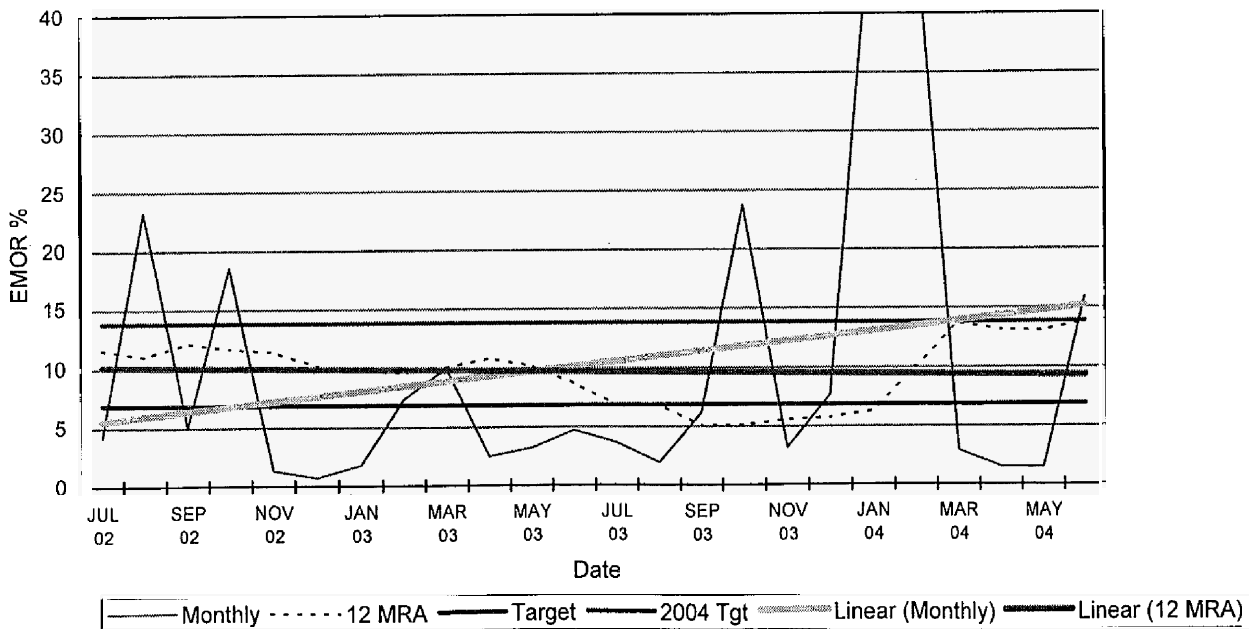
**TAMPA ELECTRIC COMPANY
CRITICAL PATH METHOD DIAGRAM
GPIF UNITS \geq FOUR WEEKS
JANUARY 2005 - DECEMBER 2005**

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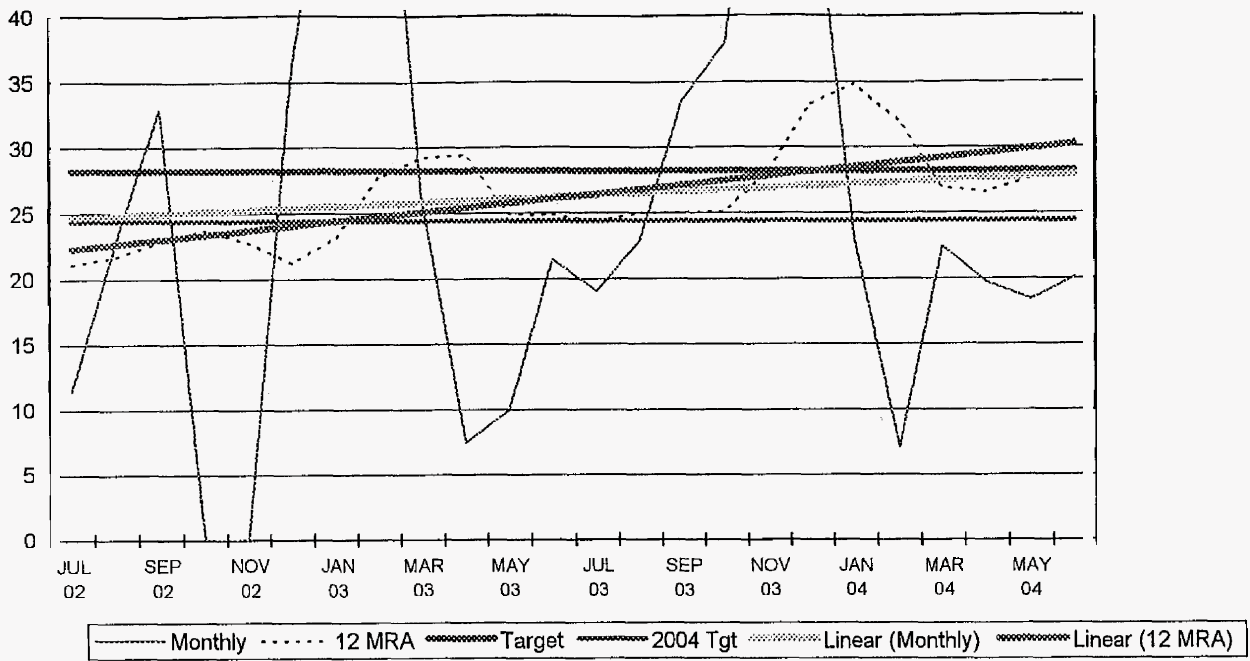
Big Bend Unit 1
 EFOR



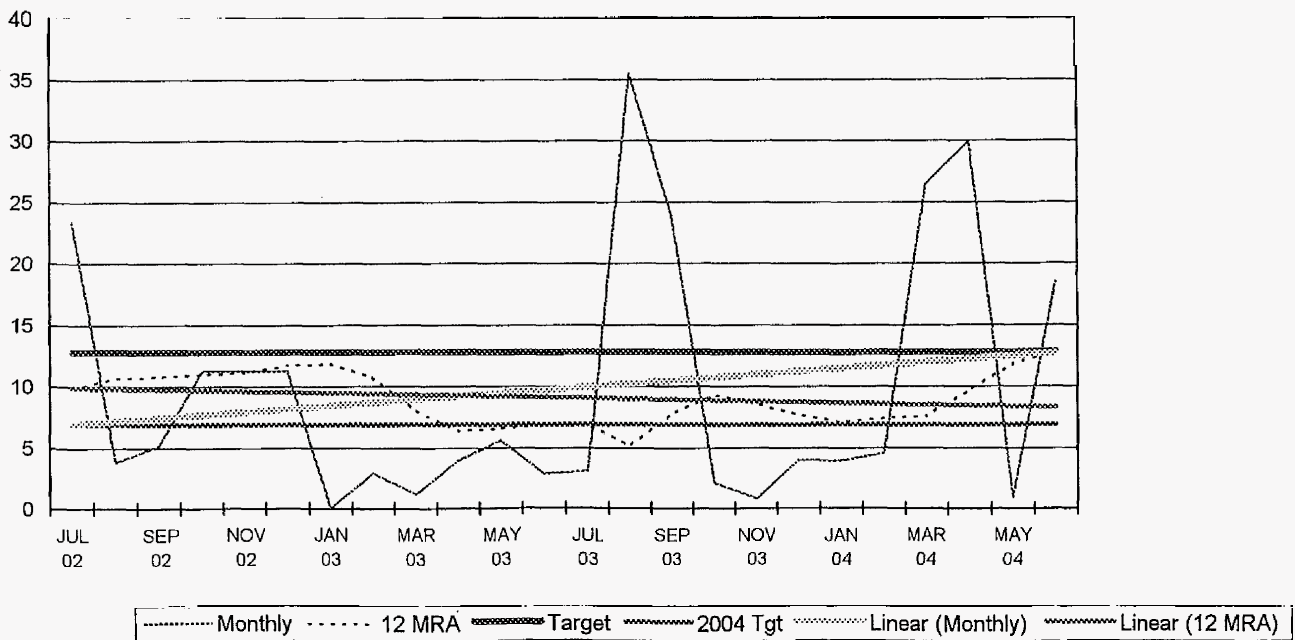
Big Bend Unit 1
 EMOR



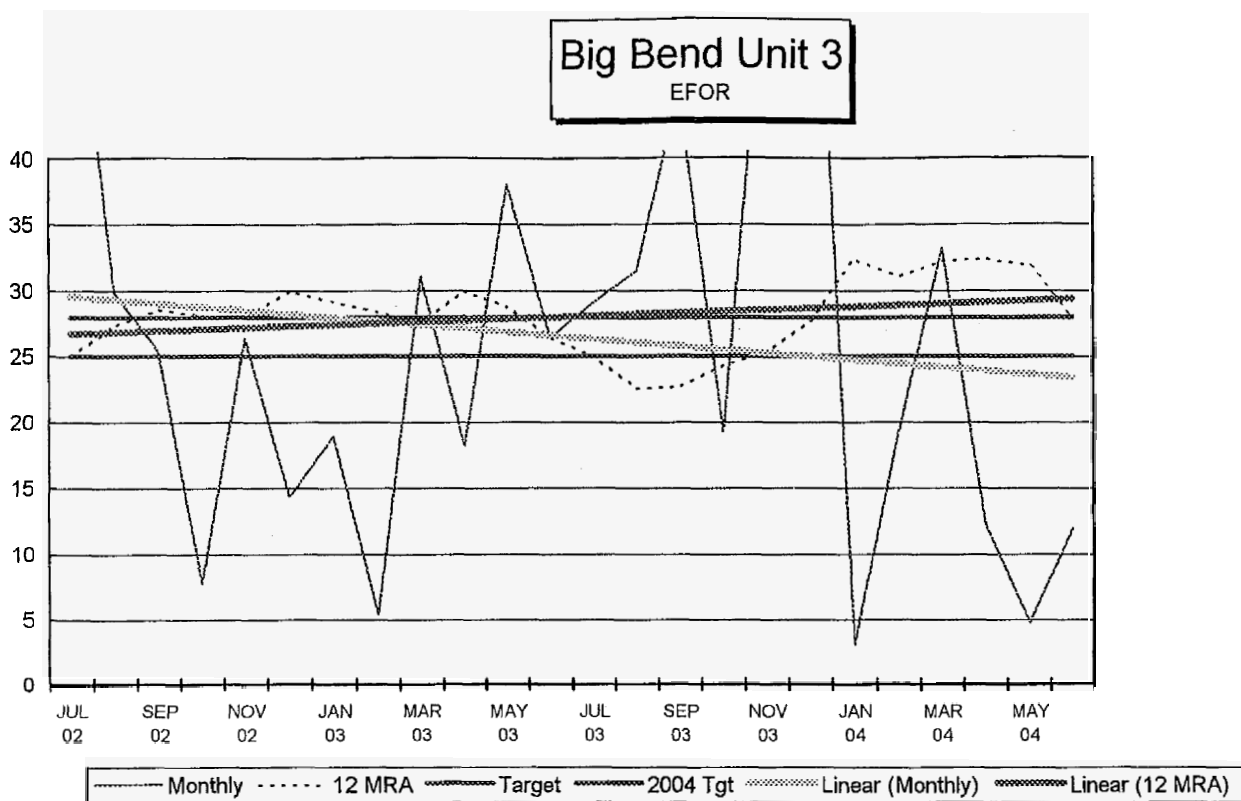
Big Bend Unit 2



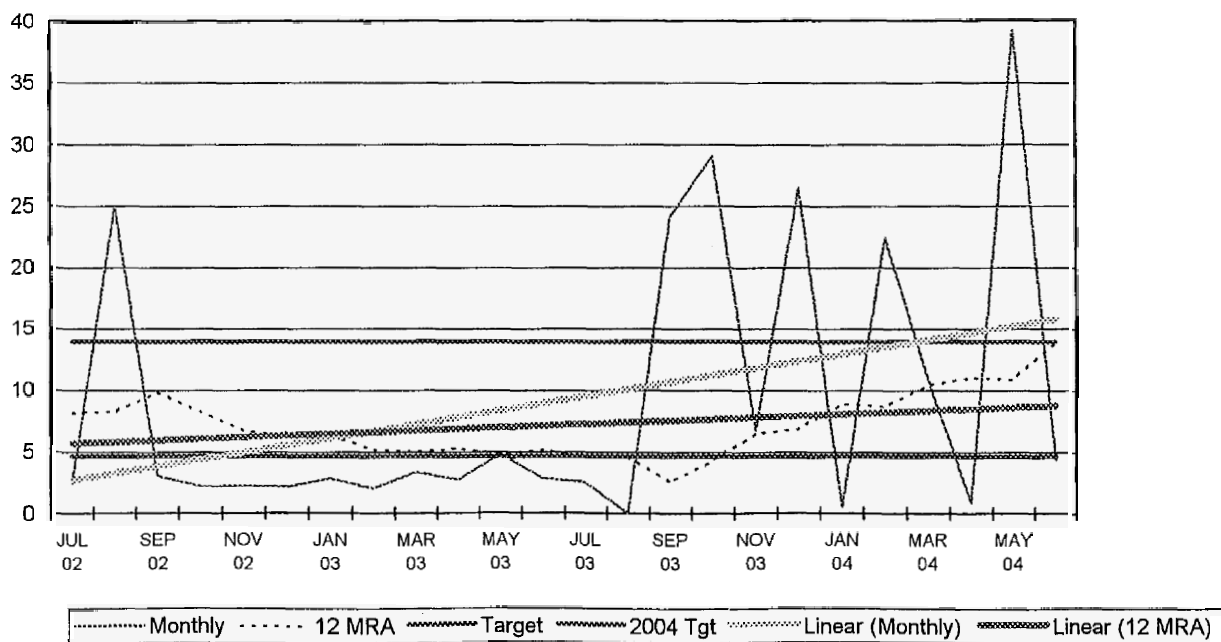
Big Bend Unit 2 EMOR



12 MRA □ 12 Month Rolling Average

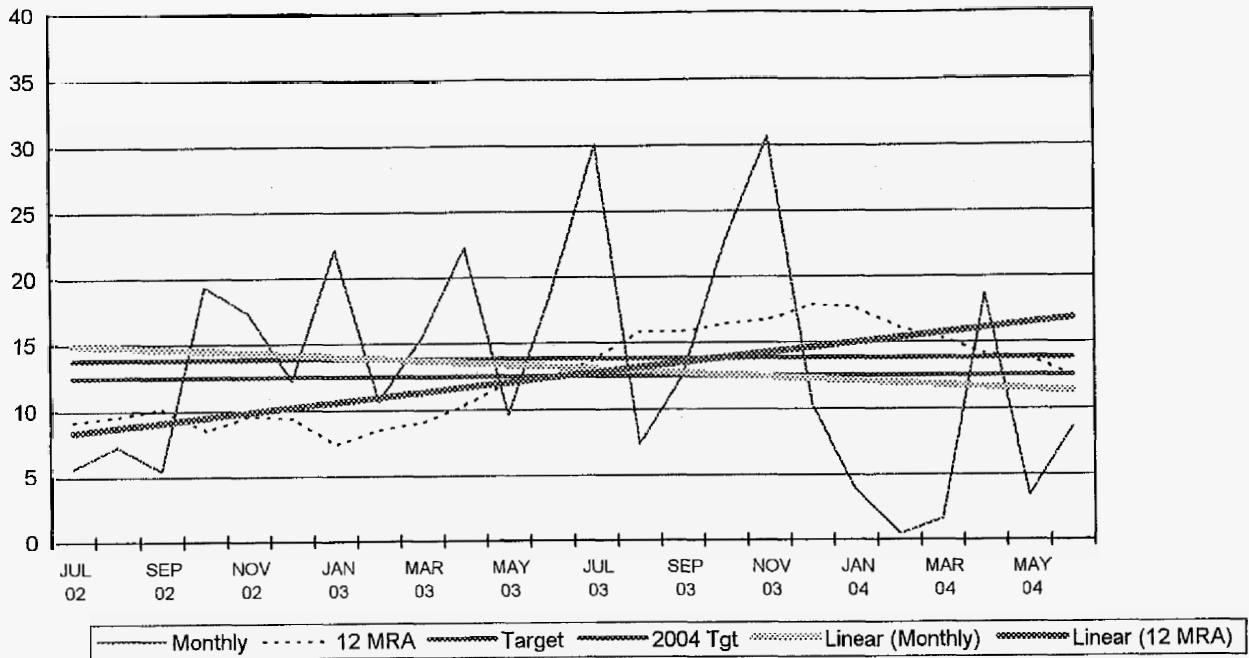


Big Bend Unit 3 EMOR

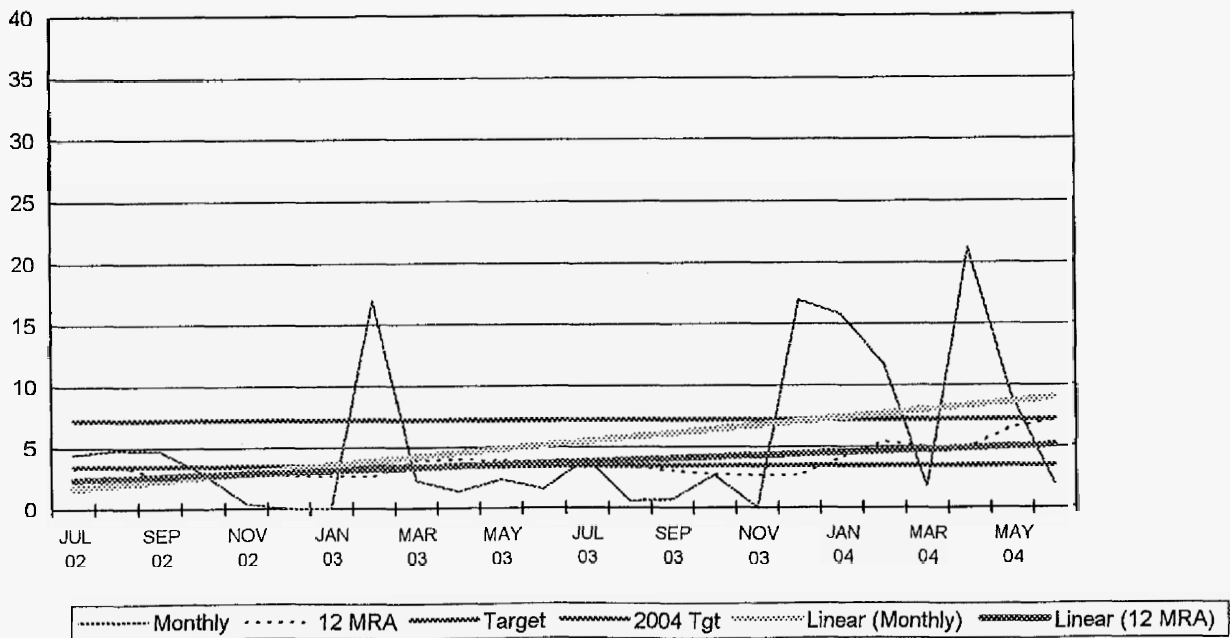


12 MRA = 12 Month Rolling Average

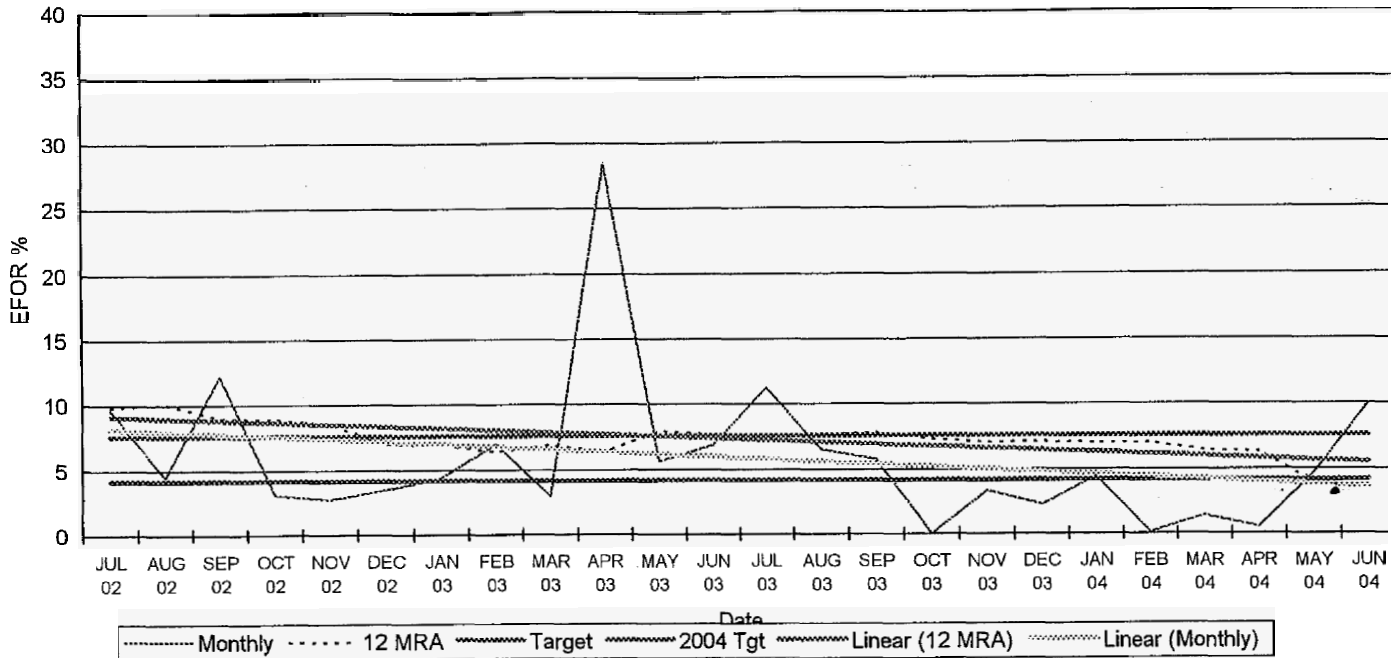
Big Bend Unit 4
EFOR



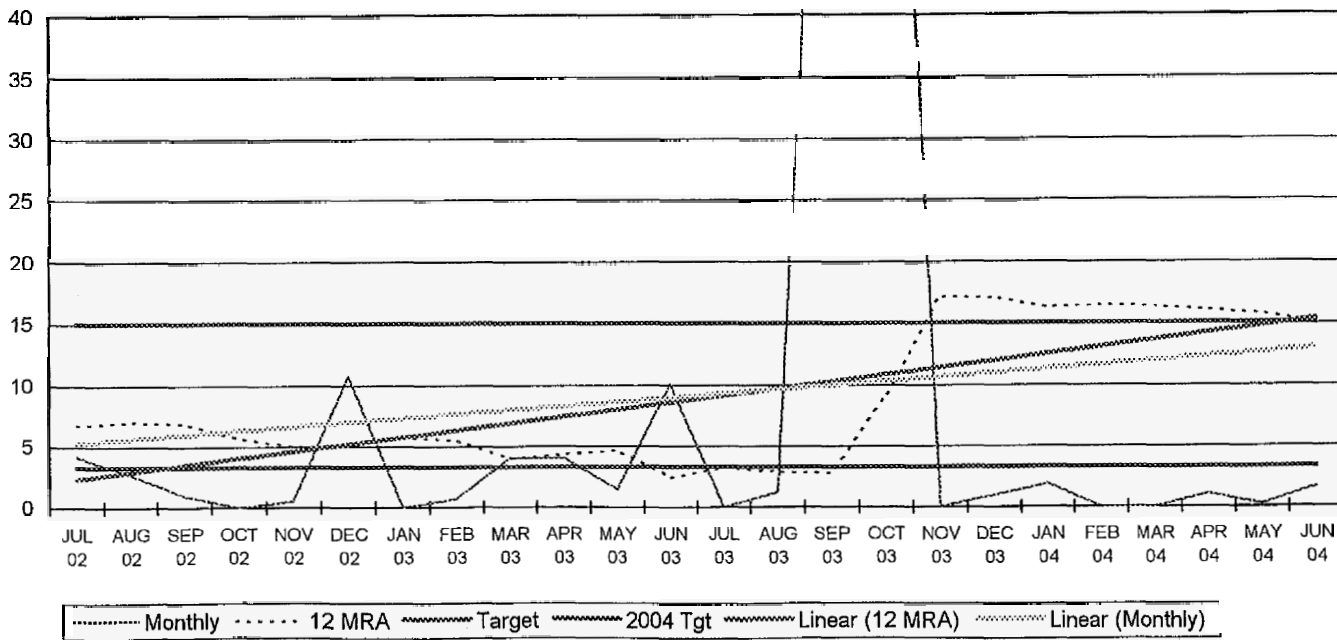
Big Bend Unit 4
EMOR



Polk Unit 1
EFOR

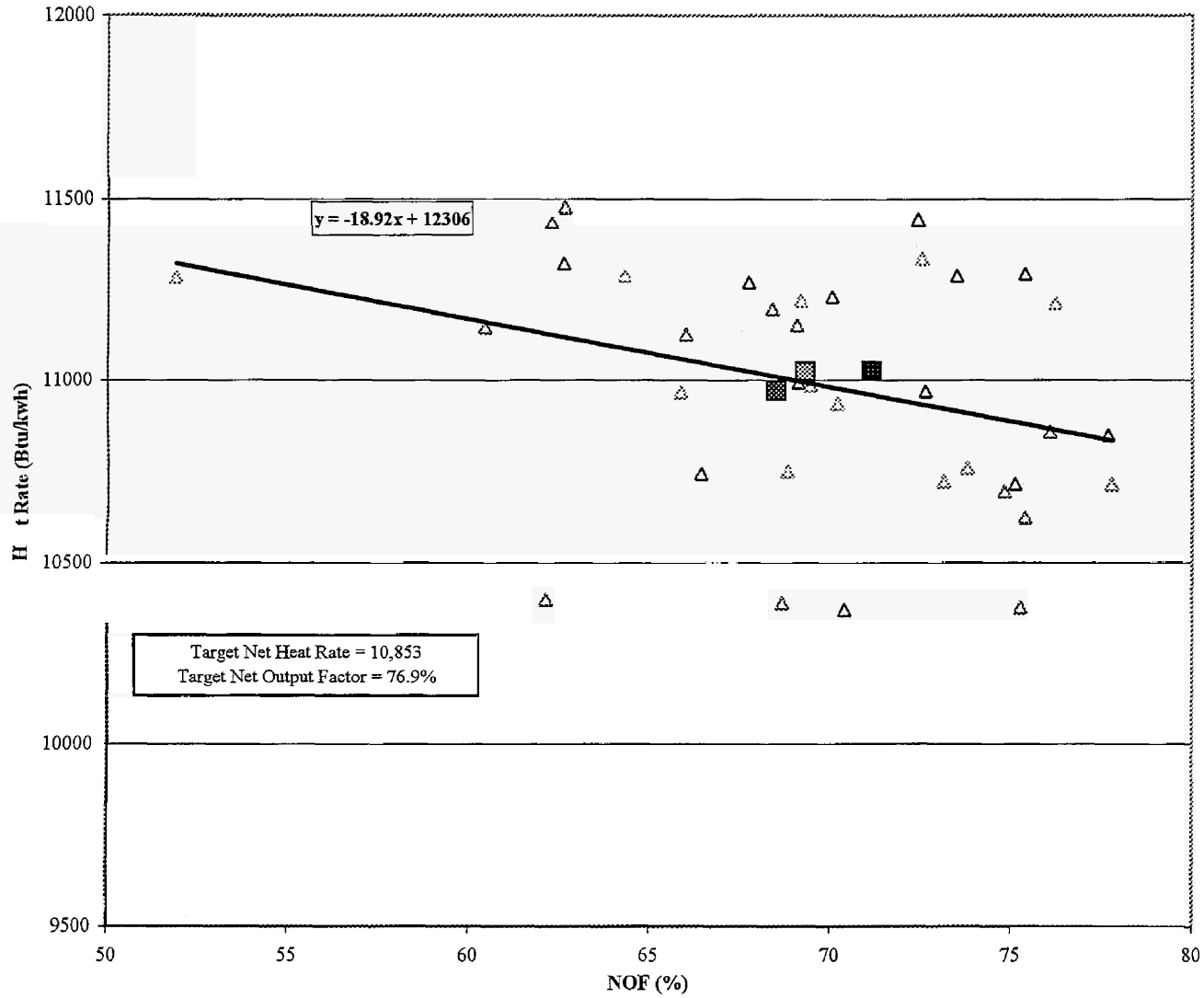


Polk Unit 1
EMOR



12 MRA = 12 Month Rolling Avreage

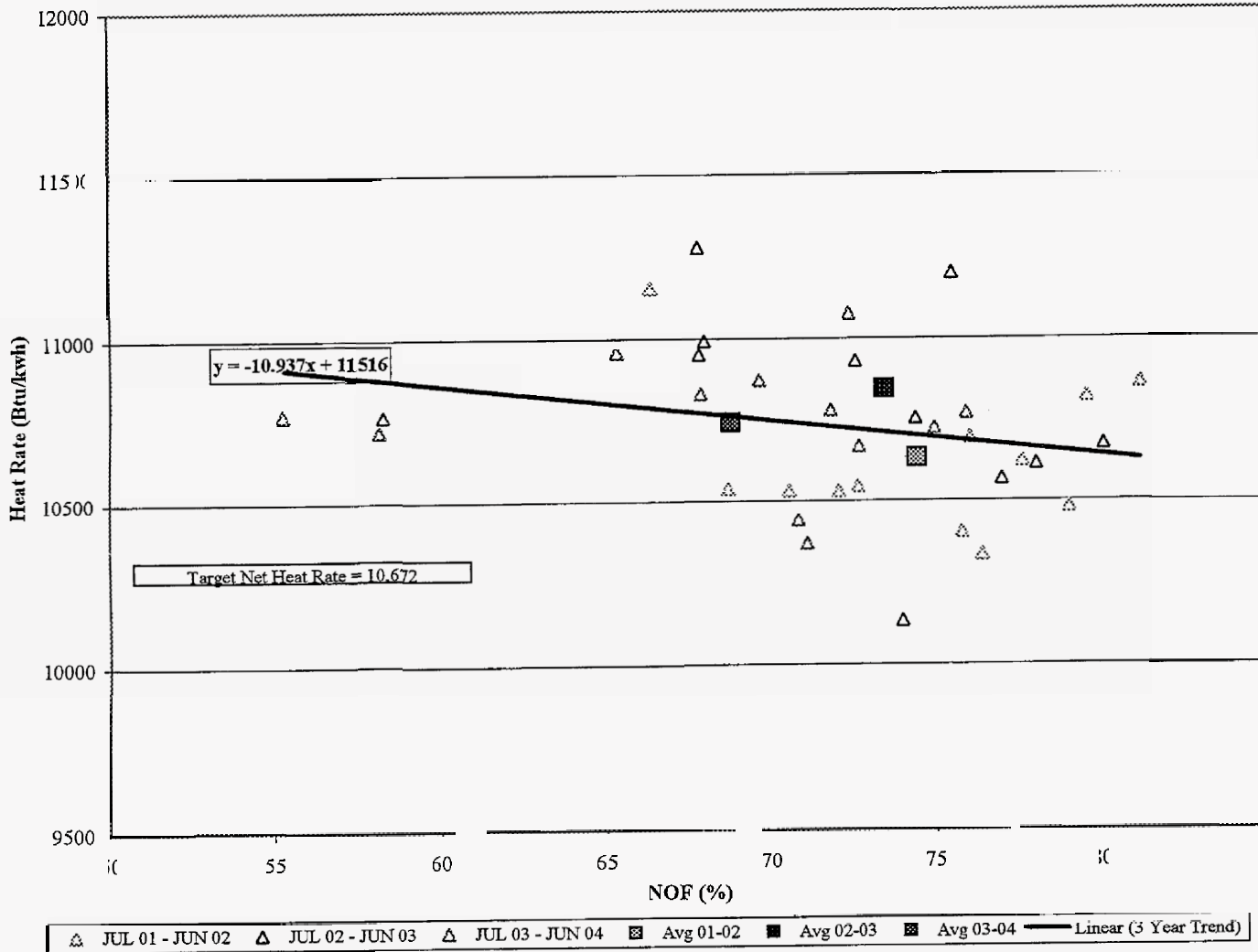
Tampa Electric Company Heat Rate vs Net Output Factor Big Bend Unit #1



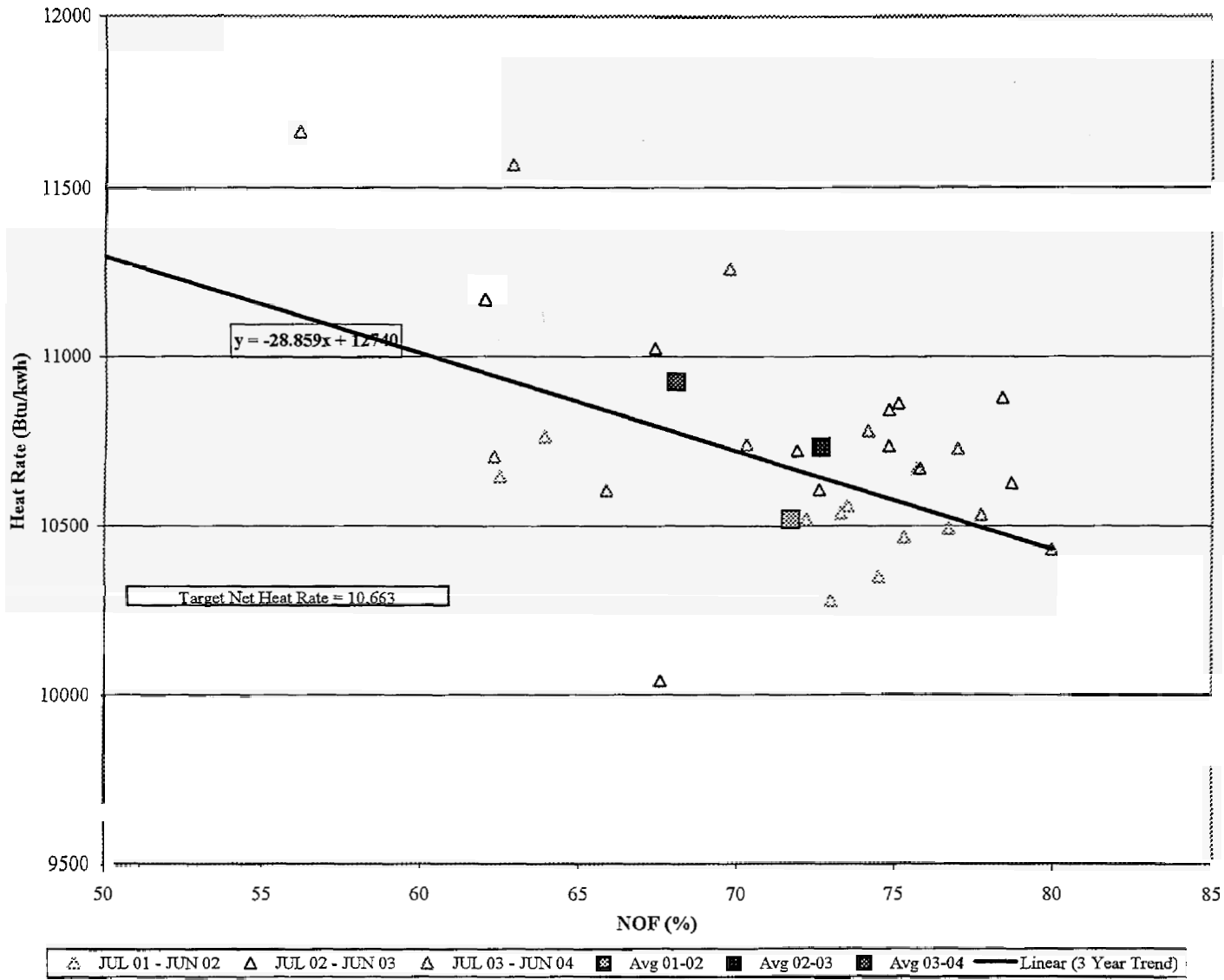
44

**Tampa Electric Company
Heat Rate vs Net Output Factor
Big Bend Unit #2**

45

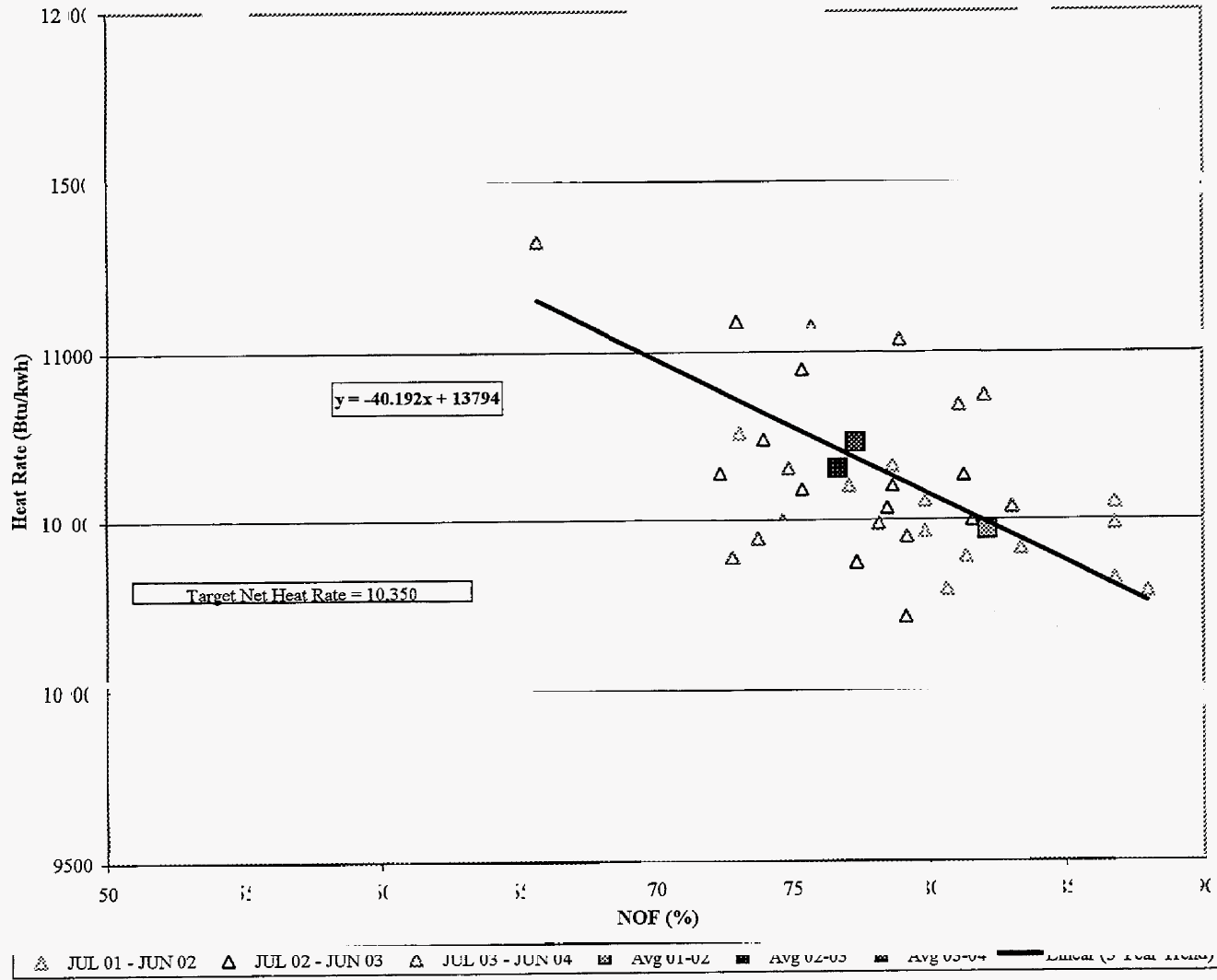


**Tampa Electric Company
Heat Rate vs Net Output Factor
Big Bend Unit #3**



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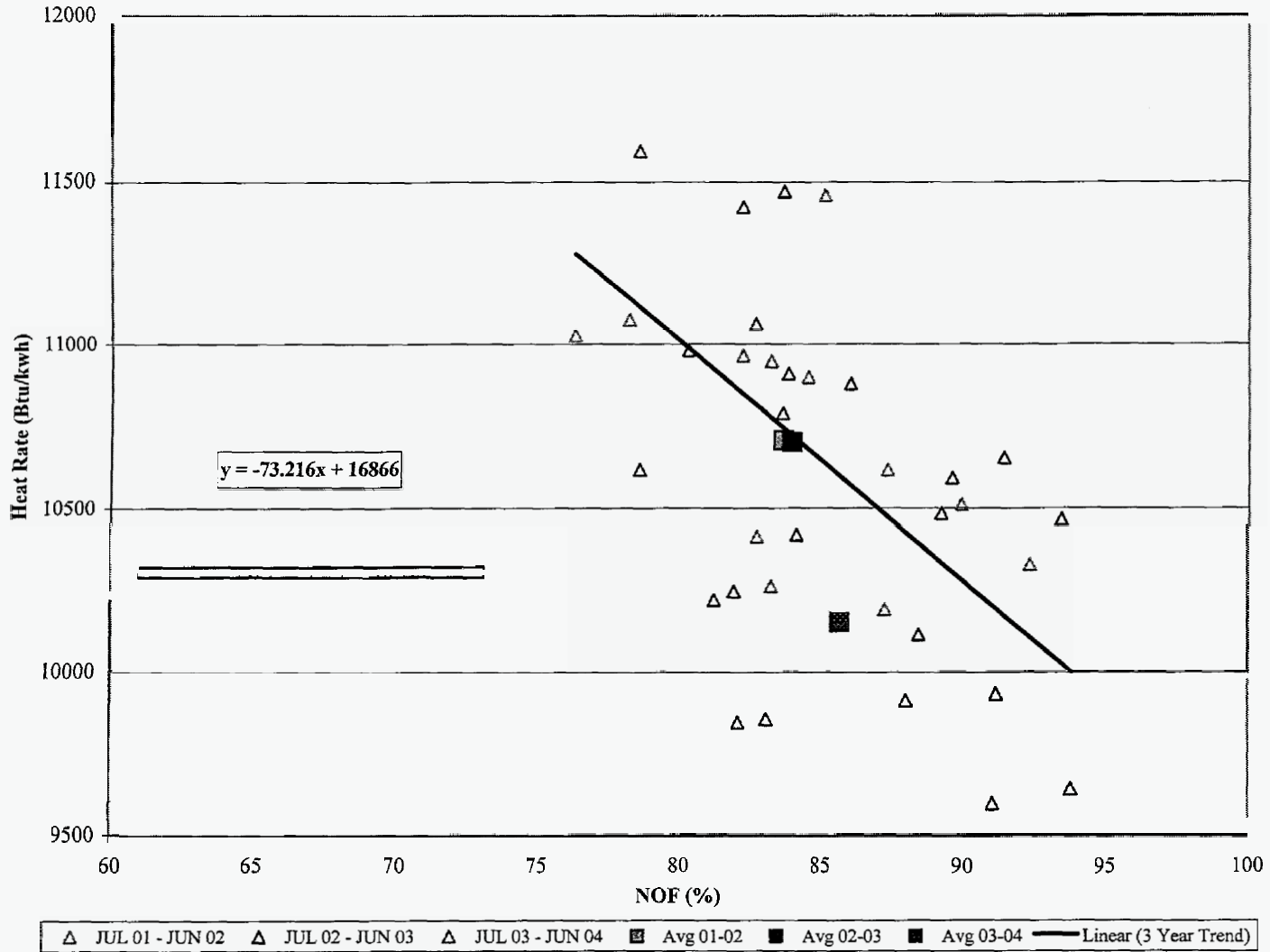
Tampa Electric Company Heat Rate vs Net Output Factor Big Bend Unit #4



47

**Tampa Electric Company
Heat Rate vs Net Output Factor
Polk Unit #1**

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**TAMPA ELECTRIC COMPANY
GENERATING UNITS IN GPIF
TABLE 4.2
JANUARY 2005 - DECEMBER 2005**

<u>PLANT / UNIT</u>	<u>ANNUAL GROSS MDC (MW)</u>	<u>ANNUAL NET NDC (MW)</u>
BIG BEND 1	447	425
BIG BEND 2	452	422
BIG BEND 3	455	433
BIG BEND 4	488	456
POLK 1	325	258
GPIF TOTAL	<u>2,167</u>	<u>1,993</u>
SYSTEM TOTAL	4,547	4,252
% OF SYSTEM TOTAL	47.66%	46.88%

TAMPA ELECTRIC COMPANY
UNIT RATINGS
JANUARY 2005 - DECEMBER 2005

<u>PLANT / UNIT</u>	<u>ANNUAL GROSS MDC (MW)</u>	<u>ANNUAL NET NDC (MW)</u>
BIG BEND 1	447	425
BIG BEND 2	452	422
BIG BEND 3	455	433
BIG BEND 4	488	456
BIG BEND TOTAL	<u>1,842</u>	<u>1,736</u>
BIG BEND CT1	15	15
BIG BEND CT2	80	73
BIG BEND CT3	70	65
CT TOTAL	<u>165</u>	<u>153</u>
PHILLIPS 1	18	17
PHILLIPS 2	18	17
PHILLIPS TOTAL	<u>36</u>	<u>34</u>
POLK 1	325	258
POLK 2	180	170
POLK 3	180	173
POLK TOTAL	<u>685</u>	<u>600</u>
BAYSIDE 1	787	745
BAYSIDE 2	1,032	985
BAYSIDE TOTAL	<u>1,819</u>	<u>1,730</u>
SYSTEM TOTAL	<u><u>4,547</u></u>	<u><u>4,252</u></u>

TAMPA ELECTRIC COMPANY
PERCENT GENERATION BY UNIT
JANUARY 2005 - DECEMBER 2005

PLANT	UNIT	NET OUTPUT MWH	PERCENT OF PROJECTED OUTPUT	PERCENT CUMULATIVE PROJECTED OUTPUT
BAYSIDE	2	4,674,230	26.33%	26.33%
BIG BEND	4	2,691,339	15.16%	41.50%
BAYSIDE	1	3,402,421	19.17%	60.67%
BIG BEND	3	1,873,211	10.55%	71.22%
BIG BEND	2	1,799,508	10.14%	81.36%
BIG BEND	1	1,622,779	9.14%	90.50%
POLK	1	1,519,143	8.56%	99.06%
POLK	2	79,166	0.45%	99.51%
PHILLIPS	1	20,010	0.11%	99.62%
PHILLIPS	2	20,068	0.11%	99.73%
POLK	3	41,910	0.24%	99.97%
BIG BEND CT	3	2,162	0.01%	99.98%
BIG BEND CT	1	488	0.00%	99.98%
BIG BEND CT	2	3,061	0.02%	100.00%

TOTAL GENERATION

17,749,496

100.00%

GENERATION BY COAL UNITS: 9,505,980 MWH

GENERATION BY NATURAL GAS UNITS: 8,197,727 MWH

% GENERATION BY COAL UNITS: 53.56%

% GENERATION BY NATURAL GAS UNITS: 46.19%

GENERATION BY OIL UNITS: 45,789 MWH

GENERATION BY GPIF UNITS: 9,505,980 MWH

% GENERATION BY OIL UNITS: 0.26%

% GENERATION BY GPIF UNITS: 53.56%

EXHIBIT TO THE TESTIMONY OF
DAVID R. KNAPP

DOCKET NO. 040001-EI

GENERATING PERFORMANCE INCENTIVE FACTOR
JANUARY 2005 - DECEMBER 2005

DOCUMENT NO. 2

SUMMARY OF GPIF TARGETS

Tampa Electric Company
Summary of GPIF Targets
January 2005 - December 2005

Unit	Availability			Net Heat Rate
	EAF	POF	EUOF	
Big Bend 1 ¹	52.6	15.34	32.03	10,853
Big Bend 2 ²	61.6	3.84	34.52	10,672
Big Bend 3 ³	60.6	3.84	35.61	10,663
Big Bend 4 ⁴	78.7	3.84	17.48	10,350
Polk 1 ⁵	79.76	3.77	15.47	10,342

^{1/} Original Sheet 8.401.05E, Page 12

^{2/} Original Sheet 8.401.05E, Page 13

^{3/} Original Sheet 8.401.05E, Page 14

^{4/} Original Sheet 8.401.05E, Page 15

^{5/} Original Sheet 8.401.05E, Page 16