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August 21, 2006

- VIA OVERNIGHT DELIVERY -

Ms. Blanca S. Bayó, Director  
Division of the Commission Clerk and  
Administrative Services  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399

Re: Docket No. 060001-EI

Dear Ms. Bayó:

I am enclosing for filing in the above docket the original and fifteen (15) copies of the prefiled testimony and exhibit of Florida Power & Light Company witness Pamela Sonnelitter, which responds to the prefiled testimony and exhibits submitted on behalf of the Office of Public Counsel by James Ross concerning the Generating Performance Incentive Factor.

If there are any questions regarding this transmittal, please contact me at 561-304-5639.

Sincerely,

*Kevin M. Butri for JTB*

John T. Butler

- CMP \_\_\_\_\_
- COM 5
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**CERTIFICATE OF SERVICE**  
**Docket No. 060001-EI**

I **HEREBY CERTIFY** that a true and correct copy of the foregoing prefiled testimony of Pamela Sonnelitter has been furnished by overnight delivery (\*) or U.S. Mail on this 21<sup>st</sup> day of August 2006, to the following:

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**BEFORE THE FLORIDA  
PUBLIC SERVICE COMMISSION**

**DOCKET NO. 060001-EI  
FLORIDA POWER & LIGHT COMPANY**

**August 22, 2006**

**GENERATING PERFORMANCE INCENTIVE FACTOR  
(Response to GPIF Testimony of Public Counsel Witness James Ross)**

**TESTIMONY & EXHIBITS OF:**

**P. SONNELITTER**

DOCUMENT NUMBER-DATE

07586 AUG 22 06

FPSC-COMMISSION CLERK

1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**  
2                               **FLORIDA POWER & LIGHT COMPANY**  
3                               **TESTIMONY OF PAMELA SONNELITTER**  
4                               **(RESPONSE TO GPIF TESTIMONY OF**  
5                               **PUBLIC COUNSEL WITNESS JAMES ROSS)**  
6                                       **DOCKET NO. 060001-EI**  
7                                       **AUGUST 22, 2006**

8  
9    **Q.    Please state your name and business address.**

10   A.   My name is Pamela Sonnelitter. My business address is 700 Universe  
11        Boulevard, Juno Beach, Florida 33408-0420.

12  
13   **Q.    Are you sponsoring an exhibit in this case?**

14   A.   Yes. I am sponsoring an exhibit consisting of one document, Document No.  
15        PS-2, which is attached to my testimony.

16  
17   **Q.    Are you the same Pamela Sonnelitter who has testified in this and**  
18        **predecessor dockets?**

19   A.   Yes, I am.

20  
21   **Q.    What is the purpose of your testimony?**

22   A.   The purpose of my testimony is to respond to the testimony of Office of  
23        Public Counsel witness James Ross concerning the Generating Performance

1 Incentive Factor (“GPIF”), as his testimony relates to Florida Power & Light  
2 Company (“FPL”). Specifically, my testimony will do the following:

- 3 • briefly summarize the history and intended operation of the GPIF;
- 4 • illustrate that the GPIF works as intended with respect to FPL;
- 5 • refute Mr. Ross’s erroneous assertion that the performance of FPL’s  
6 generating units has not steadily improved; and
- 7 • explain why Mr. Ross’s proposals to impose an asymmetric dead band  
8 on the GPIF reward/penalty calculation and to establish minimum  
9 system performance levels for GPIF rewards are unwarranted and  
10 unfair.

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**HISTORY AND OPERATION OF THE GPIF**

On September 19, 1980, the Florida Public Service Commission incorporated within the Fuel and Purchased Power Cost Recovery Clause, in conjunction with the move to projected fuel factors, an explicit incentive called the GPIF. This was done in order to provide an ongoing motivation for utilities to operate their generators efficiently. The GPIF is designed to reward or penalize the performance of units on two parameters (availability and thermal efficiency, i.e., heat rate) relative to their recent past by developing targets based on a rolling average of the last three years’ performance. The GPIF applies to the most-utilized units, which cumulatively represent approximately 80% of a utility’s total projected generation output. New units are excluded for a period of three years in order to obtain sufficient historical information

1           upon which to base heat rate and availability projections. The GPIF essentially  
2           excludes the effect of planned outages on the availability calculation,  
3           recognizing that planned outage schedule variations would distort the inter-  
4           period comparisons between target and actual performance. In addition, the  
5           GPIF appropriately expresses the target heat rate as a curve. This recognizes  
6           that heat rate performance can vary considerably at different net output  
7           factors. Again, this is done in order to facilitate inter-period comparisons  
8           between target and actual performance.

9

10                           **OPERATION OF THE GPIF FOR FPL'S GENERATING UNITS**

11   **Q.    Has the GPIF achieved its intended purpose with respect to FPL's**  
12           **generating units?**

13    A.    Yes, it has. The GPIF has resulted in rewards when the performance of  
14           generating units improves relative to the GPIF targets, and it has resulted in  
15           penalties when their performance has deteriorated compared to those targets.  
16           This is illustrated by the graphs that appear on pages 5 and 6 of my Document  
17           PS-2. These graphs compare the equivalent availability and heat rate for one  
18           of FPL's units, Martin Unit 4, to the GPIF targets for those parameters over  
19           the years from 1999 to 2005 and then show whether the unit received a reward  
20           or penalty for its performance in each year. One can see that Martin Unit 4  
21           was consistently rewarded when its performance exceeded the target and was  
22           consistently penalized when its performance fell short of the target.

23

1 **Q. Does the compensation of FPL's power plant management take into**  
2 **account factors that are consistent with the incentives provided by the**  
3 **GPIF?**

4 A. Yes. Two of the key measures included in the performance evaluations for  
5 FPL plant managers are the availability and heat rate achieved by their plants.  
6 Thus, improvements in availability and/or heat rate that would result in better  
7 GPIF results directly impact the managers' performance evaluations, upon  
8 which their compensation is based.

9

10 **FPL'S IMPROVED GENERATING PERFORMANCE OVER TIME**

11 **Q. Mr. Ross states that the GPIF process has not prompted sustained**  
12 **improvements in individual unit performance or system-wide**  
13 **performance. Do you agree?**

14 A. No. First of all, I would like to point out that, while FPL has in fact achieved  
15 significant system-wide performance improvement over the sixteen years for  
16 which we have continuous GPIF data available, Mr. Ross's focus on  
17 performance trends over extended periods of time misses the point of the  
18 GPIF. If utilities are exposed to rewards or penalties for the performance of  
19 their generating units relative to the recent past, then the GPIF is achieving its  
20 purpose regardless of the long-term operational trends. Rewarding and  
21 penalizing performance relative to recent experience provides strong  
22 motivation for utilities to improve their generating performance, regardless of

1           whether the long-term trend of past performance has been consistently  
2           improving, consistently deteriorating, or mixed.

3

4           In any event, FPL has in fact achieved consistent and significant performance  
5           improvements at its generating units over the past sixteen years. Page 1 of  
6           Document PS-2 shows the availability of FPL's system-wide generating fleet  
7           since 1990, as measured by the generation-weighted average of the Equivalent  
8           Availability Factor (EAF) of all units (excluding planned outages to provide a  
9           consistent basis for comparison to the GPIF calculations). The dashed line on  
10          page 1 shows the actual EAF achieved by FPL's fleet of generating units each  
11          year from 1990 to 2005. The solid bold line represents the EAF trend  
12          calculated by applying the least-squares statistical method to the actual EAF  
13          values. This trend line has a positive slope, which shows an availability  
14          improvement over the period. Page 2 of Document PS-2 likewise shows an  
15          upward sloping EAF trend line specifically for those FPL units that were  
16          included in the GPIF calculation over the past sixteen years.

17

18          A similar analysis of the trend in combustion efficiency for FPL's generating  
19          units is shown on pages 3 and 4 of Document PS-2. Page 3 shows the  
20          combustion efficiency trend for FPL's system-wide generating fleet (as  
21          measured by the generation-weighted average of the Average Net Operating  
22          Heat Rate (ANOHR) of all units). Again, the dashed line represents actual  
23          system-wide performance (for ANOHR, in this case), while the solid bold line



1 represents the trend calculated using the least-squares statistical method. The  
2 trend line has a negative slope, which represents a substantial and consistent  
3 heat rate improvement over that period (a lower heat rate means that a unit is  
4 operating more efficiently). Page 4 shows the same trend with respect to the  
5 FPL units that were included in the GPIF calculation over the past sixteen  
6 years.

7

8 **Q. For both availability and heat rate, the graphs on pages 1 and 3 show that**  
9 **the trend of performance improvements continues through the 2003-2005**  
10 **time period for the system-wide fleet of generating units, whereas the**  
11 **graph on page 4 does not show continued improvements over those final**  
12 **years for the GPIF units. Would you please explain what causes these**  
13 **differences?**

14 A. In both instances, it has to do with appropriate exclusions from the GPIF of  
15 new units. During the period 2002-2005, FPL brought into service Fort Myers  
16 2, Sanford 4, Sanford 5, Manatee 3, and Martin 8 which represents over 5,000  
17 MW of state-of-the-art combined cycled capacity. These units are highly  
18 efficient and have contributed substantially to FPL's overall generation mix  
19 since they came into service. However, until the new units have three years of  
20 historical data that can be used to develop a representative unit performance  
21 baseline, they do not enter into the GPIF calculation.

22

1           Regarding availability, there is not a substantial difference between the graphs  
2           for the system-wide generating fleet (page 1) and the GPIF units (page 2).  
3           The small difference that does exist reflects the fact that the new units are  
4           highly reliable and hence favorably affect the weighted average availability  
5           for the fleet.

6  
7           For heat rate, the difference between the graphs on pages 3 and 4 is somewhat  
8           more pronounced and reflects two consequences of excluding the new units  
9           from the GPIF calculation. First, the new units have low heat rates and hence  
10          favorably affect the weighted average heat rate for the fleet compared to the  
11          average for just the GPIF units. Perhaps more significantly, due to the high  
12          efficiency of the new units, they tend to displace FPL's older units to spots  
13          lower on the dispatch curve and hence result in lower net output factors for  
14          those older units. Because a lower output factor results in a higher heat rate  
15          regardless of a unit's overall combustion efficiency, this reduction in the older  
16          units' output factors means that their achieved heat rates will tend to be higher  
17          compared to earlier periods. Thus, the older units, which are appropriately  
18          included in the GPIF calculation, appear to have deteriorating heat rate  
19          performance when in fact they are simply being operated at lower output  
20          factors due to economic dispatch. This phenomenon disproportionately  
21          affects the "GPIF Units Only" graph, because it is not offset by the inclusion  
22          of the new units.

23

1 **Q. Does the GPIF take the dependence between net output factor and heat**  
2 **rate into account?**

3 A. Yes, it does. As I mentioned previously, the GPIF heat rate targets are  
4 actually curves plotting heat rate vs. net output factor, and a unit's actual heat  
5 rate is measured against the heat rate shown on the target curve at the net  
6 output factor at which the unit actually operated. It would be difficult if not  
7 impossible to express heat rate trends over time on an output-adjusted basis.

8  
9 **Q. Mr. Ross purports to show on his Schedule 7 that some of FPL's**  
10 **individual units have not experienced consistent improvement over time.**  
11 **Is this meaningful from a GPIF perspective?**

12 A. No, it is not. Again, this reflects Mr. Ross's misunderstanding regarding the  
13 GPIF. While performance relative to target is calculated separately for each  
14 GPIF unit, utilities are rewarded or penalized based on the weighted average  
15 performance of *all* their GPIF units. This is both logical and appropriate. The  
16 GPIF is intended to provide incentives to utilities to control fuel costs by  
17 operating their units effectively. Our customers pay for the fuel costs of all  
18 units, not just particular, individual ones. If a utility manages to achieve high  
19 availability and low heat rate on an overall weighted average basis, it is  
20 irrelevant to the goals of the GPIF whether the performance of individual units  
21 went up or down.

22

1 **Q. Mr. Ross points out in his testimony that FPL has received a cumulative**  
2 **net reward under the GPIF of about \$92 million. In view of the sustained**  
3 **improvements in the performance of FPL's generating units, is this**  
4 **cumulative reward justified?**

5 **A.** Yes, it is. The same availability and heat rate improvements that led to these  
6 GPIF rewards have saved FPL's customers over \$227 million in fuel costs  
7 during the last sixteen years. That is an average of over \$14 million per year in  
8 fuel savings to our customers, which is more than double the average GPIF  
9 reward during the same period.

10

11 **MR. ROSS'S PROPOSED MODIFICATIONS TO THE GPIF**

12 **Q. Mr. Ross proposes to establish a dead-band on the calculation of GPIF**  
13 **rewards and penalties. Do you agree with his proposal?**

14 **A.** No. First of all, Mr. Ross's proposed dead band is unfairly  
15 asymmetric: it would exclude twice as large a range of performance  
16 improvements from receiving rewards as it would exclude performance  
17 declines from receiving penalties. Mr. Ross does not even attempt to justify  
18 the unfair impact on utilities that would result from this asymmetry.

19

20 Furthermore, Mr. Ross's proposed dead band is so large on the reward side  
21 that it would virtually eliminate the possibility of FPL receiving any rewards  
22 despite FPL's improvements in availability and heat rate over time. This  
23 would be manifestly unfair to FPL, considering that its fossil units have

1 achieved best-in-class availability performance when compared to other fossil  
2 fleets throughout the *nation*, for seven out of the last eight years and best-in-  
3 class performance in heat rate for six out of the last eight years.

4  
5 Moreover, achieving a heat rate improvement over even the existing dead  
6 band of 75 Btu/kWh will be harder to accomplish in the near future because  
7 the new combined cycle units, with heat rates on the order of 7000 Btu/kWh,  
8 that are expected to become GPIF units in the coming years would have to  
9 drop their already low heat rate by over 1% per year to see any reward. This  
10 would be nearly impossible to achieve by these already highly-efficient  
11 machines.

12  
13 **Q. In addition to the establishment of an asymmetric dead band, Mr. Ross**  
14 **proposes to institute “absolute system weighted EAF and HR numbers**  
15 **for each utility that would preclude any reward payment for actual**  
16 **performance below these established minimum performance levels.” Do**  
17 **you agree with this proposal?**

18 A. No. First of all, I can only respond to his proposal generally and conceptually  
19 at this point, because Mr. Ross devotes only two short paragraphs in his  
20 testimony to what is necessarily an extremely complex subject. In fact, he and  
21 the Office of Public Counsel have made it clear that, if the concept of  
22 minimum performance levels is to be considered, it should take place in the  
23 2007 fuel adjustment docket.

1

2

Conceptually, I am opposed to imposing minimum performance levels because it would go against the fundamental purpose of the GPIF, which is to create incentives for utilities to improve the operation of their generating units relative to prior, actual performance. Minimum performance levels would be inherently insensitive to actual, achievable performance. They would therefore have a high likelihood of pushing units arbitrarily into a grey area where their performance is adequate to avoid penalties under the GPIF formula but not good enough to receive a reward because it falls below the minimum performance levels. All GPIF incentives would be effectively removed for such units. This would be counter to the intent of the GPIF which, as stated in the GPIF Manual, is to “provide an incentive for the efficient operation of base load generating units.”

14

15

In a nutshell, the current GPIF methodology works and is in no need of Mr. Ross’s ill-conceived revisions.

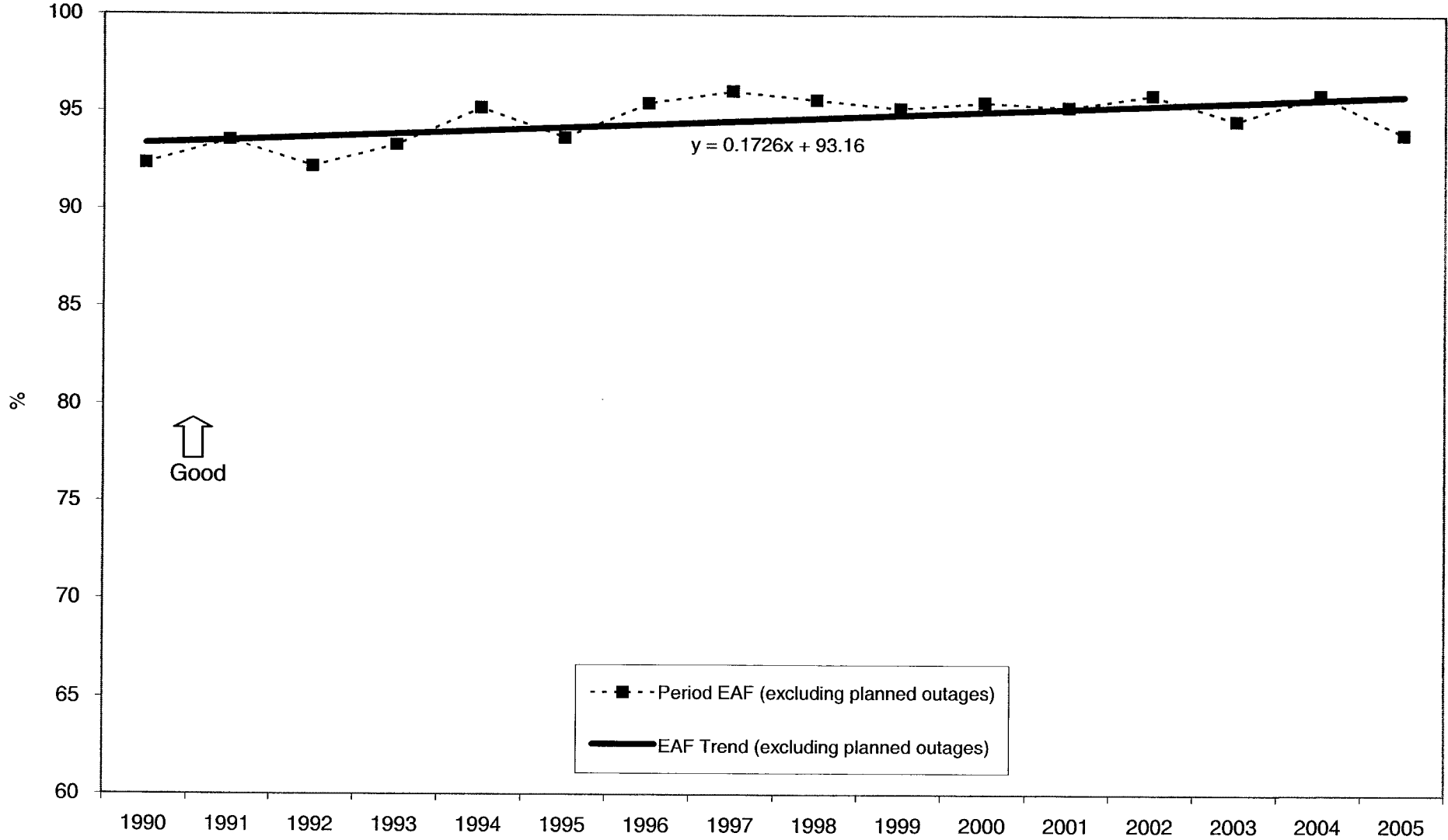
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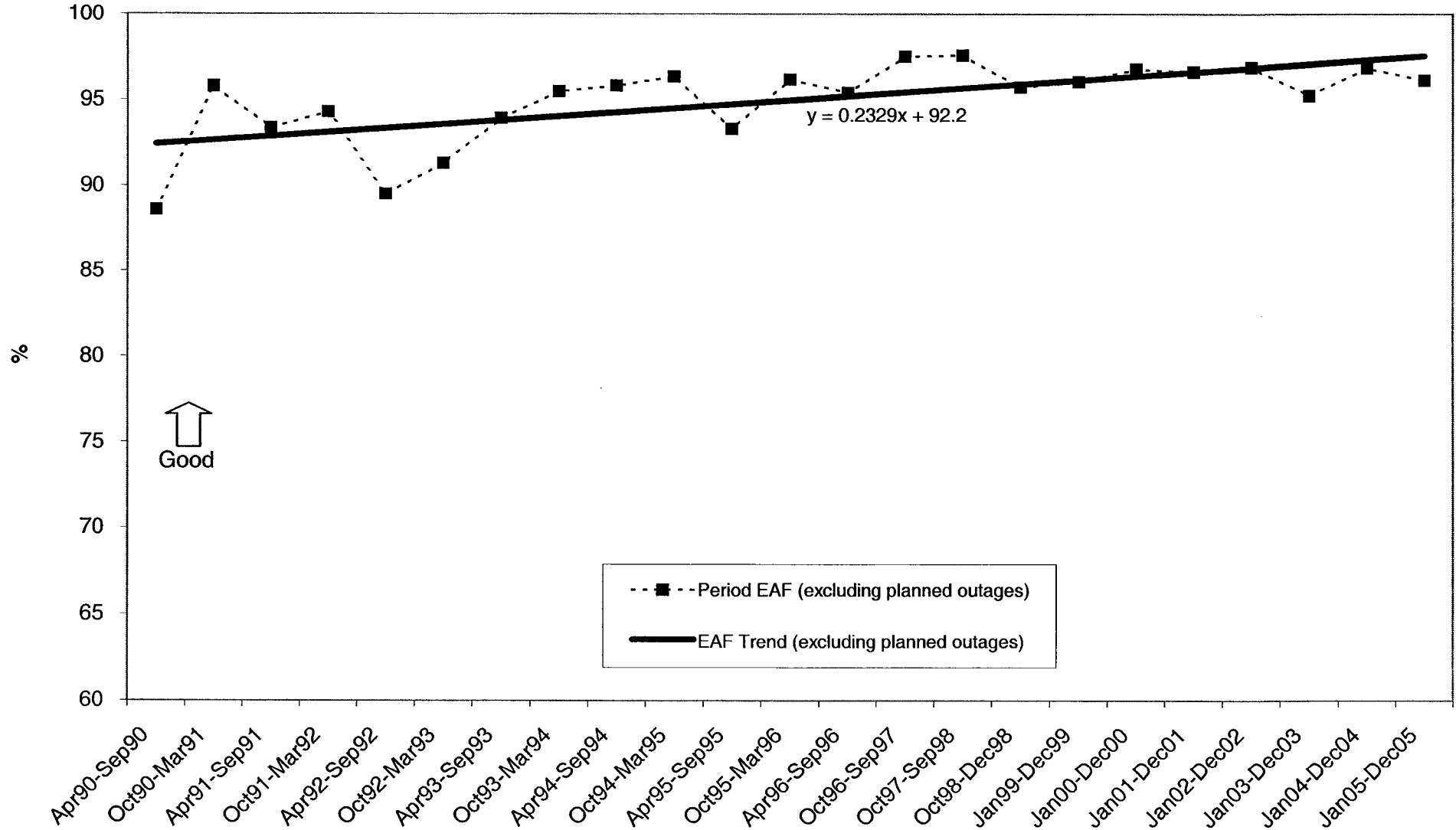
18 **Q. Does this conclude your testimony?**

19 A. Yes it does.

# FPL System-Wide Fleet Equivalent Availability Factor (EAF)

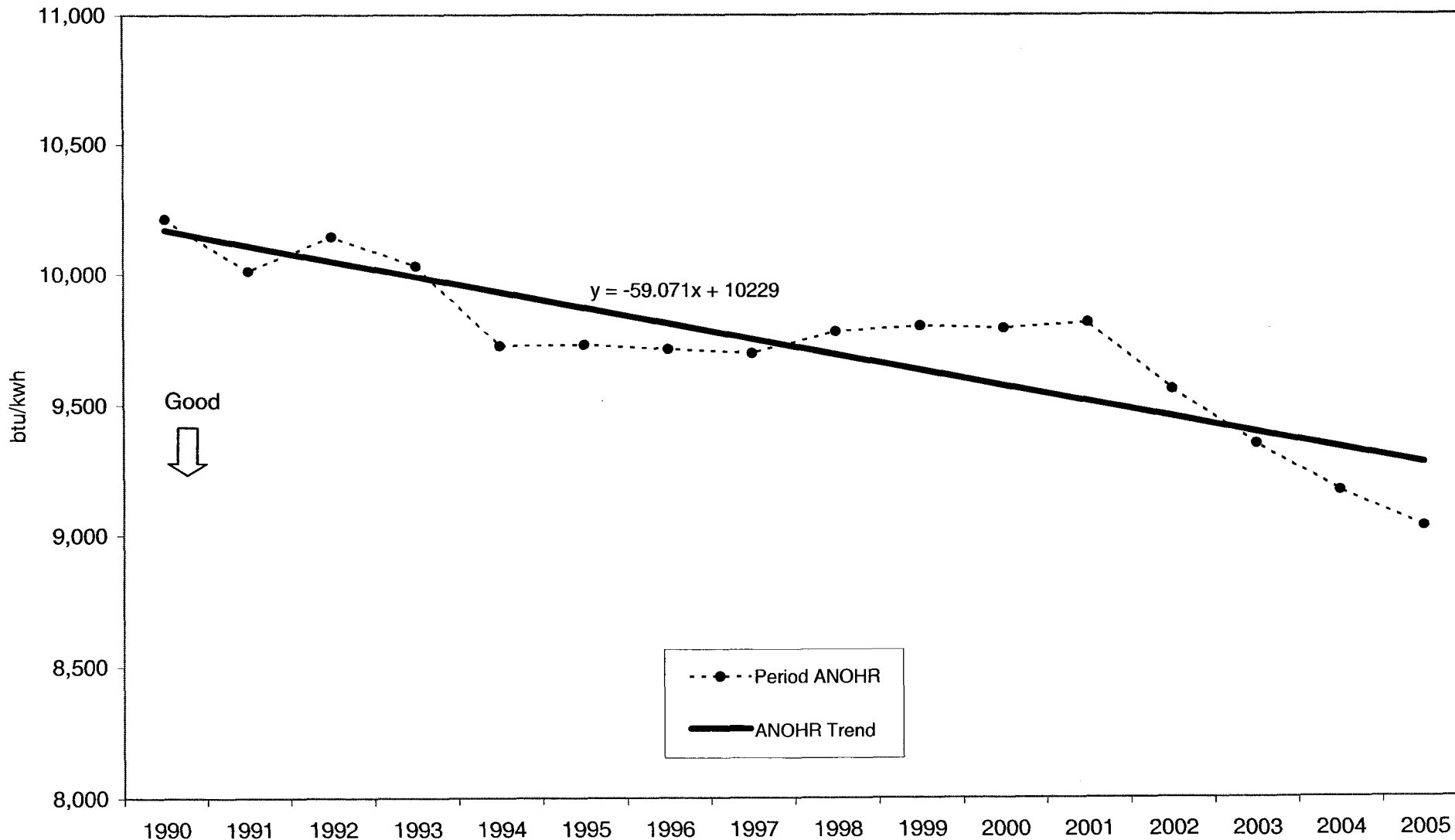


## FPL GPIF Units Only Equivalent Availability Factor (EAF)

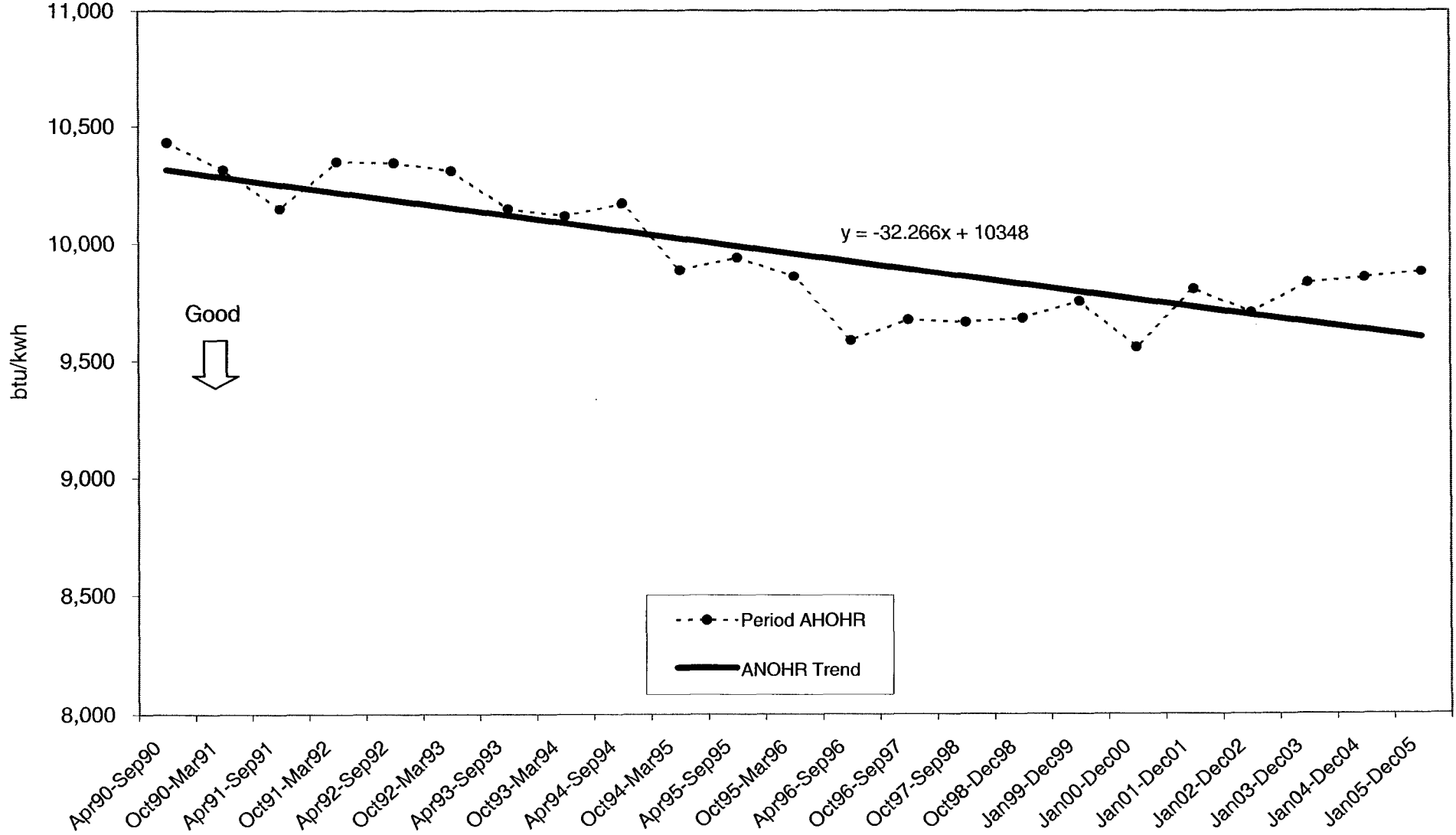




# FPL System-Wide Fleet Average Net Operating Heat Rate (ANOHR)

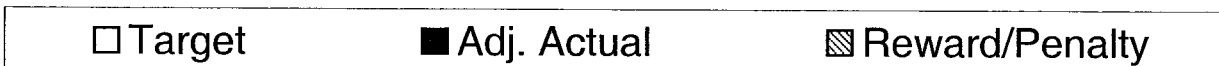
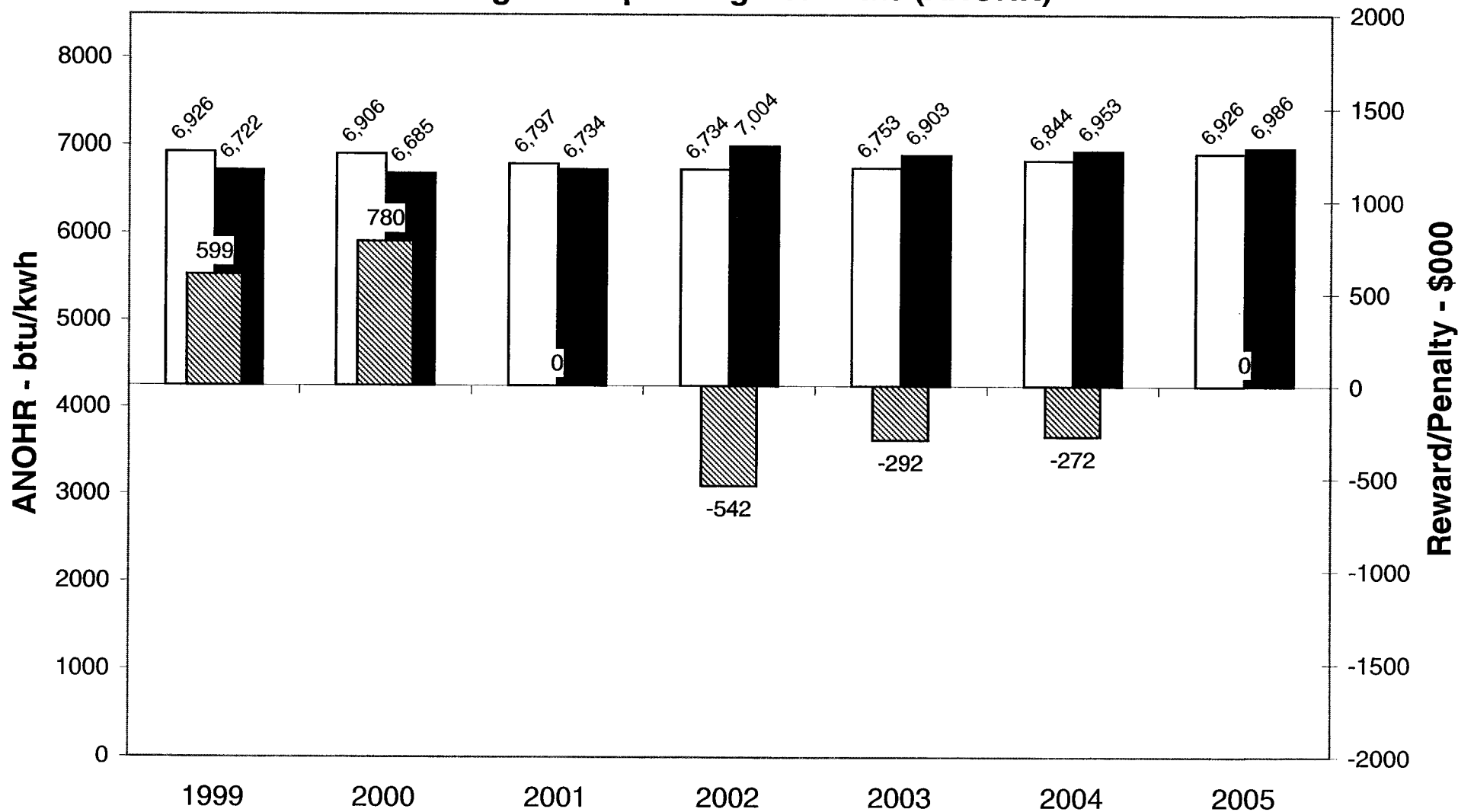


## FPL GPIF Units Only Average Net Operating Heat Rate (ANOHR)



## Martin 4

### Average Net Operating Heat Rate (ANOHR)



# Martin 4

## Equivalent Availability Factor (EAF)

