

### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 020001-EI
IN RE: FUEL & PURCHASED POWER COST RECOVERY
AND
CAPACITY COST RECOVERY

## GENERATING PERFORMANCE INCENTIVE FACTOR PROJECTIONS

JANUARY 2003 THROUGH DECEMBER 2003

TESTIMONY AND EXHIBITS

OF

WILLIAM A. SMOTHERMAN

DOCUMENT NUMBER - DATE

10109 SEP 208

# TAMPA ELECTRIC COMPANY DOCKET NO. 020001-EI FILED: 9/20/02

1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION						
2	PREPARED DIRECT TESTIMONY							
3		OF						
4		WILLIAM A. SMOTHERMAN						
5								
6	Q.	Please state your name, business address, occupation and						
7		employer.						
8								
9	A.	My name is William A. Smotherman. My mailing and						
10		business address is 702 N. Franklin Street, Tampa,						
11		Florida 33602. I am employed by Tampa Electric Company						
12		("Tampa Electric" or "company") as the Director of the						
13		Resource Planning Department.						
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15	Q.	Please provide a brief outline of your educational						
16		background and business experience.						
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18	A.	I received a Bachelor of Electrical Engineering degree						
19		in 1986 from the University of South Florida. In May						
20		1986, I joined Tampa Electric as an associate engineer,						
21		and I have worked in the areas of system planning,						
22		commercial/ industrial account management and wholesale						
23		power marketing. In February 2001, I was promoted to						
24		Director, Resource Planning. My present						
25		responsibilities include the areas of system						

reliability, generation expansion and system fuel and purchased power forecasting and related economic analyses.

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Q. What is the purpose of your testimony?

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

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

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(WAS-2), consisting A. Yes, Exhibit No. two documents, was prepared under direction mу and supervision. Document No. 1 is titled Performance Incentive Factor January 2003 December 2003." Document No. 2 is a summary of the GPIF targets for the 2003 period.

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

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A. Six of the company's coal-fired units and one integrated gasification combined cycle unit are included. These are

Gannon Station Units 5 and 6, Big Bend Station Units 1, 2, 3, and 4, and Polk Power Station Unit 1. Due to environmental compliance requirements, Gannon Units 5 and 6 are expected to stop operating in February 2003 and September 2003 respectively, however the data for these units are included in the GPIF calculations until the units are shut down for repowering.

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Q. Do the exhibits you have prepared comply with Commissionapproved GPIF methodology?

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The documents I prepared are consistent with the GPIF Implementation Manual previously approved by the Commission, with the exception of the criterion that the company shall include generating units that will represent not less than 80 percent of projected system net generation.

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Q. Please explain.

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A. Due to the implementation of the final phases of repowering Gannon units 5 and 6 from coal to natural gas fired generation, 2003 will be a transition year for Tampa Electric. Since the company is repowering Gannon Units 5 and 6 to Bayside Units 1 and 2, its remaining

GPIF units will not represent 80 percent of projected system net generation. Although the first Bayside unit will begin operation in 2003, the repowered unit cannot be immediately included in the GPIF calculations because Tampa Electric will not have the historical operational data required by the GPIF Implementation manual to set GPIF targets. In addition, Tampa Electric has no other base load generating units to substitute for Gannon Units 5 and 6. Therefore, Tampa Electric requests approval of its calculation of the 2003 GPIF excluding the repowered units, as provided for by Section 3.2 of the GPIF Implementation Manual, which states that the Commission will approve exclusion of units from the calculation of the GPIF on a case-by-case basis.

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Q. Please describe how Tampa Electric developed the various factors associated with the GPIF.

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A. Targets were established for equivalent availability and heat rate for each unit considered for the 2003 period. A range of potential improvements and degradations was determined for each of these parameters.

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Q. How were the target values for unit availability determined? A. The Planned Outage Factor ("POF") and the Equivalent Unplanned Outage Factor ("EUOF") were subtracted from 100% to determine the target Equivalent Availability Factor ("EAF"). The factors for each of the seven units included within the GPIF are shown on page 5 of Document No. 1.

To give an example for the 2003 period, the projected Equivalent Unplanned Outage Factor for Big Bend Unit 1 is 24.35% and the Planned Outage Factor is 5.75%. Therefore, the target equivalent availability factor for Big Bend Unit 1 equals 69.9% or:

$$100\% - [(24.35\% + 5.75\%)] = 69.9\%$$

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

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

A. Maximum equivalent availability is derived by using the following formula:

$$EAF_{MAX} = 100\% - [0.8 (EUOF_T) + 0.95 (POF_T)]$$

The factors included in the above equations are the same factors that determine the target equivalent To determine the maximum incentive points, availability. reduction in Equivalent Forced Outage Factor ("EUOF") Equivalent and Maintenance Outage Factor plus a 5% reduction in the Planned Outage ("EMOF"), Factor are necessary. Continuing with the Big Bend Unit 1 example:

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EAF  $_{MAX}$  = 100% - [0.8 (24.35%) + 0.95 (5.75%)] = 75.1%

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

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

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The potential for unit availability degradation is Α. potential for significantly greater than the unit This concept was discussed availability improvement. extensively and approved in earlier hearings before the To incorporate this biased effect into the Commission. unit availability tables, Tampa Electric uses a potential twice range equal to the potential degradation Consequently, minimum equivalent improvement. 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 1 example,

EAF  $_{MIN}$  = 100% - [1.4 (24.35%) + 1.1 (5.75%)] = 59.6%

The equivalent availability MAX and MIN for the other six units is computed in a similar manner.

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

A. The company's planned outages for January 2003 through December 2003 are shown on page 21 of Document No. 1.

Also, a Critical Path Method (C.P.M.) for each major planned outage, which affects GPIF, is shown on pages 22 and 23 of Document No. 1. Planned Outage Factors are calculated for each unit. For example, Big Bend Unit 1 is scheduled for a planned outage February 15 through March 7, 2003. There are 504 planned outage hours scheduled for the 2003 period, and a total of 8,760 hours during this 12-month period. Consequently, the Planned Outage Factor for Unit 1 at Big Bend is 5.75% or:

504	x	100%	=	5.75%

8,760

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The factor for each unit is shown on pages 5 and 14 of Document No. 1. Big Bend Unit 2 has a Planned Outage Factor of 3.84%. Big Bend Unit 3 has a Planned Outage Factor of 3.84%. Big Bend 4 has a Planned Outage Factor of 9.59%. Gannon Unit 5 has a Planned Outage Factor of 0%. Gannon Unit 6 has a Planned Outage Factor of 0%. Polk Unit 1 has a Planned Outage Factor of 12.05%.

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

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Graphs for both factors (adjusted for planned outages) versus time were prepared. Monthly data and 12-month rolling average data were recorded. For each unit the most current 12-month ending value, June 2002, was used as a basis for the projection. This value was adjusted by analyzing trends and causes for recent forced and All projected factors are based maintenance outages. upon historical unit performance, engineering judgment, time since last planned outage, and equipment performance resulting in a forced or maintenance outage. These target factors are additive and result in an Equivalent

Unplanned Outage Factor of 24.35% for Big Bend Unit 1. The Equivalent Unplanned Outage Factor for Big Bend Unit 1 is verified by the data shown on page 14, lines 3, 5, 10 and 11 of Document No. 1 and calculated using the following formula:

Or

EUOF = 
$$(1416 + 717)$$
 x 100 = 24.35%  
8,760

Relative to Big Bend Unit 1, the EUOF of 24.35% forms the basis of the equivalent availability target development as shown on pages 4 and 5 of Document No. 1.

#### Big Bend Unit 1

The projected Equivalent Unplanned Outage Factor for this unit is 24.35%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 5.75%. Therefore, the target equivalent availability for this unit is 69.9%.

#### Big Bend Unit 2

The projected Equivalent Unplanned Outage Factor for this

unit is 33.16%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 3.84%. Therefore, the target equivalent availability for this unit is 63%.

#### Big Bend Unit 3

The projected Equivalent Unplanned Outage Factor for this unit is 28.9%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 3.84%. Therefore, the target equivalent availability for this unit is 67.3%.

#### Big Bend Unit 4

The projected Equivalent Unplanned Outage Factor for this unit is 12.68%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 9.59%. Therefore, the target equivalent availability for this unit is 77.7%.

#### Gannon Unit 5

The projected Equivalent Unplanned Outage Factor for this unit is 28.07%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 0%. Therefore, the target equivalent availability for this unit is 71.9%.

#### Gannon Unit 6

The projected Equivalent Unplanned Outage Factor for this

unit is 24.05%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 0%. Therefore, the target equivalent availability for this unit is 75.9%.

#### Polk Unit 1

The projected Equivalent Unplanned Outage Factor for this unit is 13.39%. This unit will have a planned outage in 2003 and the Planned Outage Factor is 12.05%. Therefore, the target equivalent availability for this unit is 74.6%.

Q. Please summarize your testimony regarding Equivalent Availability Factor.

A. The GPIF system weighted Equivalent Availability Factor of 69.3% is shown on Page 5 of Document No. 1 This target compares favorably to the July 2001 - June 2002 GPIF period.

Q. When graphing and monitoring Forced and Maintenance
Outage Factors, why are they adjusted for planned outage
hours?

A. The adjustment makes the factors more accurate and comparable. Obviously, a unit in a planned outage stage

or reserve shutdown stage will not incur a forced or maintenance outage. Since the units in the GPIF are usually base loaded, reserve shutdown is generally not a factor.

To demonstrate the effects of a planned outage, note the Equivalent Unplanned Outage Rate and Equivalent Unplanned Outage Factor for Big Bend Unit 1 on page 14 of Document During the months of January and April through December, the Equivalent Unplanned Outage Rate and the Equivalent Unplanned Outage Factor are equal. due to the fact that no planned outages are scheduled during these months. During the months of February and March, Equivalent Unplanned Outage exceeds Rate Equivalent Unplanned Outage Factor due to the scheduling of a planned outage. Therefore, the adjusted factors apply to the period hours after the planned outage hours have been extracted.

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

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A. Yes. Rates provide a proper and accurate method of determining the unit parameters, which are subsequently converted to factors. Therefore,

#### FOF + MOF + POF + EAF = 100%

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

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

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

Q. How were these targets determined?

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A. Net heat rate data for the three most recent July through June annual periods, along with the PROMOD IV program, formed the basis of the target development. Projections of unit performance were made with the aid of PROMOD IV. The historical data and the target values are analyzed to assure applicability to current conditions of operation. This provides assurance that any periods of abnormal operations or equipment modifications having material effect on heat rate can be taken into consideration.

Q. The accomplishment of scrubbing the flue gas from Big
Bend Units 1 and 2 requires an additional amount of

station service power. How do you plan to address the associated effect to net heat rate for GPIF purposes?

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A. The change in heat rate for these units resulting from utilization of the new scrubber can be quantified, but the operational history is short of GPIF quidelines. Therefore, targets for Big Bend Units 1 and 2 have been developed in the standard fashion using data without scrubber power. In order to assure compatibility with the targets, scrubber power will be removed prior to calculating Units 1 and 2 heat rates for the subsequent true-up process. This method was approved by the Commission for Big Bend Unit 3 when it began scrubbing The company will utilize the aforementioned operation. method until there is sufficient history to meet target preparation guidelines.

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Q. Have you developed the heat rate targets in accordance with GPIF guidelines?

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21 A. Yes.

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

A. The ranges were determined through analysis of historical net heat rate and net output factor data. This is the same data from which the net heat rate versus net output factor curves have been developed for each unit. This information is shown on pages 31 through 37 of Document No. 1.

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

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

- Q. Please summarize your heat rate projection (Btu/Net kWh) and the range about each target to allow for potential improvement or degradation for the 2003 period.
- A. The heat rate target for Big Bend Unit 1 is 10,533 Btu/Net kWh. The range about this value, to allow for

potential improvement or degradation, is ±622 Btu/Net kWh. The heat rate target for Big Bend Unit 2 is 10111 Btu/Net kWh with a range of ±537 Btu/Net kWh. The heat rate target for Big Bend Unit 3 is 10,132 Btu/Net kWh, with a range of ±677 Btu/Net kWh. The heat rate target for Big Bend Unit 4 is 10,028 Btu/Net kWh with a range of ±463 Btu/Net kWh. The heat rate target for Gannon Unit 5 is 10,862 Btu/Net kWh with a range of ±728 Btu/Net kWh. The heat rate target for Gannon Unit 6 is 10,775 Btu/Net kWh with a range of ±767 Btu/Net kWh. The heat rate target for Polk Unit 1 is 10,382 Btu/Net kWh with a range of  $\pm 767$ Btu/Net kWh. A zone of tolerance of ±75 Btu/Net kWh is included within the range for each target. This is shown on page 4, and pages 7 through 13 of Document No. 1.

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

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A. Yes.

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

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A. The next step is to calculate the savings and weighting factor to be used for both average net operating heat rate and equivalent availability. This is shown on pages 7 through 13. The PROMOD IV cost simulation model was used to calculate the total system fuel cost if all units operated at target heat rate and target availability for the period. This total system fuel cost of \$546,407,900 is shown on page 6, column 2.

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The PROMOD IV output was then used to calculate total system fuel cost with each unit individually operating at maximum improvement in equivalent availability and each station operating at maximum improvement in average net operating heat rate. The respective savings are shown on page 6, column 4 of Document No. 1.

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After all of the individual savings are calculated column 4 totals \$29,158,500, which reflects the savings if all the units operated maximum improvement. of at Α weighting factor for each parameter is then calculated by dividing individual savings by the total. For Big Bend Unit 1, the weighting factor for equivalent availability is 10.36% as shown in the right-hand column on page 6. Pages 7 through 13 of Document No. 1 show the point table, the Fuel Savings/(Loss) the equivalent and

availability or heat rate value. The individual weighting factor is also shown. For example, on Big Bend Unit 1, page 7, if the unit operates at 75.1% equivalent availability, fuel savings would equal \$3,021,700 and ten equivalent availability points would be awarded.

The GPIF Reward/Penalty Table on page 2 is a summary of the tables on pages 7 through 13. The left-hand column of this document shows the incentive points for Tampa Electric. The center column shows the total fuel savings and is the same amount as shown on page 6, column 4, \$29,158,500. The right hand column of page 2 is the estimated reward or penalty based upon performance.

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Q. How were the maximum allowed incentive dollars determined?

A. Referring to page 3, line 14, the estimated average common equity for the period January 2003 through December 2003 is \$1,751,599,709. This produces the maximum allowed jurisdictional incentive dollars of \$6,960,923 shown on line 21.

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

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

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- Q. Please summarize your testimony on the GPIF.
  - Electric Α. Tampa has complied with the Commission's directions, philosophy, methodology and in our determination of GPIF. The GPIF is determined by the following formula for calculating Generating Performance Incentive Points (GPIP):

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- 12 GPIP: =  $(0.1036 \text{ EAP}_{BB1} + 0.1461 \text{ EAP}_{BB2})$
- + 0.1041 EAP<sub>BB3</sub> + 0.0696 EAP<sub>BB4</sub>
  - + 0.0034 EAP<sub>GN5</sub> + 0.0441 EAP<sub>GN6</sub>
- + 0.0306 EAP<sub>PK1</sub> + 0.0895 HRP<sub>BB1</sub>
- + 0.0740 HRP<sub>BB2</sub> + 0.1001 HRP<sub>BB3</sub>
- + 0.0850 HRP<sub>BB4</sub> + 0.0050 HRP<sub>GN5</sub>
- $+ 0.0660 \text{ HRP}_{GN6} + 0.0781 \text{ HRP}_{PK1}$ )

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- 20 Where:
- 21 GPIP = Generating Performance Incentive Points.
- EAP = Equivalent Availability Points awarded/deducted for
  Big Bend Units 1, 2, 3 and 4, Gannon Units 5 and 6,
  and Polk Unit 1.
  - HRP = Average Net Heat Rate Points awarded/deducted for

Big Bend Units 1, 2, 3 and 4, Gannon Units 5 and 6, and Polk Unit 1. Have you prepared a document summarizing the GPIF targets Q. for the January 2003 - December 2003 period? Document No. 2 entitled "Tampa Electric Company, A. Yes. Summary of GPIF Targets, January 2003 - December 2003" provides the availability and heat rate targets for each unit. Does this conclude your testimony? Q. A. Yes. 

EXHIBIT NO.\_\_\_\_\_\_
DOCKET NO. 020001-EI
TAMPA ELECTRIC COMPANY
(WAS-2)
FILED: SEPTEMBER 20, 2002

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## EXHIBITS TO THE TESTIMONY OF WILLIAM A. SMOTHERMAN

DOCKET NO. 020001-EI

### GENERATING PERFORMANCE INCENTIVE FACTOR JANUARY 2003 - DECEMBER 2003

DOCUMENT NO. 1

**GPIF SCHEDULES** 

EXHIBIT NO. \_\_\_\_\_ (WAS-2)
TAMPA ELECTRIC COMPANY
DOCKET NO. 020001 - EI
DOCUMENT NO. 1
PAGE 1 OF 40

# TAMPA ELECTRIC COMPANY GENERATING PERFORMANCE INCENTIVE FACTOR JANUARY 2003 - DECEMBER 2003 TARGETS TABLE OF CONTENTS

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# TAMPA ELECTRIC COMPANY GENERATING PERFORMANCE INCENTIVE FACTOR REWARD / PENALTY TABLE - ESTIMATED JANUARY 2003 - DECEMBER 2003

GENERATING PERFORMANCE INCENTIVE POINTS (GPIP)	FUEL SAVINGS / (LOSS) (\$000)	GENERATING PERFORMANCE INCENTIVE FACTOR (\$000)
+10	29,158.5	6,960.9
+9	26,242.6	6,264.8
+8	23,326.8	5,568.7
+7	20,410.9	4,872.6
+6	17,495.1	4,176.6
+5	14,579.2	3,480.5
+4	11,663.4	2,784.4
+3	8,747.5	2,088.3
+2	5,831.7	1,392.2
+1	2,915.8	696.1
0	0.0	0.0
-1	(3,520.2)	(696.1)
-2	(7,040.4)	(1,392.2)
-3	(10,560.7)	(2,088.3)
-4	(14,080.9)	(2,784.4)
-5	(17,601.1)	(3,480.5)
-6	(21,121.3)	(4,176.6)
-7	(24,641.5)	(4,872.6)
-8	(28,161.8)	(5,568.7)
-9	(31,682.0)	(6,264.8)
-10	(35,202.2)	(6,960.9)

# TAMPA ELECTRIC COMPANY GENERATING PERFORMANCE INCENTIVE FACTOR CALCULATION OF MAXIMUM ALLOWED INCENTIVE DOLLARS (ESTIMATED)

#### JANUARY 2003 - DECEMBER 2003

Line 3 Line 4	Month of February  Month of March	2003 2003	\$ \$	1,607,355,782 1,621,224,265
Line 5				
Line 5	Month of April	2003	\$	1,635,308,086
Line 6	Month of May	2003	\$	1,649,450,269
Line 7	Month of June	2003	\$	1,856,730,928
Line 8	Month of July	2003	\$	1,828,644,756
Line 9	Month of August	2003	\$	1,842,790,236
Line 10	Month of September	2003	\$	1,857,074,223
Line 11	Month of October	2003	\$	1,871,154,780
Line 12	Month of November	2003	\$	1,885,716,504
Line 13	Month of December	2003	\$	1,900,420,811
Line 14	(Summation of line 1 through l	line 13 divided by 13)	\$	1,751,599,709
Line 15	25 Basis points			0.0025
Line 16	Revenue Expansion Factor			61.38%
Line 17	Maximum Allowed Incentive I (line 14 times line 15 divided b		\$	7,134,152
Line 18	Jurisdictional Sales			18,037,201 MWH
Line 19	Total Sales			18,486,071 MWH
Line 20	Jurisdictional Separation Factor (line 18 divided by line 19)	or		97.57%
Line 21	Maximum Allowed Jurisdict (line 17 times line 20)	ional Incentive Dollars	\$	6,960,923

### TAMPA ELECTRIC COMPANY GPIF TARGET AND RANGE SUMMARY JANUARY 2003 - DECEMBER 2003

#### **EQUIVALENT AVAILABILITY**

PLANT / UNIT	WEIGHTING FACTOR (%)	EAF TARGET (%)	EAF RA MAX. (%)	MIN. (%)	MAX. FUEL SAVINGS (\$000)	MAX. FUEL LOSS (\$000)
BIG BEND 1	10.36%	69.9	75.1	59.6	3,021.7	(1,669.5)
BIG BEND 2	14.61%	63.0	69.9	49.4	4,261.3	(5,768.6)
BIG BEND 3	10.41%	67.3	73.2	55.3	3,034.2	(4,512.7)
BIG BEND 4	6.96%	77.7	80.7	71.7	2,030.2	(3,893.4)
GANNON 5	0.34%	71.9	77.5	60.7	100.5	(274.6)
GANNON 6	4.41%	75.9	80.8	66.3	1,287.1	(2,883.1)
POLK 1	3.06%	74.6	77.8	68.0	892.7	(1,669.5)
GPIF SYSTEM	50.17%					

#### **AVERAGE NET OPERATING HEAT RATE**

PLANT / UNIT	WEIGHTING FACTOR (%)	ANOHR Btu/kwh	TARGET NOF	ANOHR I	RANGE MAX.	MAX. FUEL SAVINGS (\$000)	MAX. FUEL LOSS (\$000)
BIG BEND I	8.95%	10533	70.7	9912	11155	2,610.9	(2,610.9)
BIG BEND 2	7.40%	10111	79.7	9574	10649	2,158.4	(2,158.4)
BIG BEND 3	10.01%	10132	75.5	9455	10810	2,917.7	(2,917.7)
BIG BEND 4	8.50%	10028	88.2	9565	10491	2,477.8	(2,477.8)
GANNON 5	0.50%	10862	64.9	10134	11589	145.8	(145.8)
GANNON 6	6.66%	10775	69.5	10007	11542	1,942.0	(1,942.0)
POLK 1	7.81%	10382	96.0	9615	11148	2,278.3	(2,278.3)
GPIF SYSTEM	49.83%					14,530.8	(14,530.8)

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

#### EQUIVALENT AVAILABILITY (%)

	WEIGHTING FACTOR	NORMALIZED WEIGHTING		GET PER 03 - DEC			GET PERI			GET PER			GET PER	
PLANT / UNIT	(%)	FACTOR	POF	EUOF	EUOR	POF	EUOF	EUOR	POF	EUOF	EUOR	POF	EUOF	EUOR
BIG BEND 1	10.36%	20.7%	5.8	24.4	25.8	4.5	24.8	26.0	14.3	23.7	27.7	5.7	16.0	17.0
BIG BEND 2	14.61%	29.1%	3.8	33.2	34.5	0.0	28.2	28.2	6.1	18.5	19.7	5.6	10.4	11.0
BIG BEND 3	10.41%	20.7%	3.8	28.9	30.1	16.2	27.7	33.1	0.0	16.7	16.7	11.2	18.0	20.3
BIG BEND 4	6.96%	13.9%	9.6	12.7	14.0	0.0	12.4	12.4	8.5	12.6	13.8	10.9	9.5	10.7
GANNON 5	0.34%	0.7%	0.0	28.1	28.1	14.0	26.9	31.3	12.2	39.1	44.5	6.3	26.5	28.3
GANNON 6	4.41%	8.8%	0.0	24.1	24.1	0.0	23.4	23.4	8.3	23.3	25.4	9.1	30.0	33.0
POLK 1	3.06%	6.1%	12.1	13.4	15.2	0.7	14.3	14.4	4.3	8.7	9.1	4.9	13.3	14.0
GPIF SYSTEM	50.17%	100.0%	5.2	25.6	26.8	4.4	23.9	25.3	7.0	18.3	19.9	7.8	15.0	16.4
GPIF SYSTEM WEIGHTED EQUIVALENT AVAILABILITY (%)				<u>69.3</u>			<u>71.6</u>			<u>74.7</u>			<u>77.2</u>	

3 PERIOD AVERAGE POF EUOF EUOR 3 PERIOD AVERAGE
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6.4 19.1 20.5

74.5

#### AVERAGE NET OPERATING HEAT RATE (Btu/kwh)

PLANT / UNIT	WEIGHTING FACTOR (%)	NORMALIZED WEIGHTING FACTOR	TARGET HEAT RATE JAN 03 - DEC 03	ADJUSTED PRIOR HEAT RATE JUL 01 - JUN 02	ADJUSTED PRIOR HEAT RATE JUL 00 - JUN 01	ADJUSTED PRIOR HEAT RATE JUL 99 - JUN 00
BIG BEND 1	8.95%	18.0%	10,533	10,806	10,572	10,225
BIG BEND 2	7.40%	14.9%	10,111	10,390	10,062	9,883
BIG BEND 3	10.01%	20 1%	10,132	10,209	10,149	10,039
BIG BEND 4	8.50%	17.1%	10,028	10,277	9,949	9,835
GANNON 5	0.50%	1.0%	10,862	10,770	10,716	11,072
GANNON 6	6.66%	13.4%	10,775	10,971	10,235	10,938
POLK 1	7.81%	15.7%	10,382	10,623	10,268	10,242
GPIF SYSTEM	49.83%	100.0%				
GPIF SYSTEM V	WEIGHTED AVE	RAGE HEAT RATE (	Btu/kwh) 10,316	10,527	10,214	10,177

# TAMPA ELECTRIC COMPANY DERIVATION OF WEIGHTING FACTORS JANUARY 2003 - DECEMBER 2003 PRODUCTION COSTING SIMULATION FUEL COST (\$000)

UNIT PERFORMANCE INDICATOR	AT TARGET (1)	AT MAXIMUM IMPROVEMENT (2)	SAVINGS (3)	WEIGHTING FACTOR (% OF SAVINGS)
EQUIVALENT AVAILABILITY				
EA <sub>1</sub> BIG BEND 1	546407.9	543386.2	3022	10.36%
EA <sub>2</sub> BIG BEND 2	546407.9	542146.6	4261	14.61%
EA <sub>3</sub> BIG BEND 3	546407.9	543373.7	3034.2	10.41%
EA <sub>4</sub> BIG BEND 4	546407.9	544377.7	2030	6.96%
EA <sub>5</sub> GANNON 5	546407.9	546307.4	101	0.34%
EA <sub>6</sub> GANNON 6	546407.9	545120.8	1287	4,41%
EA <sub>7</sub> POLK 1	546407.9	545515.2	892.7	3.06%
AVERAGE HEAT RATE				
AHR <sub>1</sub> BIG BEND 1	546407.9	543797.0	2610.9	8.95%
AHR <sub>2</sub> BIG BEND 2	546407.9	544249.5	2158.4	7.40%
AHR <sub>3</sub> BIG BEND 3	546407.9	543490.2	2917.7	10.01%
AHR <sub>4</sub> BIG BEND 4	546407.9	543930.1	2477.8	8.50%
AHR <sub>5</sub> GANNON 5	546407.9	546262.1	145.8	0.50%
AHR <sub>6</sub> GANNON 6	546407.9	544465.9	1942.0	6.66%
AHR <sub>7</sub> POLK 1	546407.9	544129.6	2278.3	7.81%
TOTAL SAVINGS			29,158.5	100.00%

<sup>(1)</sup> Fuel Adjustment Base Case - All unit performance indicators at target.

<sup>(2)</sup> All other units performance indicators at target.

<sup>(3)</sup> Expressed in replacement energy cost.

#### GPIF TARGET AND RANGE SUMMARY

#### JANUARY 2003 - DECEMBER 2003

EQUIVALENT AVAILABILITY POINTS	FUEL SAVINGS / (LOSS) (\$000)	ADJUSTED ACTUAL EQUIVALENT AVAILABILITY	AVERAGE FUEL HEAT RATE SAVINGS / (LOSS) POINTS (\$000)		ADJUSTED ACTUAL AVERAGE HEAT RATE
+10	3,021.7	75.1	+10	2,610.9	9,912
+9	2,719.5	74.6	+9	2,349.9	9,966
+8	2,417.4	74.1	+8	2,088.8	10,021
+7	2,115.2	73.5	+7	1,827.7	10,076
+6	1,813.0	73.0	+6	1,566.6	10,130
+5	1,510.9	72.5	+5	1,305.5	10,185
+4	_ 1,208.7	72.0	+4	1,044.4	10,240
+3	906.5	71.5	+3	783.3	10,294
+2	604.3	70.9	+2	522.2	10,349
+1	302.2	70.4	+1	261.1	10,404
					10,458
0	0.0	69.9	0	0.0	10,533
					10,608
-1	(167.0)	68.9	-1	(261.1)	10,663
-2	(333.9)	67.8	-2	(522.2)	10,718
-3	(500.9)	66.8	-3	(783.3)	10,772
-4	(667.8)	65.8	-4	(1,044.4)	10,827
-5	(834.8)	64.7	-5	(1,305.5)	10,882
-6	(1,001.7)	63.7	-6	(1,566.6)	10,936
-7	(1,168.7)	62.7	-7	(1,827.7)	10,991
-8	(1,335.6)	61.6	-8	(2,088.8)	11,046
-9	(1,502.6)	60.6	-9	(2,349.9)	11,100
-10	(1,669.5)	59.6	-10	(2,610.9)	11,155
	Weighting Factor =	10.36%		Weighting Factor =	8.95%

#### **GPIF TARGET AND RANGE SUMMARY**

#### JANUARY 2003 - DECEMBER 2003

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	4,261.3	69.9	+10	2,158.4	9,574
+9	3,835.2	69.2	+9	1,942.5	9,620
+8	3,409.0	68.5	+8	1,726.7	9,666
+7	2,982.9	67.8	+7	1,510.9	9,713
+6	2,556.8	67.1	+6	1,295.0	9,759
+5	2,130.7	66.5	+5	1,079.2	9,805
+4	1,704.5	65.8	+4	863.4	9,851
+3	1,278.4	65.1	+3	647.5	9,898
+2	852.3	64,4	+2	431.7	9,944
+1	426.1	63.7	+1	215.8	9,990
					10,036
0	0.0	63.0	0	0.0	10,111
					10,186
-1	(576.9)	61.6	-1	(215.8)	10,233
-2	(1,153.7)	60.3	-2	(431.7)	10,279
-3	(1,730.6)	58.9	-3	(647.5)	10,325
-4	(2,307.4)	57.6	-4	(863.4)	10,371
-5	(2,884.3)	56.2	-5	(1,079.2)	10,418
-6	(3,461.2)	54.8	-6	(1,295.0)	10,464
-7	(4,038.0)	53.5	-7	(1,510.9)	10,510
-8	(4,614.9)	52.1	-8	(1,726.7)	10,556
-9	(5,191.7)	50.8	-9	(1,942.5)	10,603
-10	(5,768.6)	49.4	-10	(2,158.4)	10,649
	Weighting Factor =	14.61%		Weighting Factor =	7.40%

#### GPIF TARGET AND RANGE SUMMARY

#### JANUARY 2003 - DECEMBER 2003

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	3,034.2	73.2	+10	2,917.7	9,455
+9	2,730.8	72.6	+9	2,625.9	9,515
+8	2,427.4	72.0	+8	2,334.1	9,575
+7	2,123.9	71.4	+7	2,042.4	9,635
+6	1,820.5	70.8	+6	1,750.6	9,696
+5	1,517.1	70.2	+5	1,458.8	9,756
+4	1,213.7	69.6	+4	1,167.1	9,816
+3	910.3	69.0	+3	875.3	9,876
+2	606.8	68.5	+2	583.5	9,937
+1	303.4	67.9	+1	291.8	9,997
					10,057
0	0.0	67.3	0	0.0	10,132
					10,207
-1	(451.3)	66.1	-1	(291.8)	10,267
-2	(902.5)	64.9	-2	(583.5)	10,328
-3	(1,353.8)	63.7	-3	(875.3)	10,388
-4	(1,805.1)	62.5	-4	(1,167.1)	10,448
-5	(2,256.3)	61.3	-5	(1,458.8)	10,508
-6	(2,707.6)	60.1	-6	(1,750.6)	10,569
<b>-</b> 7	(3,158.9)	58.9	-7	(2,042.4)	10,629
-8	(3,610.2)	57.7	-8	(2,334.1)	10,689
-9	(4,061.4)	56.5	-9	(2,625.9)	10,749
-10	(4,512.7)	55.3	-10	(2,917.7)	10,810
	Weighting Factor =	10.41%		Weighting Factor =	10.01%

#### **GPIF TARGET AND RANGE SUMMARY**

#### JANUARY 2003 - DECEMBER 2003

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	2,030.2	80.7	+10	2,477.8	9,565
+9	1,827.2	80.4	+9	2,230.0	9,604
+8	1,624.2	80.1	+8	1,982.2	9,643
+7	1,421.1	79.8	+7	1,734.4	9,682
+6	1,218.1	79.5	+6	1,486.7	9,721
+5	1,015.1	79.2	+5	1,238.9	9,759
+4	_ 812.1	78.9	+4	991.1	9,798
+3	609.1	78.6	+3	743.3	9,837
+2	406.0	78.3	+2	495.6	9,876
+1	203.0	78.0	+1	247.8	9,915
					9,953
0	0.0	77.7	0	0.0	10,028
					10,103
-1	(389.3)	77.1	-1	(247.8)	10,142
-2	(778.7)	76.5	-2	(495.6)	10,181
-3	(1,168.0)	75.9	-3	(743.3)	10,220
-4	(1,557.4)	75.3	-4	(991.1)	10,259
-5	(1,946.7)	74.7	-5	(1,238.9)	10,297
-6	(2,336.0)	74.1	-6	(1,486.7)	10,336
-7	(2,725.4)	73.5	-7	(1,734.4)	10,375
-8	(3,114.7)	72.9	-8	(1,982.2)	10,414
-9	(3,504.1)	72.3	-9	(2,230.0)	10,453
-10	(3,893.4)	71.7	-10	(2,477.8)	10,491
	Weighting Factor =	6.96%		Weighting Factor =	8.50%

#### GPIF TARGET AND RANGE SUMMARY

#### JANUARY 2003 - DECEMBER 2003

#### **GANNON 5**

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	100.5	77.5	+10	145.8	10,134
+9	90.5	76.9	+9	131.2	10,199
+8	80.4	76.4	+8	116.6	10,265
+7	70.4	75.8	+7	102.1	10,330
+6	60.3	75.3	+6	87.5	10,395
+5	50.3	74.7	+5	72.9	10,460
+4	40.2	74.2	+4	58.3	10,526
+3	30.2	73.6	+3	43.7	10,591
+2	20.1	73.0	+2	29.2	10,656
+1	10.1	72.5	+1	14.6	10,722
					10,787
0	0.0	71.9	0	0.0	10,862
					10,937
-1	(27.5)	70.8	-1	(14.6)	11,002
-2	(54.9)	69.7	-2	(29.2)	11,067
-3	(82.4)	68.6	-3	(43.7)	11,133
-4	(109.8)	67.4	-4	(58.3)	11,198
-5	(137.3)	66.3	-5	(72.9)	11,263
-6	(164.8)	65.2	-6	(87.5)	11,328
-7	(192.2)	64.1	-7	(102.1)	11,394
-8	(219.7)	63.0	-8	(116.6)	11,459
-9	(247.1)	61.8	-9	(131.2)	11,524
-10	(274.6)	60.7	-10	(145.8)	11,589
	Weighting Factor =	0.34%		Weighting Factor ≈	0.50%

#### GPIF TARGET AND RANGE SUMMARY

#### JANUARY 2003 - DECEMBER 2003

#### **GANNON 6**

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	1,287.1	80.8	+10	1,942.0	10,007
+9	1,158.4	80.3	+9	1,747.8	10,077
+8	1,029.7	79.8	+8	1,553.6	10,146
+7	901.0	79.3	+7	1,359.4	10,215
+6	772.3	78.9	+6	1,165.2	10,284
+5	643.5	78.4	+5	971.0	10,354
+4	514.8	77.9	+4	776.8	10,423
+3	386.1	77.4	+3	582.6	10,492
+2	257.4	76.9	+2	388.4	10,561
+1	128.7	76.4	+1	194.2	10,630
					10,700
0	0.0	75.9	0	0.0	10,775
					10,850
-1	(288.3)	75.0	-1	(194.2)	10,919
-2	(576.6)	74.0	-2	(388.4)	10,988
-3	(864.9)	73.1	-3	(582.6)	11,057
-4	(1,153.2)	72.1	-4	(776.8)	11,126
-5	(1,441.5)	71.1	-5	(971.0)	11,196
-6	(1,729.9)	70.2	-6	(1,165.2)	11,265
-7	(2,018.2)	69.2	-7	(1,359.4)	11,334
-8	(2,306.5)	68.3	-8	(1,553.6)	11,403
-9	(2,594.8)	67.3	-9	(1,747.8)	11,472
-10	(2,883.1)	66.3	-10	(1,942.0)	11,542
	Weighting Factor =	4.41%		Weighting Factor =	6.66%

#### GPIF TARGET AND RANGE SUMMARY

#### JANUARY 2003 - DECEMBER 2003

#### POLK 1

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	892.7	77.8	+10	2,278.3	9,615
+9	803.4	77.5	+9	2,050.4	9,684
+8	714.2	77.2	+8	1,822.6	9,753
+7	624.9	76.8	+7	1,594.8	9,822
+6	535.6	76.5	+6	1,367.0	9,891
+5	446.4	76.2	+5	1,139.1	9,961
+4	357.1	75.9	+4	911.3	10,030
+3	267.8	75.5	+3	683.5	10,099
+2	178.5	75.2	+2	455.7	10,168
+1	89.3	74.9	+1	227.8	10,237
					10,307
0	0.0	74.6	0	0.0	10,382
					10,457
-1	(167.0)	73.9	-1	(227.8)	10,526
-2	(333.9)	73.2	-2	(455.7)	10,595
-3	(500.9)	72.6	-3	(683.5)	10,664
-4	(667.8)	71.9	-4	(911.3)	10,733
-5	(834.8)	71.3	-5	(1,139.1)	10,802
-6	(1,001.7)	70.6	-6	(1,367.0)	10,872
-7	(1,168.7)	70.0	-7	(1,594.8)	10,941
-8	(1,335.6)	69.3	-8	(1,822.6)	11,010
-9	(1,502.6)	68.6	-9	(2,050.4)	11,079
-10	(1,669.5)	68.0	-10	(2,278.3)	11,148
	Weighting Factor =	3.06%		Weighting Factor =	7.81%

#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

	PLANT/UNIT	MONTH OF:	PERIOD											
	BIG BEND 1 GPIF (w/o FGD)	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
	1. EAF (%)	74.2	37.1	57.4	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2	69.9
	2. POF	0.0	50.0	22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.75
	3. EUOF	25.8	12.9	20 0	25.8	25.8	25.8	25.8	25.8	25.8	25 8	25.8	25.8	24.35
	4. EUOR	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8760
	6. SH	638	288	494	617	638	617	638	638	617	638	617	638	7078
	7. RSH	0	0	0	0	0	0	0	o	0	0	0	0	0
د	8. UH	106	384	250	103	106	103	106	106	103	106	103	106	1682
Ĭ	9. РОН	0	336	168	0	0	0	0	0	0	0	О	0	504
	10. FOH & ЕГОН	128	58	99	124	128	124	128	128	124	128	124	128	1416
	11. MOH & EMOH	65	29	50	63	65	63	65	65	63	65	63	65	717
	12. OPER BTU (GBTU)	1886	912	1639	1901	1956	1926	2023	2029	1983	2127	1940	2025	22354
	13. NET GEN (MWH)	176,693	86,348	156,473	179,939	185,049	182,762	192,406	193,065	189,080	204,142	184,323	191,901	2,122,181
	14. ANOHR (Btu/kwh)	10,672	10,557	10,472	10,563	10,571	10,540	10,512	10,507	10,487	10,418	10,527	10,552	10,533
	15. NOF (%)	64.3	69.6	73.5	69.3	68.9	70.4	71.6	71.9	72.8	76.0	71.0	69.8	70.7
	16. NPC (MW)	431	431	431	421	421	421	421	421	421	421	421	431	424
	17. ANOHR EQUATION	ANO	HR = NOF(	-21.583	) +	12058								

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#### TAMPA ELECTRIC COMPANY

#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

PLANT/UNIT	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF-	MONTH OF:	PERIOD						
BIG BEND 2 GPIF (w/o FGD)	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
1. EAF (%)	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	61.2	40.2	63.0
2. POF	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	0 0	00	6.7	38.7	3.84
3. EUOF	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	32.2	21.1	33.16
4. EUOR	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8760
6. SH	622	562	622	602	622	602	622	622	602	622	562	381	7043
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	o
8. UH	122	110	122	118	122	118	122	122	118	122	158	363	1717
9. РОН	0	0	0	0	0	o	0	o	0	0	48	288	336
10. FOH & EFOH	171	154	171	165	171	165	171	171	165	171	154	105	1932
11. MOH & EMOH	86	78	86	83	86	83	86	86	83	86	78	53	972
12. OPER BTU (GBTU)	2039	1907	2186	2036	2053	2057	2153	2154	2099	2163	1926	1306	24083
13. NET GEN (MWH)	200,361	188,168	216,519	201,316	202,447	203,582	213,426	213,480	208,281	214,566	190,740	128,926	2,381,812
14. ANOHR (Btu/kwh)	10,175	10,137	10,098	10,115	10,142	10,103	10,088	10,088	10,080	10,083	10,100	10,127	10,111
15. NOF (%)	74.7	77.7	80.8	79.4	77.3	80.3	81.5	81.5	82.2	81.9	80 6	78.5	79.7
16. NPC (MW)	431	431	431	421	421	421	421	421	421	421	421	431	424
17. ANOHR EQUATION	ANOF	IR = NOF(	-12.783	) +	11130								

#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

PLANT/UNIT	MONTH OF:	PERIOD											
BIG BEND 3	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
1. EAF (%)	69.9	69.9	38.4	69.9	69.9	69.9	69.9	69.9	69.9	69.9	69.9	69.9	67.3
2. POF	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.84
3. EUOF	30.1	30.1	16.5	30.1	30.1	30.1	30.1	30.1	30.1	30.1	30.1	30.1	28.90
4. EUOR	30.1	30.1	30.1	30.1	30.1	30.1	30 1	30.1	30.1	30.1	30.1	30.1	30.1
5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8760
6. SH	597	539	327	578	597	578	597	597	578	597	578	597	6760
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	o
8. UH	147	133	417	142	147	142	147	147	142	147	142	147	2000
9. POH	0	0	336	o	0	0	0	0	0	0	0	0	336
10. FOH & EFOH	136	123	74	131	136	131	136	136	131	136	131	136	1536
11. МОН & ЕМОН	88	79	48	85	88	85	88	88	85	88	85	88	996
12. OPER BTU (GBTU)	1969	1805	1019	1918	1969	1913	1993	2001	1951	1911	1931	2017	22400
13. NET GEN (MWH)	193,848	178,983	98,013	189,482	193,899	188,652	197,340	198,493	194,204	185,755	191,281	200,870	2,210,820
14 ANOHR (Btu/kwh)	10,155	10,083	10,398	10,125	10,154	10,139	10,098	10,079	10,045	10,287	10,094	10,040	10,132
15. NOF (%)	75.0	76.7	69.2	75.7	75.0	75.4	76.3	76.8	77.6	71.9	76.4	77.7	75.5
16. NPC (MW)	433	433	433	433	433	433	433	433	433	433	433	433	433
17. ANOHR EQUATION	ANOH	IR = NOF(	-42.211	) +	13320								

#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

P	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
E	BIG BEND 4	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
	1. EAF (%)	86 0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	47.1	25.8	86.0	77.7
	2 POF	0.0	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.2	70.0	0.0	9.59
	3. EUOF	14.0	14 0	14.0	14.0	140	14.0	14.0	14.0	14.0	7.7	4.2	14.0	12 68
	4 EUOR	14.0	14.0	14 0	14 0	14 0	14 0	14 0	140	14.0	14.0	14.0	14.0	14.0
	5. PH	744	672	744	720	744	720	744	744	720	744	720	744	8760
	6. SH	658	595	658	637	658	637	658	658	637	361	191	658	7006
	7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0
	8 UH	86	77	86	83	86	83	86	86	83	383	529	86	1754
•	9. POH	0	0	0	0	0	0	0	0	0	336	504	0	840
1	0. FOH & EFOH	72	65	72	70	72	70	72	72	70	39	21	72	766
1	1. МОН & ЕМОН	32	29	32	31	32	31	32	32	31	18	9	32	345
1:	2. OPER BTU (GBTU)	2554.951	2352.685	2610 856	2514 136	2555.776	2445.295	2563.987	2569.815	2519.294	1431.958	749.068	2626.980	27493.324
ì	3. NET GEN (MWH)	252,964	234,609	260,720	251,672	254,191	242,090	255,333	256,146	252,402	143,641	74,789	262,992	2,741,549
1	4. ANOHR (Btu/kwh)	10,100	10,028	10,014	9,990	10,055	10,101	10,042	10,033	9,981	9,969	10,016	9,989	10,028
ì	5. NOF (%)	86 0	88.2	88.6	89.4	87.4	86.0	87.8	88.1	89.6	90.0	88.6	89.4	88.2
1	6. NPC (MW)	447	447	447	442	442	442	442	442	442	442	442	447	444
1	7. ANOHR EQUATION	ANOI	HR = NOF(	-32.62558703	) +	12906.02976								

#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

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
GANNON 5	Jan-03	Feb-03	Mar-03	Арт-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
1 EAF(%)	71.9	71.9											71.9
2. POF	0.0	00											0.00
3. EUOF	28.1	28.1											28.07
4 EUOR	28.1	28.1											28.1
5. PH	744	168											912
6. SH	562	125											687
7. RSH	0	0											0
8. UH	182	43											225
9. POH	0	0											0
10. FOH & EFOH	143	32											176
11. MOH & EMOH	65	15											80
12. OPER BTU (GBTU)	844.655	206.435											1051.108
13. NET GEN (MWH)	77,748	19,023											96,771
14. ANOHR (Btt/kwh)	10,864	10,852											10,862
15. NOF (%)	63.7	70.1											64.9
16. NPC (MW)	217	217											217
17. ANOHR EQUATION	ANOH	IR = NOF(	-1.899627385	)+	10985.08063								

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#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

	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
	GANNON 6	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
	1. EAF (%)	75.9	75.9	75.9	75.9	75.9	75.9	75.9	75.9					75.9
	• •													
	2. POF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.00
	3. EUOF	24 1	24 1	24 1	24.1	24.1	24.1	24.1	24.1					24.05
	4. EUOR	24 1	24.1	24 1	24.1	24 1	24.1	24.1	24.1					24.1
	5 PH	744	672	744	<del>7</del> 20	744	720	744	744					5832
	6. SH	617	557	617	597	617	597	617	617					4837
	7. RSH	0	0	0	0	0	0	0	0					0
•	8. UH	127	115	127	123	127	123	127	127					995
,	9. РОН	0	0	0	0	0	0	0	0					0
	10 FOH & EFOH	103	93	103	100	103	100	103	103					806
	11. МОН & ЕМОН	76	69	76	74	76	74	76	76					596
	12. OPER BTU (GBTU)	1569.141	1536.134	1795.428	1661.188	1738.703	1730.081	1840.396	1862.661					13736.851
	13 NET GEN (MWH)	144,712	142,157	166,569	154,170	161,464	160,885	171,398	173,581					1,274,936
	14. ANOHR (Btu/kwh)	10,843	10,806	10,779	10,775	10,768	10,754	10,738	10,731					10,775
	15. NOF (%)	59.8	65.1	68.9	69.4	70.3	72.4	74.7	75.6					69.5
	16. NPC (MW)	392	392	392	372	372	372	372	372					379
	17. ANOHR EQUATION	ANOI	IR = NOF(	-7.118328179 )	+	11269.01914								

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#### TAMPA ELECTRIC COMPANY

#### ESTIMATED UNIT PERFORMANCE DATA

#### JANUARY 2003 - DECEMBER 2003

PLANT/UNIT	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF:	MONTH OF	MONTH OF	MONTH OF:	PERIOD					
POLK I	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	2003
1. EAF (%)	84.8	84 8	19.1	28 3	84 8	84.8	84 8	84.8	84.8	84.8	84.8	84.8	74.6
2 POF	0.0	0.0	77.4	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.05
3. EUOF	15.2	15.2	3.4	5.1	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	13.39
4. EUOR	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
5. PH	744	672	744		744								
				720		720	744	744	720	744	720	744	8760
6. SH	584	527	132	226	584	565	584	584	565	584	565	584	6084
7. RSH	0	0	0	0	0	0	0	0	0	0	0	0	0
8 UH	160	145	612	494	160	155	160	160	155	160	155	160	2676
9. POH	0	0	576	480	0	0	o	0	0	o	0	0	1056
10. FOH & EFOH	72	65	16	23	72	69	72	72	69	72	69	72	741
11. MOH & EMOH	42	38	9	13	42	40	42	42	40	42	40	42	432
12. OPER BTU (GBTU)	1512.416	1368.560	348.341	572.583	1387.749	1342.951	1387.749	1387.749	1342.951	1516.220	1467.275	1516.202	15153.516
13. NET GEN (MWH)	146,198	132,326	33,732	55,238	133,138	128,843	133,138	133,138	128,843	146,600	141,871	146,598	1,459,663
14. ANOHR (Btu/kwh)	10,345	10,342	10,327	10,366	10,423	10,423	10,423	10,423	10,423	10,343	10,342	10,343	10,382
15. NOF (%)	100.1	100.4	102.2	97.8	91 2	91.2	91.2	91.2	91.2	100.4	100.4	100.4	96.0
16. NPC (MW)	250	250	250	250	250	250	250	250	250	250	250	250	250
17. ANOHR EQUATION	ANOF	IR = NOF(	-8.76500931	) <b>+</b>	11222.67106								

### TAMPA ELECTRIC COMPANY PLANNED OUTAGE SCHEDULE (ESTIMATED) GPIF UNITS JANUARY 2003 - DECEMBER 2003

PLANT / UNIT	PLANNED OUTAGE DATES	OUTAGE DESCRIPTION
+ BIG BEND 1	Feb 15 - Mar 07	Fuel System Clean-up
+ BIG BEND 2	Nov 29 - Dec 12	Fuel System Clean-up
+ BIG BEND 3	Mar 15 - Mar 28	Fuel System Clean-up
BIG BEND 4	Oct 18 - Nov 21	
		FGD (3&4) Replace Common Inlet Duct, BB Limestone Ball Liner Replacement, BB FGD 3&4 A&B Booster Fan Inlet Duct Replacement, BB4 Boiler Burner Replacement, BB4 ID Fan Inlet Duct Expansion Joints Replacement, BB4 CEM and BB4 Opacity Monitor Replacement, BB4 B
+ GANNON 5		
+ GANNON 6		
POLK 1	Mar 08 - Apr 20	#1CT Major Outage: Tops off Rotor out, Gen. Rotor Rewind/Insul., Steam Turbine Major Outage: Tops off Rotors out, Gen. Rotor Rewind, Gasifier Outage Major Inspection, Syngas Saturator Project, Gasifier Hot Face Brick Replacement, RSC Vessel Shell Repairs

EXHIBIT NO. \_\_\_\_\_ (WAS-2)
TAMPA ELECTRIC COMPANY
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### TAMPA ELECTRIC COMPANY CRITICAL PATH METHOD DIAGRAMS GPIF UNITS > FOUR WEEKS JANUARY 2003 - DECEMBER 2003

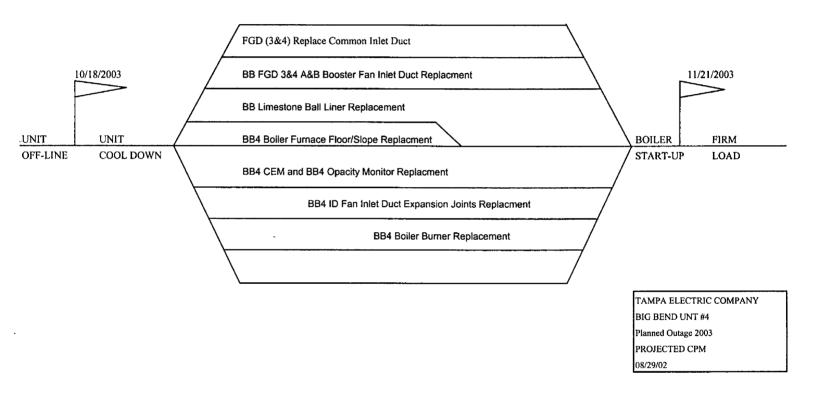
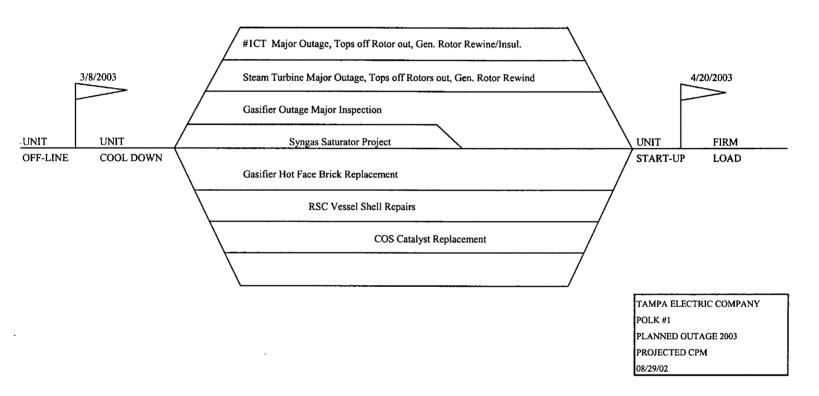
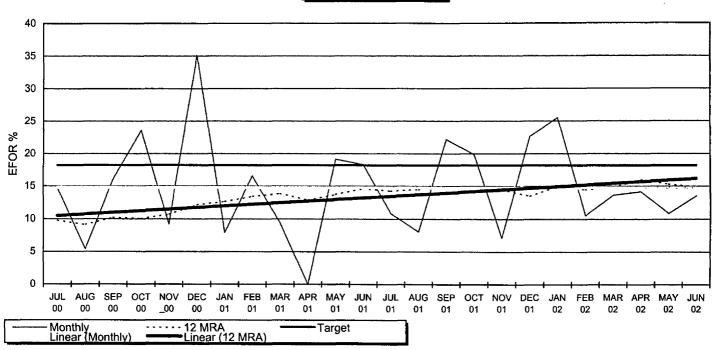


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TAMPA ELECTRIC COMPANY
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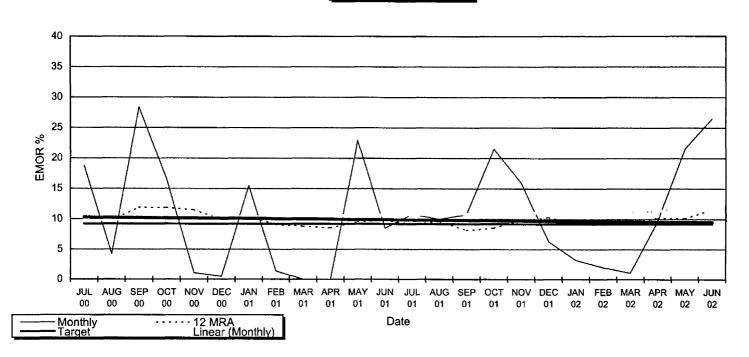
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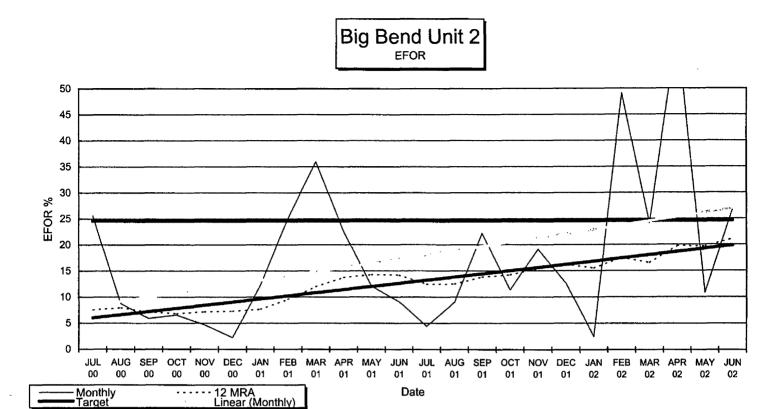


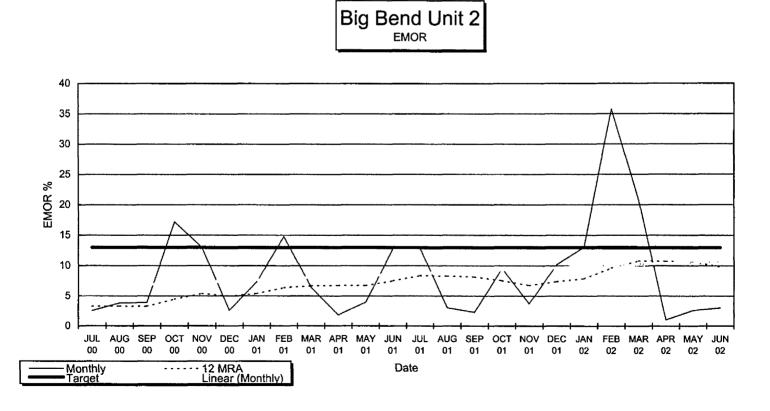


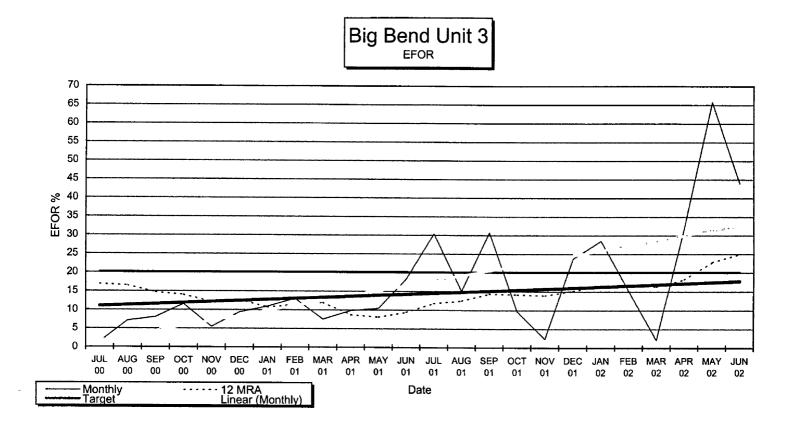


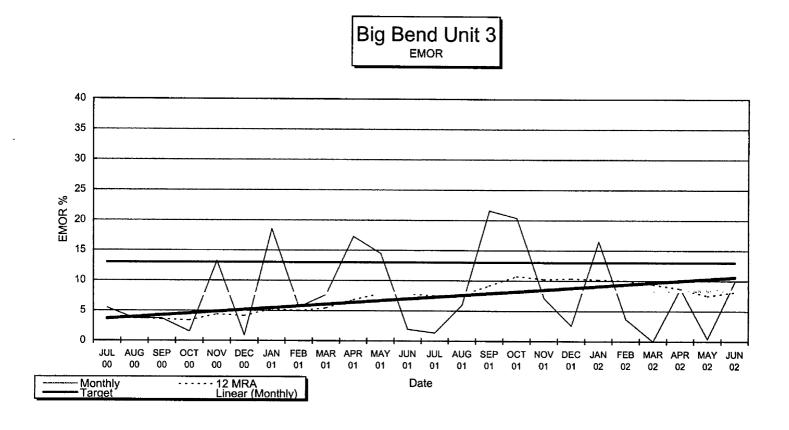
### Big Bend Unit 1

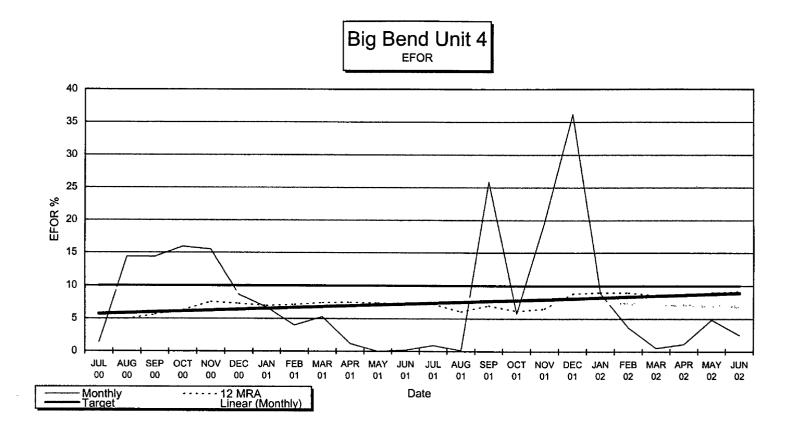


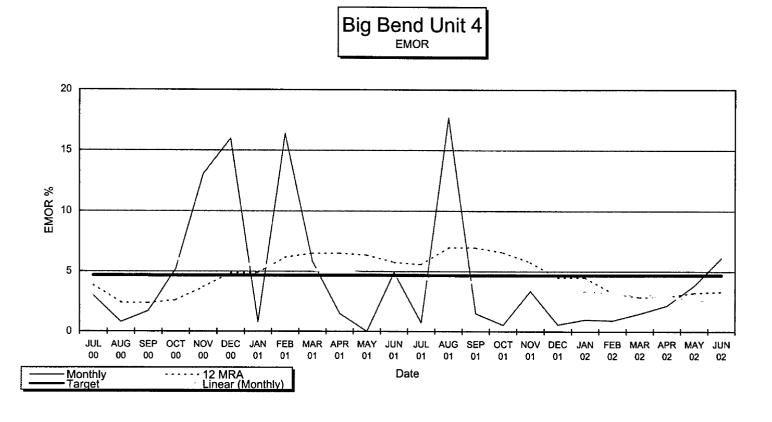


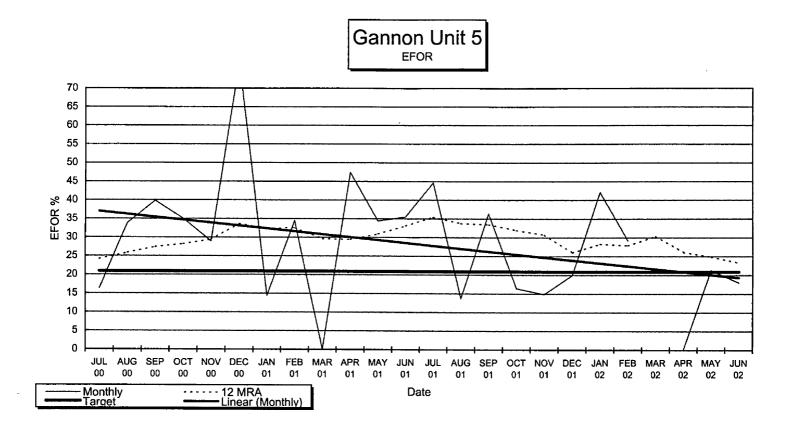




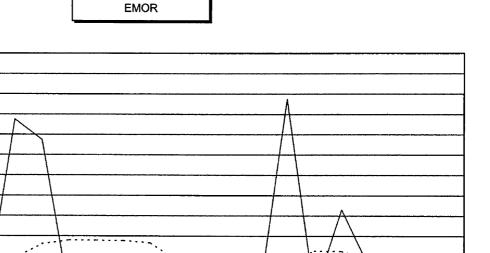








Gannon Unit 5



OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR

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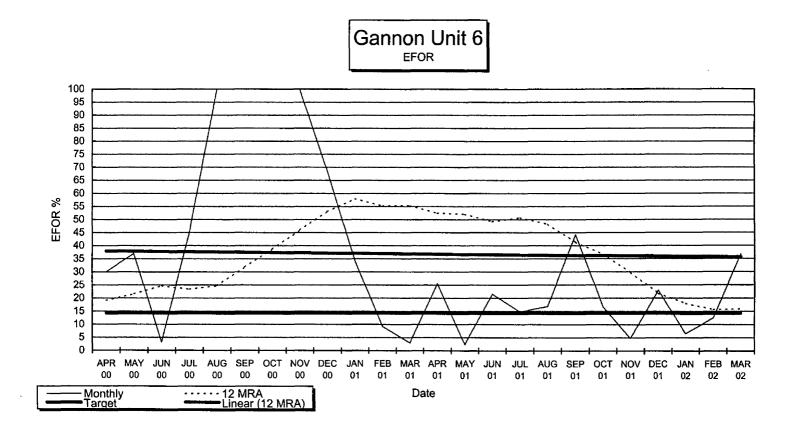
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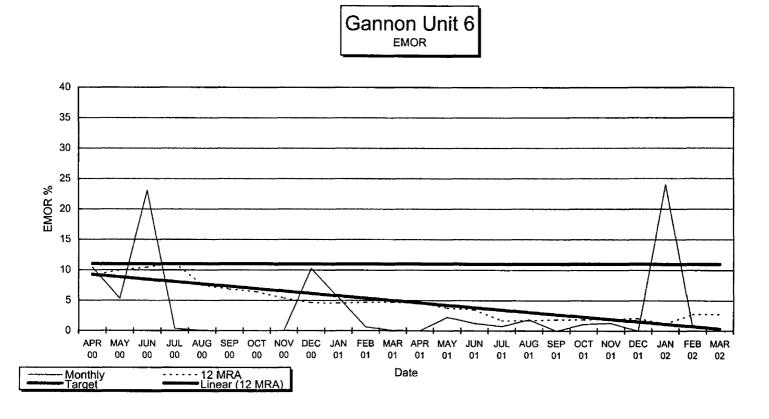
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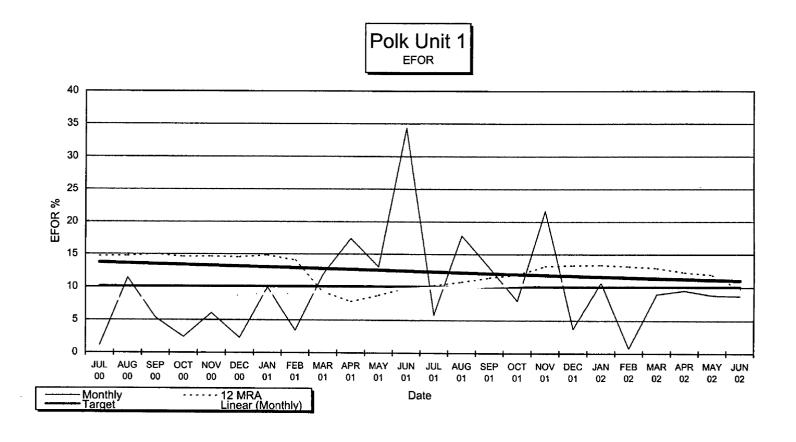
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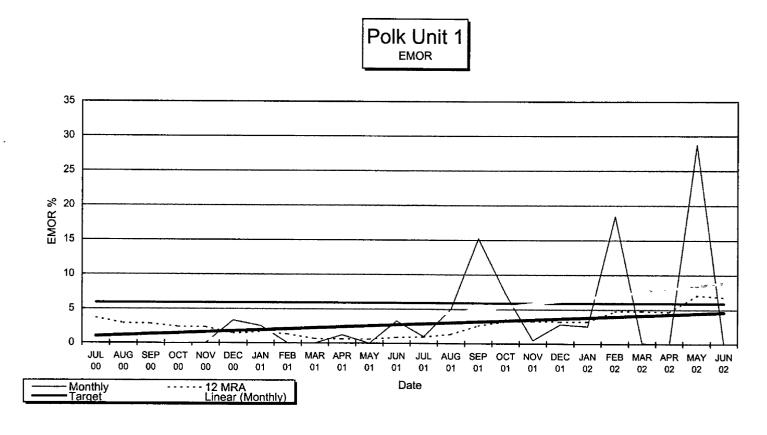
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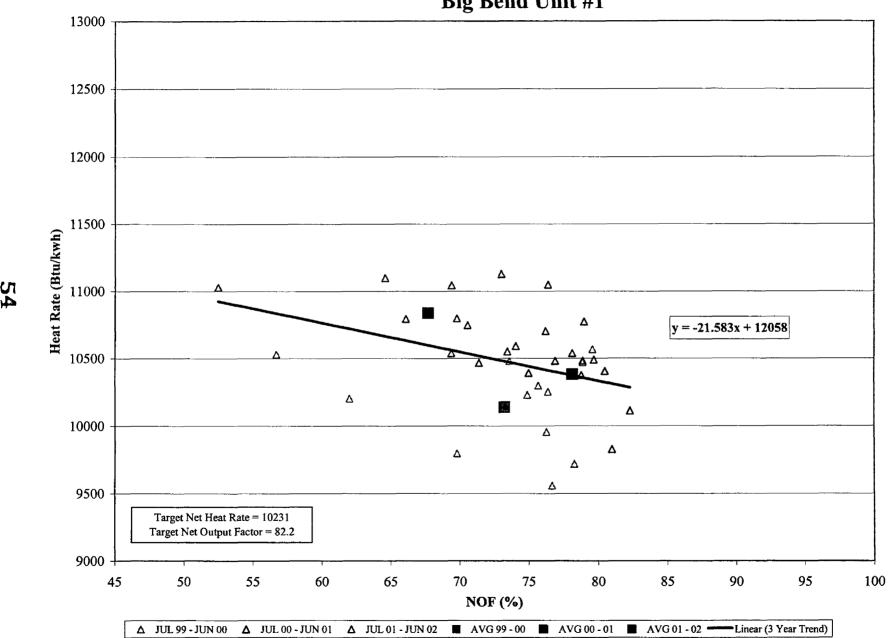
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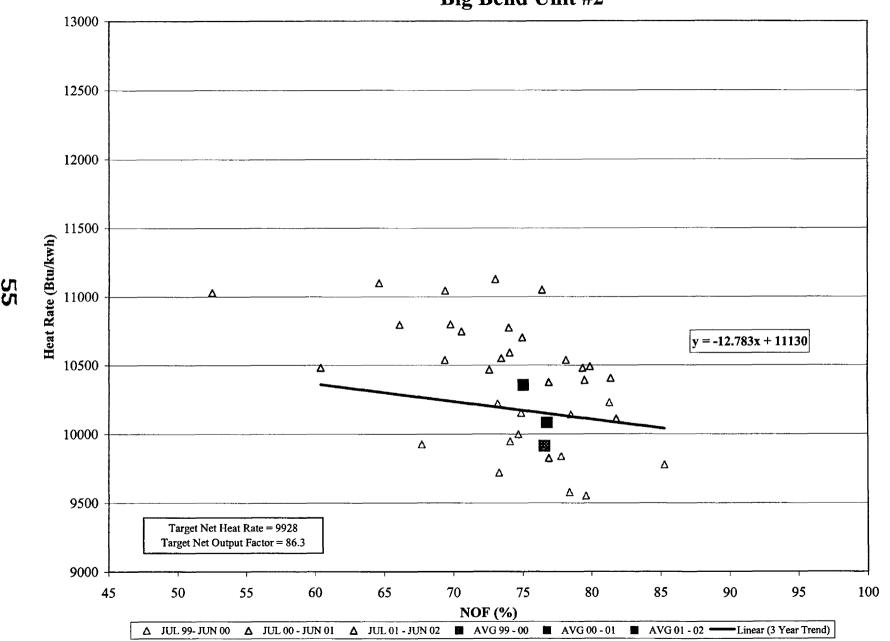




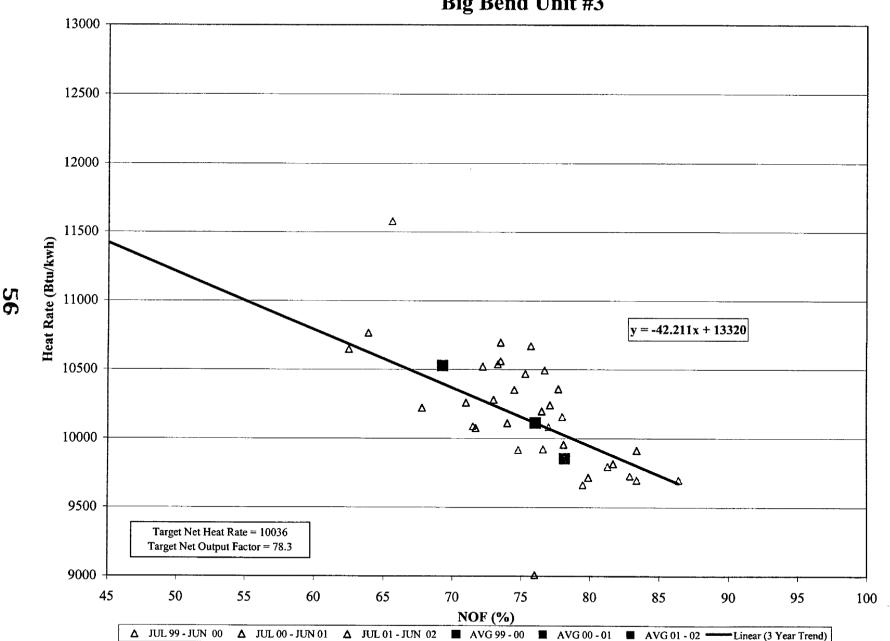


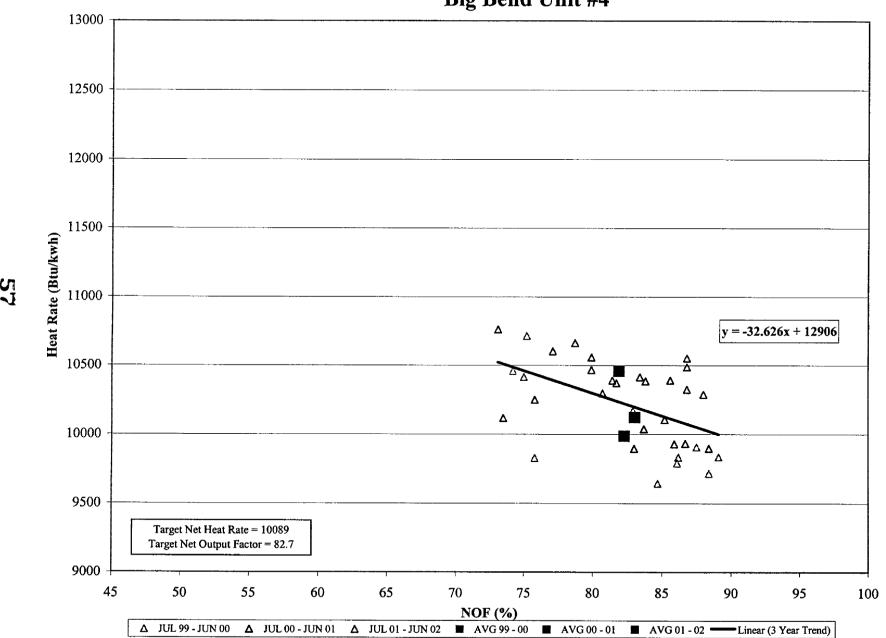


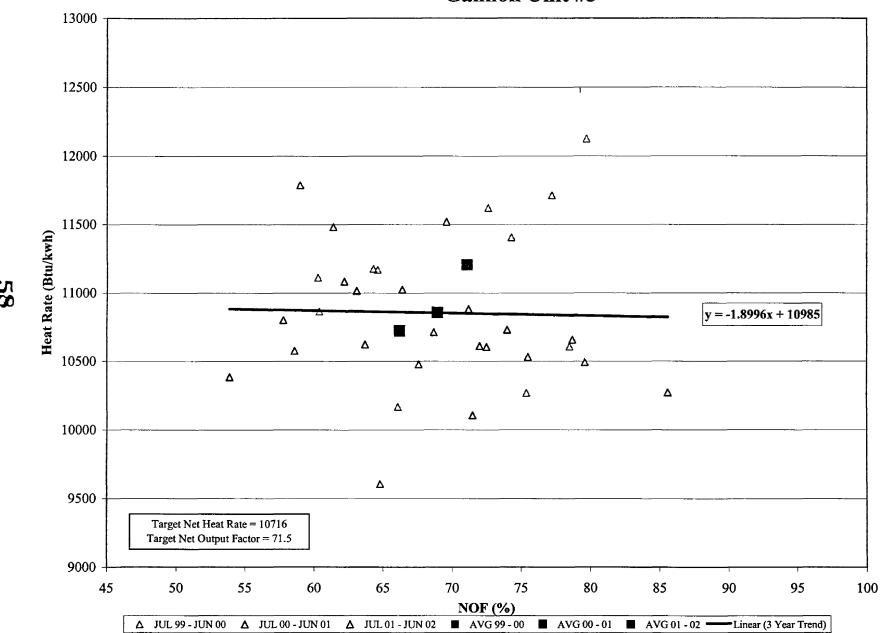


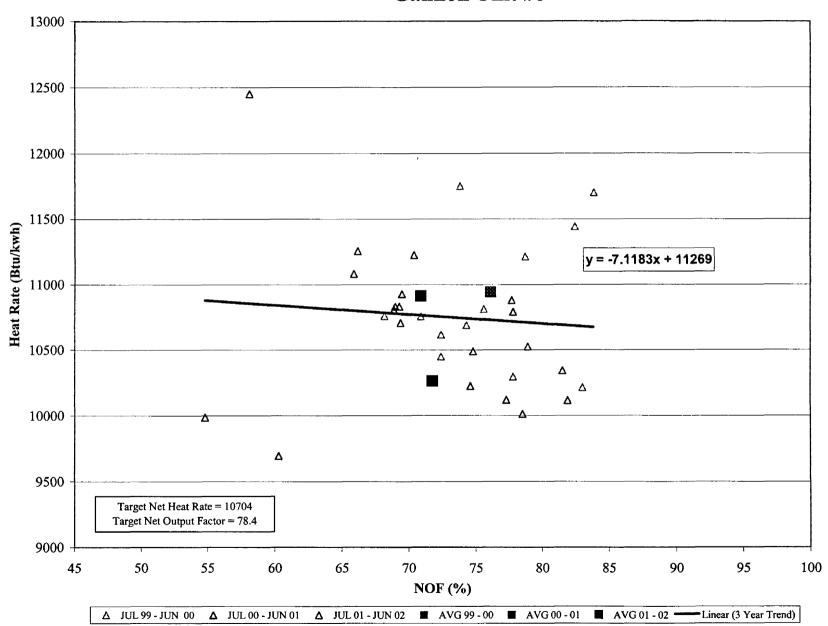


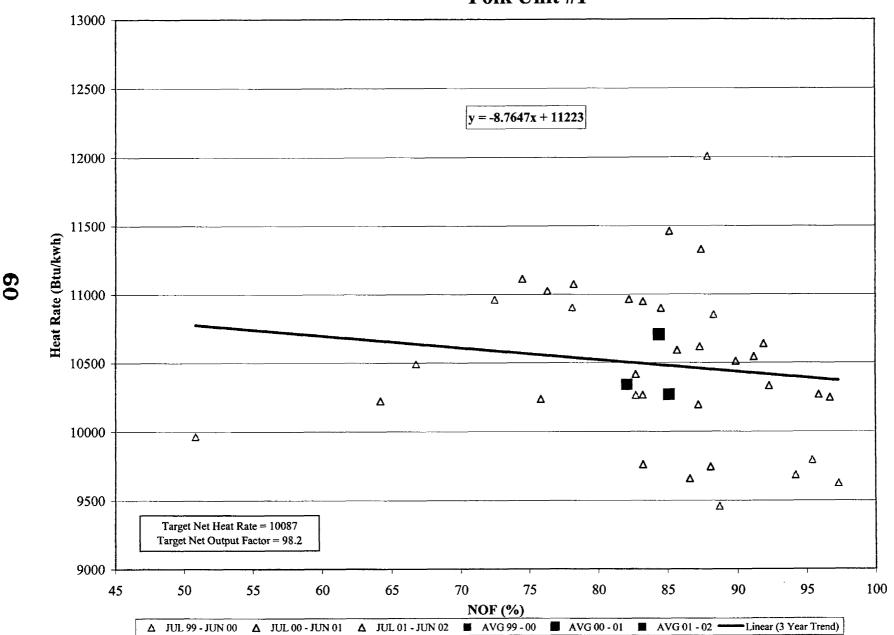
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## TAMPA ELECTRIC COMPANY GENERATING UNITS IN GPIF TABLE 4.2 JANUARY 2003 - DECEMBER 2003

PLANT / UNIT	ANNUAL GROSS MDC (MW)	ANNUAL NET NDC (MW)
BIG BEND 1 w/o FGD	440	426
BIG BEND 2 w/o FGD	440	426
BIG BEND 3	450	433
BIG BEND 4	473	445
GANNON 5	230	217
GANNON 6	395	382
POLK 1	315	250
GPIF TOTAL	2743	<u>2579</u>
SYSTEM TOTAL	3820	3619
% OF SYSTEM TOTAL	71.79%	71.25%

### TAMPA ELECTRIC COMPANY UNIT RATINGS JANUARY 2003 - DECEMBER 2003

PLANT / UNIT		ANNUAL GROSS MDC (MW)	ANNUAL NET NDC (MW)
GANNON 1		120	114
GANNON 2		105	98
GANNON 3		160	150
GANNON 4		170	159
GANNON 5		230	217
GANNON 6		395	382
	GANNON TOTAL	1180	<u>1120</u>
BIG BEND 1 w/o FGD		440	426
BIG BEND 2 w/o FGD		440	426
BIG BEND 3		450	433
BIG BEND 4		473	445
	BIG BEND TOTAL	1803	<u>1730</u>
BIG BEND CT1		15	15
BIG BEND CT2		73	73
BIG BEND CT3		73	73
	CT TOTAL	<u>160.5</u>	<u>160.5</u>
PHILLIPS 1		18	17
PHILLIPS 2		18	17
	PHILLIPS TOTAL	<u>36</u>	<u>34</u>
POLK 1		315	250
POLK 2		163	162.5
POLK 3		163	163
	POLK TOTAL	<u>641</u>	<u>575</u>
	SYSTEM TOTAL	3820	3619

#### TAMPA ELECTRIC COMPANY PERCENT GENERATION BY UNIT JANUARY 2003 - DECEMBER 2003

PLANT	UNIT	NET OUTPUT MWH	PERCENT OF PROJECTED OUTPUT	PERCENT CUMULATIVE PROJECTED OUTPUT
BIG BEND	4	2,741,549	15.72%	15.72%
BIG BEND	1	2,122,181	12.17%	27.89%
BIG BEND	2	2,381,812	13.66%	41.55%
BIG BEND	3	2,210,820	12.68%	54.22%
GANNON	6	1,274,936	7.31%	61.53%
POLK	1	1,459,663	8.37%	69.90%
GANNON	5	96,771	0.55%	70.46%
GANNON	4	549,471	3.15%	73.61%
GANNON	3	604,246	3.46%	77.08%
GANNON	1	504,523	2.89%	79.97%
POLK	2	223,323	1.28%	81.25%
GANNON	2	371,525	2.13%	83.38%
POLK	3	197,173	1.13%	84.51%
PHILLIPS	1	36,822	0.21%	84.72%
PHILLIPS	2	38,889	0.22%	84.94%
BIG BEND CT	2	1,786	0.01%	84.95%
BIG BEND CT	3	670	0.00%	84.96%
BIG BEND CT	1	307	0.00%	84.96%
BAYSIDE	1	2,417,198	13.86%	98.82%
BAYSIDE	2	205,747	1.18%	100.00%
TOTAL GENERA	ATION	17,439,412	100.00%	
GENERATION E	Y COAL UNITS: 14,317,497 MWH	GENERATION BY NAT	TURAL GAS UNITS: 4	120,496 MWH
% GENERATION	BY COAL UNITS: 82.10%	% GENERATION BY N	ATURAL GAS UNITS:	2.41%
GENERATION E	Y OIL UNITS: 78.474 MWH	GENERATION BY GPI	F UNITS: 12,2	.87,732 MWH
% GENERATION	BY OIL UNITS: 0.45%	% GENERATION BY G	PIF UNITS:	70.46%

TAMPA ELECTRIC COMPANY DOCKET NO. 020001-EI FILED: 9/20/02

### EXHIBITS TO THE TESTIMONY OF WILLIAM A. SMOTHERMAN

DOCKET NO. 020001-EI

### GENERATING PERFORMANCE INCENTIVE FACTOR JANUARY 2003 - DECEMBER 2003

DOCUMENT NO. 2

SUMMARY OF GPIF TARGETS

#### TAMPA ELECTRIC COMPANY SUMMARY OF GPIF TARGETS JANUARY 2003 - DECEMBER 2003

	Net			
Unit	EAF	POF	EUOF	Heat Rate
Big Bend 1	69.9	5.75	24.35	10,533 <sup>1/</sup>
Big Bend 2	63.0	3.84	33.16	10,111 <sup>2/</sup>
Big Bend 3	67.3	3.84	28.9	10,132 <sup><u>3</u>/</sup>
Big Bend 4	77.7	9.59	12.68	10,0284/
Gannon 5	71.9	0.0	28.07	10,862 <sup>5</sup> /
Gannon 6	75.9	0.0	24.05	10,775 <sup><u>6</u>/</sup>
Polk 1	74.6	12.05	13.39	10,382 <sup>7</sup>

 $<sup>^{1/}</sup>$  Original Sheet 8.401.03E, Page 14

<sup>&</sup>lt;sup>2/</sup> Original Sheet 8.401.03E, Page 15

<sup>&</sup>lt;sup>3</sup>/ Original Sheet 8.401.03E, Page 16

<sup>&</sup>lt;sup>4</sup> Original Sheet 8.401.03E, Page 17

<sup>&</sup>lt;sup>5</sup>/ Original Sheet 8.401.03E, Page 18

<sup>&</sup>lt;sup>6</sup>/ Original Sheet 8.401.03E, Page 19

<sup>&</sup>lt;sup>2</sup>/ Original Sheet 8.401.03E, Page 20