

ORIGINAL

GULF POWER COMPANY  
TESTIMONY AND EXHIBITS OF  
J. R. DOUGLASS

GENERATING PERFORMANCE INCENTIVE FACTOR

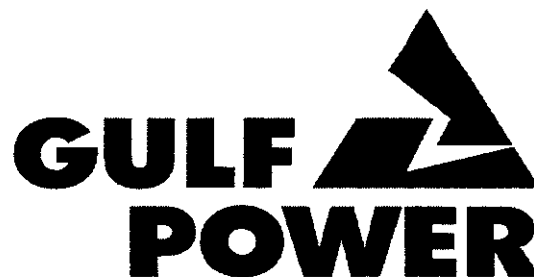
TARGETS FOR

JANUARY 2000 - DECEMBER 2000

Before

THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 990001-EI



A SOUTHERN COMPANY

DOCUMENT NUMBER-DATE

11849 OCT-18

1 GULF POWER COMPANY  
2 Before the Florida Public Service Commission  
3 Direct Testimony of  
4 J. R. Douglass  
5 Docket No. 990001-EI  
6 Date of Filing October 1, 1999

7 Q. Please state your name, address and occupation.

8 A. My name is James R. Douglass, my business address is  
9 One Energy Place, Pensacola, Florida 32520-0335, and my  
10 position is Performance Test Specialist for Gulf Power  
11 Company.

12 Q. Please describe your educational and business  
13 background.

14 A. I received my Bachelor of Aviation Management Degree  
15 from Auburn University in 1989. Following graduation,  
16 I served as a commissioned officer in the U.S. Navy  
17 filling several shipboard roles including Electrical  
18 Division Officer, Engineering Officer of the Watch, and  
19 Deck Division Officer. After serving in the Navy, I  
20 worked in the Generation Planning and Development  
21 Department of Southern Company Services as a System  
22 Planning Analyst for six years and, as I previously  
23 stated, my current position is Performance Test  
24 Specialist at Gulf Power Company.

25

1 Q. What is the purpose of your testimony in this  
2 proceeding?

3 A. The purpose of my testimony today is to present GPIF  
4 targets for Gulf Power Company for the period of January 1,  
5 2000 through December 31, 2000.

6  
7 Q. Have you prepared exhibit(s) that contains information  
8 to which you will refer in your testimony?

9 A. Yes, I have prepared one exhibit consisting of four  
10 schedules.

11

12 Q. Were these exhibits prepared by you or under your  
13 direction and supervision?

14 A. Yes, they were.

15

16 Counsel: We ask that Mr. Douglass's exhibit be  
17 marked for identification a exhibit \_\_\_\_\_(JRD-1).

18

19

20 Q. Which units does Gulf propose to include under the GPIF  
21 for the subject period?

22 A. We propose that Crist Units 6 and 7, Smith Units 1 and  
23 2, and Daniel Units 1 and 2 continue to be the  
24 Company's GPIF units.

25

1 Q. What are the target heat rates Gulf proposes to use in  
2 the GPIF for these units for the performance period  
3 January 1, 2000 through December 31, 2000?

4 A. I would like to refer you to Page 32 of Schedule 1 of  
5 my exhibit \_\_\_\_\_ (JRD-1) where these targets are  
6 listed.

7  
8 Q. How were these proposed target heat rates determined?

9 A. They were determined according to the GPIF  
10 implementation manual procedures for Gulf. For Plant  
11 Daniel, a new independent variable was added to the  
12 regression and the proposed revision to the  
13 implementation manual has been included as Schedule 4  
14 of exhibit \_\_\_\_\_ (JRD-1).

15  
16 Q. Describe your proposed change to the GPIF procedures  
17 for Plant Daniel.

18 A. In April, 2000 Gulf expects to switch from Powder River  
19 Basin, a low-BTU sub-bituminous western coal that Plant  
20 Daniel has been using most of the last three years, to  
21 a higher-BTU bituminous coal. The current GPIF  
22 procedures set the target heat rate using historical  
23 heat rate data. For the historical period required,  
24 Plant Daniel burned the low-BTU sub-bituminous coal.  
25 Therefore, a target heat rate set using this data would

1 be based on the low-BTU coal. When Plant Daniel  
2 switches to the high-BTU coal in 2000, the heat rate of  
3 the units would reasonably expected to be lower than  
4 targets set using the historical data from the low-BTU  
5 coal. This would produce an unfair comparison between  
6 the historical and the actual heat rates for the year  
7 2000. Normally, this non-comparability would result in  
8 the exclusion of Plant Daniel from the GPIF process for  
9 that portion of the year when the high-BTU coal was  
10 actually used. In order to prevent the exclusion of  
11 these major units from the GPIF, Gulf proposes that a  
12 new BTU-per-pound (BTU/LB) independent variable be  
13 included in the Plant Daniel target heat rate  
14 equations.

15  
16 The BTU/LB variable represents the heat content of the  
17 different coals used over the appropriate time period.  
18 Inclusion of this new variable brings the heat content  
19 of the fuels into the regression analysis when the  
20 target heat rate is set. This allows the target heat-  
21 rate equation to account for the heat rate  
22 variabilities resulting from the different coal types.  
23 The end result is a target heat rate that is reasonable  
24 because it takes into account these variabilities.

25

1 Q. How do you propose to implement the new BTU/LB variable  
2 for Plant Daniel?

3 A. The heat rate equations in this projection filing for  
4 Plant Daniel have been developed using the new  
5 variable. Estimates of the monthly BTU/LB for Plant  
6 Daniel for the year 2000 are included on page 32 of my  
7 exhibit \_\_\_\_\_ (JRD-1) and the resulting target heat  
8 rate equations are shown on page 3 and pages 69 through  
9 72.

10 For the results filing, the actual monthly BTU/LB  
11 values for the year 2000 will replace the estimated  
12 values in the target heat rate equation. This process  
13 is exactly the same as it is for the other two  
14 independent variables; Average kW Load (AKW) and the  
15 Load Square Range Factor (LSRF). All of these estimated  
16 variables are replaced with their actual values in the  
17 results filing in order to develop the 'Target Heat  
18 Rate at Actual Conditions' as in the example shown on  
19 line 2 of page 52 of exhibit \_\_\_\_\_ (JRD-1). This is  
20 then used to produce the 'Adjustments to Actual Heat  
21 Rate' which adjust the 'Actual Heat Rate' as shown on  
22 lines 3 and 4 respectively of page 52 of exhibit \_\_\_\_\_  
23 (JRD-1).

24

1 It is anticipated that this variable will continue to  
2 be used for Plant Daniel until such time as the prior  
3 years of historical data and following year's projected  
4 fuel types all represent reasonably consistent average  
5 heat-content. Then the BTU/LB variable would be dropped  
6 from the heat rate equation and the resulting targets  
7 would be valid for those conditions.

8  
9 Q. Are any changes needed to the GPIF implementation  
10 manual resulting from the use of the new BTU/LB  
11 variable at Plant Daniel?

12 A. Yes, Gulf has included a proposed revision to the GPIF  
13 implementation manual procedures that details the use  
14 of this new term in Gulf's target heat rates for Plant  
15 Daniel. This proposed revision is found in Schedule 4  
16 of my exhibit \_\_\_\_ (JRD-1).

17  
18 Q. Describe how the targets were determined for Gulf's  
19 other proposed GPIF units.

20 A. Page 2 of Schedule 1 of exhibit \_\_\_\_ (JRD-1) shows the  
21 target average net operating heat rate equations for  
22 the proposed GPIF units, and pages 4 through 29 of  
23 Schedule 1 contain the weekly historical data used for  
24 the statistical development of these equations.

1 Pages 30 and 31 of Schedule 1 present the calculations  
2 which provide the unit target heat rates from the  
3 target equations.

4  
5 Q. Were the maximum and minimum attainable heat rates for  
6 each proposed GPIF unit, indicated on page 32 of  
7 Schedule 1 of exhibit \_\_\_\_\_ (JRD-1), calculated  
8 according to the appropriate GPIF implementation manual  
9 procedures?

10 A. Yes.

11  
12 Q. What are the proposed target, maximum and minimum,  
13 equivalent availabilities for Gulf's units?

14 A. The target equivalent availabilities and their ranges  
15 are listed on page 4 of Schedule 2 of exhibit  
16 \_\_\_\_\_ (JRD-1).

17  
18 Q. How are these target equivalent availabilities  
19 determined?

20 A. The target equivalent availabilities were determined  
21 according to the standard GPIF implementation manual  
22 procedures for Gulf, and are presented on page 2 of  
23 Schedule 2 of exhibit (JRD-1).

24



1 Q. How were the maximum and minimum attainable equivalent  
2 availabilities determined for each unit?

3 A. The maximum and minimum attainable equivalent  
4 availabilities, which are presented along with their  
5 respective target availabilities on page 4 of Schedule  
6 2 of exhibit (JRD-1), were determined per GPIF manual  
7 procedures for Gulf.

8

9 Q. Mr. Douglass, has Gulf completed the GPIF minimum  
10 filing requirements data package?

11 A. Yes, we have completed the required data. Schedule 3  
12 of my exhibit \_\_\_\_\_ (JRD-1) contains this information.

13

14 Q. Mr. Douglass, would you please summarize your  
15 testimony?

16 A. Yes. Gulf asks that the Commission accept:

17 1. Crist Units 6 and 7, Smith Units 1 and 2 and Daniel  
18 Units 1 and 2, for inclusion under the GPIF for the  
19 period of January 1, 2000 through December 31, 2000.

20

21 2. Gulf asks that the Commission accept the proposed  
22 changes to the GPIF implementation manual  
23 procedures for Gulf in order to allow use of the  
24 coal BTU/LB variable in setting heat rate targets  
25 when significant differences in coal heat content

1 are expected from historical data to planned data.  
2 Additionally, we ask that use of this new variable  
3 be accepted as shown throughout exhibit \_\_\_\_\_  
4 (JRD-1) for Plant Daniel for the year 2000.

5  
6 3. The target, maximum attainable, and minimum  
7 attainable average net operating heat rates, as  
8 proposed by the Company and as shown on page 32 of  
9 Schedule 1 and also page 5 of Schedule 3 of my  
10 exhibit \_\_\_\_\_ (JRD-1).

11  
12 4. The target, maximum attainable, and minimum  
13 attainable equivalent availabilities, as proposed  
14 by the Company and as shown on Page 4 of Schedule  
15 2 and also page 5 of Schedule 3 of my exhibit  
16 \_\_\_\_\_ (JRD-1).

17  
18 5. The weekly average net operating heat rate least  
19 squares regression equations, shown on page 2 of  
20 Schedule 1 and also pages 18 through 29 of  
21 Schedule 3 of my exhibit \_\_\_\_\_ (JRD-1), for use in  
22 adjusting the annual actual unit heat rates to  
23 target conditions.

24  
25

1 Q. Mr. Douglass, does this conclude your testimony?

2 A. Yes, Sir.

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Florida Public Service Commission  
Docket No. 990001-EI  
Gulf Power Company  
Witness: J. R. Douglass  
Exhibit No. \_\_\_\_ (JRD-1)

EXHIBIT TO THE TESTIMONY OF

J. R. DOUGLASS

IN FPSC DOCKET 990001-EI

I. DETERMINATION OF HEAT RATE TARGETS

Target Heat Rate Equations

$$\text{Crist 6 ANOHR} = 10^6 / \text{AKW} * [88.29 - 44.75 * \text{APR} - 24.93 * \text{MAY}] \\ + 10,287$$

$$\text{Crist 7 ANOHR} = 10^6 / \text{AKW} * [215.83 + 54.63 * \text{MAY}] \\ + 9,725$$

$$\text{Smith 1 ANOHR} = 10^6 / \text{AKW} * [303.56 - 13.60 * \text{APR} - 14.98 * \text{MAY} + 12.46 * \text{JUL} - 15.94 * \text{NOV}] \\ + 5,563 + 0.01691 * \text{LSRF} / \text{AKW}$$

$$\text{Smith 2 ANOHR} = 10^6 / \text{AKW} * [86.76 + 21.35 * \text{MAY} + 16.56 * \text{JUN} + 32.76 * \text{JUL} + 30.95 * \text{AUG} + 11.83 * \text{SEP}] \\ + 9,526$$

$$\text{Daniel 1 ANOHR} = 10^6 / \text{AKW} * [1223.24 - 40.12 * \text{JAN} - 50.48 * \text{MAR} - 44.86 * \text{JUN}] \\ + 9,170 + 10^6 / \text{AKW} * [-0.0731 * \text{BTU/LB}]$$

$$\text{Daniel 2 ANOHR} = 10^6 / \text{AKW} * [1014.82 - 37.91 * \text{JAN} + 69.66 * \text{JUL} + 78.80 * \text{AUG} + 76.66 * \text{SEP}] \\ + 9,052 + 10^6 / \text{AKW} * [-0.0554 * \text{BTU/LB}]$$

Where:

- ANOHR = Average Net Operating Heat Rate, BTU/KWH
- AKW = Average Kilowatt Load, KW
- LSRF = Load Square Range Factor, KW<sup>2</sup>
- BTU/LB = Coal Burned Average Heat Content, BTU/LB
- JAN = January, 0 if not January, 1 if January
- FEB = February, 0 if not February, 1 if February
- MAR = March, 0 if not March, 1 if March
- APR = April, 0 if not April, 1 if April
- MAY = May, 0 if not May, 1 if May
- JUN = June, 0 if not June, 1 if June
- JUL = July, 0 if not July, 1 if July
- AUG = August, 0 if not August, 1 if August
- SEP = September, 0 if not September, 1 if September
- OCT = October, 0 if not October, 1 if October
- NOV = November, 0 if not November, 1 if November

WEEKLY UNIT OPERATING  
DATA USED TO DEVELOP  
TARGET HEAT RATE EQUATIONS

Data Base for CRIST 6 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10554	168	166.0	32167	0	0	0	0	0	0	1	0	0	0	0	0	1996
10506	168	189.1	40435	0	0	0	0	0	0	1	0	0	0	0	0	1996
10437	168	208.4	48527	0	0	0	0	0	0	1	0	0	0	0	0	1996
10660	168	174.1	34747	0	0	0	0	0	0	1	0	0	0	0	0	1996
10594	168	179.8	37388	0	0	0	0	0	0	0	1	0	0	0	0	1996
10555	168	185.8	40687	0	0	0	0	0	0	0	1	0	0	0	0	1996
10635	168	177.1	36296	0	0	0	0	0	0	0	1	0	0	0	0	1996
10574	168	166.9	30468	0	0	0	0	0	0	0	1	0	0	0	0	1996
10800	168	143.3	23026	0	0	0	0	0	0	0	1	0	0	0	0	1996
10577	168	170.0	32930	0	0	0	0	0	0	0	0	1	0	0	0	1996
10559	168	164.6	32612	0	0	0	0	0	0	0	0	1	0	0	0	1996
10645	168	186.3	42682	0	0	0	0	0	0	0	0	1	0	0	0	1996
10544	168	185.4	41787	0	0	0	0	0	0	0	0	1	0	0	0	1996
10660	24	150.4	27195	0	0	0	0	0	0	0	0	1	0	0	0	1996
10934	168	137.4	20296	0	0	0	0	0	0	0	0	0	1	0	0	1996
10769	168	139.4	20831	0	0	0	0	0	0	0	0	0	1	0	0	1996
10484	168	156.3	27865	0	0	0	0	0	0	0	0	0	1	0	0	1996
10613	169	162.6	30049	0	0	0	0	0	0	0	0	0	1	0	0	1996
10882	168	141.1	21315	0	0	0	0	0	0	0	0	0	0	1	0	1996
11015	168	142.8	22265	0	0	0	0	0	0	0	0	0	0	1	0	1996
10666	168	171.6	32771	0	0	0	0	0	0	0	0	0	0	1	0	1996
10652	152	160.3	27575	0	0	0	0	0	0	0	0	0	0	1	0	1996
11712	20	145.9	23325	0	0	0	0	0	0	0	0	0	0	0	1	1996
10980	168	142.8	21954	0	0	0	0	0	0	0	0	0	0	0	0	1996
10660	160	169.5	33373	0	0	0	0	0	0	0	0	0	0	0	0	1996
11318	158	120.6	14901	0	0	0	0	0	0	0	0	0	0	0	0	1996
11191	168	125.7	17423	1	0	0	0	0	0	0	0	0	0	0	0	1997
10847	168	147.7	24075	1	0	0	0	0	0	0	0	0	0	0	0	1997
10676	168	167.5	31788	1	0	0	0	0	0	0	0	0	0	0	0	1997
10711	168	140.5	20753	1	0	0	0	0	0	0	0	0	0	0	0	1997
10626	133	177.7	36651	1	0	0	0	0	0	0	0	0	0	0	0	1997
12327	22	122.4	15294	0	1	0	0	0	0	0	0	0	0	0	1	1997
10918	93	144.1	22329	0	1	0	0	0	0	0	0	0	0	0	1	1997
10948	46	135.4	18587	0	0	1	0	0	0	0	0	0	0	0	0	1997
11479	26	123.3	15940	0	0	1	0	0	0	0	0	0	0	0	1	1997
11031	91	126.4	16459	0	0	1	0	0	0	0	0	0	0	0	0	1997
11614	25	124.6	16021	0	0	1	0	0	0	0	0	0	0	0	1	1997
10807	167	149.0	23780	0	0	0	1	0	0	0	0	0	0	0	0	1997
10694	168	148.4	23603	0	0	0	1	0	0	0	0	0	0	0	0	1997
10617	168	172.8	33320	0	0	0	1	0	0	0	0	0	0	0	0	1997
10511	168	202.4	46310	0	0	0	1	0	0	0	0	0	0	0	0	1997
10724	99	170.2	33466	0	0	0	0	1	0	0	0	0	0	0	0	1997
11029	141	149.7	27563	0	0	0	0	1	0	0	0	0	0	0	1	1997
10403	168	198.0	42852	0	0	0	0	1	0	0	0	0	0	0	0	1997
10866	168	157.9	32869	0	0	0	0	1	0	0	0	0	0	0	0	1997
10818	167	162.4	30606	0	0	0	0	1	0	0	0	0	0	0	0	1997
11330	168	133.0	20826	0	0	0	0	0	1	0	0	0	0	0	0	1997



Data Base for CRIST 6 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
11102	168	174.3	35632	0	0	0	0	0	1	0	0	0	0	0	0	1997
10818	168	187.2	40880	0	0	0	0	0	1	0	0	0	0	0	0	1997
10943	168	179.6	37652	0	0	0	0	0	1	0	0	0	0	0	0	1997
10883	168	208.7	50498	0	0	0	0	0	0	1	0	0	0	0	0	1997
11483	168	155.8	27723	0	0	0	0	0	0	1	0	0	0	0	0	1997
11234	168	162.4	30227	0	0	0	0	0	0	1	0	0	0	0	0	1997
10901	168	213.4	50938	0	0	0	0	0	0	1	0	0	0	0	0	1997
10871	168	178.9	37117	0	0	0	0	0	0	0	1	0	0	0	0	1997
11006	168	173.3	34804	0	0	0	0	0	0	0	1	0	0	0	0	1997
10539	168	222.2	54505	0	0	0	0	0	0	0	1	0	0	0	0	1997
10554	168	208.3	49645	0	0	0	0	0	0	0	1	0	0	0	0	1997
10616	168	201.2	48706	0	0	0	0	0	0	0	1	0	0	0	0	1997
10560	168	212.0	52281	0	0	0	0	0	0	0	0	1	0	0	0	1997
10516	117	213.7	53660	0	0	0	0	0	0	0	0	1	0	0	1	1997
10373	165	228.3	58801	0	0	0	0	0	0	0	0	1	0	0	0	1997
10831	168	179.8	37447	0	0	0	0	0	0	0	0	1	0	0	0	1997
10574	18	195.0	45296	0	0	0	0	0	0	0	0	1	0	0	0	1997
10415	75	219.5	54886	0	0	0	0	0	0	0	0	0	1	0	1	1997
10684	168	202.9	46288	0	0	0	0	0	0	0	0	0	1	0	0	1997
10679	70	163.2	28695	0	0	0	0	0	0	0	0	0	1	0	0	1997
11436	110	165.1	32220	0	0	0	0	0	0	0	0	0	0	0	1	1997
10680	168	235.3	61294	0	0	0	0	0	0	0	0	0	0	0	0	1997
10914	76	198.9	45226	0	0	0	0	0	0	0	0	0	0	0	0	1997
11744	99	144.8	22986	0	0	0	0	0	0	0	0	0	0	0	1	1997
11279	15	123.8	16118	1	0	0	0	0	0	0	0	0	0	0	0	1998
10939	149	218.3	53383	1	0	0	0	0	0	0	0	0	0	0	1	1998
10810	168	234.2	59691	1	0	0	0	0	0	0	0	0	0	0	0	1998
11037	168	197.0	43142	1	0	0	0	0	0	0	0	0	0	0	0	1998
11229	168	176.4	33936	1	0	0	0	0	0	0	0	0	0	0	0	1998
10657	168	194.9	41264	0	1	0	0	0	0	0	0	0	0	0	0	1998
10613	168	186.6	39179	0	1	0	0	0	0	0	0	0	0	0	0	1998
10371	168	209.4	49823	0	1	0	0	0	0	0	0	0	0	0	0	1998
10391	168	205.0	47809	0	1	0	0	0	0	0	0	0	0	0	0	1998
10660	168	243.4	64790	0	0	1	0	0	0	0	0	0	0	0	0	1998
10641	168	229.5	57861	0	0	1	0	0	0	0	0	0	0	0	0	1998
10663	168	202.6	45698	0	0	1	0	0	0	0	0	0	0	0	0	1998
10528	168	237.0	61359	0	0	1	0	0	0	0	0	0	0	0	0	1998
10518	167	227.6	57539	0	0	0	1	0	0	0	0	0	0	0	0	1998
10647	168	209.9	49267	0	0	0	1	0	0	0	0	0	0	0	0	1998
10477	69	259.9	71446	0	0	0	1	0	0	0	0	0	0	0	0	1998
12942	13	126.4	16689	0	0	0	1	0	0	0	0	0	0	0	1	1998
10573	168	213.4	50470	0	0	0	0	1	0	0	0	0	0	0	0	1998
10411	168	234.8	60425	0	0	0	0	1	0	0	0	0	0	0	0	1998
10331	168	251.2	67786	0	0	0	0	1	0	0	0	0	0	0	0	1998
10457	168	251.3	67734	0	0	0	0	1	0	0	0	0	0	0	0	1998
10719	135	239.4	63743	0	0	0	0	1	0	0	0	0	0	0	1	1998
10496	168	231.8	58700	0	0	0	0	0	1	0	0	0	0	0	0	1998

Data Base for CRIST 6 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10690	168	253.5	68465	0	0	0	0	0	1	0	0	0	0	0	0	1998
10669	134	241.0	63971	0	0	0	0	0	1	0	0	0	0	0	1	1998
10545	146	233.9	60446	0	0	0	0	0	1	0	0	0	0	0	0	1998
10763	168	235.8	60731	0	0	0	0	0	0	1	0	0	0	0	0	1998
10686	168	251.2	68163	0	0	0	0	0	0	1	0	0	0	0	0	1998
10678	168	251.3	67749	0	0	0	0	0	0	1	0	0	0	0	0	1998
10792	154	264.0	76427	0	0	0	0	0	0	1	0	0	0	0	0	1998
10770	168	246.8	67200	0	0	0	0	0	0	0	1	0	0	0	0	1998
10840	168	240.9	63176	0	0	0	0	0	0	0	1	0	0	0	0	1998
11101	168	229.8	58271	0	0	0	0	0	0	0	1	0	0	0	0	1998
11028	168	238.7	63320	0	0	0	0	0	0	0	1	0	0	0	0	1998
10652	168	273.9	78098	0	0	0	0	0	0	0	1	0	0	0	0	1998
10772	157	222.8	55696	0	0	0	0	0	0	0	0	1	0	0	0	1998
10725	168	209.8	47428	0	0	0	0	0	0	0	0	1	0	0	0	1998
11071	142	213.4	48377	0	0	0	0	0	0	0	0	1	0	0	1	1998
10671	168	236.5	60544	0	0	0	0	0	0	0	0	1	0	0	0	1998
11260	24	216.8	52596	0	0	0	0	0	0	0	0	1	0	0	0	1998
11279	168	234.9	60121	0	0	0	0	0	0	0	0	0	1	0	0	1998
10915	168	184.6	38492	0	0	0	0	0	0	0	0	0	1	0	0	1998
10616	168	240.2	62106	0	0	0	0	0	0	0	0	0	1	0	0	1998
10836	169	178.0	33687	0	0	0	0	0	0	0	0	0	1	0	0	1998
11241	46	163.8	27811	0	0	0	0	0	0	0	0	0	0	1	0	1998
10834	97	237.1	61976	0	0	0	0	0	0	0	0	0	0	1	1	1998
10726	167	239.7	62983	0	0	0	0	0	0	0	0	0	0	1	0	1998
10388	168	251.0	67114	0	0	0	0	0	0	0	0	0	0	1	0	1998
10731	168	181.0	37056	0	0	0	0	0	0	0	0	0	0	1	0	1998
10699	168	218.8	53167	0	0	0	0	0	0	0	0	0	0	0	0	1998
10606	168	206.1	46963	0	0	0	0	0	0	0	0	0	0	0	0	1998
10573	168	197.2	42770	0	0	0	0	0	0	0	0	0	0	0	0	1998
10711	168	159.2	27797	0	0	0	0	0	0	0	0	0	0	0	0	1998
10489	24	212.0	48246	0	0	0	0	1	0	0	0	0	0	0	0	1998
10493	168	233.2	59731	1	0	0	0	0	0	0	0	0	0	0	0	1999
10901	168	186.5	38813	1	0	0	0	0	0	0	0	0	0	0	0	1999
10987	168	157.4	27151	1	0	0	0	0	0	0	0	0	0	0	0	1999
11079	168	149.8	24220	1	0	0	0	0	0	0	0	0	0	0	0	1999
11015	168	168.5	30545	0	1	0	0	0	0	0	0	0	0	0	0	1999
10985	168	173.0	33086	0	1	0	0	0	0	0	0	0	0	0	0	1999
10696	168	224.0	54377	0	1	0	0	0	0	0	0	0	0	0	0	1999
10871	168	204.9	46925	0	1	0	0	0	0	0	0	0	0	0	0	1999
11118	168	156.8	26531	0	0	1	0	0	0	0	0	0	0	0	0	1999
10779	168	194.3	41923	0	0	1	0	0	0	0	0	0	0	0	0	1999
10718	168	199.4	43824	0	0	1	0	0	0	0	0	0	0	0	0	1999
10780	112	220.7	53263	0	0	1	0	0	0	0	0	0	0	0	1	1999
10408	168	266.5	73209	0	0	1	0	0	0	0	0	0	0	0	0	1999
10495	26	221.8	55893	0	0	0	1	0	0	0	0	0	0	0	0	1999
10164	166	236.3	61472	0	0	0	1	0	0	0	0	0	0	0	1	1999
* 9147	168	206.0	48180	0	0	0	0	1	0	0	0	0	0	0	0	1999

Data Base for CRIST 6 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
* 9339	168	204.1	46604	0	0	0	0	1	0	0	0	0	0	0	0	1999
11254	159	190.9	41135	0	0	0	0	1	0	0	0	0	0	0	0	1999
10719	168	226.8	57330	0	0	0	0	1	0	0	0	0	0	0	0	1999
10224	168	212.8	50396	0	0	0	0	1	0	0	0	0	0	0	0	1999
* 8907	168	239.3	62415	0	0	0	0	0	1	0	0	0	0	0	0	1999
10612	168	227.1	57552	0	0	0	0	0	1	0	0	0	0	0	0	1999
10166	168	225.3	56766	0	0	0	0	0	1	0	0	0	0	0	0	1999
11745	144	217.7	52645	0	0	0	0	0	1	0	0	0	0	0	0	1999

Data Base for CRIST 6 Target Heat Rate Equation

- HR Average net operating heat rate based on unadjusted measured fuel consumption, before adjustment for unit start ups after shutdown for 24 hours or more, in BTU/KWH.
- HOUR Number of hours the unit was synchronized during the week.
- AMW Average load on the unit, in MW.
- LSRF Load square range factor, in MW<sup>2</sup>.
- JAN to NOV The number 1 indicates the month of the observation. All 0's indicate December.
- NS Number of unit start ups during the week after being shut down for 24 hours or more.
- YEAR The year of the observation.
- \* Indicates data points removed from the analysis of the target heat rate equation because they were out of the 90% confidence interval.

Data Base for CRIST 7 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10307	168	314.1	114054	0	0	0	0	0	0	1	0	0	0	0	0	1996
10406	98	340.2	130649	0	0	0	0	0	0	1	0	0	0	0	0	1996
10610	126	351.9	141120	0	0	0	0	0	0	1	0	0	0	0	1	1996
10340	168	317.9	115896	0	0	0	0	0	0	1	0	0	0	0	0	1996
10427	163	335.5	130760	0	0	0	0	0	0	0	1	0	0	0	0	1996
10393	165	323.7	122079	0	0	0	0	0	0	0	1	0	0	0	0	1996
10449	163	319.1	119372	0	0	0	0	0	0	0	1	0	0	0	0	1996
10300	168	323.3	120367	0	0	0	0	0	0	0	1	0	0	0	0	1996
10532	168	261.3	79233	0	0	0	0	0	0	0	1	0	0	0	0	1996
10428	168	356.4	146668	0	0	0	0	0	0	0	0	1	0	0	0	1996
10693	123	254.1	78190	0	0	0	0	0	0	0	0	1	0	0	1	1996
10392	163	309.4	113465	0	0	0	0	0	0	0	0	1	0	0	0	1996
10341	168	311.0	114394	0	0	0	0	0	0	0	0	1	0	0	0	1996
10781	24	199.5	40331	0	0	0	0	0	0	0	0	1	0	0	0	1996
10638	167	243.2	66328	0	0	0	0	0	0	0	0	0	1	0	0	1996
10660	168	235.0	60222	0	0	0	0	0	0	0	0	0	1	0	0	1996
10408	168	290.0	97416	0	0	0	0	0	0	0	0	0	1	0	0	1996
10266	169	310.8	107010	0	0	0	0	0	0	0	0	0	1	0	0	1996
10396	168	263.2	77262	0	0	0	0	0	0	0	0	0	0	1	0	1996
10515	168	274.9	85513	0	0	0	0	0	0	0	0	0	0	1	0	1996
10539	163	269.2	80429	0	0	0	0	0	0	0	0	0	0	1	0	1996
10504	95	332.6	121814	0	0	0	0	0	0	0	0	0	0	1	0	1996
10448	168	285.2	91265	0	0	0	0	0	0	0	0	0	0	0	1	1996
10660	106	231.0	60278	0	0	0	0	0	0	0	0	0	0	0	0	1996
10088	38	280.7	93284	1	0	0	0	0	0	0	0	0	0	0	1	1997
10332	166	309.0	108716	1	0	0	0	0	0	0	0	0	0	0	0	1997
10378	159	387.8	163663	1	0	0	0	0	0	0	0	0	0	0	0	1997
10455	97	267.8	79559	1	0	0	0	0	0	0	0	0	0	0	1	1997
10497	135	311.1	114813	1	0	0	0	0	0	0	0	0	0	0	1	1997
10267	165	301.8	102582	0	1	0	0	0	0	0	0	0	0	0	0	1997
10430	133	341.3	133210	0	1	0	0	0	0	0	0	0	0	0	1	1997
10556	168	284.9	92189	0	1	0	0	0	0	0	0	0	0	0	0	1997
10443	102	277.4	88087	0	1	0	0	0	0	0	0	0	0	0	0	1997
10627	104	259.7	74032	0	0	1	0	0	0	0	0	0	0	0	0	1997
10636	140	221.6	54325	0	0	1	0	0	0	0	0	0	0	0	0	1997
10624	131	247.2	66973	0	0	1	0	0	0	0	0	0	0	0	2	1997
10558	168	278.4	83495	0	0	1	0	0	0	0	0	0	0	0	0	1997
10358	167	343.1	131827	0	0	0	1	0	0	0	0	0	0	0	0	1997
10304	166	357.9	143356	0	0	0	1	0	0	0	0	0	0	0	0	1997
10558	142	352.2	137891	0	0	0	1	0	0	0	0	0	0	0	1	1997
10192	63	373.8	155010	0	0	0	1	0	0	0	0	0	0	0	0	1997
* 20529	7	140.3	22105	0	0	0	0	1	0	0	0	0	0	0	1	1997
11310	48	210.2	50548	0	0	0	0	0	1	0	0	0	0	0	1	1997
10768	101	288.6	105293	0	0	0	0	0	1	0	0	0	0	0	2	1997
10553	128	335.9	133952	0	0	0	0	0	1	0	0	0	0	0	1	1997
10672	168	351.3	142934	0	0	0	0	0	1	0	0	0	0	0	0	1997
10735	166	358.9	149824	0	0	0	0	0	0	1	0	0	0	0	0	1997

Data Base for CRIST 7 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10429	168	369.2	156851	0	0	0	0	0	0	1	0	0	0	0	0	1997
10577	168	355.0	145792	0	0	0	0	0	0	1	0	0	0	0	0	1997
10732	168	380.6	162265	0	0	0	0	0	0	1	0	0	0	0	0	1997
10625	122	320.7	126085	0	0	0	0	0	0	0	1	0	0	0	1	1997
10620	122	330.2	131125	0	0	0	0	0	0	0	1	0	0	0	1	1997
10238	168	415.8	185966	0	0	0	0	0	0	0	1	0	0	0	0	1997
9999	168	397.6	175594	0	0	0	0	0	0	0	1	0	0	0	0	1997
10221	168	379.3	163604	0	0	0	0	0	0	0	1	0	0	0	0	1997
10206	168	401.5	179966	0	0	0	0	0	0	0	0	1	0	0	0	1997
10357	150	390.5	173153	0	0	0	0	0	0	0	0	1	0	0	0	1997
9976	163	430.0	197475	0	0	0	0	0	0	0	0	1	0	0	0	1997
10263	168	374.6	156330	0	0	0	0	0	0	0	0	1	0	0	0	1997
10417	24	334.4	123221	0	0	0	0	0	0	0	0	1	0	0	0	1997
10440	118	345.6	133677	0	0	0	0	0	0	0	0	0	1	0	0	1997
10239	134	400.8	181371	0	0	0	0	0	0	0	0	0	1	0	1	1997
10008	168	364.4	153316	0	0	0	0	0	0	0	0	0	1	0	0	1997
10379	141	367.8	157382	0	0	0	0	0	0	0	0	0	1	0	1	1997
10247	157	361.1	150359	0	0	0	0	0	0	0	0	0	0	1	0	1997
10458	146	300.7	105465	0	0	0	0	0	0	0	0	0	0	1	0	1997
10188	168	388.9	165016	0	0	0	0	0	0	0	0	0	0	1	0	1997
10473	168	336.0	128873	0	0	0	0	0	0	0	0	0	0	1	0	1997
10049	29	311.7	112901	0	0	0	0	0	0	0	0	0	0	1	0	1997
10769	107	261.7	79032	0	0	0	0	0	0	0	0	0	0	0	1	1997
10556	128	244.5	74051	0	0	0	0	0	0	0	0	0	0	0	1	1997
10466	168	329.8	123668	1	0	0	0	0	0	0	0	0	0	0	0	1998
11493	33	257.6	74980	1	0	0	0	0	0	0	0	0	0	0	1	1998
10440	159	359.1	136046	1	0	0	0	0	0	0	0	0	0	0	1	1998
10384	168	402.8	173393	1	0	0	0	0	0	0	0	0	0	0	0	1998
10104	168	387.7	161630	1	0	0	0	0	0	0	0	0	0	0	0	1998
10019	168	414.7	180515	0	1	0	0	0	0	0	0	0	0	0	0	1998
10188	39	339.7	132661	0	1	0	0	0	0	0	0	0	0	0	0	1998
11457	25	245.6	70590	0	0	1	0	0	0	0	0	0	0	0	1	1998
10153	168	393.6	163232	0	0	1	0	0	0	0	0	0	0	0	0	1998
9963	168	436.7	198894	0	0	1	0	0	0	0	0	0	0	0	0	1998
10057	168	459.6	214840	0	0	1	0	0	0	0	0	0	0	0	0	1998
10013	167	457.4	213621	0	0	0	1	0	0	0	0	0	0	0	0	1998
10259	168	441.5	201502	0	0	0	1	0	0	0	0	0	0	0	0	1998
10252	146	464.8	220552	0	0	0	1	0	0	0	0	0	0	0	0	1998
10397	168	441.8	201211	0	0	0	1	0	0	0	0	0	0	0	0	1998
10497	168	436.2	199312	0	0	0	0	1	0	0	0	0	0	0	0	1998
10446	164	442.2	202421	0	0	0	0	1	0	0	0	0	0	0	0	1998
10410	168	470.0	222286	0	0	0	0	1	0	0	0	0	0	0	0	1998
10631	168	472.1	224105	0	0	0	0	1	0	0	0	0	0	0	0	1998
10666	168	433.7	195373	0	0	0	0	1	0	0	0	0	0	0	0	1998
10630	41	421.6	187752	0	0	0	0	0	1	0	0	0	0	0	0	1998
10428	152	433.6	198362	0	0	0	0	0	1	0	0	0	0	0	1	1998
9922	168	435.8	198747	0	0	0	0	0	1	0	0	0	0	0	0	1998

Data Base for CRIST 7 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10099	150	433.5	196430	0	0	0	0	0	1	0	0	0	0	0	0	1998
10090	168	429.6	192940	0	0	0	0	0	0	1	0	0	0	0	0	1998
10129	168	453.5	211263	0	0	0	0	0	0	1	0	0	0	0	0	1998
10200	168	430.3	194368	0	0	0	0	0	0	1	0	0	0	0	0	1998
10194	137	432.6	199913	0	0	0	0	0	0	1	0	0	0	0	1	1998
10243	168	435.1	197499	0	0	0	0	0	0	0	1	0	0	0	0	1998
10349	145	420.9	187767	0	0	0	0	0	0	0	1	0	0	0	0	1998
10351	95	389.8	167965	0	0	0	0	0	0	0	1	0	0	0	1	1998
10428	148	413.3	183622	0	0	0	0	0	0	0	1	0	0	0	1	1998
10385	121	445.5	203668	0	0	0	0	0	0	0	1	0	0	0	1	1998
10342	168	373.4	148411	0	0	0	0	0	0	0	0	1	0	0	0	1998
10531	90	359.1	145734	0	0	0	0	0	0	0	0	1	0	0	2	1998
10263	168	399.5	173690	0	0	0	0	0	0	0	0	1	0	0	0	1998
10316	168	443.2	202248	0	0	0	0	0	0	0	0	1	0	0	0	1998
11002	24	466.9	219085	0	0	0	0	0	0	0	0	1	0	0	0	1998
10321	168	426.4	187324	0	0	0	0	0	0	0	0	0	1	0	0	1998
10540	168	352.6	135320	0	0	0	0	0	0	0	0	0	1	0	0	1998
9952	48	402.1	175689	0	0	0	0	0	0	0	0	0	1	0	0	1998
10493	83	347.9	133782	0	0	0	0	0	0	0	0	0	1	0	1	1998
10368	168	396.8	171079	0	0	0	0	0	0	0	0	0	0	1	0	1998
10547	62	338.4	133558	0	0	0	0	0	0	0	0	0	0	1	2	1998
10218	168	415.9	182964	0	0	0	0	0	0	0	0	0	0	1	0	1998
10195	168	406.4	179027	0	0	0	0	0	0	0	0	0	0	1	0	1998
10037	168	386.5	162154	0	0	0	0	0	0	0	0	0	0	1	0	1998
10235	168	376.1	162539	0	0	0	0	0	0	0	0	0	0	0	0	1998
10056	168	419.7	186978	0	0	0	0	0	0	0	0	0	0	0	0	1998
10129	168	408.7	177678	0	0	0	0	0	0	0	0	0	0	0	0	1998
10114	168	353.6	137664	0	0	0	0	0	0	0	0	0	0	0	0	1998
10104	24	486.8	237146	0	0	0	0	1	0	0	0	0	0	0	0	1998
10185	165	396.2	167502	1	0	0	0	0	0	0	0	0	0	0	0	1999
10322	115	363.3	143630	1	0	0	0	0	0	0	0	0	0	0	1	1999
10299	168	319.3	110896	1	0	0	0	0	0	0	0	0	0	0	0	1999
10226	168	338.1	124012	1	0	0	0	0	0	0	0	0	0	0	0	1999
10146	24	306.3	105374	0	1	0	0	0	0	0	0	0	0	0	0	1999
10792	77	386.7	162144	0	1	0	0	0	0	0	0	0	0	0	1	1999
10273	168	351.9	132504	0	0	1	0	0	0	0	0	0	0	0	0	1999
10069	168	446.9	204598	0	0	1	0	0	0	0	0	0	0	0	0	1999
10312	168	424.8	187757	0	0	1	0	0	0	0	0	0	0	0	0	1999
10405	79	400.0	174708	0	0	1	0	0	0	0	0	0	0	0	2	1999
10063	168	450.7	208403	0	0	1	0	0	0	0	0	0	0	0	0	1999
10404	105	403.1	176277	0	0	0	1	0	0	0	0	0	0	0	1	1999
10074	168	477.5	228760	0	0	0	1	0	0	0	0	0	0	0	0	1999
10061	141	454.7	211982	0	0	0	1	0	0	0	0	0	0	0	1	1999
10217	121	423.3	186336	0	0	0	1	0	0	0	0	0	0	0	1	1999
10186	168	421.1	184591	0	0	0	0	1	0	0	0	0	0	0	0	1999
10177	168	380.4	156625	0	0	0	0	1	0	0	0	0	0	0	0	1999
10165	168	396.4	167147	0	0	0	0	1	0	0	0	0	0	0	0	1999

Data Base for CRIST 7 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10299	168	415.0	178822	0	0	0	0	1	0	0	0	0	0	0	0	1999
10225	168	395.5	165707	0	0	0	0	1	0	0	0	0	0	0	0	1999
* 9330	153	392.4	164114	0	0	0	0	0	1	0	0	0	0	0	0	1999
10280	156	415.2	178337	0	0	0	0	0	1	0	0	0	0	0	0	1999
10263	103	393.6	169047	0	0	0	0	0	1	0	0	0	0	0	2	1999
10217	144	441.9	197479	0	0	0	0	0	1	0	0	0	0	0	0	1999

Data Base for CRIST 7 Target Heat Rate Equation

HR Average net operating heat rate based on unadjusted measured fuel consumption, before adjustment for unit start ups after shutdown for 24 hours or more, in BTU/KWH.

HOUR Number of hours the unit was synchronized during the week.

AMW Average load on the unit, in MW.

LSRF Load square range factor, in MW<sup>2</sup>.

JAN to NOV The number 1 indicates the month of the observation. All 0's indicate December.

NS Number of unit start ups during the week after being shut down for 24 hours or more.

YEAR The year of the observation.

\* Indicates data points removed from the analysis of the target heat rate equation because they were out of the 90% confidence interval.

Data Base for SMITH 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10238	168	151.6	23243	0	0	0	0	0	0	1	0	0	0	0	0	1996
10224	168	157.4	24844	0	0	0	0	0	0	1	0	0	0	0	0	1996
10184	168	158.3	25073	0	0	0	0	0	0	1	0	0	0	0	0	1996
10135	168	156.6	24665	0	0	0	0	0	0	1	0	0	0	0	0	1996
10222	168	155.3	24349	0	0	0	0	0	0	0	1	0	0	0	0	1996
10192	168	155.7	24389	0	0	0	0	0	0	0	1	0	0	0	0	1996
10345	168	149.9	22838	0	0	0	0	0	0	0	1	0	0	0	0	1996
10259	168	148.6	22458	0	0	0	0	0	0	0	1	0	0	0	0	1996
10361	168	145.0	21700	0	0	0	0	0	0	0	1	0	0	0	0	1996
10504	168	141.6	20879	0	0	0	0	0	0	0	0	1	0	0	0	1996
10082	168	144.4	21594	0	0	0	0	0	0	0	0	1	0	0	0	1996
10148	168	144.1	21626	0	0	0	0	0	0	0	0	1	0	0	0	1996
10145	168	144.6	21786	0	0	0	0	0	0	0	0	1	0	0	0	1996
10286	24	144.4	21518	0	0	0	0	0	0	0	0	1	0	0	0	1996
10153	168	141.6	21123	0	0	0	0	0	0	0	0	0	1	0	0	1996
10248	168	137.4	19856	0	0	0	0	0	0	0	0	0	1	0	0	1996
10102	168	145.0	21646	0	0	0	0	0	0	0	0	0	1	0	0	1996
10061	169	147.9	22404	0	0	0	0	0	0	0	0	0	1	0	0	1996
9989	95	146.0	21881	0	0	0	0	0	0	0	0	0	0	1	0	1996
10096	62	151.9	23514	0	0	0	0	0	0	0	0	0	0	1	1	1996
10019	168	153.2	23688	0	0	0	0	0	0	0	0	0	0	1	0	1996
10017	168	144.9	21688	0	0	0	0	0	0	0	0	0	0	1	0	1996
10079	168	130.6	18405	0	0	0	0	0	0	0	0	0	0	1	0	1996
10110	168	134.4	19204	0	0	0	0	0	0	0	0	0	0	0	0	1996
10184	168	131.0	18364	0	0	0	0	0	0	0	0	0	0	0	0	1996
10142	168	135.2	19396	0	0	0	0	0	0	0	0	0	0	0	0	1996
10315	167	92.4	9657	0	0	0	0	0	0	0	0	0	0	0	0	1996
10947	25	104.5	12649	1	0	0	0	0	0	0	0	0	0	0	1	1997
10316	168	130.6	18238	1	0	0	0	0	0	0	0	0	0	0	0	1997
10210	168	145.7	22041	1	0	0	0	0	0	0	0	0	0	0	0	1997
10293	168	125.5	17385	1	0	0	0	0	0	0	0	0	0	0	0	1997
10313	168	129.4	18164	1	0	0	0	0	0	0	0	0	0	0	0	1997
10263	168	121.0	16213	0	1	0	0	0	0	0	0	0	0	0	0	1997
10380	168	130.3	18310	0	1	0	0	0	0	0	0	0	0	0	0	1997
10295	168	114.4	14483	0	1	0	0	0	0	0	0	0	0	0	0	1997
10339	168	111.8	14237	0	1	0	0	0	0	0	0	0	0	0	0	1997
10655	168	90.6	9470	0	0	1	0	0	0	0	0	0	0	0	0	1997
10450	58	86.6	8717	0	0	1	0	0	0	0	0	0	0	0	0	1997
11144	20	107.3	12534	0	0	1	0	0	0	0	0	0	0	0	1	1997
9994	167	156.3	24582	0	0	0	1	0	0	0	0	0	0	0	0	1997
10050	168	149.8	22865	0	0	0	1	0	0	0	0	0	0	0	0	1997
10019	168	149.0	22623	0	0	0	1	0	0	0	0	0	0	0	0	1997
10088	168	150.3	22982	0	0	0	1	0	0	0	0	0	0	0	0	1997
10090	168	138.2	20423	0	0	0	0	1	0	0	0	0	0	0	0	1997
10150	168	130.5	18329	0	0	0	0	1	0	0	0	0	0	0	0	1997
10190	116	139.8	20685	0	0	0	0	1	0	0	0	0	0	0	1	1997
10086	168	138.0	20104	0	0	0	0	1	0	0	0	0	0	0	0	1997



Data Base for SMITH 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10292	168	135.7	19550	0	0	0	0	1	0	0	0	0	0	0	0	1997
10224	168	127.2	17639	0	0	0	0	0	1	0	0	0	0	0	0	1997
10191	168	130.7	18658	0	0	0	0	0	1	0	0	0	0	0	0	1997
10255	168	133.0	19105	0	0	0	0	0	1	0	0	0	0	0	0	1997
10221	168	137.8	20173	0	0	0	0	0	1	0	0	0	0	0	0	1997
10387	142	136.3	19820	0	0	0	0	0	0	1	0	0	0	0	1	1997
10361	168	141.5	20848	0	0	0	0	0	0	1	0	0	0	0	0	1997
10397	168	141.0	20741	0	0	0	0	0	0	1	0	0	0	0	0	1997
10358	168	151.0	23090	0	0	0	0	0	0	1	0	0	0	0	0	1997
10238	168	138.6	20323	0	0	0	0	0	0	0	1	0	0	0	0	1997
10255	168	138.5	20207	0	0	0	0	0	0	0	1	0	0	0	0	1997
10138	100	152.2	23372	0	0	0	0	0	0	0	1	0	0	0	0	1997
10577	78	120.5	16586	0	0	0	0	0	0	0	1	0	0	0	1	1997
10229	168	140.6	20642	0	0	0	0	0	0	0	1	0	0	0	0	1997
10196	168	139.8	20585	0	0	0	0	0	0	0	0	1	0	0	0	1997
10153	168	147.3	22330	0	0	0	0	0	0	0	0	1	0	0	0	1997
10130	168	156.6	24597	0	0	0	0	0	0	0	0	1	0	0	0	1997
10235	168	146.3	22121	0	0	0	0	0	0	0	0	1	0	0	0	1997
10272	24	142.3	21214	0	0	0	0	0	0	0	0	1	0	0	0	1997
10223	168	142.5	21190	0	0	0	0	0	0	0	0	0	1	0	0	1997
10170	168	151.8	23239	0	0	0	0	0	0	0	0	0	1	0	0	1997
10208	168	138.4	20265	0	0	0	0	0	0	0	0	0	1	0	0	1997
10245	73	137.2	20080	0	0	0	0	0	0	0	0	0	1	0	0	1997
10494	71	129.5	18433	0	0	0	0	0	0	0	0	0	0	1	1	1997
10367	168	98.3	10150	0	0	0	0	0	0	0	0	0	0	1	0	1997
10312	168	117.4	14886	0	0	0	0	0	0	0	0	0	0	1	0	1997
10299	168	146.4	21916	0	0	0	0	0	0	0	0	0	0	1	0	1997
10255	168	126.1	17284	0	0	0	0	0	0	0	0	0	0	1	0	1997
10401	168	146.0	21998	0	0	0	0	0	0	0	0	0	0	0	0	1997
10227	168	147.3	22270	0	0	0	0	0	0	0	0	0	0	0	0	1997
10264	168	141.6	21028	0	0	0	0	0	0	0	0	0	0	0	0	1997
10338	168	116.5	15378	0	0	0	0	0	0	0	0	0	0	0	0	1997
10233	168	122.2	16298	1	0	0	0	0	0	0	0	0	0	0	0	1998
10227	168	130.0	18360	1	0	0	0	0	0	0	0	0	0	0	0	1998
10300	168	134.8	19185	1	0	0	0	0	0	0	0	0	0	0	0	1998
10470	168	131.5	18355	1	0	0	0	0	0	0	0	0	0	0	0	1998
10559	168	127.4	17502	1	0	0	0	0	0	0	0	0	0	0	0	1998
10423	168	137.9	19903	0	1	0	0	0	0	0	0	0	0	0	0	1998
10391	168	117.8	15442	0	1	0	0	0	0	0	0	0	0	0	0	1998
10357	168	125.5	17185	0	1	0	0	0	0	0	0	0	0	0	0	1998
10419	168	118.2	15750	0	1	0	0	0	0	0	0	0	0	0	0	1998
10512	145	130.7	18853	0	0	1	0	0	0	0	0	0	0	0	1	1998
10311	168	140.3	20615	0	0	1	0	0	0	0	0	0	0	0	0	1998
10236	168	140.0	20604	0	0	1	0	0	0	0	0	0	0	0	0	1998
10208	168	139.4	20476	0	0	1	0	0	0	0	0	0	0	0	0	1998
10183	167	149.0	22661	0	0	0	1	0	0	0	0	0	0	0	0	1998
10224	168	136.1	19721	0	0	0	1	0	0	0	0	0	0	0	0	1998

Data Base for SMITH 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10218	168	148.2	22450	0	0	0	1	0	0	0	0	0	0	0	0	1998
10154	168	137.2	20007	0	0	0	1	0	0	0	0	0	0	0	0	1998
10002	168	153.2	23707	0	0	0	0	1	0	0	0	0	0	0	0	1998
10357	168	155.1	24120	0	0	0	0	1	0	0	0	0	0	0	0	1998
10320	168	155.5	24210	0	0	0	0	1	0	0	0	0	0	0	0	1998
10276	168	153.6	23705	0	0	0	0	1	0	0	0	0	0	0	0	1998
10306	168	152.9	23514	0	0	0	0	1	0	0	0	0	0	0	0	1998
10160	25	145.5	22061	0	0	0	0	0	1	0	0	0	0	0	0	1998
10386	95	150.5	23182	0	0	0	0	0	1	0	0	0	0	0	1	1998
10161	168	155.0	24113	0	0	0	0	0	1	0	0	0	0	0	0	1998
10047	168	156.4	24505	0	0	0	0	0	1	0	0	0	0	0	0	1998
10084	168	153.3	23709	0	0	0	0	0	0	1	0	0	0	0	0	1998
10093	168	154.1	23798	0	0	0	0	0	0	1	0	0	0	0	0	1998
10429	168	155.9	24350	0	0	0	0	0	0	1	0	0	0	0	0	1998
10232	168	156.3	24481	0	0	0	0	0	0	1	0	0	0	0	0	1998
10354	168	154.5	23900	0	0	0	0	0	0	0	1	0	0	0	0	1998
10193	168	154.2	23834	0	0	0	0	0	0	0	1	0	0	0	0	1998
10010	168	155.2	24085	0	0	0	0	0	0	0	1	0	0	0	0	1998
10184	168	153.9	23779	0	0	0	0	0	0	0	1	0	0	0	0	1998
10019	168	154.9	24039	0	0	0	0	0	0	0	1	0	0	0	0	1998
10301	168	154.9	24017	0	0	0	0	0	0	0	0	1	0	0	0	1998
10116	168	150.8	23099	0	0	0	0	0	0	0	0	1	0	0	0	1998
10062	72	147.9	22243	0	0	0	0	0	0	0	0	1	0	0	0	1998
10312	112	146.6	21989	0	0	0	0	0	0	0	0	1	0	0	1	1998
10510	24	150.2	22608	0	0	0	0	0	0	0	0	1	0	0	0	1998
10331	168	152.8	23468	0	0	0	0	0	0	0	0	0	1	0	0	1998
10004	168	147.5	22219	0	0	0	0	0	0	0	0	0	1	0	0	1998
10306	168	155.6	24293	0	0	0	0	0	0	0	0	0	1	0	0	1998
10037	169	153.4	23641	0	0	0	0	0	0	0	0	0	1	0	0	1998
9979	168	150.6	22849	0	0	0	0	0	0	0	0	0	0	1	0	1998
10089	168	151.8	23243	0	0	0	0	0	0	0	0	0	0	1	0	1998
10003	168	141.1	20239	0	0	0	0	0	0	0	0	0	0	1	0	1998
9887	144	146.8	22213	0	0	0	0	0	0	0	0	0	0	1	1	1998
9978	168	136.6	19550	0	0	0	0	0	0	0	0	0	0	1	0	1998
9896	168	141.0	20608	0	0	0	0	0	0	0	0	0	0	0	0	1998
10259	142	145.5	21957	0	0	0	0	0	0	0	0	0	0	0	1	1998
10253	168	140.5	20567	0	0	0	0	0	0	0	0	0	0	0	0	1998
9976	168	136.6	19356	0	0	0	0	0	0	0	0	0	0	0	0	1998
9876	24	148.6	22178	0	0	0	0	1	0	0	0	0	0	0	0	1998
10053	168	154.2	23977	1	0	0	0	0	0	0	0	0	0	0	0	1999
9994	168	147.1	22167	1	0	0	0	0	0	0	0	0	0	0	0	1999
10130	168	136.0	19443	1	0	0	0	0	0	0	0	0	0	0	0	1999
10017	144	135.6	19427	1	0	0	0	0	0	0	0	0	0	0	0	1999
10004	114	126.0	17341	0	1	0	0	0	0	0	0	0	0	0	1	1999
11244	52	107.9	13960	0	0	0	1	0	0	0	0	0	0	0	1	1999
10192	68	108.0	12633	0	0	0	1	0	0	0	0	0	0	0	1	1999
9550	168	148.2	22163	0	0	0	1	0	0	0	0	0	0	0	0	1999

Data Base for SMITH 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
9811	100	145.3	22106	0	0	0	0	1	0	0	0	0	0	0	1	1999
9887	168	145.5	21922	0	0	0	0	1	0	0	0	0	0	0	0	1999
9881	168	143.6	21454	0	0	0	0	1	0	0	0	0	0	0	0	1999
9885	168	144.7	21631	0	0	0	0	1	0	0	0	0	0	0	0	1999
10230	113	138.7	20405	0	0	0	0	1	0	0	0	0	0	0	1	1999
9941	168	149.3	22693	0	0	0	0	0	1	0	0	0	0	0	0	1999
10150	168	153.5	23731	0	0	0	0	0	1	0	0	0	0	0	0	1999
10061	168	145.8	22147	0	0	0	0	0	1	0	0	0	0	0	0	1999
10104	144	152.5	23755	0	0	0	0	0	1	0	0	0	0	0	0	1999

Data Base for SMITH 1 Target Heat Rate Equation

- HR                   Average net operating heat rate based on unadjusted measured fuel consumption, before adjustment for unit start ups after shutdown for 24 hours or more, in BTU/KWH.
- HOUR                Number of hours the unit was synchronized during the week.
- AMW                 Average load on the unit, in MW.
- LSRF                Load square range factor, in MW<sup>2</sup>.
- JAN to NOV         The number 1 indicates the month of the observation. All 0's indicate December.
- NS                  Number of unit start ups during the week after being shut down for 24 hours or more.
- YEAR                The year of the observation.
- \*                    Indicates data points removed from the analysis of the target heat rate equation because they were out of the 90% confidence interval.

Data Base for SMITH 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10308	168	172.4	30540	0	0	0	0	0	0	1	0	0	0	0	0	1996
10407	168	180.9	33028	0	0	0	0	0	0	1	0	0	0	0	0	1996
10474	148	179.9	32962	0	0	0	0	0	0	1	0	0	0	0	0	1996
10418	155	175.9	31924	0	0	0	0	0	0	1	0	0	0	0	0	1996
10478	168	177.3	32099	0	0	0	0	0	0	0	1	0	0	0	0	1996
10413	168	177.6	32033	0	0	0	0	0	0	0	1	0	0	0	0	1996
10523	168	171.0	30187	0	0	0	0	0	0	0	1	0	0	0	0	1996
10543	168	169.9	29848	0	0	0	0	0	0	0	1	0	0	0	0	1996
10568	168	163.8	28367	0	0	0	0	0	0	0	1	0	0	0	0	1996
10638	154	156.0	26482	0	0	0	0	0	0	0	0	1	0	0	0	1996
10357	158	157.2	26715	0	0	0	0	0	0	0	0	1	0	0	1	1996
10278	168	163.0	28333	0	0	0	0	0	0	0	0	1	0	0	0	1996
10352	168	161.5	27867	0	0	0	0	0	0	0	0	1	0	0	0	1996
10428	24	163.0	28271	0	0	0	0	0	0	0	0	1	0	0	0	1996
10305	168	156.9	26609	0	0	0	0	0	0	0	0	0	1	0	0	1996
10221	168	151.6	24906	0	0	0	0	0	0	0	0	0	1	0	0	1996
10132	164	156.8	26268	0	0	0	0	0	0	0	0	0	1	0	0	1996
10239	143	164.5	28949	0	0	0	0	0	0	0	0	0	1	0	1	1996
10140	168	171.2	30246	0	0	0	0	0	0	0	0	0	0	1	0	1996
10080	168	177.0	31769	0	0	0	0	0	0	0	0	0	0	1	0	1996
10290	73	178.5	32575	0	0	0	0	0	0	0	0	0	0	1	0	1996
10410	61	147.7	23811	0	0	0	0	0	0	0	0	0	0	1	1	1996
10068	168	141.4	22187	0	0	0	0	0	0	0	0	0	0	1	0	1996
9917	168	148.9	24054	0	0	0	0	0	0	0	0	0	0	0	0	1996
10103	168	147.4	23656	0	0	0	0	0	0	0	0	0	0	0	0	1996
10224	140	142.1	22919	0	0	0	0	0	0	0	0	0	0	0	1	1996
10418	124	89.1	9030	0	0	0	0	0	0	0	0	0	0	0	1	1996
10233	168	115.3	15541	1	0	0	0	0	0	0	0	0	0	0	0	1997
10224	168	136.7	20724	1	0	0	0	0	0	0	0	0	0	0	0	1997
10038	168	162.6	27939	1	0	0	0	0	0	0	0	0	0	0	0	1997
10280	168	132.0	19932	1	0	0	0	0	0	0	0	0	0	0	0	1997
10372	168	131.0	19863	1	0	0	0	0	0	0	0	0	0	0	0	1997
10178	168	129.0	18776	0	1	0	0	0	0	0	0	0	0	0	0	1997
10281	168	134.4	20432	0	1	0	0	0	0	0	0	0	0	0	0	1997
10519	60	114.1	15578	0	1	0	0	0	0	0	0	0	0	0	1	1997
10219	168	113.3	15116	0	1	0	0	0	0	0	0	0	0	0	0	1997
10315	168	91.0	9700	0	0	1	0	0	0	0	0	0	0	0	0	1997
10398	168	85.7	8514	0	0	1	0	0	0	0	0	0	0	0	0	1997
10271	168	99.0	11206	0	0	1	0	0	0	0	0	0	0	0	0	1997
10126	24	126.6	18440	0	0	1	0	0	0	0	0	0	0	0	0	1997
10285	95	162.5	27958	0	0	0	1	0	0	0	0	0	0	0	1	1997
10098	168	165.3	28668	0	0	0	1	0	0	0	0	0	0	0	0	1997
10044	168	170.5	30248	0	0	0	1	0	0	0	0	0	0	0	0	1997
10132	168	149.4	24726	0	0	0	0	1	0	0	0	0	0	0	0	1997
10256	168	139.8	22011	0	0	0	0	1	0	0	0	0	0	0	0	1997
10166	168	153.4	25791	0	0	0	0	1	0	0	0	0	0	0	0	1997
9933	168	152.8	25617	0	0	0	0	1	0	0	0	0	0	0	0	1997

Data Base for SMITH 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10344	168	146.9	24070	0	0	0	0	1	0	0	0	0	0	0	0	1997
10266	168	131.9	19901	0	0	0	0	0	1	0	0	0	0	0	0	1997
10210	168	143.5	23380	0	0	0	0	0	1	0	0	0	0	0	0	1997
10349	168	147.5	24373	0	0	0	0	0	1	0	0	0	0	0	0	1997
10340	146	151.1	25219	0	0	0	0	0	1	0	0	0	0	0	0	1997
10354	168	155.2	26245	0	0	0	0	0	0	1	0	0	0	0	0	1997
10237	168	156.6	26434	0	0	0	0	0	0	1	0	0	0	0	0	1997
10255	168	155.5	26141	0	0	0	0	0	0	1	0	0	0	0	0	1997
10200	168	168.9	29484	0	0	0	0	0	0	1	0	0	0	0	0	1997
10125	168	154.5	25964	0	0	0	0	0	0	0	1	0	0	0	0	1997
10151	168	152.3	25448	0	0	0	0	0	0	0	1	0	0	0	0	1997
10116	145	168.6	29387	0	0	0	0	0	0	0	1	0	0	0	0	1997
10164	168	165.8	29050	0	0	0	0	0	0	0	1	0	0	0	0	1997
10103	168	156.9	26571	0	0	0	0	0	0	0	1	0	0	0	0	1997
10020	168	156.1	26573	0	0	0	0	0	0	0	0	1	0	0	0	1997
10067	96	160.7	27555	0	0	0	0	0	0	0	0	1	0	0	0	1997
10085	92	176.8	31862	0	0	0	0	0	0	0	0	1	0	0	1	1997
9996	168	166.0	28953	0	0	0	0	0	0	0	0	1	0	0	0	1997
9842	24	163.4	28585	0	0	0	0	0	0	0	0	1	0	0	0	1997
9986	168	162.1	28097	0	0	0	0	0	0	0	0	0	1	0	0	1997
9939	168	173.4	30564	0	0	0	0	0	0	0	0	0	1	0	0	1997
9978	168	155.4	26152	0	0	0	0	0	0	0	0	0	1	0	0	1997
10114	169	162.9	28099	0	0	0	0	0	0	0	0	0	1	0	0	1997
10141	168	155.3	25961	0	0	0	0	0	0	0	0	0	0	1	0	1997
10156	145	157.5	26660	0	0	0	0	0	0	0	0	0	0	1	0	1997
9958	168	172.2	30675	0	0	0	0	0	0	0	0	0	0	1	0	1997
10024	168	168.5	29506	0	0	0	0	0	0	0	0	0	0	1	0	1997
10081	168	136.5	21002	0	0	0	0	0	0	0	0	0	0	1	0	1997
10181	134	167.5	29827	0	0	0	0	0	0	0	0	0	0	0	1	1997
10100	137	167.9	29694	0	0	0	0	0	0	0	0	0	0	0	0	1997
10079	118	153.7	26164	0	0	0	0	0	0	0	0	0	0	0	1	1997
10189	95	131.5	20649	0	0	0	0	0	0	0	0	0	0	0	1	1997
10068	168	148.8	24665	1	0	0	0	0	0	0	0	0	0	0	0	1998
10135	139	147.9	23646	1	0	0	0	0	0	0	0	0	0	0	1	1998
10120	168	158.0	26116	1	0	0	0	0	0	0	0	0	0	0	0	1998
10056	168	175.2	30765	1	0	0	0	0	0	0	0	0	0	0	0	1998
10332	168	174.7	31139	1	0	0	0	0	0	0	0	0	0	0	0	1998
10198	168	173.4	30473	0	1	0	0	0	0	0	0	0	0	0	0	1998
9919	168	170.1	29092	0	1	0	0	0	0	0	0	0	0	0	0	1998
9951	168	166.8	28540	0	1	0	0	0	0	0	0	0	0	0	0	1998
10026	70	162.9	28013	0	1	0	0	0	0	0	0	0	0	0	0	1998
* 13989	21	81.1	9097	0	0	0	0	1	0	0	0	0	0	0	2	1998
10568	93	132.1	20017	0	0	0	0	1	0	0	0	0	0	0	1	1998
10166	46	177.0	32284	0	0	0	0	1	0	0	0	0	0	0	0	1998
10333	66	149.3	26043	0	0	0	0	1	0	0	0	0	0	0	1	1998
9934	168	187.5	35192	0	0	0	0	0	1	0	0	0	0	0	0	1998
* 1000	168	188.5	35654	0	0	0	0	0	1	0	0	0	0	0	0	1998

Data Base for SMITH 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10092	168	187.4	35145	0	0	0	0	0	1	0	0	0	0	0	0	1998
9964	168	182.9	33905	0	0	0	0	0	1	0	0	0	0	0	0	1998
9866	163	182.9	34168	0	0	0	0	0	0	1	0	0	0	0	0	1998
9918	168	187.1	35026	0	0	0	0	0	0	1	0	0	0	0	0	1998
10196	168	186.9	34947	0	0	0	0	0	0	1	0	0	0	0	0	1998
10150	168	136.9	20988	0	0	0	0	0	0	1	0	0	0	0	0	1998
10053	168	185.7	34485	0	0	0	0	0	0	0	1	0	0	0	0	1998
10085	168	184.9	34241	0	0	0	0	0	0	0	1	0	0	0	0	1998
10007	168	187.0	35011	0	0	0	0	0	0	0	1	0	0	0	0	1998
9981	168	183.5	33767	0	0	0	0	0	0	0	1	0	0	0	0	1998
9890	168	186.4	34769	0	0	0	0	0	0	0	1	0	0	0	0	1998
9935	168	182.4	33329	0	0	0	0	0	0	0	0	1	0	0	0	1998
9876	168	179.2	32632	0	0	0	0	0	0	0	0	1	0	0	0	1998
9931	168	187.0	34995	0	0	0	0	0	0	0	0	1	0	0	0	1998
9939	168	183.0	33526	0	0	0	0	0	0	0	0	1	0	0	0	1998
10153	24	178.2	31776	0	0	0	0	0	0	0	0	1	0	0	0	1998
9851	168	183.9	33884	0	0	0	0	0	0	0	0	0	1	0	0	1998
9930	168	178.0	32255	0	0	0	0	0	0	0	0	0	1	0	0	1998
9942	168	182.4	33413	0	0	0	0	0	0	0	0	0	1	0	0	1998
9911	169	181.8	33263	0	0	0	0	0	0	0	0	0	1	0	0	1998
9928	168	183.2	33638	0	0	0	0	0	0	0	0	0	0	1	0	1998
9998	168	184.7	34171	0	0	0	0	0	0	0	0	0	0	1	0	1998
9982	168	184.0	33884	0	0	0	0	0	0	0	0	0	0	1	0	1998
9871	168	182.8	33550	0	0	0	0	0	0	0	0	0	0	1	0	1998
9992	168	182.5	33335	0	0	0	0	0	0	0	0	0	0	1	0	1998
9954	168	180.7	32713	0	0	0	0	0	0	0	0	0	0	0	0	1998
10136	19	180.3	32612	0	0	0	0	0	0	0	0	0	0	0	0	1998
10113	114	164.0	28373	0	0	0	0	0	0	0	0	0	0	0	1	1998
9986	168	165.2	28367	0	0	0	0	0	0	0	0	0	0	0	0	1998
10041	24	184.6	34106	0	0	0	0	1	0	0	0	0	0	0	0	1998
9917	167	184.5	34329	1	0	0	0	0	0	0	0	0	0	0	0	1999
9985	168	180.4	33074	1	0	0	0	0	0	0	0	0	0	0	0	1999
9924	168	176.4	31654	1	0	0	0	0	0	0	0	0	0	0	0	1999
9888	168	174.3	31246	1	0	0	0	0	0	0	0	0	0	0	0	1999
9956	168	173.6	31062	0	1	0	0	0	0	0	0	0	0	0	0	1999
9969	168	166.2	29058	0	1	0	0	0	0	0	0	0	0	0	0	1999
10131	168	181.2	33279	0	1	0	0	0	0	0	0	0	0	0	0	1999
10096	168	184.0	33904	0	1	0	0	0	0	0	0	0	0	0	0	1999
10044	168	183.1	33862	0	0	1	0	0	0	0	0	0	0	0	0	1999
9963	168	187.1	35089	0	0	1	0	0	0	0	0	0	0	0	0	1999
9979	168	187.3	35091	0	0	1	0	0	0	0	0	0	0	0	0	1999
9983	168	186.2	34682	0	0	1	0	0	0	0	0	0	0	0	0	1999
10082	168	185.0	34327	0	0	1	0	0	0	0	0	0	0	0	0	1999
9850	167	181.6	33137	0	0	0	1	0	0	0	0	0	0	0	0	1999
9991	168	181.3	32923	0	0	0	1	0	0	0	0	0	0	0	0	1999
9958	168	184.9	34272	0	0	0	1	0	0	0	0	0	0	0	0	1999
10038	168	184.2	33985	0	0	0	1	0	0	0	0	0	0	0	0	1999

Data Base for SMITH 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR
10041	168	183.8	33884	0	0	0	0	1	0	0	0	0	0	0	0	1999
10682	22	165.3	29274	0	0	0	0	1	0	0	0	0	0	0	0	1999
10086	143	174.1	31307	0	0	0	0	1	0	0	0	0	0	0	1	1999
10196	168	182.5	33810	0	0	0	0	1	0	0	0	0	0	0	0	1999
10094	168	182.4	33508	0	0	0	0	0	1	0	0	0	0	0	0	1999
10168	168	185.1	34306	0	0	0	0	0	1	0	0	0	0	0	0	1999
10094	168	174.8	31554	0	0	0	0	0	1	0	0	0	0	0	0	1999
10132	144	185.6	34450	0	0	0	0	0	1	0	0	0	0	0	0	1999

Data Base for SMITH 2 Target Heat Rate Equation

HR Average net operating heat rate based on unadjusted measured fuel consumption, before adjustment for unit start ups after shutdown for 24 hours or more, in BTU/KWH.

HOURL Number of hours the unit was synchronized during the week.

AMW Average load on the unit, in MW.

LSRF Load square range factor, in MW<sup>2</sup>.

JAN to NOV The number 1 indicates the month of the observation. All 0's indicate December.

NS Number of unit start ups during the week after being shut down for 24 hours or more.

YEAR The year of the observation.

\* Indicates data points removed from the analysis of the target heat rate equation because they were out of the 90% confidence interval.



Data Base for DANIEL 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10394	153	333.2	135606	0	0	0	0	0	0	1	0	0	0	0	1	1996	11215
10247	168	365.6	156769	0	0	0	0	0	0	1	0	0	0	0	0	1996	11095
10242	138	397.7	177299	0	0	0	0	0	0	1	0	0	0	0	1	1996	11210
9961	168	371.8	161217	0	0	0	0	0	0	1	0	0	0	0	0	1996	11319
10138	168	368.4	159178	0	0	0	0	0	0	0	1	0	0	0	0	1996	11468
10217	168	364.0	157202	0	0	0	0	0	0	0	1	0	0	0	0	1996	11355
10410	168	360.3	156432	0	0	0	0	0	0	0	1	0	0	0	0	1996	11256
10309	168	337.6	140366	0	0	0	0	0	0	0	1	0	0	0	0	1996	11100
10813	168	284.6	105093	0	0	0	0	0	0	0	1	0	0	0	0	1996	11128
10520	168	331.3	132807	0	0	0	0	0	0	0	0	1	0	0	0	1996	11156
10819	168	361.1	133300	0	0	0	0	0	0	0	0	1	0	0	0	1996	9544
10768	168	347.5	121243	0	0	0	0	0	0	0	0	1	0	0	0	1996	9359
10480	119	356.3	128460	0	0	0	0	0	0	0	0	1	0	0	0	1996	9678
13434	19	186.9	38605	0	0	0	0	0	0	0	0	0	1	0	1	1996	9080
10994	168	313.4	102118	0	0	0	0	0	0	0	0	0	1	0	0	1996	9337
10607	98	423.4	184613	0	0	0	0	0	0	0	0	0	1	0	1	1996	9376
10564	169	441.8	196945	0	0	0	0	0	0	0	0	0	1	0	0	1996	9342
10623	168	419.7	179445	0	0	0	0	0	0	0	0	0	0	1	0	1996	9320
10656	168	400.6	162702	0	0	0	0	0	0	0	0	0	0	1	0	1996	9345
10395	168	427.5	183049	0	0	0	0	0	0	0	0	0	0	1	0	1996	9398
10255	76	367.3	136582	0	0	0	0	0	0	0	0	0	0	1	0	1996	9179
10661	144	396.5	163244	0	0	0	0	0	0	0	0	0	0	1	1	1996	9443
10595	168	451.8	205622	0	0	0	0	0	0	0	0	0	0	0	0	1996	9491
10556	168	427.0	187822	0	0	0	0	0	0	0	0	0	0	0	0	1996	9339
10447	168	441.7	198347	0	0	0	0	0	0	0	0	0	0	0	0	1996	9355
10457	168	393.6	163949	0	0	0	0	0	0	0	0	0	0	0	0	1996	9261
10779	168	401.5	165701	1	0	0	0	0	0	0	0	0	0	0	0	1997	9374
10835	95	349.3	124956	1	0	0	0	0	0	0	0	0	0	0	0	1997	9262
10905	152	320.1	107643	0	1	0	0	0	0	0	0	0	0	0	1	1997	9336
10571	167	383.5	150753	0	1	0	0	0	0	0	0	0	0	0	0	1997	9279
10777	97	377.7	155150	0	1	0	0	0	0	0	0	0	0	0	1	1997	9210
10514	138	381.1	158484	0	1	0	0	0	0	0	0	0	0	0	1	1997	9123
10561	130	361.5	145363	0	0	1	0	0	0	0	0	0	0	0	1	1997	9389
10528	168	389.9	163244	0	0	1	0	0	0	0	0	0	0	0	0	1997	9235
10401	168	408.4	174168	0	0	1	0	0	0	0	0	0	0	0	0	1997	9199
10362	168	425.7	185977	0	0	1	0	0	0	0	0	0	0	0	0	1997	9257
10574	89	406.4	173770	0	0	0	1	0	0	0	0	0	0	0	1	1997	9293
10590	168	428.0	185933	0	0	0	1	0	0	0	0	0	0	0	0	1997	9170
10352	168	449.3	202671	0	0	0	1	0	0	0	0	0	0	0	0	1997	9227
10699	168	443.9	197621	0	0	0	1	0	0	0	0	0	0	0	0	1997	9492
10404	93	408.0	169639	0	0	0	0	1	0	0	0	0	0	0	0	1997	11195
10946	67	340.3	128531	0	0	0	0	1	0	0	0	0	0	0	1	1997	9488
10367	168	424.3	184712	0	0	0	0	1	0	0	0	0	0	0	0	1997	9459
10513	168	418.2	178740	0	0	0	0	1	0	0	0	0	0	0	0	1997	9485
10499	168	349.5	125242	0	0	0	0	1	0	0	0	0	0	0	0	1997	9146
10609	168	374.0	150054	0	0	0	0	0	1	0	0	0	0	0	0	1997	9228
10614	168	395.9	163115	0	0	0	0	0	1	0	0	0	0	0	0	1997	9260

Data Base for DANIEL 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10637	168	397.3	165198	0	0	0	0	0	1	0	0	0	0	0	0	1997	9281
10600	168	386.2	154992	0	0	0	0	0	1	0	0	0	0	0	0	1997	9136
10645	168	399.0	164401	0	0	0	0	0	0	1	0	0	0	0	0	1997	9280
10789	86	377.8	151678	0	0	0	0	0	0	1	0	0	0	0	1	1997	9215
10640	168	369.9	140828	0	0	0	0	0	0	1	0	0	0	0	0	1997	8999
10793	168	392.2	155125	0	0	0	0	0	0	1	0	0	0	0	0	1997	9243
10790	168	362.9	137430	0	0	0	0	0	0	0	1	0	0	0	0	1997	9215
10776	135	379.1	148806	0	0	0	0	0	0	0	1	0	0	0	1	1997	9260
10639	168	413.0	170854	0	0	0	0	0	0	0	1	0	0	0	0	1997	9286
10793	123	372.2	148539	0	0	0	0	0	0	0	1	0	0	0	1	1997	9264
10553	168	383.2	152292	0	0	0	0	0	0	0	1	0	0	0	0	1997	9239
10792	131	355.6	137302	0	0	0	0	0	0	0	0	1	0	0	1	1997	9300
10597	168	368.0	142684	0	0	0	0	0	0	0	0	1	0	0	0	1997	9310
10713	139	377.5	148203	0	0	0	0	0	0	0	0	1	0	0	1	1997	9374
10696	168	363.3	138521	0	0	0	0	0	0	0	0	1	0	0	0	1997	9261
10736	24	353.8	133462	0	0	0	0	0	0	0	0	1	0	0	0	1997	9290
10617	168	373.7	143155	0	0	0	0	0	0	0	0	0	1	0	0	1997	9498
10677	83	333.2	112028	0	0	0	0	0	0	0	0	0	1	0	0	1997	9670
10705	68	339.6	127450	0	0	0	0	0	0	0	0	0	1	0	1	1997	9325
10624	146	378.7	151108	0	0	0	0	0	0	0	0	0	1	0	0	1997	9244
10830	167	373.9	148544	0	0	0	0	0	0	0	0	0	0	1	0	1997	9522
10466	124	397.9	166774	0	0	0	0	0	0	0	0	0	0	1	1	1997	9217
10378	168	417.1	177825	0	0	0	0	0	0	0	0	0	0	1	0	1997	9194
10464	153	394.9	164220	0	0	0	0	0	0	0	0	0	0	1	0	1997	9259
10529	168	351.9	134096	0	0	0	0	0	0	0	0	0	0	1	0	1997	9064
10528	168	393.4	159933	0	0	0	0	0	0	0	0	0	0	0	0	1997	9199
10550	168	400.6	164575	0	0	0	0	0	0	0	0	0	0	0	0	1997	9397
10692	100	372.1	144588	0	0	0	0	0	0	0	0	0	0	0	1	1997	9317
10735	168	315.3	110914	0	0	0	0	0	0	0	0	0	0	0	0	1997	9317
10799	168	287.3	94698	1	0	0	0	0	0	0	0	0	0	0	0	1998	9276
10771	168	326.6	115282	1	0	0	0	0	0	0	0	0	0	0	0	1998	9001
10342	168	375.4	147535	1	0	0	0	0	0	0	0	0	0	0	0	1998	9205
10600	168	346.2	126688	1	0	0	0	0	0	0	0	0	0	0	0	1998	9073
10607	168	337.6	122720	1	0	0	0	0	0	0	0	0	0	0	0	1998	9204
10499	72	374.8	146150	0	1	0	0	0	0	0	0	0	0	0	0	1998	9138
10465	128	314.7	111832	0	0	1	0	0	0	0	0	0	0	0	1	1998	9192
10495	168	389.3	163543	0	0	1	0	0	0	0	0	0	0	0	0	1998	9462
10420	167	399.6	171579	0	0	0	1	0	0	0	0	0	0	0	0	1998	9375
10633	105	377.5	158113	0	0	0	1	0	0	0	0	0	0	0	1	1998	9471
10424	137	412.8	180808	0	0	0	1	0	0	0	0	0	0	0	1	1998	9469
10349	168	391.4	166654	0	0	0	1	0	0	0	0	0	0	0	0	1998	9391
10442	168	389.9	161435	0	0	0	0	1	0	0	0	0	0	0	0	1998	9081
10346	168	388.4	160734	0	0	0	0	1	0	0	0	0	0	0	0	1998	9221
10347	168	430.6	190386	0	0	0	0	1	0	0	0	0	0	0	0	1998	9371
10359	168	419.1	182107	0	0	0	0	1	0	0	0	0	0	0	0	1998	9317
10393	168	413.0	179030	0	0	0	0	1	0	0	0	0	0	0	0	1998	9202
10546	168	395.9	168440	0	0	0	0	0	1	0	0	0	0	0	0	1998	9330

Data Base for DANIEL 1 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10454	168	419.1	179076	0	0	0	0	0	1	0	0	0	0	0	0	1998	9214
10560	168	386.7	155511	0	0	0	0	0	1	0	0	0	0	0	0	1998	9210
10645	168	378.2	152447	0	0	0	0	0	1	0	0	0	0	0	0	1998	9271
10495	168	395.3	162966	0	0	0	0	0	0	1	0	0	0	0	0	1998	9242
10506	168	387.5	155026	0	0	0	0	0	0	1	0	0	0	0	0	1998	9202
10884	93	319.0	120254	0	0	0	0	0	0	1	0	0	0	0	1	1998	9201
10353	168	419.8	182219	0	0	0	0	0	0	1	0	0	0	0	0	1998	9233
10517	168	414.4	177742	0	0	0	0	0	0	0	1	0	0	0	0	1998	9179
10388	168	418.6	182475	0	0	0	0	0	0	0	1	0	0	0	0	1998	9414
10434	168	399.3	167610	0	0	0	0	0	0	0	1	0	0	0	0	1998	9334
10436	168	431.3	192513	0	0	0	0	0	0	0	1	0	0	0	0	1998	9278
10443	168	450.6	206282	0	0	0	0	0	0	0	1	0	0	0	0	1998	9265
10404	168	436.3	191456	0	0	0	0	0	0	0	0	1	0	0	0	1998	9260
10336	70	426.9	187317	0	0	0	0	0	0	0	0	1	0	0	0	1998	9274
15296	31	106.4	14196	0	0	0	0	0	0	0	0	0	0	0	1	1998	9223
10691	113	321.8	111013	1	0	0	0	0	0	0	0	0	0	0	1	1999	9239
10581	128	356.3	138612	1	0	0	0	0	0	0	0	0	0	0	1	1999	9346
10629	100	357.9	140625	1	0	0	0	0	0	0	0	0	0	0	1	1999	9242
10630	168	395.3	166677	0	1	0	0	0	0	0	0	0	0	0	0	1999	9715
10291	161	304.6	107931	0	1	0	0	0	0	0	0	0	0	0	0	1999	11273
10211	168	386.1	155644	0	1	0	0	0	0	0	0	0	0	0	0	1999	10468
10188	159	390.1	162981	0	1	0	0	0	0	0	0	0	0	0	0	1999	10168
10325	168	362.1	136961	0	0	1	0	0	0	0	0	0	0	0	0	1999	9970
10519	130	431.9	191684	0	0	1	0	0	0	0	0	0	0	0	1	1999	9644
10219	168	450.0	204247	0	0	1	0	0	0	0	0	0	0	0	0	1999	9264
10264	156	435.2	193515	0	0	1	0	0	0	0	0	0	0	0	0	1999	9398
10648	51	392.3	171439	0	0	1	0	0	0	0	0	0	0	0	2	1999	9333
10306	24	441.0	201118	0	0	0	1	0	0	0	0	0	0	0	0	1999	9263
10554	127	329.5	113008	0	0	0	1	0	0	0	0	0	0	0	1	1999	9320
10157	168	457.2	209956	0	0	0	1	0	0	0	0	0	0	0	0	1999	9321
10319	168	451.7	206474	0	0	0	1	0	0	0	0	0	0	0	0	1999	9353
10874	127	356.5	135479	0	0	0	0	1	0	0	0	0	0	0	1	1999	9819
10750	148	387.9	163672	0	0	0	0	1	0	0	0	0	0	0	0	1999	9932
9925	168	388.6	170667	0	0	0	0	1	0	0	0	0	0	0	0	1999	11148
10369	150	409.5	184361	0	0	0	0	1	0	0	0	0	0	0	0	1999	11325
10681	168	366.8	153244	0	0	0	0	1	0	0	0	0	0	0	0	1999	11256
10087	168	417.5	187770	0	0	0	0	0	1	0	0	0	0	0	0	1999	11009
9819	168	427.1	193747	0	0	0	0	0	1	0	0	0	0	0	0	1999	10644
9997	168	417.3	189676	0	0	0	0	0	1	0	0	0	0	0	0	1999	10698
9617	144	439.4	200007	0	0	0	0	0	1	0	0	0	0	0	0	1999	10207

Data Base for DANIEL 1 Target Heat Rate Equation

HR Average net operating heat rate based on unadjusted measured fuel consumption, before adjustment for unit start ups after shutdown for 24 hours or more, in BTU/KWH.

HOUR Number of hours the unit was synchronized during the week.

AMW Average load on the unit, in MW.

LSRF Load square range factor, in MW<sup>2</sup>.

JAN to NOV The number 1 indicates the month of the observation. All 0's indicate December.

NS Number of unit start ups during the week after being shut down for 24 hours or more.

YEAR The year of the observation.

BTU/LB Average heat content of coal burned by the unit for the week.

\* Indicates data points removed from the analysis of the target heat rate equation because they were out of the 90% confidence interval.

Data Base for DANIEL 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10346	168	316.5	124968	0	0	0	0	0	0	1	0	0	0	0	0	1996	11217
10521	154	328.9	136965	0	0	0	0	0	0	1	0	0	0	0	0	1996	11094
10282	168	366.9	156999	0	0	0	0	0	0	1	0	0	0	0	0	1996	11203
10383	168	339.0	139593	0	0	0	0	0	0	1	0	0	0	0	0	1996	11319
10351	168	336.3	138413	0	0	0	0	0	0	0	1	0	0	0	0	1996	11466
10302	168	330.7	136177	0	0	0	0	0	0	0	1	0	0	0	0	1996	11301
10374	168	335.0	139983	0	0	0	0	0	0	0	1	0	0	0	0	1996	11138
10510	138	293.6	108165	0	0	0	0	0	0	0	1	0	0	0	1	1996	11103
10779	168	254.7	83904	0	0	0	0	0	0	0	1	0	0	0	0	1996	11115
10679	168	295.7	109065	0	0	0	0	0	0	0	0	1	0	0	0	1996	11131
10824	168	368.9	151722	0	0	0	0	0	0	0	0	1	0	0	0	1996	9452
10643	168	406.4	174961	0	0	0	0	0	0	0	0	1	0	0	0	1996	9271
10672	168	386.8	160741	0	0	0	0	0	0	0	0	1	0	0	0	1996	9400
10504	24	400.9	170256	0	0	0	0	0	0	0	0	1	0	0	0	1996	9274
10131	168	422.2	183607	0	0	0	0	0	0	0	0	0	1	0	0	1996	9072
10387	168	398.5	169036	0	0	0	0	0	0	0	0	0	1	0	0	1996	9329
10451	168	421.1	184735	0	0	0	0	0	0	0	0	0	1	0	0	1996	9341
10395	169	424.7	187212	0	0	0	0	0	0	0	0	0	1	0	0	1996	9313
10499	168	406.6	173305	0	0	0	0	0	0	0	0	0	0	1	0	1996	9313
10636	168	384.5	152482	0	0	0	0	0	0	0	0	0	0	1	0	1996	9342
10243	74	413.9	179535	0	0	0	0	0	0	0	0	0	0	1	0	1996	9308
10253	106	385.8	160769	0	0	0	0	0	0	0	0	0	0	1	1	1996	9326
10340	168	401.2	168261	0	0	0	0	0	0	0	0	0	0	1	0	1996	9404
10345	168	460.7	215927	0	0	0	0	0	0	0	0	0	0	0	0	1996	9493
10367	168	415.4	180617	0	0	0	0	0	0	0	0	0	0	0	0	1996	9338
10178	168	442.7	201239	0	0	0	0	0	0	0	0	0	0	0	0	1996	9356
10338	168	375.5	152947	0	0	0	0	0	0	0	0	0	0	0	0	1996	9259
10324	168	411.2	175882	1	0	0	0	0	0	0	0	0	0	0	0	1997	9376
10222	168	457.6	209533	1	0	0	0	0	0	0	0	0	0	0	0	1997	9323
9840	120	435.2	194714	1	0	0	0	0	0	0	0	0	0	0	0	1997	9230
13137	59	189.0	49912	0	1	0	0	0	0	0	0	0	0	0	2	1997	9236
10459	166	387.2	160496	0	1	0	0	0	0	0	0	0	0	0	0	1997	9248
10134	168	405.1	173947	0	1	0	0	0	0	0	0	0	0	0	0	1997	9121
10109	168	398.7	170639	0	0	1	0	0	0	0	0	0	0	0	0	1997	9369
10212	168	411.3	179282	0	0	1	0	0	0	0	0	0	0	0	0	1997	9235
10125	168	432.4	192365	0	0	1	0	0	0	0	0	0	0	0	0	1997	9200
10257	168	451.0	205440	0	0	1	0	0	0	0	0	0	0	0	0	1997	9259
10211	167	460.7	214256	0	0	0	1	0	0	0	0	0	0	0	0	1997	9280
10513	167	377.6	160881	0	0	0	1	0	0	0	0	0	0	0	0	1997	9204
10163	168	459.4	211500	0	0	0	1	0	0	0	0	0	0	0	0	1997	9227
10215	96	425.5	183397	0	0	0	1	0	0	0	0	0	0	0	0	1997	10430
10736	29	317.5	116301	0	0	0	0	1	0	0	0	0	0	0	1	1997	9448
10397	157	400.3	168885	0	0	0	0	1	0	0	0	0	0	0	0	1997	9471
10284	110	418.3	181814	0	0	0	0	1	0	0	0	0	0	0	1	1997	9477
10406	157	441.3	200684	0	0	0	0	1	0	0	0	0	0	0	0	1997	9489
10293	165	422.5	188920	0	0	0	0	1	0	0	0	0	0	0	0	1997	9149
10239	168	403.6	172114	0	0	0	0	0	1	0	0	0	0	0	0	1997	9229

Data Base for DANIEL 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10346	168	425.3	187103	0	0	0	0	0	1	0	0	0	0	0	0	1997	9260
10367	168	430.0	190572	0	0	0	0	0	1	0	0	0	0	0	0	1997	9282
10365	168	421.7	181660	0	0	0	0	0	1	0	0	0	0	0	0	1997	9136
10349	91	420.8	183395	0	0	0	0	0	0	1	0	0	0	0	0	1997	9268
10312	166	434.5	194546	0	0	0	0	0	0	1	0	0	0	0	1	1997	9240
10313	168	411.7	172947	0	0	0	0	0	0	1	0	0	0	0	0	1997	8996
10480	168	424.5	181953	0	0	0	0	0	0	1	0	0	0	0	0	1997	9243
10453	168	411.2	176328	0	0	0	0	0	0	0	1	0	0	0	0	1997	9217
10361	168	427.4	186660	0	0	0	0	0	0	0	1	0	0	0	0	1997	9266
10399	168	463.1	214743	0	0	0	0	0	0	0	1	0	0	0	0	1997	9286
10363	168	440.8	199395	0	0	0	0	0	0	0	1	0	0	0	0	1997	9263
10373	168	426.4	187242	0	0	0	0	0	0	0	1	0	0	0	0	1997	9243
10397	168	400.8	170577	0	0	0	0	0	0	0	0	1	0	0	0	1997	9299
10345	168	421.1	183222	0	0	0	0	0	0	0	0	1	0	0	0	1997	9310
10359	168	450.0	203364	0	0	0	0	0	0	0	0	1	0	0	0	1997	9382
10315	168	429.3	188643	0	0	0	0	0	0	0	0	1	0	0	0	1997	9261
10263	24	417.8	180295	0	0	0	0	0	0	0	0	1	0	0	0	1997	9290
10019	41	394.4	161330	0	0	0	0	0	0	0	0	0	1	0	0	1997	10369
9942	89	434.7	194442	0	0	0	0	0	0	0	0	0	1	0	1	1997	9208
10188	131	395.4	169441	0	0	0	0	0	0	0	0	0	1	0	1	1997	9324
10071	169	446.0	203560	0	0	0	0	0	0	0	0	0	1	0	0	1997	9248
10504	113	436.2	196652	0	0	0	0	0	0	0	0	0	0	1	1	1997	9600
10024	168	427.8	187364	0	0	0	0	0	0	0	0	0	0	1	0	1997	9227
10196	168	400.4	162773	0	0	0	0	0	0	0	0	0	0	1	0	1997	9187
10198	168	462.1	214160	0	0	0	0	0	0	0	0	0	0	1	0	1997	9267
10212	168	435.5	191599	0	0	0	0	0	0	0	0	0	0	1	0	1997	9060
10235	168	451.6	205337	0	0	0	0	0	0	0	0	0	0	0	0	1997	9198
10188	168	456.8	209735	0	0	0	0	0	0	0	0	0	0	0	0	1997	9396
10088	168	445.5	200240	0	0	0	0	0	0	0	0	0	0	0	0	1997	9334
10245	168	364.8	143680	0	0	0	0	0	0	0	0	0	0	0	0	1997	9313
10048	168	396.4	158780	1	0	0	0	0	0	0	0	0	0	0	0	1998	9286
10252	168	405.1	164789	1	0	0	0	0	0	0	0	0	0	0	0	1998	9002
9909	73	390.5	155669	1	0	0	0	0	0	0	0	0	0	0	0	1998	9025
10314	139	393.6	165512	1	0	0	0	0	0	0	0	0	0	0	1	1998	9097
10148	168	445.2	200722	1	0	0	0	0	0	0	0	0	0	0	0	1998	9202
10120	168	442.4	197540	0	1	0	0	0	0	0	0	0	0	0	0	1998	9218
10217	168	415.6	179355	0	1	0	0	0	0	0	0	0	0	0	0	1998	9306
10148	168	413.6	177315	0	1	0	0	0	0	0	0	0	0	0	0	1998	9238
10088	168	389.3	156584	0	1	0	0	0	0	0	0	0	0	0	0	1998	9278
10119	168	409.2	171606	0	0	1	0	0	0	0	0	0	0	0	0	1998	9244
10290	168	434.4	194187	0	0	1	0	0	0	0	0	0	0	0	0	1998	9163
10132	168	405.1	169019	0	0	1	0	0	0	0	0	0	0	0	0	1998	9210
10453	72	351.2	124232	0	0	1	0	0	0	0	0	0	0	0	0	1998	9430
10269	114	400.8	168990	0	0	0	1	0	0	0	0	0	0	0	1	1998	9524
10125	168	436.4	194730	0	0	0	1	0	0	0	0	0	0	0	0	1998	9442
10138	168	395.7	158239	0	0	0	1	0	0	0	0	0	0	0	0	1998	9394
10213	168	390.7	153419	0	0	0	0	1	0	0	0	0	0	0	0	1998	9085

Data Base for DANIEL 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10158	148	393.3	159343	0	0	0	0	1	0	0	0	0	0	0	0	1998	9215
10184	168	430.4	186464	0	0	0	0	1	0	0	0	0	0	0	0	1998	9370
10224	168	435.2	189543	0	0	0	0	1	0	0	0	0	0	0	0	1998	9316
10305	168	432.0	187895	0	0	0	0	1	0	0	0	0	0	0	0	1998	9204
10425	87	399.8	167702	0	0	0	0	0	1	0	0	0	0	0	0	1998	9292
10342	165	421.7	181454	0	0	0	0	0	1	0	0	0	0	0	1	1998	9214
10349	168	427.7	182916	0	0	0	0	0	1	0	0	0	0	0	0	1998	9211
10410	168	426.1	181563	0	0	0	0	0	1	0	0	0	0	0	0	1998	9273
10438	168	423.3	181757	0	0	0	0	0	0	1	0	0	0	0	0	1998	9240
10452	168	427.4	182908	0	0	0	0	0	0	1	0	0	0	0	0	1998	9195
10608	168	409.2	167847	0	0	0	0	0	0	1	0	0	0	0	0	1998	9248
10556	168	414.6	171942	0	0	0	0	0	0	1	0	0	0	0	0	1998	9231
10866	108	387.2	155449	0	0	0	0	0	0	0	1	0	0	0	1	1998	9131
10491	168	420.9	177529	0	0	0	0	0	0	0	1	0	0	0	0	1998	9416
10480	168	420.9	178419	0	0	0	0	0	0	0	1	0	0	0	0	1998	9334
10600	130	402.7	168249	0	0	0	0	0	0	0	1	0	0	0	1	1998	9270
10567	168	408.1	167617	0	0	0	0	0	0	0	1	0	0	0	0	1998	9264
10531	90	390.8	158478	0	0	0	0	0	0	0	0	1	0	0	1	1998	9240
10440	168	395.3	160731	0	0	0	0	0	0	0	0	1	0	0	0	1998	9115
10511	168	405.4	164564	0	0	0	0	0	0	0	0	1	0	0	0	1998	9056
10536	139	394.9	158357	0	0	0	0	0	0	0	0	1	0	0	0	1998	9071
10518	123	396.4	159575	0	0	0	0	0	0	0	0	0	1	0	1	1998	9097
10551	137	371.1	142962	0	0	0	0	0	0	0	0	0	1	0	1	1998	8964
10572	140	362.8	139324	0	0	0	0	0	0	0	0	0	1	0	1	1998	9358
10413	124	343.5	125942	0	0	0	0	0	0	0	0	0	1	0	1	1998	9290
10645	168	317.4	110032	0	0	0	0	0	0	0	0	0	0	1	0	1998	9361
10438	49	335.9	120644	0	0	0	0	0	0	0	0	0	0	1	0	1998	9389
11007	67	275.3	77553	0	0	0	0	0	0	0	0	0	0	1	1	1998	9113
10555	168	296.0	89935	0	0	0	0	0	0	0	0	0	0	0	0	1998	9177
10304	163	359.7	131387	0	0	0	0	0	0	0	0	0	0	0	0	1998	9189
10730	110	304.6	99675	0	0	0	0	0	0	0	0	0	0	0	1	1998	9192
10355	168	347.0	121339	0	0	0	0	0	0	0	0	0	0	0	0	1998	9261
10352	24	359.1	129028	0	0	0	0	1	0	0	0	0	0	0	0	1998	9353
10406	168	357.0	128039	1	0	0	0	0	0	0	0	0	0	0	0	1999	9257
10549	168	330.6	112360	1	0	0	0	0	0	0	0	0	0	0	0	1999	9222
10617	168	320.2	105824	1	0	0	0	0	0	0	0	0	0	0	0	1999	9357
10889	128	296.9	93406	1	0	0	0	0	0	0	0	0	0	0	1	1999	9238
10699	168	334.9	112730	0	1	0	0	0	0	0	0	0	0	0	0	1999	9242
11053	22	326.9	110789	0	1	0	0	0	0	0	0	0	0	0	0	1999	9843
19150	25	157.4	30819	0	0	0	1	0	0	0	0	0	0	0	1	1999	9413
9934	150	330.4	119199	0	0	0	1	0	0	0	0	0	0	0	1	1999	9341
9932	168	466.4	222080	0	0	0	0	1	0	0	0	0	0	0	0	1999	10168
9437	168	434.9	201923	0	0	0	0	1	0	0	0	0	0	0	0	1999	10765
10317	168	406.1	183509	0	0	0	0	1	0	0	0	0	0	0	0	1999	11341
10392	123	396.7	175868	0	0	0	0	1	0	0	0	0	0	0	1	1999	11367
10478	168	405.9	182081	0	0	0	0	1	0	0	0	0	0	0	0	1999	11262
10115	168	413.4	186080	0	0	0	0	0	1	0	0	0	0	0	0	1999	11006

Data Base for DANIEL 2 Target Heat Rate Equation

HR	HOUR	AMW	LSRF	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	NS	YEAR	BTU/LB
10033	157	390.1	169872	0	0	0	0	0	1	0	0	0	0	0	0	1999	10642
9966	168	407.2	183960	0	0	0	0	0	1	0	0	0	0	0	0	1999	10698
9563	144	435.9	198496	0	0	0	0	0	1	0	0	0	0	0	0	1999	10209



Data Base for DANIEL 2 Target Heat Rate Equation

HR Average net operating heat rate based on unadjusted measured fuel consumption, before adjustment for unit start ups after shutdown for 24 hours or more, in BTU/KWH.

HOUR Number of hours the unit was synchronized during the week.

AMW Average load on the unit, in MW.

LSRF Load square range factor, in MW<sup>2</sup>.

JAN to NOV The number 1 indicates the month of the observation. All 0's indicate December.

NS Number of unit start ups during the week after being shut down for 24 hours or more.

YEAR The year of the observation.

BTU/LB Average heat content of coal burned by the unit for the week.

\* Indicates data points removed from the analysis of the target heat rate equation because they were out of the 90% confidence interval.

Calculation of  
Target Average Net Operating Heat Rates  
for January 2000 - December 2000

Unit	Month	(1)	(2)	(3)	(4)	(5)
		Forecast AKW * 10 <sup>3</sup>	Forecast LSRF * 10 <sup>6</sup>	Forecast Monthly ANOHR	Forecast AKW * 10 <sup>3</sup> Generation	Weighted ANOHR Target
CRIST 6	Jan '00	232.6	59,489	10,667	75,590	
	Feb '00	239.1	62,439	10,656	16,740	
	Mar '00	252.5	68,638	10,637	170,190	
	Apr '00	244.0	64,687	10,465	158,340	
	May '00	229.2	57,961	10,563	165,050	
	Jun '00	252.7	68,732	10,636	176,160	
	Jul '00	251.9	68,357	10,637	181,350	
	Aug '00	260.9	72,604	10,625	187,870	
	Sep '00	237.7	61,801	10,658	165,710	
	Oct '00	233.8	60,031	10,665	168,540	
	Nov '00	223.8	55,555	10,682	155,990	
	Dec '00	213.0	50,819	10,702	153,380	10,629
CRIST 7	Jan '00	420.8	187,475	10,238	287,810	
	Feb '00	428.4	192,857	10,229	236,500	
	Mar '00	0.0	0	-	0	
	Apr '00	433.4	196,408	10,223	143,030	
	May '00	415.1	183,451	10,377	283,920	
	Jun '00	456.5	212,923	10,198	302,170	
	Jul '00	452.8	210,266	10,202	309,690	
	Aug '00	463.5	217,962	10,191	317,060	
	Sep '00	426.4	191,439	10,231	263,500	
	Oct '00	426.8	191,722	10,231	273,560	
	Nov '00	439.3	200,609	10,216	271,500	
	Dec '00	403.8	175,507	10,259	258,420	10,236
SMITH 1	Jan '00	106.5	12,865	10,456	77,730	
	Feb '00	119.6	15,842	10,341	36,610	
	Mar '00	127.2	17,589	10,288	92,820	
	Apr '00	123.6	16,760	10,202	78,510	
	May '00	109.8	13,611	10,287	80,190	
	Jun '00	126.6	17,451	10,292	89,520	
	Jul '00	127.5	17,658	10,383	93,110	
	Aug '00	131.2	18,514	10,263	95,770	
	Sep '00	117.2	15,294	10,360	82,840	
	Oct '00	118.2	15,522	10,352	86,390	
	Nov '00	114.5	14,678	10,243	56,690	
	Dec '00	100.1	11,426	10,526	73,070	10,332

NOTE: Column (3) monthly ANOHR's are determined using the values from columns (1) and (2) in the target ANOHR equation on page 2 of Schedule 1.

$$\text{Column (5)} = (\sum ((3) * (4))) / (\sum (4))$$

Calculation of  
Target Average Net Operating Heat Rates  
for January 2000 - December 2000

	(1)	(2)	(3)	(4)	(5)	(6)
Unit	Forecast AKW * 10 <sup>3</sup>	Forecast LSRF * 10 <sup>6</sup>	Forecast BTU/LB	Forecast Monthly ANOHR	Forecast AKW * 10 <sup>3</sup> Generation	Weighted ANOHR Target
SMITH 2						
Jan '00	146.8	23,830	-	10,117	105,810	
Feb '00	156.4	26,391	-	10,081	105,540	
Mar '00	166.1	29,015	-	10,048	119,780	
Apr '00	160.2	27,415	-	10,068	104,120	
May '00	148.4	24,254	-	10,255	51,780	
Jun '00	166.3	29,069	-	10,147	116,100	
Jul '00	165.4	28,824	-	10,249	119,230	
Aug '00	172.4	30,738	-	10,209	124,300	
Sep '00	150.3	24,760	-	10,182	104,890	
Oct '00	154.2	25,801	-	10,089	111,330	
Nov '00	156.7	26,472	-	10,080	87,460	
Dec '00	137.1	21,278	-	10,159	82,970	10,137
DANIEL 1						
Jan '00	436.6	195,007	9,758	10,246	301,670	
Feb '00	445.9	202,157	9,767	10,312	248,390	
Mar '00	0.0	0	9,730	-	0	
Apr '00	441.8	198,992	10,057	10,275	206,780	
May '00	375.2	150,540	10,326	10,418	259,270	
Jun '00	425.1	186,317	10,550	10,128	284,410	
Jul '00	424.3	185,718	10,735	10,203	293,170	
Aug '00	447.4	203,321	10,889	10,125	309,160	
Sep '00	391.6	161,952	11,013	10,238	261,990	
Oct '00	415.1	178,895	11,101	10,162	139,070	
Nov '00	402.3	169,580	11,151	10,184	188,290	
Dec '00	354.1	136,357	11,188	10,315	244,710	10,237
DANIEL 2						
Jan '00	454.0	208,362	9,758	10,013	194,770	
Feb '00	454.9	209,082	9,767	10,093	256,560	
Mar '00	461.6	214,482	9,730	10,082	177,250	
Apr '00	449.9	205,096	10,057	10,069	283,880	
May '00	390.8	160,828	10,326	10,184	273,530	
Jun '00	441.2	198,250	10,550	10,027	298,720	
Jul '00	438.3	195,994	10,735	10,169	306,830	
Aug '00	462.1	214,888	10,889	10,113	323,460	
Sep '00	406.0	171,712	11,013	10,237	201,760	
Oct '00	0.0	0	11,101	-	0	
Nov '00	407.4	172,732	11,151	10,026	229,790	
Dec '00	367.3	144,683	11,188	10,127	257,100	10,105

NOTE: Column (4) monthly ANOHR's are determined using the values from columns (1) and (2) in the target ANOHR equation on page 2 of Schedule 1.

$$\text{Column (6)} = (\sum ((4) * (5))) / (\sum (5))$$

Summary of Target, Maximum, and Minimum  
Average Net Operating Heat Rates  
for January 2000 - December 2000

Unit	Target Heat Rate BTU/KWH (0 Points)	Minimum Attainable Heat Rate (+ 10 Points)	Maximum Attainable Heat Rate (- 10 Points)
CRIST 6	10,629	10,310	10,948
CRIST 7	10,236	9,929	10,543
SMITH 1	10,332	10,022	10,642
SMITH 2	10,137	9,833	10,441
DANIEL 1	10,237	9,930	10,544
DANIEL 2	10,105	9,802	10,408

II. DETERMINATION OF EQUIVALENT AVAILABILITY TARGETS

Calculation of  
Target Equivalent Availabilities  
for January 2000 - December 2000

Unit	5 Year Historical Average of Equivalent Unplanned Outage Rate, EUOR *	Planned Outage Hours for Jan '00 - Dec '00	Reserve Shutdown Hours for Jan '00 - Dec '00	Target Equivalent Availability **
Crist 6	0.0447	1,032	0	84.3
Crist 7	0.1044	1,200	0	77.3
Smith 1	0.0277	600	0	90.6
Smith 2	0.0370	648	0	89.2
Daniel 1	0.1192	1,271	0	75.3
Daniel 2	0.1094	1,440	0	74.5

\* For Period July 1994 Through June 1999.

\*\* EA = [ 1 - (POH + EUOR \* (PH - POH - RSH)) / PH ] \* 100

Calculation of Maximum and Minimum  
Attainable Equivalent Availabilities  
for January 2000 - December 2000

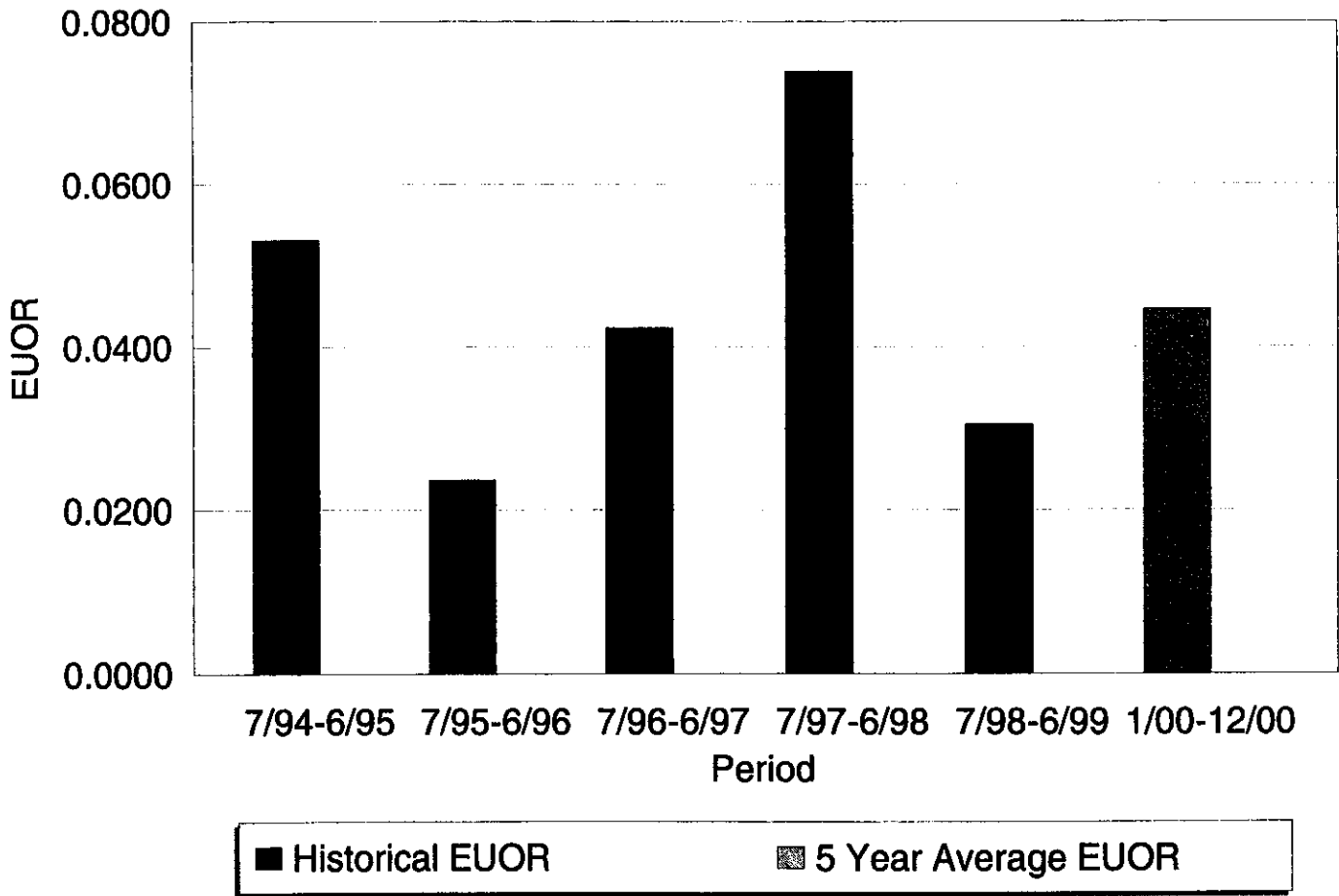
Unit	5 Year Historical Average of Equivalent Unplanned Outage Rate, EUOR (TARGET EUOR)	Minimum Attainable EUOR 70% of Target EUOR	Maximum Attainable Equivalent Availability	Maximum Attainable EUOR 145% of Target EUOR	Minimum Attainable Equivalent Availability
Crist 6	0.0447	0.0313	85.5	0.0648	82.5
Crist 7	0.1044	0.0731	80.0	0.1514	73.3
Smith 1	0.0277	0.0194	91.4	0.0402	89.4
Smith 2	0.0370	0.0259	90.2	0.0537	87.6
Daniel 1	0.1192	0.0834	78.4	0.1728	70.8
Daniel 2	0.1094	0.0766	77.2	0.1586	70.3

Summary of Target, Maximum, and Minimum  
Equivalent Availabilities  
for January 2000 - December 2000

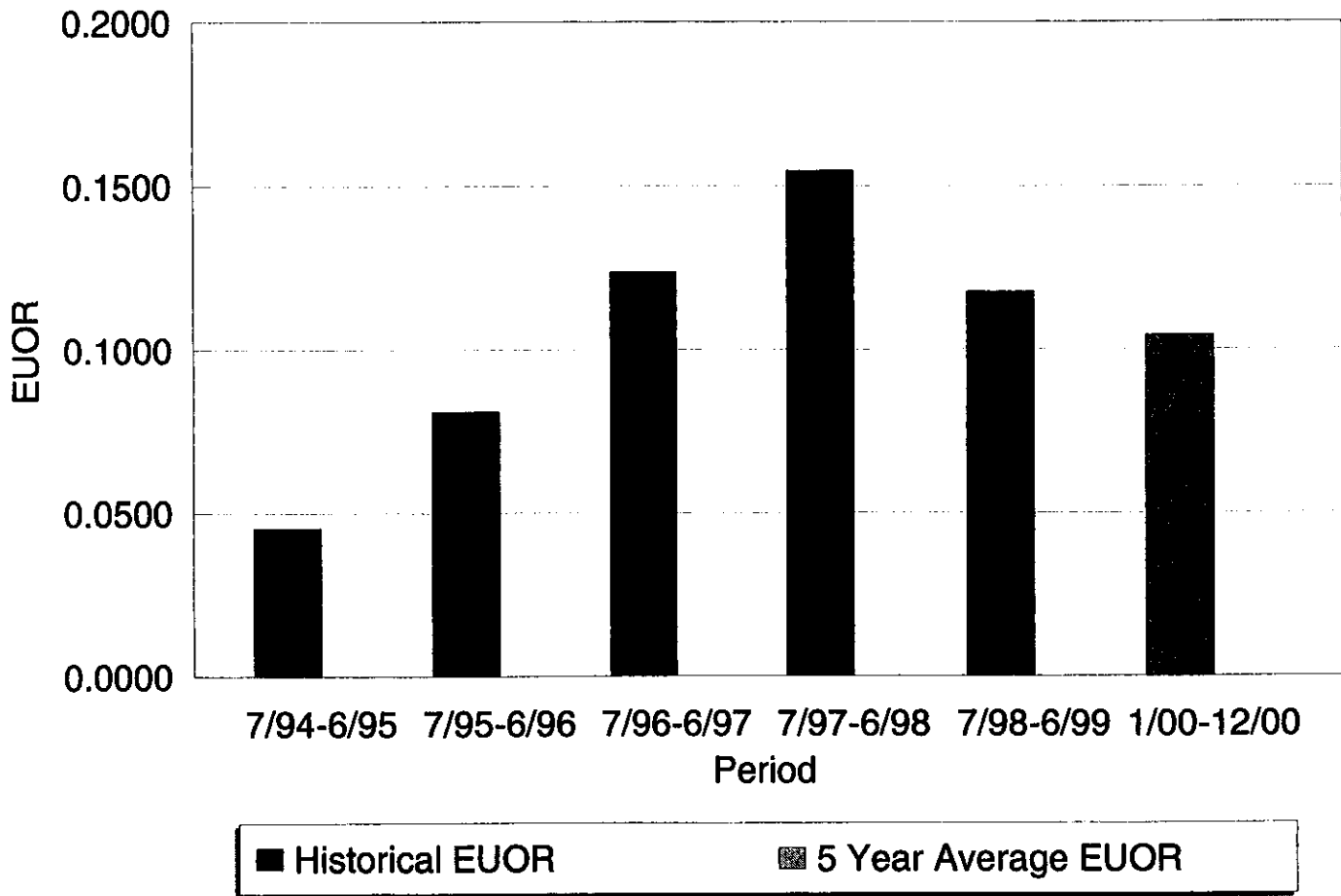
Unit	Target Equivalent Availability (0 Points)	Maximum Attainable Equivalent Availability (+10 Points)	Minimum Attainable Equivalent Availability (-10 Points)
Crist 6	84.3	85.5	82.5
Crist 7	77.3	80.0	73.3
Smith 1	90.6	91.4	89.4
Smith 2	89.2	90.2	87.6
Daniel 1	75.3	78.4	70.8
Daniel 2	74.5	77.2	70.3



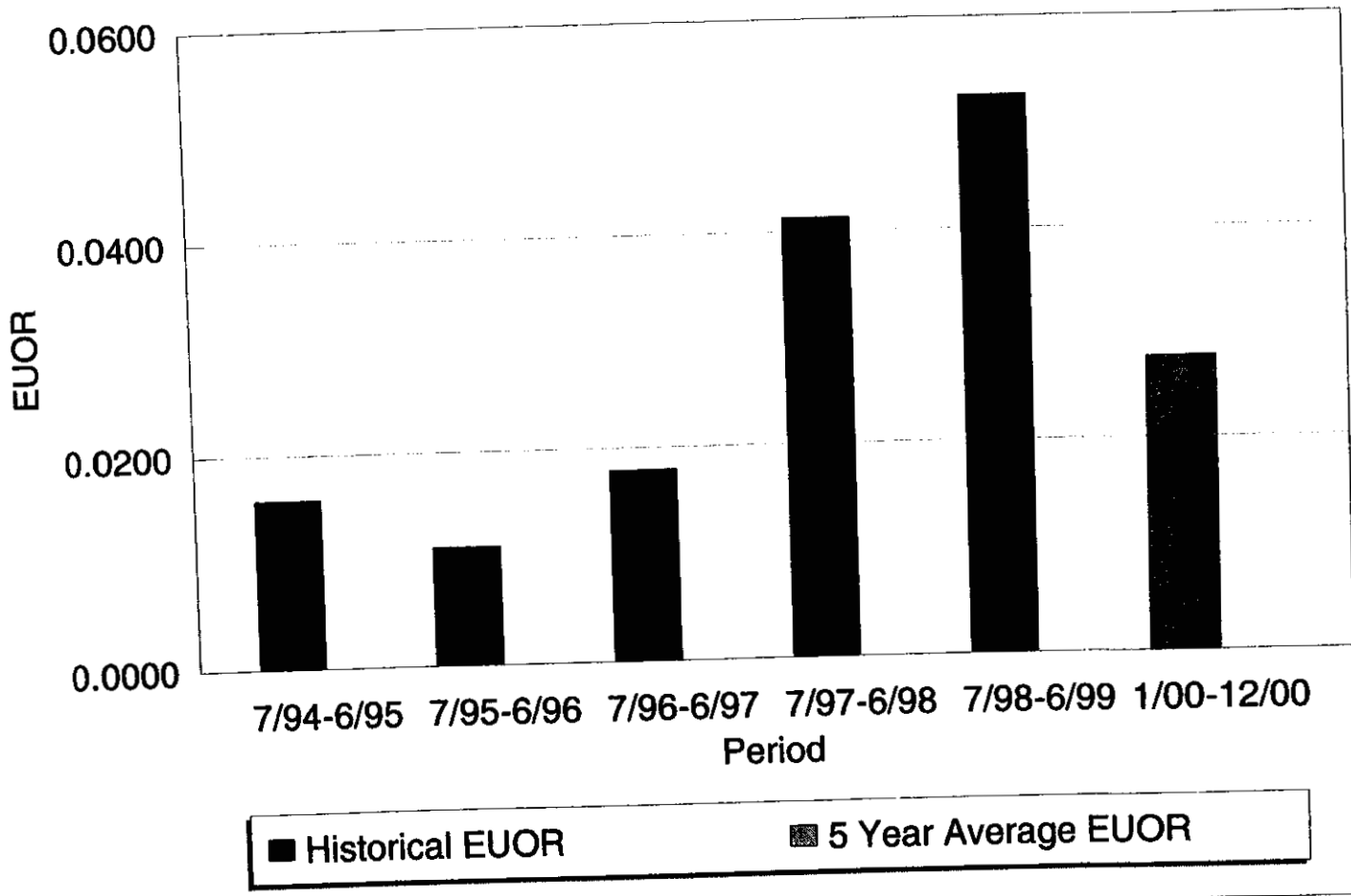
**EUOR VS. PERIOD**  
**CRIST 6 January - December**



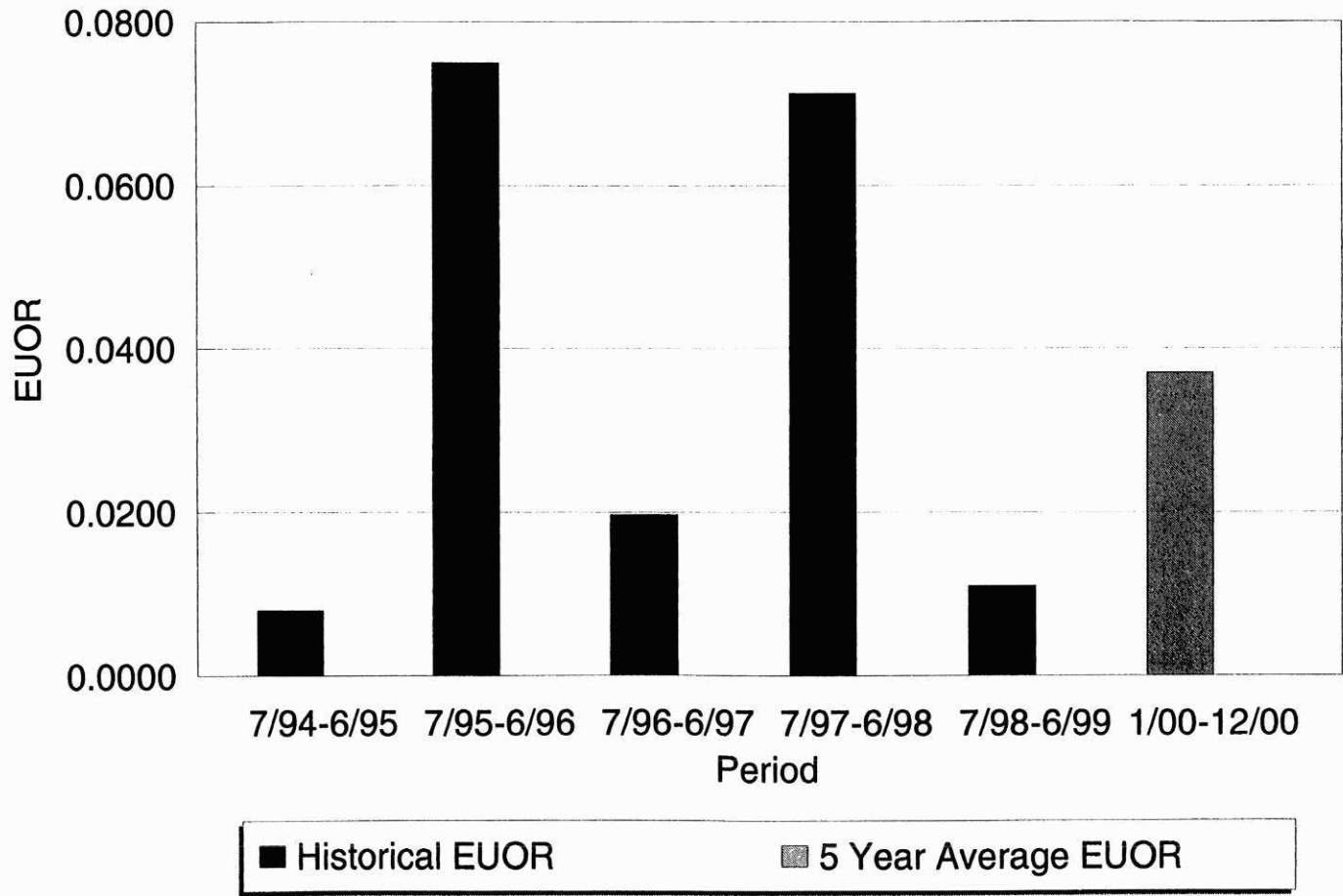
**EUOR VS. PERIOD**  
**CRIST 7 January - December**

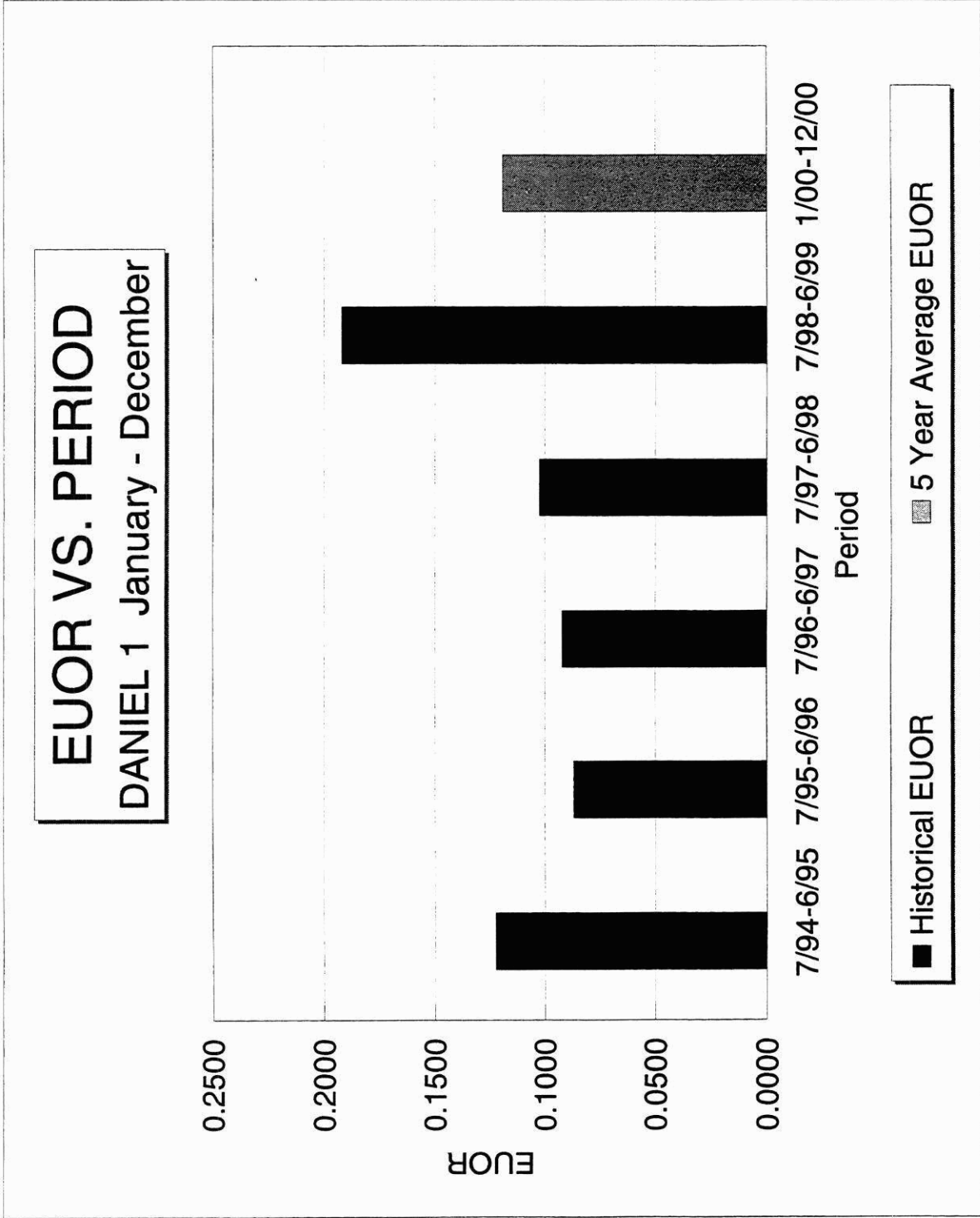


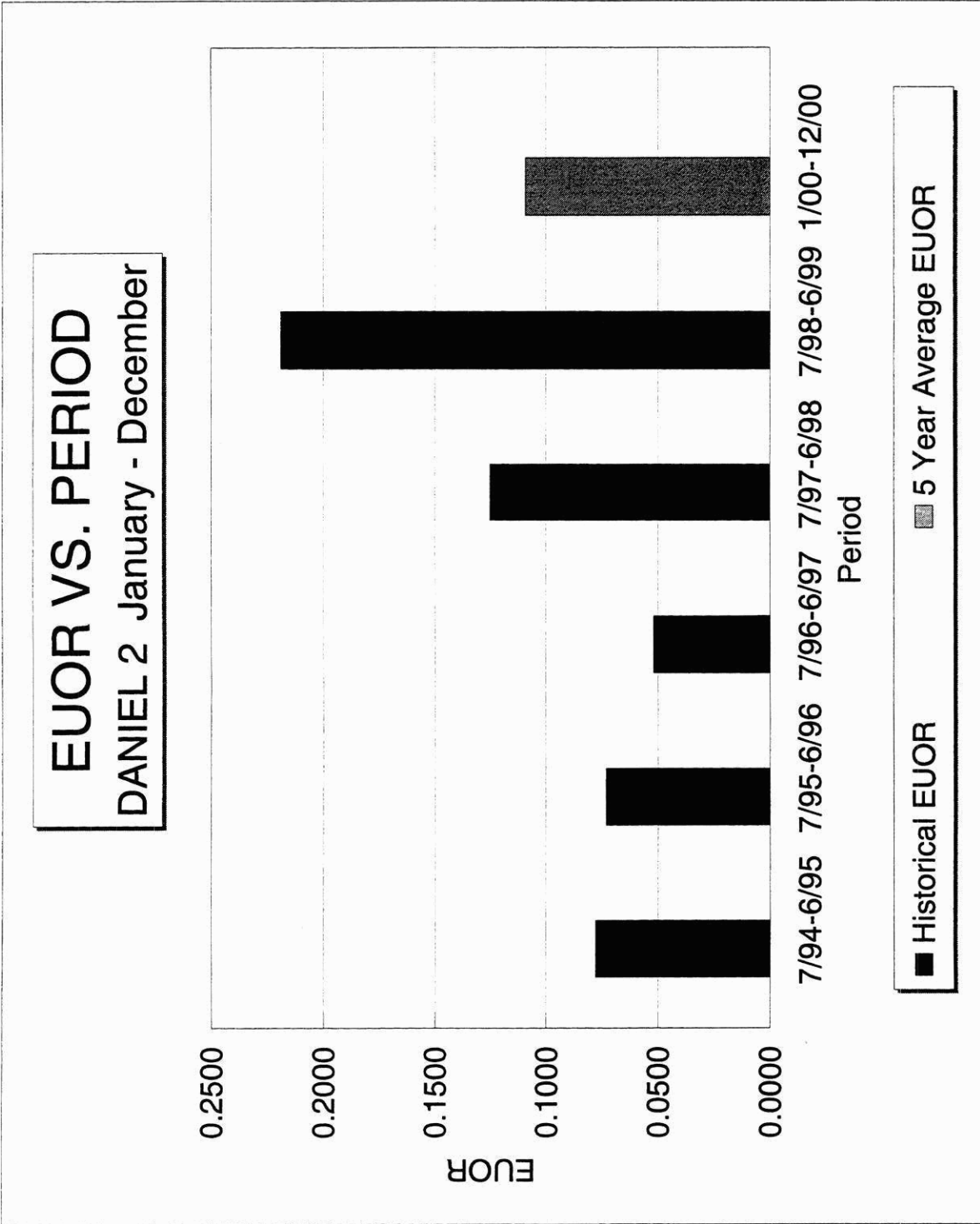
**EUOR VS. PERIOD**  
**SMITH 1 January - December**



**EUOR VS. PERIOD**  
**SMITH 2 January - December**







III. GPIF MINIMUM FILING REQUIREMENTS FOR THE  
PERIOD JANUARY 2000 - DECEMBER 2000

CONTENTS	SCHEDULE 3
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Generating Performance Incentive Factor

Estimated Reward/Penalty Table

Gulf Power Company

Period of: January 2000 - December 2000

Generating Performance Incentive Factor Points	Fuel Saving/Loss (\$000)	Generating Performance Incentive Factor (\$000)
	Maximum Attainable Fuel Savings	Maximum Incentive Dollars Allowed by Commission During Period (Reward)
+ 10	6941	1668
+ 9	6247	1501
+ 8	5553	1334
+ 7	4859	1168
+ 6	4165	1001
+ 5	3471	834
+ 4	2776	667
+ 3	2082	500
+ 2	1388	334
+ 1	694	167
0	0	0
- 1	-795	-167
- 2	-1590	-334
- 3	-2385	-500
- 4	-3180	-667
- 5	-3975	-834
- 6	-4769	-1001
- 7	-5564	-1168
- 8	-6359	-1334
- 9	-7154	-1501
- 10	-7949	-1668
	Minimum Attainable Fuel Loss	Maximum Incentive Dollars Allowed by Commission During Period (Penalty)

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Schedule 3

Filed: October 1, 1999  
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Generating Performance Incentive Factor  
 Calculation of Maximum Allowed Incentive Dollars  
 Estimated  
 Gulf Power Company  
 Period of: January 2000 - December 2000

Line 1	Beginning of Period Balance of Common Equity	\$417,899,000
	End of Month Balance of Common Equity:	
Line 2	Month of Jan '00	\$422,647,000
Line 3	Month of Feb '00	\$410,974,000
Line 4	Month of Mar '00	\$413,609,000
Line 5	Month of Apr '00	\$401,238,000
Line 6	Month of May '00	\$405,332,000
Line 7	Month of Jun '00	\$413,777,000
Line 8	Month of Jul '00	\$416,170,000
Line 9	Month of Aug '00	\$426,115,000
Line 10	Month of Sep '00	\$432,947,000
Line 11	Month of Oct '00	\$421,459,000
Line 12	Month of Nov '00	\$423,444,000
Line 13	Month of Dec '00	\$428,024,000
Line 14	Average Common Equity for the Period (sum of line 1 through line 13 divided by 13)	\$417,971,923
Line 15	25 Basis Points	0.0025
Line 16	Revenue Expansion Factor	60.4594%
Line 17	Maximum Allowed Incentive Dollars (line 14 multiplied by line 15 divided by line 16 multiplied by 1.0)	\$1,728,317
Line 18	Jurisdictional Sales (KWH)	9,993,721,000
Line 19	Total Territorial Sales (KWH)	10,354,345,000
Line 20	Jurisdictional Separation Factor (line 18 divided by line 19)	96.5172%
Line 21	Maximum Allowed Jurisdictional Incentive Dollars (line 17 multiplied by line 20)	\$1,668,123

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 Schedule 3

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## GPIF Unit Performance Summary

Gulf Power Company

Period of: January 2000 - December 2000

Plant & Unit	Weighting Factor %	EAF Target %	EAF Range		Max Fuel Savings (\$000)	Max Fuel Loss (\$000)
			Max %	Min %		
Crist 6	1.9%	84.3	85.5	82.5	\$132	(\$182)
Crist 7	8.8%	77.3	80.0	73.3	\$614	(\$876)
Smith 1	0.5%	90.6	91.4	89.4	\$38	(\$45)
Smith 2	1.2%	89.2	90.2	87.6	\$81	(\$133)
Daniel 1	7.8%	75.3	78.4	70.8	\$539	(\$875)
Daniel 2	6.5%	74.5	77.2	70.3	\$454	(\$755)

Plant & Unit	Weighting Factor %	ANOHR Target BTU/KWH	Target NOF	ANOHR Range		Max Fuel Savings (\$000)	Max Fuel Loss (\$000)
				Min BTU/KWH	Max BTU/KWH		
Crist 6	12.1%	10,629	79.3	10,310	10,948	\$843	(\$843)
Crist 7	17.3%	10,236	93.2	9,929	10,543	\$1,204	(\$1,204)
Smith 1	4.1%	10,332	73.1	10,022	10,642	\$284	(\$284)
Smith 2	5.3%	10,137	81.5	9,833	10,441	\$369	(\$369)
Daniel 1	16.7%	10,237	82.3	9,930	10,544	\$1,156	(\$1,156)
Daniel 2	17.7%	10,105	85.3	9,802	10,408	\$1,227	(\$1,227)

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## Comparison of GPIF Targets vs. Actual Performance of Prior Periods

## Availability

Gulf Power Company

Period of: January 2000 - December 2000

Plant & Unit	Target Weighting Factor	Normalized Weighting Factor	Target			Actual Performance 1st Prior Period Jul '98 - Jun '99			Actual Performance 2nd Prior Period Jul '97 - Jun '98		
			POF	EUOF	EUOR	POF	EUOF	EUOR	POF	EUOF	EUOR
Crist 6	1.9%	7.1%	0.1175	0.0395	0.0447	0.0768	0.0281	0.0305	0.1549	0.0593	0.0739
Crist 7	8.8%	33.0%	0.1366	0.0902	0.1044	0.0888	0.1072	0.1177	0.0721	0.1426	0.1545
Smith 1	0.5%	2.0%	0.0683	0.0258	0.0277	0.2058	0.0417	0.0526	0.0468	0.0394	0.0413
Smith 2	1.2%	4.4%	0.0738	0.0343	0.0370	0.0583	0.0103	0.0110	0.2248	0.0547	0.0713
Daniel 1	7.8%	29.0%	0.1447	0.1019	0.1192	0.2959	0.1352	0.1920	0.1325	0.0889	0.1025
Daniel 2	6.5%	24.4%	0.1639	0.0914	0.1094	0.2633	0.1614	0.2191	0.0235	0.1221	0.1251
Weighted GPIF System Average:			0.1401	0.0865	0.1012	0.1917	0.1174	0.1519	0.0898	0.1102	0.1206

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## Comparison of GPIF Targets vs. Actual Performance of Prior Periods

## Availability

## Gulf Power Company

Period of: January 2000 - December 2000

Plant & Unit	Target Weighting Factor	Normalized Weighting Factor	Actual Performance			Actual Performance			Actual Performance		
			3rd Prior Period			4th Prior Period			5th Prior Period		
			Jul '96 - Jun '97			Jul '95 - Jun '96			Jul '94 - Jun '95		
			POF	EUOF	EUOR	POF	EUOF	EUOR	POF	EUOF	EUOR
Crist 6	1.9%	7.1%	0.0273	0.0363	0.0424	0.1183	0.0176	0.0236	0.1183	0.0176	0.0236
Crist 7	8.8%	33.0%	0.1595	0.0985	0.1238	0.3446	0.0518	0.0809	0.3446	0.0518	0.0809
Smith 1	0.5%	2.0%	0.0647	0.0165	0.0179	0.0602	0.0105	0.0111	0.0602	0.0105	0.0111
Smith 2	1.2%	4.4%	0.0669	0.0181	0.0197	0.0580	0.0702	0.0750	0.0580	0.0702	0.0750
Daniel 1	7.8%	29.0%	0.1143	0.0817	0.0922	0.2291	0.0649	0.0869	0.2291	0.0649	0.0869
Daniel 2	6.5%	24.4%	0.0995	0.0468	0.0519	0.2586	0.0532	0.0731	0.2586	0.0532	0.0731

Weighted GPIF System Average: 0.1164 0.0714 0.0846 0.2557 0.0535 0.0750 0.2557 0.0535 0.0750

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## Comparison of GPIF Targets vs. Actual Performance of Prior Periods

## Average Net Operating Heat Rate

Gulf Power Company

Period of: January 2000 - December 2000

Plant & Unit	Target Weighting Factor	Normalized Weighting Factor	Heat Rate Target	1st Prior Period Heat Rate Jul '98 - Jun '99	2nd Prior Period Heat Rate Jul '97 - Jun '98	3rd Prior Period Heat Rate Jul '96 - Jun '97
Crist 6	12.1%	16.6%	10,629	10,608	10,630	10,561
Crist 7	17.3%	23.7%	10,236	10,207	10,259	10,269
Smith 1	4.1%	5.6%	10,332	10,238	10,399	10,304
Smith 2	5.3%	7.3%	10,137	10,075	10,113	10,219
Daniel 1	16.7%	22.7%	10,237	10,179	10,227	10,319
Daniel 2	17.7%	24.1%	10,105	10,139	10,061	10,139
Weighted GPIF System Average:			10,268	10,243	10,263	10,296

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Example Calculation of Prior Season

Average Net Operating Heat Rate

Adjusted to Target Basis

Crist 6 Jul '97 - Jun '98

	Jul Jan	Aug Feb	Sep Mar	Oct Apr	Nov May	Dec Jun
1. Target Heat Rate*	10637 10667	10625 10656	10658 10637	10665 10465	10682 10563	10702 10636
2. Target Heat Rate at Actual Conditions**	10764 10709	10733 10737	10712 10677	10731 10485	0 10552	10746 10651
3. Adjustments to Actual Heat Rate (1-2)	-127 -42	-108 -81	-54 -40	-66 -20	10682 11	-44 -15
4. Actual Heat Rate for Prior Period	11060 10927	10693 10603	10537 10591	10547 10568	0 10452	10967 10567
5. Adjusted actual Heat Rate (4+3)	10933 10885	10585 10522	10483 10551	10481 10548	10682 10463	10923 10552
6. Forecast Net MWH Generation*	181350 75590	187870 16740	165710 170190	168540 158340	155990 165050	153380 176160
7. Adjusted Actual Heat Rate for Jul '97 - Jun '98 = ( $\Sigma$ ((5)*(6)) ) / ( $\Sigma$ (6) )						10,630

\* For the January 2000 - December 2000 time period.

\*\* Based on the target heat rate equation from page 2 of Schedule 1 using actual rather than forecast variable values.

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## Derivation of Weighting Factors

Gulf Power Company

Period of: January 2000 - December 2000

## Production Cost Simulation

## Fuel Cost (\$000)

Plant & Unit	Unit Performance Indicator	Fuel Cost (\$000)			Weighting Factor (% of Savings)
		At Target (1)	At Maximum Improvement (2)	Savings (3)	
Crist 6	EA-1	\$193,461	\$193,329	\$132	1.9%
Crist 6	ANOHR-1	\$193,461	\$192,618	\$843	12.1%
Crist 7	EA-2	\$193,461	\$192,847	\$614	8.8%
Crist 7	ANOHR-2	\$193,461	\$192,257	\$1,204	17.3%
Smith 1	EA-3	\$193,461	\$193,423	\$38	0.5%
Smith 1	ANOHR-3	\$193,461	\$193,177	\$284	4.1%
Smith 2	EA-4	\$193,461	\$193,380	\$81	1.2%
Smith 2	ANOHR-4	\$193,461	\$193,092	\$369	5.3%
Daniel 1	EA-5	\$193,461	\$192,922	\$539	7.8%
Daniel 1	ANOHR-5	\$193,461	\$192,305	\$1,156	16.7%
Daniel 2	EA-6	\$193,461	\$193,007	\$454	6.5%
Daniel 2	ANOHR-6	\$193,461	\$192,234	\$1,227	17.7%
					100.0%

- (1) Fuel Adjustment Base Case - All unit performance indicators at target.
- (2) All other unit performance indicators at target.
- (3) Expressed in replacement energy costs. Also includes variable operating and maintenance expense savings associated with availability improvements.

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## Generating Performance Incentive Points Table

Gulf Power Company

Period of: January 2000 - December 2000

Crist 6

Equivalent Availability Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Equivalent Availability	Average Heat Rate Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Heat Rate
+ 10	132	85.50	+ 10	843	10,310
+ 9	119	85.38	+ 9	759	10,334
+ 8	106	85.26	+ 8	674	10,359
+ 7	92	85.14	+ 7	590	10,383
+ 6	79	85.02	+ 6	506	10,408
+ 5	66	84.90	+ 5	422	10,432
+ 4	53	84.78	+ 4	337	10,456
+ 3	40	84.66	+ 3	253	10,481
+ 2	26	84.54	+ 2	169	10,505
+ 1	13	84.42	+ 1	84	10,530
				0	10,554
0	0	84.30	0	0	10,629
				0	10,704
- 1	(18)	84.12	- 1	(84)	10,728
- 2	(36)	83.94	- 2	(169)	10,753
- 3	(55)	83.76	- 3	(253)	10,777
- 4	(73)	83.58	- 4	(337)	10,802
- 5	(91)	83.40	- 5	(422)	10,826
- 6	(109)	83.22	- 6	(506)	10,850
- 7	(127)	83.04	- 7	(590)	10,875
- 8	(146)	82.86	- 8	(674)	10,899
- 9	(164)	82.68	- 9	(759)	10,924
- 10	(182)	82.50	- 10	(843)	10,948
Weighting Factor:		0.019	Weighting Factor:		0.121

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## Generating Performance Incentive Points Table

Gulf Power Company

Period of: January 2000 - December 2000

Crist 7

Equivalent Availability Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Equivalent Availability	Average Heat Rate Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Heat Rate
+ 10	614	80.00	+ 10	1,204	9,929
+ 9	553	79.73	+ 9	1,084	9,952
+ 8	491	79.46	+ 8	963	9,975
+ 7	430	79.19	+ 7	843	9,999
+ 6	368	78.92	+ 6	722	10,022
+ 5	307	78.65	+ 5	602	10,045
+ 4	246	78.38	+ 4	482	10,068
+ 3	184	78.11	+ 3	361	10,091
+ 2	123	77.84	+ 2	241	10,115
+ 1	61	77.57	+ 1	120	10,138
				0	10,161
0	0	77.30	0	0	10,236
				0	10,311
- 1	(88)	76.90	- 1	(120)	10,334
- 2	(175)	76.50	- 2	(241)	10,357
- 3	(263)	76.10	- 3	(361)	10,381
- 4	(350)	75.70	- 4	(482)	10,404
- 5	(438)	75.30	- 5	(602)	10,427
- 6	(526)	74.90	- 6	(722)	10,450
- 7	(613)	74.50	- 7	(843)	10,473
- 8	(701)	74.10	- 8	(963)	10,497
- 9	(788)	73.70	- 9	(1,084)	10,520
- 10	(876)	73.30	- 10	(1,204)	10,543
Weighting Factor:		0.088	Weighting Factor:		0.173

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## Generating Performance Incentive Points Table

Gulf Power Company

Period of: January 2000 - December 2000

Smith 1

Equivalent Availability Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Equivalent Availability	Average Heat Rate Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Heat Rate
+ 10	38	91.40	+ 10	284	10,022
+ 9	34	91.32	+ 9	256	10,046
+ 8	30	91.24	+ 8	227	10,069
+ 7	27	91.16	+ 7	199	10,093
+ 6	23	91.08	+ 6	170	10,116
+ 5	19	91.00	+ 5	142	10,140
+ 4	15	90.92	+ 4	114	10,163
+ 3	11	90.84	+ 3	85	10,187
+ 2	8	90.76	+ 2	57	10,210
+ 1	4	90.68	+ 1	28	10,234
				0	10,257
0	0	90.60	0	0	10,332
				0	10,407
- 1	(5)	90.48	- 1	(28)	10,431
- 2	(9)	90.36	- 2	(57)	10,454
- 3	(14)	90.24	- 3	(85)	10,478
- 4	(18)	90.12	- 4	(114)	10,501
- 5	(23)	90.00	- 5	(142)	10,525
- 6	(27)	89.88	- 6	(170)	10,548
- 7	(32)	89.76	- 7	(199)	10,572
- 8	(36)	89.64	- 8	(227)	10,595
- 9	(41)	89.52	- 9	(256)	10,619
- 10	(45)	89.40	- 10	(284)	10,642
Weighting Factor:		0.005	Weighting Factor:		0.041

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## Generating Performance Incentive Points Table

Gulf Power Company

Period of: January 2000 - December 2000

Smith 2

Equivalent Availability Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Equivalent Availability	Average Heat Rate Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Heat Rate
+ 10	81	90.20	+ 10	369	9,833
+ 9	73	90.10	+ 9	332	9,856
+ 8	65	90.00	+ 8	295	9,879
+ 7	57	89.90	+ 7	258	9,902
+ 6	49	89.80	+ 6	221	9,925
+ 5	41	89.70	+ 5	185	9,948
+ 4	32	89.60	+ 4	148	9,970
+ 3	24	89.50	+ 3	111	9,993
+ 2	16	89.40	+ 2	74	10,016
+ 1	8	89.30	+ 1	37	10,039
				0	10,062
0	0	89.20	0	0	10,137
				0	10,212
- 1	(13)	89.04	- 1	(37)	10,235
- 2	(27)	88.88	- 2	(74)	10,258
- 3	(40)	88.72	- 3	(111)	10,281
- 4	(53)	88.56	- 4	(148)	10,304
- 5	(67)	88.40	- 5	(185)	10,327
- 6	(80)	88.24	- 6	(221)	10,349
- 7	(93)	88.08	- 7	(258)	10,372
- 8	(106)	87.92	- 8	(295)	10,395
- 9	(120)	87.76	- 9	(332)	10,418
- 10	(133)	87.60	- 10	(369)	10,441
Weighting Factor:		0.012	Weighting Factor:		0.053

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## Generating Performance Incentive Points Table

Gulf Power Company

Period of: January 2000 - December 2000

Daniel 1

Equivalent Availability Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Equivalent Availability	Average Heat Rate Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Heat Rate
+ 10	539	78.40	+ 10	1,156	9,930
+ 9	485	78.09	+ 9	1,040	9,953
+ 8	431	77.78	+ 8	925	9,976
+ 7	377	77.47	+ 7	809	10,000
+ 6	323	77.16	+ 6	694	10,023
+ 5	270	76.85	+ 5	578	10,046
+ 4	216	76.54	+ 4	462	10,069
+ 3	162	76.23	+ 3	347	10,092
+ 2	108	75.92	+ 2	231	10,116
+ 1	54	75.61	+ 1	116	10,139
				0	10,162
0	0	75.30	0	0	10,237
				0	10,312
- 1	(88)	74.85	- 1	(116)	10,335
- 2	(175)	74.40	- 2	(231)	10,358
- 3	(263)	73.95	- 3	(347)	10,382
- 4	(350)	73.50	- 4	(462)	10,405
- 5	(438)	73.05	- 5	(578)	10,428
- 6	(525)	72.60	- 6	(694)	10,451
- 7	(613)	72.15	- 7	(809)	10,474
- 8	(700)	71.70	- 8	(925)	10,498
- 9	(788)	71.25	- 9	(1,040)	10,521
- 10	(875)	70.80	- 10	(1,156)	10,544
Weighting Factor:		0.078	Weighting Factor:		0.167

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## Generating Performance Incentive Points Table

Gulf Power Company

Period of: January 2000 - December 2000

Daniel 2

Equivalent Availability Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Equivalent Availability	Average Heat Rate Points	Fuel Savings/ Loss (\$000)	Adjusted Actual Heat Rate
+ 10	454	77.20	+ 10	1,227	9,802
+ 9	409	76.93	+ 9	1,104	9,825
+ 8	363	76.66	+ 8	982	9,848
+ 7	318	76.39	+ 7	859	9,870
+ 6	272	76.12	+ 6	736	9,893
+ 5	227	75.85	+ 5	614	9,916
+ 4	182	75.58	+ 4	491	9,939
+ 3	136	75.31	+ 3	368	9,962
+ 2	91	75.04	+ 2	245	9,984
+ 1	45	74.77	+ 1	123	10,007
				0	10,030
0	0	74.50	0	0	10,105
				0	10,180
- 1	(76)	74.08	- 1	(123)	10,203
- 2	(151)	73.66	- 2	(245)	10,226
- 3	(227)	73.24	- 3	(368)	10,248
- 4	(302)	72.82	- 4	(491)	10,271
- 5	(378)	72.40	- 5	(614)	10,294
- 6	(453)	71.98	- 6	(736)	10,317
- 7	(529)	71.56	- 7	(859)	10,340
- 8	(604)	71.14	- 8	(982)	10,362
- 9	(680)	70.72	- 9	(1,104)	10,385
- 10	(755)	70.30	- 10	(1,227)	10,408
Weighting Factor:		0.065	Weighting Factor:		0.177

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ESTIMATED UNIT PERFORMANCE DATA

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## ESTIMATED UNIT PERFORMANCE DATA

GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

CRIST 6	Jan '00	Feb '00	Mar '00	Apr '00	May '00	Jun '00	
1. EAF (%)	43.7	9.8	90.2	90.3	96.8	96.8	
2. POF (%)	54.8	89.7	0.0	0.0	0.0	0.0	
3. EUOF (%)	1.5	0.5	9.8	9.7	3.2	3.2	
4. EUOR (%)	3.3	5.6	9.8	9.7	3.2	3.2	
5. PH	744.0	696.0	744.0	719.0	744.0	720.0	
6. SH	325.0	70.0	674.0	649.0	720.0	697.0	
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	
8. UH	419.0	626.0	70.0	70.0	24.0	23.0	
9. POH	408.0	624.0	0.0	0.0	0.0	0.0	
10. FOH & EFOH	11.0	4.0	25.0	22.0	24.0	23.0	
11. MOH & EMOH	0.0	0.0	48.0	48.0	0.0	0.0	
12. Oper MBtu	806319.0	178381.0	1810311.0	1657028.0	1743423.0	1873638.0	
13. Net Gen (MWH)	75590.0	16740.0	170190.0	158340.0	165050.0	176160.0	
14. ANOHR (Btu/KWH)	10667.0	10656.0	10637.0	10465.0	10563.0	10636.0	
15. NOF %	77.0	79.2	83.6	80.8	75.9	83.7	
16. NPC (MW)	302.0	302.0	302.0	302.0	302.0	302.0	
19. ANOHR Equation	$10^6 / AKW * [ 88.29 - 44.75 * APR - 24.93 * MAY ]$ + 10,287						

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## ESTIMATED UNIT PERFORMANCE DATA

## GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

CRIST 6	Jul '00	Aug '00	Sep '00	Oct '00	Nov '00	Dec '00	Total
1. EAF (%)	96.8	96.8	96.8	96.8	96.8	96.8	84.3
2. POF (%)	0.0	0.0	0.0	0.0	0.0	0.0	11.7
3. EUOF (%)	3.2	3.2	3.2	3.2	3.2	3.2	4.0
4. EUOR (%)	3.2	3.2	3.2	3.2	3.2	3.2	4.5
5. PH	744.0	744.0	720.0	745.0	720.0	744.0	8784.0
6. SH	720.0	720.0	697.0	721.0	697.0	720.0	7410.0
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. UH	24.0	24.0	23.0	24.0	23.0	24.0	1374.0
9. POH	0.0	0.0	0.0	0.0	0.0	0.0	1032.0
10. FOH & EFOH	24.0	24.0	23.0	24.0	23.0	24.0	251.0
11. MOH & EMOH	0.0	0.0	0.0	0.0	0.0	0.0	96.0
12. Oper MBtu	1929020.0	1996119.0	1766137.0	1797479.0	1666285.0	1641473.0	18865613.0
13. Net Gen (MWH)	181350.0	187870.0	165710.0	168540.0	155990.0	153380.0	1774910.0
14. ANOHR (Btu/KWH)	10637.0	10625.0	10658.0	10665.0	10682.0	10702.0	10629.0
15. NOF %	83.4	86.4	78.7	77.4	74.1	70.5	79.3
16. NPC (MW)	302.0	302.0	302.0	302.0	302.0	302.0	302.0
19. ANOHR Equation	10*6 / AKW * [88.29 - 44.75 * APR - 24.93 * MAY] + 10,287						

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GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

CRIST 7	Jan '00	Feb '00	Mar '00	Apr '00	May '00	Jun '00	
1. EAF (%)	91.9	78.6	0.0	45.9	91.9	91.9	
2. POF (%)	0.0	13.8	100.0	50.1	0.0	0.0	
3. EUOF (%)	8.1	7.6	0.0	4.0	8.1	8.1	
4. EUOR (%)	8.1	8.8	0.0	8.1	8.1	8.1	
5. PH	744.0	696.0	744.0	719.0	744.0	720.0	
6. SH	684.0	552.0	0.0	330.0	684.0	662.0	
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	
8. UH	60.0	144.0	744.0	389.0	60.0	58.0	
9. POH	0.0	96.0	744.0	360.0	0.0	0.0	
10. FOH & EFOH	60.0	53.0	0.0	29.0	60.0	58.0	
11. MOH & EMOH	0.0	0.0	0.0	0.0	0.0	0.0	
12. Oper MBtu	2946599.0	2419159.0	0.0	1462196.0	2946238.0	3081530.0	
13. Net Gen (MWH)	287810.0	236500.0	0.0	143030.0	283920.0	302170.0	
14. ANOHR (Btu/KWH)	10238.0	10229.0	-	10223.0	10377.0	10198.0	
15. NOF %	90.5	92.1	0.0	93.2	89.3	98.2	
16. NPC (MW)	465.0	465.0	465.0	465.0	465.0	465.0	
19. ANOHR Equation	$10\% / AKW * [215.83 + 54.63 * MAY]$ + 9,725						

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GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

CRIST 7	Jul '00	Aug '00	Sep '00	Oct '00	Nov '00	Dec '00	Total
1. EAF (%)	91.9	91.9	85.8	86.0	85.8	86.0	77.3
2. POF (%)	0.0	0.0	0.0	0.0	0.0	0.0	13.7
3. EUOF (%)	8.1	8.1	14.2	14.0	14.2	14.0	9.0
4. EUOR (%)	8.1	8.1	14.2	14.0	14.2	14.0	10.4
5. PH	744.0	744.0	720.0	745.0	720.0	744.0	8784.0
6. SH	684.0	684.0	618.0	641.0	618.0	640.0	6797.0
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. UH	60.0	60.0	102.0	104.0	102.0	104.0	1987.0
9. POH	0.0	0.0	0.0	0.0	0.0	0.0	1200.0
10. FOH & EFOH	60.0	60.0	54.0	56.0	54.0	56.0	600.0
11. MOH & EMOH	0.0	0.0	48.0	48.0	48.0	48.0	192.0
12. Oper MBtu	3159457.0	3231158.0	2695869.0	2798792.0	2773644.0	2651131.0	30165773.0
13. Net Gen (MWH)	309690.0	317060.0	263500.0	273560.0	271500.0	258420.0	2947160.0
14. ANOHR (Btu/KWH)	10202.0	10191.0	10231.0	10231.0	10216.0	10259.0	10236.0
15. NOF %	97.4	99.7	91.7	91.8	94.5	86.8	93.2
16. NPC (MW)	465.0	465.0	465.0	465.0	465.0	465.0	465.0
19. ANOHR Equation	$10\% / AKW * [215.83 + 54.63 * MAY]$ + 9.725						

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## ESTIMATED UNIT PERFORMANCE DATA

## GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

SMITH 1	Jan '00	Feb '00	Mar '00	Apr '00	May '00	Jun '00	
1. EAF (%)	98.1	44.0	98.1	87.8	98.1	98.2	
2. POF (%)	0.0	55.2	0.0	0.0	0.0	0.0	
3. EUOF (%)	1.9	0.8	1.9	12.2	1.9	1.8	
4. EUOR (%)	1.9	1.9	1.9	12.2	1.9	1.8	
5. PH	744.0	696.0	744.0	719.0	744.0	720.0	
6. SH	730.0	306.0	730.0	635.0	730.0	707.0	
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	
8. UH	14.0	390.0	14.0	84.0	14.0	13.0	
9. POH	0.0	384.0	0.0	0.0	0.0	0.0	
10. FOH & EFOH	14.0	6.0	14.0	16.0	14.0	13.0	
11. MOH & EMOH	0.0	0.0	0.0	72.0	0.0	0.0	
12. Oper MBtu	812745.0	378584.0	954932.0	800959.0	824915.0	921340.0	
13. Net Gen (MWH)	77730.0	36610.0	92820.0	78510.0	80190.0	89520.0	
14. ANOHR (Btu/KWH)	10456.0	10341.0	10288.0	10202.0	10287.0	10292.0	
15. NOF %	65.7	73.9	78.5	76.3	67.8	78.2	
16. NPC (MW)	162.0	162.0	162.0	162.0	162.0	162.0	
19. ANOHR Equation	$10^6 / AKW * [303.56 - 13.60 * APR - 14.98 * MAY + 12.46 * JUL - 15.94 * NOV]$ $+ 5,563 + 0.01691 * LSRF / AKW$						

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## ESTIMATED UNIT PERFORMANCE DATA

GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

SMITH 1	Jul '00	Aug '00	Sep '00	Oct '00	Nov '00	Dec '00	Total
1. EAF (%)	98.1	98.1	98.2	98.1	68.8	98.1	90.6
2. POF (%)	0.0	0.0	0.0	0.0	30.0	0.0	6.8
3. EUOF (%)	1.9	1.9	1.8	1.9	1.2	1.9	2.6
4. EUOR (%)	1.9	1.9	1.8	1.9	1.8	1.9	2.8
5. PH	744.0	744.0	720.0	745.0	720.0	744.0	8784.0
6. SH	730.0	730.0	707.0	731.0	495.0	730.0	7961.0
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. UH	14.0	14.0	13.0	14.0	225.0	14.0	823.0
9. POH	0.0	0.0	0.0	0.0	216.0	0.0	600.0
10. FOH & EFOH	14.0	14.0	13.0	14.0	9.0	14.0	155.0
11. MOH & EMOH	0.0	0.0	0.0	0.0	0.0	0.0	72.0
12. Oper MBtu	966761.0	982888.0	858222.0	894309.0	580676.0	769135.0	9745466.0
13. Net Gen (MWH)	93110.0	95770.0	82840.0	86390.0	56690.0	73070.0	943250.0
14. ANOHR (Btu/KWH)	10383.0	10263.0	10360.0	10352.0	10243.0	10526.0	10332.0
15. NOF %	78.7	81.0	72.3	73.0	70.7	61.8	73.1
16. NPC (MW)	162.0	162.0	162.0	162.0	162.0	162.0	162.0
19. ANOHR Equation	$10\% / AKW * [ 303.56 - 13.60 * APR - 14.98 * MAY + 12.46 * JUL - 15.94 * NOV ]$ $+ 5,563 + 0.01691 * LSRF / AKW$						

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## ESTIMATED UNIT PERFORMANCE DATA

GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

SMITH 2	Jan '00	Feb '00	Mar '00	Apr '00	May '00	Jun '00	
1. EAF (%)	96.9	97.0	96.9	90.4	46.4	96.9	
2. POF (%)	0.0	0.0	0.0	0.0	51.6	0.0	
3. EUOF (%)	3.1	3.0	3.1	9.6	2.0	3.1	
4. EUOR (%)	3.1	3.0	3.1	9.6	4.2	3.1	
5. PH	744.0	696.0	744.0	719.0	744.0	720.0	
6. SH	721.0	675.0	721.0	650.0	349.0	698.0	
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	
8. UH	23.0	21.0	23.0	69.0	395.0	22.0	
9. POH	0.0	0.0	0.0	0.0	384.0	0.0	
10. FOH & EFOH	23.0	21.0	23.0	21.0	15.0	22.0	
11. MOH & EMOH	0.0	0.0	0.0	48.0	0.0	0.0	
12. Oper MBtu	1070480.0	1063949.0	1203549.0	1048280.0	531004.0	1178067.0	
13. Net Gen (MWH)	105810.0	105540.0	119780.0	104120.0	51780.0	116100.0	
14. ANOHR (Btu/KWH)	10117.0	10081.0	10048.0	10068.0	10255.0	10147.0	
15. NOF %	76.0	81.0	86.1	83.0	76.9	86.2	
16. NPC (MW)	193.0	193.0	193.0	193.0	193.0	193.0	
19. ANOHR Equation	$10\% / AKW * [86.76 + 21.35 * MAY + 16.56 * JUN + 32.76 * JUL + 30.95 * AUG + 11.83 * SEP]$ + 9,526						

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## ESTIMATED UNIT PERFORMANCE DATA

## GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

SMITH 2	Jul '00	Aug '00	Sep '00	Oct '00	Nov '00	Dec '00	Total
1. EAF (%)	96.9	96.9	96.9	96.9	77.5	81.3	89.2
2. POF (%)	0.0	0.0	0.0	0.0	20.0	16.1	7.4
3. EUOF (%)	3.1	3.1	3.1	3.1	2.5	2.6	3.4
4. EUOR (%)	3.1	3.1	3.1	3.1	3.1	3.0	3.7
5. PH	744.0	744.0	720.0	745.0	720.0	744.0	8784.0
6. SH	721.0	721.0	698.0	722.0	558.0	605.0	7839.0
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. UH	23.0	23.0	22.0	23.0	162.0	139.0	945.0
9. POH	0.0	0.0	0.0	0.0	144.0	120.0	648.0
10. FOH & EFOH	23.0	23.0	22.0	23.0	18.0	19.0	253.0
11. MOH & EMOH	0.0	0.0	0.0	0.0	0.0	0.0	48.0
12. Oper MBtu	1221988.0	1268979.0	1067990.0	1123208.0	881597.0	842892.0	12501983.0
13. Net Gen (MWH)	119230.0	124300.0	104890.0	111330.0	87460.0	82970.0	1233310.0
14. ANOHR (Btu/KWH)	10249.0	10209.0	10182.0	10089.0	10080.0	10159.0	10137.0
15. NOF %	85.7	89.3	77.9	79.9	81.2	71.1	81.5
16. NPC (MW)	193.0	193.0	193.0	193.0	193.0	193.0	193.0
19. ANOHR Equation	$10\% / AKW * [86.76 + 21.35 * MAY + 16.56 * JUN + 32.76 * JUL + 30.95 * AUG + 11.83 * SEP]$ + 9,526						

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## ESTIMATED UNIT PERFORMANCE DATA

GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

DANIEL 1	Jan '00	Feb '00	Mar '00	Apr '00	May '00	Jun '00	
1. EAF (%)	92.9	79.7	0.0	65.0	92.9	92.9	
2. POF (%)	0.0	13.8	100.0	29.9	0.0	0.0	
3. EUOF (%)	7.1	6.5	0.0	5.1	7.1	7.1	
4. EUOR (%)	7.1	7.5	0.0	7.3	7.1	7.1	
5. PH	744.0	696.0	744.0	719.0	744.0	720.0	
6. SH	691.0	557.0	0.0	468.0	691.0	669.0	
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	
8. UH	53.0	139.0	744.0	251.0	53.0	51.0	
9. POH	0.0	96.0	744.0	215.0	0.0	0.0	
10. FOH & EFOH	53.0	45.0	0.0	37.0	53.0	51.0	
11. MOH & EMOH	0.0	0.0	0.0	0.0	0.0	0.0	
12. Oper MBtu	3090911.0	2561398.0	0.0	2124665.0	2701075.0	2880504.0	
13. Net Gen (MWH)	301670.0	248390.0	0.0	206780.0	259270.0	284410.0	
14. ANOHR (Btu/KWH)	10246.0	10312.0	-	10275.0	10418.0	10128.0	
15. NOF %	91.3	93.3	0.0	86.6	73.6	83.4	
16. NPC (MW)	478.0	478.0	478.0	510.0	510.0	510.0	
19. ANOHR Equation	$10^6 / \text{AKW} * [ 1223.24 - 40.12 * \text{JAN} - 50.48 * \text{MAR} - 44.86 * \text{JUN} ]$ $+ 9,170 + 10^6 / \text{AKW} * [ -0.0731 * \text{BTU/LB} ]$						

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## ESTIMATED UNIT PERFORMANCE DATA

GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

DANIEL 1	Jul '00	Aug '00	Sep '00	Oct '00	Nov '00	Dec '00	Total
1. EAF (%)	92.9	92.9	92.9	45.0	65.0	92.9	75.3
2. POF (%)	0.0	0.0	0.0	29.0	0.0	0.0	14.5
3. EUOF (%)	7.1	7.1	7.1	26.0	35.0	7.1	10.2
4. EUOR (%)	7.1	7.1	7.1	36.7	35.0	7.1	11.9
5. PH	744.0	744.0	720.0	745.0	720.0	744.0	8784.0
6. SH	691.0	691.0	669.0	335.0	468.0	691.0	6621.0
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. UH	53.0	53.0	51.0	410.0	252.0	53.0	2163.0
9. POH	0.0	0.0	0.0	216.0	0.0	0.0	1271.0
10. FOH & EFOH	53.0	53.0	51.0	26.0	36.0	53.0	511.0
11. MOH & EMOH	0.0	0.0	0.0	168.0	216.0	0.0	384.0
12. Oper MBtu	2991214.0	3130245.0	2682254.0	1413229.0	1917545.0	2524184.0	28017224.0
13. Net Gen (MWH)	293170.0	309160.0	261990.0	139070.0	188290.0	244710.0	2736910.0
14. ANOHR (Btu/KWH)	10203.0	10125.0	10238.0	10162.0	10184.0	10315.0	10237.0
15. NOF %	83.2	87.7	76.8	81.4	78.9	69.4	82.3
16. NPC (MW)	510.0	510.0	510.0	510.0	510.0	510.0	502.0
19. ANOHR Equation	$10\% / \text{AKW} * [ 1223.24 - 40.12 * \text{JAN} - 50.48 * \text{MAR} - 44.86 * \text{JUN} ]$ $+ 9,170 + 10\% / \text{AKW} * [ -0.0731 * \text{BTU/LB} ]$						

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## GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

DANIEL 2	Jan '00	Feb '00	Mar '00	Apr '00	May '00	Jun '00	
1. EAF (%)	57.7	80.7	51.6	87.2	94.1	94.0	
2. POF (%)	0.0	0.0	45.2	6.7	0.0	0.0	
3. EUOF (%)	42.3	19.3	3.2	6.1	5.9	6.0	
4. EUOR (%)	42.3	19.3	5.9	6.6	5.9	6.0	
5. PH	744.0	696.0	744.0	719.0	744.0	720.0	
6. SH	429.0	564.0	384.0	631.0	700.0	677.0	
7. RSH	0.0	0.0	0.0	0.0	0.0	0.0	
8. UH	315.0	132.0	360.0	88.0	44.0	43.0	
9. POH	0.0	0.0	336.0	48.0	0.0	0.0	
10. FOH & EFOH	27.0	38.0	24.0	44.0	44.0	43.0	
11. MOH & EMOH	288.0	96.0	0.0	0.0	0.0	0.0	
12. Oper MBtu	1950232.0	2589460.0	1787035.0	2858388.0	2785630.0	2995265.0	
13. Net Gen (MWH)	194770.0	256560.0	177250.0	283880.0	273530.0	298720.0	
14. ANOHR (Btu/KWH)	10013.0	10093.0	10082.0	10069.0	10184.0	10027.0	
15. NOF %	95.0	95.2	96.6	88.2	76.6	86.5	
16. NPC (MW)	478.0	478.0	478.0	510.0	510.0	510.0	
19. ANOHR Equation	$10\% / \text{AKW} * [ 1014.82 - 37.91 * \text{JAN} + 69.66 * \text{JUL} + 78.80 * \text{AUG} + 76.66 * \text{SEP} ]$ $+ 9,052 + 10\% / \text{AKW} * [ -0.0554 * \text{BTU/LB} ]$						

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## ESTIMATED UNIT PERFORMANCE DATA

## GULF POWER COMPANY

PERIOD OF: January 2000 - December 2000

	DANIEL 2	Jul '00	Aug '00	Sep '00	Oct '00	Nov '00	Dec '00	Total
1.	EAF (%)	94.1	94.1	69.0	0.1	78.3	94.1	74.5
2.	POF (%)	0.0	0.0	26.7	99.9	16.7	0.0	16.4
3.	EUOF (%)	5.9	5.9	4.3	0.0	5.0	5.9	9.1
4.	EUOR (%)	5.9	5.9	5.9	0.0	6.0	5.9	10.9
5.	PH	744.0	744.0	720.0	745.0	720.0	744.0	8784.0
6.	SH	700.0	700.0	497.0	1.0	564.0	700.0	6547.0
7.	RSH	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.	UH	44.0	44.0	223.0	744.0	156.0	44.0	2237.0
9.	POH	0.0	0.0	192.0	744.0	120.0	0.0	1440.0
10.	FOH & EFOH	44.0	44.0	31.0	0.0	36.0	44.0	419.0
11.	MOH & EMOH	0.0	0.0	0.0	0.0	0.0	0.0	384.0
12.	Oper MBtu	3120154.0	3271151.0	2065417.0	0.0	2303875.0	2603652.0	28330259.0
13.	Net Gen (MWH)	306830.0	323460.0	201760.0	0.0	229790.0	257100.0	2803650.0
14.	ANOHR (Btu/KWH)	10169.0	10113.0	10237.0	-	10026.0	10127.0	10105.0
15.	NOF %	85.9	90.6	79.6	0.0	79.9	72.0	85.3
16.	NPC (MW)	510.0	510.0	510.0	510.0	510.0	510.0	502.0
19.	ANOHR Equation	$10^6 / \text{AKW} * [ 1014.82 - 37.91 * \text{JAN} + 69.66 * \text{JUL} + 78.80 * \text{AUG} + 76.66 * \text{SEP} ]$ $+ 9,052 + 10^6 / \text{AKW} * [ -0.0554 * \text{BTU/LB} ]$						

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Planned Outage Schedules (Estimated)  
 Gulf Power Company  
 Period of: January 2000 - December 2000

Plant & Unit	Planned Outage Dates	Reason for Outage
Crist 6	01/15/2000 - 02/26/2000	Annual general boiler maintenance and inspection.
Crist 7	02/26/2000 - 04/15/2000	Annual general boiler maintenance and inspection.
Smith 1	02/05/2000 - 02/20/2000	Semi-annual general boiler maintenance and inspection.
Smith 1	11/04/2000 - 11/12/2000	Semi-annual general boiler maintenance and inspection.
Smith 2	05/13/2000 - 05/28/2000	Semi-annual general boiler maintenance and inspection.
Smith 2	11/25/2000 - 12/05/2000	Semi-annual general boiler maintenance and inspection.
Daniel 1	02/26/2000 - 04/09/2000	General boiler maintenance, inspection, and stack repair.
Daniel 1	10/21/2000 - 10/29/2000	Semi-annual general boiler maintenance and inspection.
Daniel 2	03/18/2000 - 04/02/2000	General boiler maintenance, inspection, and stack repair.
Daniel 2	09/23/2000 - 11/05/2000	Semi-annual general boiler maintenance and inspection.

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Notes Regarding Estimated Planned Outage Schedules

Gulf Power Company

Period of: January 2000 - December 2000

It is important to understand that estimated dates for planned outages and their bar chart schedules are frequently changed in timing and work scope due to system conditions, findings of inspections, subcontractor requirements, material availability and so on.

Please note that in addition to the outages scheduled for the target period of January 2000 - December 2000, the outages shown below are currently planned and could be rescheduled for the target period.

Plant & Unit	Planned Outage Dates	Reason for Outage
	None	

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IV. PROPOSED CHANGES TO THE GPIF IMPLEMENTATION MANUAL

III. Gulf Power Company

3.1 Definitions

The following definitions are applicable in addition to those shown in Section 2, Technical Terms and Abbreviations.

<u>Term</u>	<u>Abbreviations</u>
<u>Average Kilowatt Load</u>	AKW
The average kilowatt load that a unit was operated at during a given period of time.	
$AKW = \frac{KWH}{\sum HR_i}$	
<u>Coal BTU</u>	BTUC
BTU boiler input from coal fuel including lighter oil amounts, during a specified calendar period of time.	
<u>Gas BTU</u>	BTUG
BTU boiler input from gas fuel during a specified calendar period of time	
<u>Average Net Operating Heat Rate</u>	Oper. BTU/AKW HR
The average net operating heat rate during a specified period of time.	
<u>Input/Output Equation Regression Constant</u>	C1
<u>Input/Output Equation Regression Coefficients</u>	C2, C3, C4 ... Cn
<u>Gas Adjustment Factor</u>	GF
Conversion factor for converting gas BTU boiler input for converting coal BTU boiler input.	
<u>Coal Heat Content</u>	<b>BTU/LB</b>
<b><i>Average heating value of coal fuel consumed over a given period of time. This independent variable may be used when required to produce an adequate target equation.</i></b>	

<u>Term</u>	<u>Abbreviations</u>
<u>Hour</u>	HR
<u>Hours at Load i</u> Number of hours during a specified calendar period of time the unit was operated at the i <sup>th</sup> kilowatt load level.	HR <sub>i</sub>
<u>Number of Operating Hours</u> Number of hours during a specified calendar period of time the unit was operated.	Σ HR <sub>i</sub>
<u>i<sup>th</sup> Kilowatt Output Level</u> The i <sup>th</sup> net kilowatt output level of the unit during a specified calendar period of time.	KW <sub>i</sub>
<u>Load Square Range Factor</u> A combinant variable considering the weighted amount of time a unit was loaded at various KW load levels and the square of the load.  $LSRF = \frac{\sum KW_i^2 * HR_i}{\sum HR_i}$	LSRF
<u>Start up Energy</u> Energy input to the boiler during unit start up and prior to synchronization.	SUE
<u>Causative Variables</u> Independent unit related variables upon which it is hypothesized that the BTU consumption rate for the unit may depend.	VAR <sub>1</sub> , VAR <sub>2</sub> , ... VAR <sub>n</sub>



3.2 Basis for Generating Unit Selection

The annual fuel and purchased energy savings to the Company's customers estimated to result from improving equivalent availability by three percent (3%), where not limited, and from improving heat rate one hundred (100) BTU/KWH shall be calculated for each eligible unit.

Those units with the largest savings estimates which comprise approximately eighty percent (80%) of the total estimated savings associated with improving all eligible units, shall be selected for inclusion in the GPIF.

Eligible units shall mean steam units which have been commercially operated by the Company for at least one year, are no longer under manufacturers warranty, and whose efficiency and reliability characteristics are not expected to be altered by any ongoing research during the performance period.

3.2.1 Generating Units

Units meeting the GPIF criteria are:

Christ 6  
Christ 7  
Smith 1  
Smith 2  
Daniel 1  
Daniel 2

3.3 Methodology for Determination of Equivalent Availability Targets and Ranges.

3.3.1 Equivalent Availability Targets

3.3.1.1 Target Equivalent Availability Equation

The equivalent availability target shall be determined for each unit included in the GPIF by determining performance period values for period hours (PH), planned outage hours (POH), reserve shutdown hours (RSH), and equivalent unplanned outage rate (EUOR), substituting these into the following equation, and completing the calculation for target equivalent availability (EA).

$$\text{Eqn. 1 } EA = \left[ 1 - \frac{(\text{POH} + \text{EUOR} * (\text{PH} - \text{POH} - \text{RSH}))}{\text{PH}} \right] * 100$$

3.3.1.2 Target Planned Outage Hours

The target planned outage hours, POH, to be used in equation 1 shall be determined for each GPIF unit as the sum of the expected durations of all planned outages forecast to occur within the performance period for the particular unit.

The duration of each planned outage shall be based upon similar historical outage experience, the work scope of the outage, estimates of subcontractors, vendor recommendations, management judgement or a combination of the above.

Where a planned outage for inspection is involved, the outage duration forecast will consider the uncovering and correction of typical minor problem areas only, unless there is significant reason to believe that major corrective action may be required.

3.3.1.3 Reserve Shutdown Hours

Reserve shutdown hours for each GPIF unit shall be forecast as zero for the performance period unless there is significant evidence that reserve shutdown hours will not be zero.

3.3.1.4 Target Equivalent Unplanned Outage Rate

The target equivalent unplanned outage rate for each GPIF unit shall be determined as the five year historical average of the equivalent unplanned outage rates for the same calendar period as the performance period. The equivalent unplanned outage rate for each similar historical period shall be calculated as:

$$\text{Eqn. 2 EUOR} = \frac{(\text{FOH} + \text{EFOH} + \text{MOH} + \text{EMOH})}{(\text{PH} - \text{POH} - \text{RSH})}$$

3.3.2 Equivalent Availability Ranges

3.3.2.1 Maximum Attainable Equivalent Availability

The maximum attainable equivalent availability for each unit shall be determined as was the target equivalent availability except that the next to the best (lowest) equivalent unplanned outage rate, EUOR, experienced by the unit in the last five similar historical periods shall be used.

3.3.2.2 Minimum Attainable Equivalent Availability

The minimum attainable equivalent availability for each unit shall be determined as the lower of:

The equivalent availability which results from using the next to the worst (highest) equivalent unplanned outage rate, EUOR, experienced by the unit in the last five similar historical periods along with target planned outage hours in equation 1, or

the equivalent availability which results from deducting the difference between the maximum attainable equivalent availability and the target equivalent availability for the unit from the target equivalent availability.

3.4 Methodology for Determination of Heat Rate Targets and Ranges

3.4.1 Average heat Rate Targets

3.4.1.1 Use of Multiple Least Squares Regression Analysis

Average heat rate targets for each unit included in the GPIF shall be determined from multiple least squares regression analyses of each unit's historic BTU energy consumption per hour as a function of certain causative variables.

The general form of the input/output equation used for analysis shall be:

$$\text{Eqn. 1 } \frac{\text{Oper. BTU}}{\text{HR}} = \frac{\text{BTUC} + \text{GF} * \text{BTUG} - \text{SUE}}{\text{HR}_i} = \text{C1} + \text{C2} * \text{AKW} + \text{C3} * \text{LSRF} + \text{C4} * \text{VAR1} + \dots + \text{CN} * \text{VAR}_n + \text{C5} * \text{BTU/LB}$$

***The final term (C5 \* BTU/LB) may be used when significant changes in coal heat content between the historical and forecast values are expected.***

3.4.1.2 Determination of Regression Coefficients

The regression constants of each unit's input/output equation shall be determined by applying Equation 1 to weekly observations from the most recent three (3) years operating experience of the unit.

Where three years of the necessary actual observation data is not available, the most recent data available of lesser period shall be used.

Actual observation data which is known to be defective, such as may result from inoperative or malfunctioning fuel measuring equipment, or whose BTU/HR value differs by ten percent (10%) or more from its predicted value based upon an initial regression equation shall be eliminated. Eliminated data will not be used for determining the regression coefficients of the input/output equation utilized to set the unit heat rate target.

Stepwise regression analysis shall be used, and no causative variable shall be retained in the target input/output equation if the coefficient associated with such variable is not significant using a ninety percent (90%) confidence interval.

If stepwise regression does not result in the retention of either unit load variable, AKW or LSRF, the more significant of the two will be retained in the target input/output equation, the previous paragraph notwithstanding.

In the case of intercorrelated causative variables, other than AWK and LSRF, the more significant variable will be retained in the target input/output equation and the related variable(s) discarded.

3.4.1.3 Determination of Target Heat Rate Equation from Target Input/Output Equation

The input/output equations developed per paragraphs 3.4.1.1 and 3.4.1.2 shall be converted to average net operating heat rate equations by dividing both sides of equation 1 by the average kilowatt load, AKW. The result is as shown below:

$$\text{Eqn. 2 ANOHR} = \frac{\text{Oper. BTU}}{\text{AWK} * \text{HR}} = \left( \frac{\text{C1} + \text{C4} * \text{VAR1} + \dots + \text{Cn} * \text{VARn}}{\text{AKW}} \right) + \text{C2} + \text{C3} * \frac{\text{LSRF}}{\text{AKW}} + \text{C5} * \frac{\text{BTU/LB}}{\text{AKW}}$$

3.4.1.4 Determination of Average Heat Rate Targets

The target average heat rate for each GPIF unit shall be determined by forecasting values for the independent (causative) variables of equation 2 for the future GPIF performance period, inserting these values into equation 2, and completing the calculation for the target heat rate, ANOHR. **Independent variable BTU/LB need only be forecast and used when necessary to account for significant differences in coal heat content between the historical and the forecast values.**

3.4.1.5 Alterations to Target Heat Rate Methodology

Should an adequate number of data observations to produce equation 2 for each GPIF unit be unavailable, or should a unit be scheduled to be physically altered in the performance period by government mandate or because of the economic benefit of such alteration to Company and Customer and such alteration will adversely affect the unit's heat rate characteristics, the Company shall either obtain the necessary number of observations from an earlier period, use engineering analyses,

other appropriate means, or a combination of these as warranted to produce equation 2. If one of the aforementioned alternative methods is necessary, the Company shall use and present to the Commission the methodology which it believes best represents what the input/output curve of the subject GPIF unit will be in the performance period assuming there is no additional action or inaction regarding the unit by the Company beyond current practice.

If for some reason the future value of a causative variable, other than those related to operating load levels, cannot be reliably determined, the Company shall estimate to the best of its engineering expertise the value of the term in equation 2 for the performance period.

3.4.1.6 Gas Factor

The gas factor, GF, shall be calculated from actual operating data for each coal/gas burning unit individually.

3.4.2 Average Heat Rate Ranges

The minimum attainable heat rate value for the performance period for each GPIF unit shall be established at ninety seven percent (97%) of the target heat rate.

The maximum attainable heat rate value for the performance period for each GPIF unit shall be established at one hundred and three percent (103%) of the target heat rate.

3.4.3 Adjustments to Average Heat Rate

Since performance targets are set prospectively in the GPIF, certain circumstances may arise during the six month period which warrant adjustments to be made in the final GPIF calculation. Adjustments to the average heat rate performance indicator are necessary to reflect differences between actual values which occurred during the period and forecast values of variables used as part of the target heat rate setting methodology, and may be necessary to offset the effect of an externally caused disaster. A prime example of the first type of adjustment are adjustments needed to reflect changes in the economic dispatch of units not anticipated in advance. An example of the second type of adjustment might be continued economic operation of an efficiency impaired turbine where the impairment was the result of blade damage predicated by material failure or blade removal based upon vendor recommendation.

Adjustment for differences between actual and forecast values of the target setting variables shall be calculated as the target heat rate less what the target heat rate would have been established at had the actual variable values been known for the unit for the period.

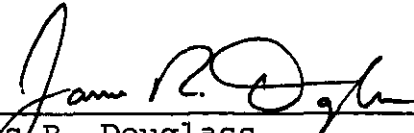
Table 1 graphically illustrates the method for calculating the adjustment for a single target setting variable. The adjustment to the actual average heat rate performance indicator is the vertical distance between the target average heat rate curve at the actual variable value for the period and the target average heat rate curve at the forecasted variable value for the period.

AFFIDAVIT

STATE OF FLORIDA )  
                          )  
COUNTY OF ESCAMBIA )

Docket No. 990001-EI

Before me the undersigned authority, personally appeared James R. Douglass, who being first duly sworn, deposes, and says that he is the Performance Test Specialist for Gulf Power Company, a Maine corporation, and that the foregoing is true and correct to the best of his knowledge, information, and belief. He is personally known to me.

  
\_\_\_\_\_  
James R. Douglass  
Performance Test Specialist

Sworn to and subscribed before me this 29th day of September, 1999.

  
\_\_\_\_\_  
Notary Public, State of Florida at Large

Commission Number:  
Commission Expires:

