FLORIDA PUBLIC SERVICE COMMISSION

Fletcher Building
101 East Gaines Street
Tallahassee, FL 32399-0850

M E M O R A N D U M

April 25, 1991

TO : **DIRECTOR, DIVISION OF RECORDS AND REPORTING**

FROM: **DIVISION OF ELECTRIC & GAS (RENDELL, MAKIN, McCORMICK)**
DIVISION OF LEGAL SERVICES (PALECKI)

RE : **DOCKET NO. 910086-EG WEST FLORIDA NATURAL GAS COMPANY, PETITION FOR APPROVAL OF CONSERVATION PLAN**

AGENDA: **05/07/91 - CONTROVERSIAL AGENDA - PROPOSED AGENCY ACTION**

CASE BACKGROUND

West Florida Natural Gas Company (West Florida or the Company) submitted its proposed plan, entitled Energy Conservation and Promotional Program with certain modifications on January 25, 1991. Staff requested additional information and clarification February 12, 1991. West Florida responded March 5, 1991.

DISCUSSION OF ISSUES

ISSUE 1: Should the Commission approve any or all of the conservation programs contained in the West Florida Natural Gas Company's conservation plan entitled Energy Conservation and Promotional Program?

RECOMMENDATION: Yes, the Commission should approve West Florida Natural Gas Company's conservation plan entitled Energy Conservation and Promotional Program, as modified by West Florida's March 5, 1991 letter to Commission Staff and further modified by revised conservation program schedules also filed March 5, 1991.

STAFF ANALYSIS: Conservation program approval has long hinged on three criteria; policy objectives, monitorability, and cost-effectiveness. Order 22176 reiterated those three criteria as follows:

1. Does each component program advance the policy objectives set forth in Rule 25-17.001 and the FEECA statute?

2. Is each component program directly monitorible and yield measurable results?

3. Is each component program cost-effective?

Criterion 1 - Policy Objectives: West Florida's plan appears to meet the first criterion in all component programs.

Criterion 2 - Monitorability: See Issue 2.

Criterion 3 - Cost-effectiveness: The Company's plan shows cost-effectiveness to the state as a whole through savings realized by avoiding the building of new power plants and generating fuel savings. The Company's analysis shows benefits of $72,029,695 (present value) flowing to electric utility ratepayers (Attachment 1).

In the past, Commission has recognized that the benefit of gas utility conservation inures to gas ratepayers because they also use electricity. That remains true, but demands further analysis as the Commission decides whether to approve new conservation programs that can be expected to be in place for several years. FEECA addresses the efficient use of electricity and natural gas. The Company's analysis further shows direct benefits of $15,957,142 (present value) flowing to the Company's gas customers (Attachment 1).

Direct benefits to gas ratepayers have been calculated by adding the incremental revenue effect on existing ratepayers from added customer charge revenues, contribution to gross margin from increased commodity-related sales, spreading of fixed demand charges over a larger number of therms sold, and, where applicable, any savings associated with not having to cut and cap existing dormant service lines. Costs of new service lines and meter sets are applied as offsets against the projected direct savings although the Company's practice is to capitalize service lines. The net present value of twenty years of benefits were then calculated. Although the programs are projected to be in effect only ten years, the benefits are presumed to continue.

The modified conservation plan is made up of the following six programs:

Residential Electric Resistance Appliance & Oil Heating Replacement
Residential Home Builder
Gas Appliance Energy Savings Payback

Gas Water Heater Load Retention
Gas Space Conditioning Allowance
Commercial Electric Resistance Appliance Replacement

The spreadsheet at Attachment 1 shows a direct benefit to gas ratepayers of $22,537,141, less program costs of $6,579,999 to be borne by gas utility ratepayers for a net direct benefit to gas utility ratepayers of $15,957,142. Added to that is the total benefit to electric ratepayers, shown as $72,029,695, for a total net benefit to the state, projected by West Florida to be a net present value of $87,986,837 in benefits over twenty years.

Component programs of West Florida's modified Conservation Plan are similar to existing programs in the residential sector. New programs have been added to attack inefficiencies in the commercial sector. These programs include the Gas Space Conditioning Allowance Program and the Commercial Electric Resistance Appliance Replacement Program.

The submitted plan does not include clarifying wording provided by the Company in its response to a Staff inquiry nor the revised conservation program schedules. Commission approval of West Florida's modified Plan should include the revised conservation program schedules submitted in a March 5, 1991 letter from Cindy Arnold (Attachment 3), with modifications contained in a March 5, 1991 letter from Patti Smith of West Florida Natural Gas Company to William Troy Rendell of Commission Staff (Attachment 4). Commission's approval should also include the monitoring plan discussed in Issue 2, which was submitted on April 4, 1991 in Document No. 3307.

ISSUE 2: Should the Commission require West Florida Natural Gas Company to file its monitoring data with the Commission Staff?

RECOMMENDATION: Yes, West Florida Natural Gas Company should be required to file monitoring data at least annually.

STAFF ANALYSIS: The Company, at the request of Staff, has outlined a monitoring plan in Document No. 3307 filed April 4, 1991. The information specified in that plan, unless filed more often under another Commission rule or order, should be filed with the Commission Staff by March 31 of each year for the preceding calendar year, in a format to be agreed upon by Staff and the Company.

ISSUE 3: Should the Commission require West Florida Natural Gas Company to establish an accounting system for conservation

programs to permit detailed auditing by the Commission Staff?

RECOMMENDATION: Yes, if the Plan is approved, the order approving the Plan should include the following wording:

> "The system of internal accounting controls for each conservation program shall be adequate to provide the company and the Commission with reasonable assurance that conservation program assets are safeguarded against loss from unauthorized use or disposition, that transactions are executed in accordance with the Commission's authorization and are recorded properly to permit the preparation of financial conservation cost recovery exhibits in accordance with generally accepted accounting principles. Further, West Florida shall obtain an opinion from a Florida CPA firm that the conservation system of internal controls meets the above objective for each of its programs."

STAFF ANALYSIS: The Commission's Division of Auditing and Financial Analysis has requested the Division of Electric and Gas to recommend that orders approving conservation programs include specific wording on accounting controls. In the past Commission Staff auditors have found that an adequate audit trail does not always exist for transactions in utilities' conservation programs. The proposed wording would ensure that the objective of adequate accounting for conservation programs is met. The same wording will be proposed for each gas utility that requests voluntarily participation in Energy Conservation Cost Recovery. The Commission order approving Peoples' Gas System's revised conservation plan (Order 23462, dated September 11, 1990) contained the wording recommended here.

ISSUE 4: Should this docket be closed?

RECOMMENDATION: Yes.

West Florida Natural Gas Company
Energy Conservation and Promotional Programs

Program Benefits	Benefit To Electric Ratepayers	Benefit To Gas Ratepayers	Program Cost Gas Utility Ratepayers	Net Benefit Gas Utility Ratepayers
Residential Electric Resistance Appliance and Oil Heating Replacement	$17,418,844	$ 8,484,957	$2,826,228	$5,658,729
Residential Home Builder	$21,168,356	$ 4,589,377	$1,720,033	$2,869,344
Gas Appliance Energy Savings Payback	$10,283,786	$ 1,345,762	$ 179,927	$1,165,835
Gas Water Heater Load Retention	$ 1,995,730	$ 1,731,889	$ 325,280	$1,406,609
Gas Space Conditioning Allowance	$ 4,829,827	$ 2,210,395	$ 662,334	$1,548,061
Commercial Electric Resistance Appliance Replacement	$16,333,152	$ 4,174,761	$ 866,197	$3,308,564
TOTAL PROGRAM BENEFIT (COST)	$72,029,695	$22,537,141	$6,579,999	$15,957,142

Attachment 2
April 25, 1991

West Florida Natural Gas Company
Benefit/Cost Ratios
All Programs

Program	Electric Ratepayers Ratio (To 1)	Electric Ratepayers Payback (In Yrs)	Gas Ratepayers Ratio (To 1)	Gas Ratepayers Payback (In Yrs)
Residential Electric Resistance Appliance and Oil Heating Replacement Program	7.17	.14	3.01	.34
Residential Home Builders Program	13.31	.08	2.67	.37
Gas Appliance Energy Savings Payback Program	57.1	.02	7.48	.13
Gas Water Heater Load Retention Program	7.14	.14	5.32	.19
Gas Space Conditioning Program	8.29	.12	3.34	.30
Commercial Electric Resistance Appliance Replacement Program	19.86	.05	4.82	.21

Attachment 3
April 25, 1991

West Florida
Natural Gas Co.
"energy for all seasons"

J.E. McIntyre
President

Caller Box 1460
301 Maple Avenue
Panama City, FL 32402
(904) 872-6100

March 5, 1991

Mr. Troy Rendell
Electric and Gas Bureau
101 East Gaines Street
Tallahassee, FL 32399-0865

Dear Troy:

Enclosed please find the revised conservation program schedules we discussed on the phone.

If you have any questions, please call me at 904-872-6151.

Sincerely yours,

Cindy Arnold

Cindy Arnold
Conservation Clerk

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PROGRAM BACKGROUND AND COST EFFECTIVENESS ANALYSIS ASSUMPTIONS

A direct benefit to gas ratepayers of $22,537,141 (present value), less a program cost of $6,579,999 (present value) to be paid by the West Florida Natural Gas Company ratepayers for a net direct benefit to the ratepayers of $15,957,142 (present value) is shown in the section headed "Summary of Program Costs/Benefits to Electric and Gas Ratepayers." Electric ratepayers receive a $72,029,695 (present value) net benefit, to comprise a total net benefit to the State, projected by West Florida Natural Gas Company at a net present value of $87,986,837 in benefits over twenty (20) years.

The assumptions and basic data utilized in the preparation of the benefit/cost analysis contained in this document are as follows:

The average consumption data for gas appliances is based on information taken from customer historical use patterns in Northwest and Central Florida and are as follows:

Residential Energy Efficient	Water Heaters	300 Therms/Yr
	Range	110 Therms/Yr
	Dryer	120 Therms/Yr
	Furnace	380 Therms/Yr
Commercial Energy Efficient	Water Heaters	2,300 Therms/Yr
	Range	630 Therms/Yr
	Fryer	880 Therms/Yr
	Dryer	660 Therms/Yr

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West Florida Natural Gas Company
Benefit/Cost Ratios
All Programs

Program	Electric Ratepayers Ratio (To 1)	Electric Ratepayers Payback (In Yrs)	Gas Ratepayers Ratio (To 1)	Gas Ratepayers Payback (In Yrs)
Residential Electric Resistance Appliance and Oil Heating Replacement Program	7.17	.14	3.01	.34
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West Florida Natural Gas Company
Energy Conservation and Promotional Programs

Program Benefits	Benefit To Electric Ratepayers	Benefit To Gas Ratepayers	Program Cost Gas Utility Ratepayers	Net Benefit Gas Utility Ratepayers	Approval Yes/No
Residential Electric Resistance Appliance and Oil Heating Replacement	$17,418,844	$ 8,484,957	$2,828,228	$5,656,729	
Residential Home Builder	$21,168,356	$ 4,589,377	$1,720,033	$2,869,344	
Gas Appliance Energy Savings Payback	$10,283,786	$ 1,345,762	$ 179,927	$1,165,835	
Gas Water Heater Load Retention	$ 1,995,730	$ 1,731,889	$ 325,280	$1,406,609	
Gas Space Conditioning Allowance	$ 4,829,827	$ 2,210,395	$ 662,334	$1,548,061	
Commercial Electric Resistance Appliance Replacement	$16,333,152	$ 4,174,761	$ 866,197	$3,308,564	
TOTAL PROGRAM BENEFIT (COST)	$72,029,695	$22,537,141	$6,579,999	$15,957,142	

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IV. Cost Effectiveness Methodology

Based on the cost effectiveness methodology used in currently approved conservation programs, and using the assumptions listed, a benefit/cost ratio of 7.17 to 1 with a payback period of .14 years will be achieved for the State of Florida. The ratepayers of West Florida Natural Gas Company will receive a benefit/cost ratio of 3.01 to 1 with a payback period of .34 years. The cost effectiveness calculations follow Table A-2.

V. Program Monitoring and Evaluation

The progress of the West Florida Natural Gas Company Electric Resistance Appliance and Oil Heating Replacement Program is monitored monthly at both branches of the company. The Panama City office also submits a semi-annual report to the Florida Public Service Commission for both divisions. Feedback received from both branches is constantly evaluated and any necessary revisions will be proposed to the program based upon these evaluations. Allowances paid to eligible participants under the program guidelines are based upon documentation and information necessary for Florida Public Service Commission audit purposes.

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ATTACHMENT A - 1

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE
AND OIL HEATING REPLACEMENT PROGRAM

PROJECTED FORECASTED CONSERVATION

YEAR	AVOIDED CAPACITY	ANNUAL KWH REDUCTION
1991	2,512	3,805,055
1992	2,663	4,033,358
1993	2,822	4,275,360
1994	2,992	4,531,881
1995	3,171	4,803,794
1996	3,362	5,092,022
1997	3,563	5,397,543
1998	3,777	5,721,396
1999	4,004	6,064,680
2000	4,244	6,428,560
TOTAL	33,110	50,153,650

ATTACHMENT A-2

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

YEAR	# OF ELIGIBLE PARTICIPANTS	# OF ACTUAL APPLIANCES	% OF ACTUAL TO ELIGIBLE
1985	200,000	1,062	0.53%
1986	200,000	1,151	0.58%
1987	200,000	991	0.50%
1988	200,000	1,144	0.57%
1989	200,000	616	0.31%
1990	200,000	400	0.20%
1991	200,000	985	0.49%
1992	200,000	1,044	0.52%
1993	200,000	1,107	0.55%
1994	200,000	1,173	0.59%
1995	200,000	1,244	0.62%
1996	200,000	1,318	0.66%
1997	200,000	1,397	0.70%
1998	200,000	1,481	0.74%
1999	200,000	1,570	0.78%
2000	200,000	1,664	0.83%

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RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL REPLACEMENT PROGRAM

Results from Allowance Program

Estimated Gas Company Expenditures	
1. Personnel Costs	$334,792
2. Advertising Costs	$494,280
3. Installation Allowances	$3,622,280
4. Total Costs	$4,451,352
5. Present Value of Total	$2,826,228
Reductions	
6. KW	33,110
7. MWH	551,694
Estimated Electric Company Benefits	
8. Construction Savings	$31,362,319
9. Fuel Purchase Savings	
A. Oil	$2,590,403
B. Coal	$528,900
10. Total Savings	$34,481,622
Net Present Value of Total Program	
11. Net Present Value	$20,245,072
Net Benefits from Cumulative Totals	
Col 11 - Col 5	$17,418,844

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Benefit/Cost Ratio from Cumulative Totals

Col 11 / Col 5	**7.17 TO 1**

Discount Payback

Col 5 / Col 11 (YEARS)	**0.14 YEARS**

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LIST OF ASSUMPTIONS

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

1. 1991 Program Personnel Costs.	25,400	/YR
Escalation Rate - Personnel Costs.	6.0%	/YR
2. 1991 Advertising Costs.	37,500	/YR
Escalation Rate - Advertising Costs.	6.0%	/YR
3. Fuel Cost of Natural Gas 1991	$0.2864	/THERM
Escalation Rate - Fuel Cost Natural Gas	3.0%	/YR
4. KWH Produced from Ton of Coal	2076	KWH
5. KWH Produced from Barrel #6 Oil	613	KWH
6. Percentage Breakdown of Displaced Fuel	19.6%	OIL
From Reduced KWH Generation	80.4%	COAL
7. 1991 Construction Cost per KW. (Pulverized Coal)	$721	/KW
Escalation Rate of Construction.	5.4%	/YR
8. KW is eliminated at the time of its deferral.		
9. Average Allowance for Gas Appliance Replacing Electric	$279	/APP
10. Demand Displacement - Water Heating	.91	KW
- Central Heating	7.50	KW
- Space Heating	5.00	KW
11. Average Natural Gas Annual Therm Consumption Per Installed Applaince	261	THERM
12. Period of Appliance Use.	10	YRS
13. Price of Oil per Barrel	$20.50	/BL
Escalation Rate	4.0%	/YR

14. Price of Coal per Ton $42.00 /TON
Escalation Rate 3.0% /YR

15. Discount Rate or Rate of Time Preference 10.45% /YR

16. Gas Appliances Installed during Program 1st Year 985 APPL.
Escalation Rate 6.0% /YR

	Number	Allowance	KWH Displaced	KW Avoided	Gas Therms
Water Heater	370	$250	0.91	4500	300
Central Heat	240	500	7.50	5700	380
Range	150	150	NIL	1650	110
Dryer	150	150	NIL	1800	120
Space Heat:					
<50,000Btu	37	150	5.00	3400	270
>50,000Btu	38	300	5.00	3400	270
Total	985				
Weighted Average Allowance		$279			
Weighted Average KW		2.55			
Weighted Average KWH		3863			
Weighted Average Therms Gas		261			

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

TABLE - 1 - PROGRAM COSTS

YEAR	PERSONNEL COSTS	ADVERTISING COSTS	INSTALLATION ALLOWANCES	TOTAL COSTS
1991	25,400	37,500	274,815	337,715
1992	26,924	39,750	291,304	357,978
1993	28,539	42,135	308,782	379,457
1994	30,252	44,663	327,309	402,224
1995	32,067	47,343	346,948	426,357
1996	33,991	50,183	367,764	451,939
1997	36,030	53,194	389,830	479,055
1998	38,192	56,386	413,220	507,798
1999	40,484	59,769	438,013	538,266
2000	42,913	63,355	464,294	570,562
	334,792	494,280	3,622,280	4,451,352

SUMMARY SHEET ITEMS 1, 2, 3, AND 4.

TABLE - 2 - PRESENT VALUE OF TOTAL COSTS

YEAR	TOTAL COSTS	DISCOUNT FACTOR	PRESENT VALUE
1991	337,715	1.00000	337,715
1992	357,978	0.90539	324,110
1993	379,457	0.81973	311,052
1994	402,224	0.74217	298,519
1995	426,357	0.67195	286,491
1996	451,939	0.60838	274,951
1997	479,055	0.55081	263,868
1998	507,798	0.49870	253,239
1999	538,266	0.45152	243,038
2000	570,562	0.40880	233,246
TOTAL			2,826,228

SUMMARY SHEET ITEM 5

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TABLE - 3 - ESTIMATED NUMBER OF NATURAL GAS APPLIANCES INSTALLED

YEAR	APPLIANCES INSTALLED	KW DISPLACED	KWH AVOIDED
1991	985	2,512	3,805,055
1992	1,044	2,663	4,033,358
1993	1,107	2,822	4,275,360
1994	1,173	2,992	4,531,881
1995	1,244	3,171	4,803,794
1996	1,318	3,362	5,092,022
1997	1,397	3,563	5,397,543
1998	1,481	3,777	5,721,396
1999	1,570	4,004	6,064,680
2000	1,664	4,244	6,428,560
	12,983	33,110	50,153,650

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RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

FUEL SAVINGS - OIL

YEAR	KWH REDUCED	19.6% OIL	KW/BBL	$/BBL	AVOIDED COSTS
1991	3,805,055	745,791	613	20.50	24,941
1992	7,838,413	1,536,329	613	21.32	53,433
1993	12,113,773	2,374,300	613	22.17	85,881
1994	16,645,654	3,262,548	613	23.06	122,730
1995	21,449,448	4,204,092	613	23.98	164,475
1996	26,541,470	5,202,128	613	24.94	211,661
1997	31,939,013	6,260,047	613	25.94	264,893
1998	37,660,409	7,381,440	613	26.98	324,839
1999	43,725,089	8,570,117	613	28.06	392,235
2000	50,153,649	9,830,115	613	29.18	467,899
2001	50,153,649	9,830,115	613	30.35	486,615
2002	46,348,594	9,084,324	613	31.56	467,684
2003	42,315,236	8,293,786	613	32.82	444,065
2004	38,039,876	7,455,816	613	34.13	415,166
2005	33,507,995	6,567,567	613	35.50	380,334
2006	28,704,201	5,626,023	613	36.92	338,840
2007	23,612,179	4,627,987	613	38.40	289,880
2008	18,214,636	3,570,069	613	39.93	232,561
2009	12,493,240	2,448,675	613	41.53	165,892
2010	6,428,560	1,259,998	613	43.19	88,776
TOTAL					5,422,800

FUEL SAVINGS - COAL

YEAR	KWH REDUCED	80.4% COAL	KW/TON	$/TON	AVOIDED COSTS
1991	3,805,055	3,059,264	2,076	42.00	61,893
1992	7,838,413	6,302,084	2,076	43.26	131,324
1993	12,113,773	9,739,473	2,076	44.56	209,041
1994	16,645,654	13,383,106	2,076	45.89	295,863
1995	21,449,448	17,245,356	2,076	47.27	392,684
1996	26,541,470	21,339,342	2,076	48.69	500,483
1997	31,939,013	25,678,966	2,076	50.15	620,330
1998	37,660,409	30,278,969	2,076	51.65	753,396
1999	43,725,089	35,154,972	2,076	53.20	900,962
2000	50,153,649	40,323,534	2,076	54.80	1,064,426
2001	50,153,649	40,323,534	2,076	56.44	1,096,359
2002	46,348,594	37,264,270	2,076	58.14	1,043,576
2003	42,315,236	34,021,450	2,076	59.88	981,344
2004	38,039,876	30,584,060	2,076	61.68	908,659
2005	33,507,995	26,940,428	2,076	63.53	824,418
2006	28,704,201	23,078,178	2,076	65.43	727,414
2007	23,612,179	18,984,192	2,076	67.40	616,325
2008	18,214,636	14,644,567	2,076	69.42	489,701
2009	12,493,240	10,044,565	2,076	71.50	345,958
2010	6,428,560	5,168,562	2,076	73.65	183,358
TOTAL					12,147,514

REVISED
RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE
AND OIL HEATING REPLACEMENT PROGRAM

TABLE - 4 - KW AVOIDANCE AND KWH REDUCTIONS FROM PROGRAM

YEAR	KW	KWH	MWH CUMULATIVE
1991	2,512	3,805,055	3,805
1992	2,663	4,033,358	7,838
1993	2,822	4,275,360	12,114
1994	2,992	4,531,881	16,646
1995	3,171	4,803,794	21,449
1996	3,362	5,092,022	26,541
1997	3,563	5,397,543	31,939
1998	3,777	5,721,396	37,660
1999	4,004	6,064,680	43,725
2000	4,244	6,428,560	50,154
2001			50,154
2002			46,349
2003			42,316
2004			38,040
2005			33,508
2006			28,705
2007			23,613
2008			18,215
2009			12,494
2010			6,429
			551,694

SUMMARY SHEET ITEM 7

TABLE - 5 - TOTAL CONSTRUCTION COSTS DEFERRED

YEAR	KW DEFERRED	COSTS PER KW	TOTAL CONSTRUCTION COSTS DEFERRED
1991	2,512	721	1,811,152
1992	2,663	760	2,023,491
1993	2,822	801	2,260,726
1994	2,992	844	2,525,773
1995	3,171	890	2,821,895
1996	3,362	938	3,152,734
1997	3,563	989	3,522,360
1998	3,777	1,042	3,935,322
1999	4,004	1,098	4,396,699
2000	4,244	1,157	4,912,168
			31,362,319

SUMMARY SHEET ITEM 8

REVISED

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

ANNUAL FUEL CONSUMPTION - NATURAL GAS

YEAR	THERMS CONSUMED	THERMS CUMULATIVE	$/THERM	TOTAL COSTS
1991	257,085	257,085	0.2864	73,629
1992	272,510	529,595	0.2950	156,226
1993	288,861	818,456	0.3038	248,681
1994	306,192	1,124,648	0.3130	351,967
1995	324,564	1,449,212	0.3223	467,147
1996	344,038	1,793,250	0.3320	595,388
1997	364,680	2,157,930	0.3420	737,961
1998	386,561	2,544,491	0.3522	896,261
1999	409,754	2,954,245	0.3628	1,071,809
2000	434,340	3,388,585	0.3737	1,266,270
2001		3,388,585	0.3849	1,304,258
2002		3,131,500	0.3964	1,241,466
2003		2,858,990	0.4083	1,167,434
2004		2,570,129	0.4206	1,080,966
2005		2,263,937	0.4332	980,750
2006		1,939,373	0.4462	865,352
2007		1,595,335	0.4596	733,197
2008		1,230,655	0.4734	582,562
2009		844,094	0.4876	411,561
2010		434,340	0.5022	218,127

NATURAL GAS FUEL COST - DISPLACEMENT DISTRIBUTION

YEAR	TOTAL NATURAL GAS COST	19.6% OIL	80.4% COAL
1991	73,629	14,431	59,198
1992	156,226	30,620	125,606
1993	248,681	48,741	199,940
1994	351,967	68,985	282,981
1995	467,147	91,561	375,586
1996	595,388	116,696	478,692
1997	737,961	144,640	593,321
1998	896,261	175,667	720,594
1999	1,071,809	210,075	861,734
2000	1,266,270	248,189	1,018,081
2001	1,304,258	255,635	1,048,624
2002	1,241,466	243,327	998,139
2003	1,167,434	228,817	938,617
2004	1,080,966	211,869	869,096
2005	980,750	192,227	788,523
2006	865,352	169,609	695,743
2007	733,197	143,707	589,490
2008	582,562	114,182	468,380
2009	411,561	80,666	330,895
2010	218,127	42,753	175,374
TOTAL		2,832,399	11,618,614

REVISED

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

TABLE - 6 - FUEL SAVINGS OIL

YEAR	AVOIDED OIL COSTS	GAS COSTS	FUEL SAVINGS
1991	24,941	14,431	10,510
1992	53,433	30,620	22,813
1993	85,881	48,741	37,140
1994	122,730	68,985	53,745
1995	164,475	91,561	72,914
1996	211,661	116,696	94,965
1997	264,893	144,640	120,253
1998	324,839	175,667	149,172
1999	392,235	210,075	182,160
2000	467,899	248,189	219,710
2001	486,615	255,635	230,980
2002	467,684	243,327	224,357
2003	444,065	228,817	215,248
2004	415,166	211,869	203,297
2005	380,334	192,227	188,107
2006	338,840	169,609	169,231
2007	289,880	143,707	146,173
2008	232,561	114,182	118,379
2009	165,892	80,666	85,226
2010	88,776	42,753	46,023
			2,590,403

SUMMARY SHEET ITEM 9A

REVISED

TABLE - 7 - FUEL SAVINGS COAL

YEAR	AVOIDED OIL COSTS	GAS COSTS	FUEL SAVINGS
1991	61,893	59,198	2,695
1992	131,324	125,606	5,718
1993	209,041	199,940	9,101
1994	295,863	282,981	12,882
1995	392,684	375,586	17,098
1996	500,483	478,692	21,791
1997	620,330	593,321	27,009
1998	753,396	720,594	32,802
1999	900,962	861,734	39,228
2000	1,064,426	1,018,081	46,345
2001	1,096,359	1,048,624	47,735
2002	1,043,576	998,139	45,437
2003	981,344	938,617	42,727
2004	908,659	869,096	39,563
2005	824,418	788,523	35,895
2006	727,414	695,743	31,671
2007	616,325	589,490	26,835
2008	489,701	468,380	21,321
2009	345,958	330,895	15,063
2010	183,358	175,374	7,984
			528,900

SUMMARY SHEET ITEM 9B

REVISED

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE AND OIL HEATING REPLACEMENT PROGRAM

TABLE - 8 - TOTAL SAVINGS

YEAR	CONSTRUCTION DEFERRED	OIL SAVINGS	COAL SAVINGS	TOTAL SAVINGS
1991	1,811,152	10,510	2,695	1,824,357
1992	2,023,704	22,813	5,718	2,052,235
1993	2,260,339	37,140	9,101	2,306,580
1994	2,525,915	53,745	12,882	2,592,542
1995	2,821,590	72,914	17,098	2,911,602
1996	3,153,088	94,965	21,791	3,269,844
1997	3,522,044	120,253	27,009	3,669,306
1998	3,935,322	149,172	32,802	4,117,296
1999	4,396,699	182,160	39,228	4,618,087
2000	4,912,168	219,710	46,345	5,178,223
2001		230,980	47,735	278,715
2002		224,357	45,437	269,794
2003		215,248	42,727	257,975
2004		203,297	39,563	242,860
2005		188,107	35,895	224,002
2006		169,231	31,671	200,902
2007		146,173	26,835	173,008
2008		118,379	21,321	139,700
2009		85,226	15,063	100,289
2010		46,023	7,984	54,007

TABLE - 9 - NET PRESENT VALUE OF TOTAL PROGRAM

YEAR	TOTAL COST	DISCOUNT RATE 10.5%	PRESENT VALUE
1991	1,824,357	1.0000	1,824,357
1992	2,052,235	0.9054	1,858,094
1993	2,306,580	0.8197	1,890,704
1994	2,592,542	0.7422	1,924,185
1995	2,911,602	0.6720	1,956,597
1996	3,269,844	0.6084	1,989,373
1997	3,669,306	0.5508	2,021,054
1998	4,117,296	0.4987	2,053,296
1999	4,618,087	0.4515	2,085,066
2000	5,178,223	0.4088	2,116,858
2001	278,715	0.3701	103,152
2002	269,794	0.3351	90,408
2003	257,975	0.3034	78,270
2004	242,860	0.2747	66,714
2005	224,002	0.2487	55,709
2006	200,902	0.2252	45,243
2007	173,008	0.2039	35,276
2008	139,700	0.1846	25,789
2009	100,289	0.1671	16,758
2010	54,007	0.1513	8,171
TOTAL			20,245,072

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WEST FLORIDA NATURAL GAS RATE PAYER BENEFITS

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE & OIL HEATING REPLACEMENT PROGRAM

Results from Allowance Program

Estimated Gas Company Expenditures	
1. Personnel Costs	$334,792
2. Advertising Costs	$494,280
3. Installation Allowances	$3,622,280
4. Total Costs	$4,451,352
5. Present Value of Total Costs	$2,826,228
Present Value of Total Program Benefits	
6. Present Value Benefits	$8,484,957
7. Present Value of Total Costs	$2,826,228
8. Line 6 - Line 7	$5,658,729
Benefit/Cost Ratio from Cumulative Totals	
Line 6 / Line 7	3.01 TO 1
Discount Payback	
Line 7 / Line 6 (Years)	.34 YRS

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GAS RATEPAYERS COST EFFECTIVENESS ANALYSIS

LIST OF ASSUMPTIONS

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE & OIL HEATING REPLACEMENT PROGRAM

1.	1991 Program Personnel Costs	$25,400 /YR
	Escalation Rate - Personnel Costs	6.0% /YR
2.	1991 Advertising Costs	$37,500 /YR
	Escalation Rate - Advertising Costs	6.0% /YR
3.	Applicable Non-Gas Energy Charge	$0.2847 /THERM
	Escalation Rate - Non-Gas Energy Charge	0.0% /YR
5.	Average Natural Gas Annual Therm Consumption Per Installed Appliance	261 THERM
6.	Period of Appliance Use	10 YEARS
7.	Discount Rate or Rate of Time Preference	10.45% /YR
8.	Appliances Installed during Program 1st Year	985
	Escalation Rate	6.0% /YR
9.	Average Allowance Per Appliance	$279
10.	Demand Charges ($/TH)	$0.02284
11.	Monthly Service Charge	$8
12.	Heat Only Disconnect Period (Months)	6
13.	Cost to Cap Service at Main	$125
	Escalation Rate	3.0%
14.	Cost to Run Service from Main/Set Regulator and Meter	$375
	Cost to Set Regulator and Meter Only	$120
	Escalation Rate	3.0%

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TABLE 2 - PRESENT VALUE OF TOTAL COSTS

YEAR	TOTAL COSTS	DISCOUNT FACTOR	PRESENT VALUE
1991	337,715	1.00000	337,715
1992	357,978	0.90539	324,110
1993	379,457	0.81973	311,052
1994	402,224	0.74217	298,519
1995	426,357	0.67195	286,491
1996	451,939	0.60838	274,951
1997	479,055	0.55081	263,868
1998	507,798	0.49870	253,239
1999	538,266	0.45152	243,038
2000	570,562	0.40880	233,246
TOTAL	4,451,351		2,826,228

SUMMARY SHEET ITEM 5

TABLE 3 - ESTIMATED NUMBER OF THERMS ADDED

YEAR	THERMS ADDED	THERMS CUMULATIVE	GROSS MARGIN	"A" TOTAL MARGIN
1991	257,085	257,085	0.2648	68,086
1992	272,484	529,569	0.2648	140,251
1993	288,927	818,496	0.2648	216,770
1994	306,153	1,124,649	0.2648	297,852
1995	324,684	1,449,333	0.2648	383,841
1996	343,998	1,793,331	0.2648	474,946
1997	364,617	2,157,948	0.2648	571,511
1998	386,541	2,544,489	0.2648	673,882
1999	409,770	2,954,259	0.2648	782,406
2000	434,304	3,388,563	0.2648	897,427
2001		3,388,563	0.2648	897,427
2002		3,388,563	0.2648	897,427
2003		3,388,563	0.2648	897,427
2004		3,388,563	0.2648	897,427
2005		3,388,563	0.2648	897,427
2006		3,388,563	0.2648	897,427
2007		3,388,563	0.2648	897,427
2008		3,388,563	0.2648	897,427
2009		3,388,563	0.2648	897,427
2010		3,388,563	0.2648	897,427
2011		3,388,563	0.2648	897,427
TOTAL	3,388,563			14,378,671

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NEW SERVICE & METER SETS

TABLE 4 - OPERATING COSTS & SAVINGS

YEAR	COSTS	CUT & CAP SAVINGS	"B" NET
1991	178,039	12,313	(165,726)
1992	194,383	13,443	(180,940)
1993	212,227	14,677	(197,550)
1994	231,709	16,024	(215,685)
1995	252,980	17,495	(235,485)
1996	276,204	19,101	(257,103)
1997	301,560	20,855	(280,705)
1998	329,243	22,769	(306,474)
1999	359,467	24,859	(334,608)
2000	392,466	27,142	(365,325)
TOTAL	2,728,278	188,678	(2,539,601)

TABLE 5 - DEMAND DISPLACEMENT CHARGES AND CUSTOMER SERVICE CHARGES

YEAR	APPLIANCES IN SERVICE	DEMAND DISPLACE	CUST SERVICE CHARGE	"C" TOTAL CONTRIB.
1991	985	5,872	67,374	73,246
1992	2,029	12,096	138,790	150,886
1993	3,136	18,694	214,492	233,185
1994	4,309	25,687	294,735	320,422
1995	5,553	33,100	379,794	412,894
1996	6,871	40,958	469,955	510,913
1997	8,268	49,287	565,526	614,814
1998	9,749	58,116	666,832	724,948
1999	11,319	67,475	774,216	841,691
2000	12,983	77,395	888,043	965,438
2001	12,983	77,395	888,043	965,438
2002	12,983	77,395	888,043	965,438
2003	12,983	77,395	888,043	965,438
2004	12,983	77,395	888,043	965,438
2005	12,983	77,395	888,043	965,438
2006	12,983	77,395	888,043	965,438
2007	12,983	77,395	888,043	965,438
2008	12,983	77,395	888,043	965,438
2009	12,983	77,395	888,043	965,438
2010	12,983	77,395	888,043	965,438
2011	12,983	77,395	888,043	965,438
TOTAL		1,240,028	14,228,231	15,468,258

REVISED
TABLE 6 - PRESENT VALUE OF TOTAL PROGRAM

YEAR	(A + B + C) TOTAL CONTRIB.	DISCOUNT FACTOR	PRESENT VALUE
1991	(24,394)	1.00000	(24,394)
1992	110,197	0.90539	99,772
1993	252,405	0.81973	206,904
1994	402,589	0.74217	298,789
1995	561,249	0.67195	377,131
1996	728,756	0.60838	443,361
1997	905,620	0.55081	498,824
1998	1,092,357	0.49870	544,758
1999	1,289,489	0.45152	582,230
2000	1,497,540	0.40880	612,195
2001	1,862,865	0.37012	689,484
2002	1,862,865	0.33510	624,246
2003	1,862,865	0.30340	565,193
2004	1,862,865	0.27469	511,710
2005	1,862,865	0.24870	463,295
2006	1,862,865	0.22517	419,461
2007	1,862,865	0.20387	379,782
2008	1,862,865	0.18458	343,848
2009	1,862,865	0.16712	311,322
2010	1,862,865	0.15130	281,852
2011	1,862,865	0.13699	255,194
TOTAL	27,307,327		8,484,957

SUMMARY SHEET ITEM NUMBER 6

REVISED

the past and projections for future residences eligible under the program guidelines are listed on Table A-2.

Based on historical construction data and on projections for future construction trends, first year costs are anticipated to be:

Per Customer	$4.42 / 52,260	Total Customers
Administrative	$49,875	
Incentives	$180,950	

IV. Cost Effectiveness Methodology

Based on the cost effectiveness methodology used in currently approved conservation programs, and using the assumptions listed, a benefit/cost ratio of 13.31 to 1 with a payback period of .08 years will be achieved for the State of Florida. The ratepayers of West Florida Natural Gas Company will receive a benefit/cost ratio of 2.67 to 1 with a payback period of .37 years.

V. Program Monitoring and Evaluation

The progress of the West Florida Natural Gas Company Residential Home Builder Program is monitored monthly at both divisions of the company. The Panama City office also submits a semi-annual report to the Florida Public Service Commission for both divisions. Feedback received from both divisions is constantly evaluated, and any revisions will be proposed to the program based upon these evaluations. Allowances paid to eligible participants under the program guidelines are based upon documentation and information necessary for Florida Public Service Commission audit purposes.

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ATTACHMENT A - 1

RESIDENTIAL HOME BUILDER PROGRAM

PROJECTED FORECASTED CONSERVATION

YEAR	AVOIDED CAPACITY	ANNUAL KWH REDUCTION
1991	3,238	4,390,540
1992	3,335	4,522,256
1993	3,435	4,657,924
1994	3,538	4,797,662
1995	3,644	4,941,591
1996	3,754	5,089,839
1997	3,866	5,242,534
1998	3,982	5,399,810
1999	4,102	5,561,805
2000	4,225	5,728,659
TOTAL	37,118	50,332,621

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

Results from Allowance Program

Estimated Gas Company Expenditures -	
1. Personnel Costs	$312,104
2. Advertising Cost	$259,657
3. Installation Allowances	$2,074,580
4. Total Costs	$2,646,341
5. Present Value of Total	$1,720,033
Reductions	
6. KW	37,118
7. MWH	553,659
Estimated Electric Company Benefits	
8. Construction Savings	$34,734,783
9. Fuel Purchase Savings	
A. Oil	$2,608,064
B. Coal	$683,904
10. Total Savings	$38,026,751
Net Present Value of Total Program	
11. Net Present Value	$22,888,389
Net Benefits from Cumulative Totals	
Col 11 - Col 5	$21,168,356

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Benefit/Cost Ratio from Cumulative Totals

Col 11 / Col 5	**13.31 TO 1**

Discount Payback

Col 5 / Col 11 (Years)	**.08 YEARS**

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RESIDENTIAL HOME BUILDER PROGRAM

TABLE - 3 - ESTIMATED INSTALLATIONS OF NATURAL GAS HOMES

YEAR	WATER HEATERS DISPLACED	KW DISPLACED	KWH AVOIDED
1991	385	3,238	4,390,540
1992	397	3,335	4,522,256
1993	408	3,435	4,657,924
1994	421	3,538	4,797,662
1995	433	3,644	4,941,591
1996	446	3,754	5,089,839
1997	460	3,866	5,242,534
1998	474	3,982	5,399,810
1999	488	4,102	5,561,805
2000	502	4,225	5,728,659
	4,414	37,118	50,332,621

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

TABLE - 4 - KW AVOIDANCE AND KWH REDUCTIONS FROM PROGRAM

YEAR	KW	KWH	MWH CUMULATIVE
1991	3,238	4,390,540	4,391
1992	3,335	4,522,256	8,913
1993	3,435	4,657,924	13,571
1994	3,538	4,797,662	18,368
1995	3,644	4,941,591	23,310
1996	3,754	5,089,839	28,400
1997	3,866	5,242,534	33,642
1998	3,982	5,399,810	39,042
1999	4,102	5,561,805	44,604
2000	4,225	5,728,659	50,333
2001			50,333
2002			45,942
2003			41,420
2004			36,762
2005			31,964
2006			27,023
2007			21,933
2008			16,690
2009			11,290
2010			5,729
			553,659

SUMMARY SHEET ITEM 7

TABLE - 5 - TOTAL CONSTRUCTION COSTS DEFERRED

YEAR	KW DEFERRED	COSTS PER KW	TOTAL CONSTRUCTION COSTS DEFERRED
1991	3,238	721	2,334,490
1992	3,335	760	2,534,369
1993	3,435	801	2,751,362
1994	3,538	844	2,986,933
1995	3,644	890	3,242,674
1996	3,754	938	3,520,312
1997	3,866	989	3,821,721
1998	3,982	1,042	4,148,937
1999	4,102	1,098	4,504,169
2000	4,225	1,157	4,889,816
			34,734,783

SUMMARY SHEET ITEM 8

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

FUEL SAVINGS - OIL

YEAR	KWH REDUCED	19.6% OIL	KW/BBL	$/BBL	AVOIDED COSTS
1991	4,390,540	860,546	613	20.50	28,778
1992	8,912,796	1,746,908	613	21.32	60,757
1993	13,570,720	2,659,861	613	22.17	96,210
1994	18,368,382	3,600,203	613	23.06	135,432
1995	23,309,973	4,568,755	613	23.98	178,741
1996	28,399,812	5,566,363	613	24.94	226,481
1997	33,642,346	6,593,900	613	25.94	279,020
1998	39,042,156	7,652,263	613	26.98	336,757
1999	44,603,961	8,742,376	613	28.06	400,119
2000	50,332,620	9,865,194	613	29.18	469,569
2001	50,332,620	9,865,194	613	30.35	488,351
2002	45,942,080	9,004,648	613	31.56	463,582
2003	41,419,824	8,118,286	613	32.82	434,668
2004	36,761,900	7,205,332	613	34.13	401,218
2005	31,964,238	6,264,991	613	35.50	362,811
2006	27,022,647	5,296,439	613	36.92	318,990
2007	21,932,808	4,298,830	613	38.40	269,263
2008	16,690,274	3,271,294	613	39.93	213,098
2009	11,290,464	2,212,931	613	41.53	149,921
2010	5,728,659	1,122,817	613	43.19	79,111
TOTAL					5,392,879

FUEL SAVINGS - COAL

YEAR	KWH REDUCED	80.4% COAL	KW/TON	$/TON	AVOIDED COSTS
1991	4,390,540	3,529,994	2,076	42.00	71,416
1992	8,912,796	7,165,888	2,076	43.26	149,324
1993	13,570,720	10,910,859	2,076	44.56	234,183
1994	18,368,382	14,768,179	2,076	45.89	326,483
1995	23,309,973	18,741,218	2,076	47.27	426,745
1996	28,399,812	22,833,449	2,076	48.69	535,525
1997	33,642,346	27,048,446	2,076	50.15	653,413
1998	39,042,156	31,389,893	2,076	51.65	781,038
1999	44,603,961	35,861,585	2,076	53.20	919,071
2000	50,332,620	40,467,426	2,076	54.80	1,068,225
2001	50,332,620	40,467,426	2,076	56.44	1,100,271
2002	45,942,080	36,937,432	2,076	58.14	1,034,423
2003	41,419,824	33,301,538	2,076	59.88	960,579
2004	36,761,900	29,556,568	2,076	61.68	878,132
2005	31,964,238	25,699,247	2,076	63.53	786,436
2006	27,022,647	21,726,208	2,076	65.43	684,801
2007	21,932,808	17,633,978	2,076	67.40	572,490
2008	16,690,274	13,418,980	2,076	69.42	448,719
2009	11,290,464	9,077,533	2,076	71.50	312,651
2010	5,728,659	4,605,842	2,076	73.65	163,395
TOTAL					12,107,319

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

TABLE - 6 - FUEL SAVINGS OIL

YEAR	AVOIDED OIL COSTS	GAS COSTS	FUEL SAVINGS
1991	28,778	16,425	12,353
1992	60,757	34,363	26,394
1993	96,210	53,860	42,350
1994	135,432	75,102	60,330
1995	178,741	98,146	80,595
1996	226,481	123,148	103,333
1997	279,020	150,275	128,745
1998	336,757	179,654	157,103
1999	400,119	211,417	188,702
2000	469,569	245,703	223,866
2001	488,351	253,074	235,277
2002	463,582	237,930	225,652
2003	434,668	220,920	213,748
2004	401,218	201,986	199,232
2005	362,811	180,878	181,933
2006	318,990	157,525	161,465
2007	269,263	131,717	137,546
2008	213,098	103,233	109,865
2009	149,921	71,903	78,018
2010	79,111	37,554	41,557
			2,608,064

SUMMARY SHEET ITEM 9A

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

TABLE - 7 - FUEL SAVINGS COAL

YEAR	AVOIDED OIL COSTS	GAS COSTS	FUEL SAVINGS
1991	71,416	67,376	4,040
1992	149,324	140,957	8,367
1993	234,183	220,935	13,248
1994	326,483	308,070	18,413
1995	426,745	402,599	24,146
1996	535,525	505,159	30,366
1997	653,413	616,436	36,977
1998	781,038	736,948	44,090
1999	919,071	867,240	51,831
2000	1,068,225	1,007,883	60,342
2001	1,100,271	1,038,119	62,152
2002	1,034,423	975,999	58,424
2003	960,579	906,223	54,356
2004	878,132	828,556	49,576
2005	786,436	741,971	44,465
2006	684,801	646,174	38,627
2007	572,490	540,310	32,180
2008	448,719	423,464	25,255
2009	312,651	294,950	17,701
2010	163,395	154,047	9,348
			683,904

SUMMARY SHEET ITEM 9B

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

TABLE - 8 - TOTAL SAVINGS

YEAR	CONSTRUCTION DEFERRED	OIL SAVINGS	COAL SAVINGS	TOTAL SAVINGS
1991	2,334,490	12,353	4,040	2,350,883
1992	2,534,369	26,394	8,367	2,569,130
1993	2,751,362	42,350	13,248	2,806,960
1994	2,986,933	60,330	18,413	3,065,676
1995	3,242,674	80,595	24,146	3,347,415
1996	3,520,312	103,333	30,366	3,654,011
1997	3,821,721	128,745	36,977	3,987,443
1998	4,148,937	157,103	44,090	4,350,130
1999	4,504,169	188,702	51,831	4,744,702
2000	4,889,816	223,866	60,342	5,174,024
2001		235,277	62,152	297,429
2002		225,652	58,424	284,076
2003		213,748	54,356	268,104
2004		199,232	49,576	248,808
2005		181,933	44,465	226,398
2006		161,465	38,627	200,092
2007		137,546	32,180	169,726
2008		109,865	25,255	135,120
2009		78,018	17,701	95,719
2010		41,557	9,348	50,905

TABLE - 9 - NET PRESENT VALUE OF TOTAL PROGRAM

YEAR	TOTAL COST	DISCOUNT RATE 10.5%	PRESENT VALUE
1991	2,350,883	1.0000	2,350,883
1992	2,569,130	0.9054	2,326,090
1993	2,806,960	0.8197	2,300,865
1994	3,065,676	0.7422	2,275,345
1995	3,347,415	0.6720	2,249,463
1996	3,654,011	0.6084	2,223,100
1997	3,987,443	0.5508	2,196,284
1998	4,350,130	0.4987	2,169,410
1999	4,744,702	0.4515	2,142,233
2000	5,174,024	0.4088	2,115,141
2001	297,429	0.3701	110,078
2002	284,076	0.3351	95,194
2003	268,104	0.3034	81,343
2004	248,808	0.2747	68,348
2005	226,398	0.2487	56,305
2006	200,092	0.2252	45,061
2007	169,726	0.2039	34,607
2008	135,120	0.1846	24,943
2009	95,719	0.1671	15,995
2010	50,905	0.1513	7,702
TOTAL			22,888,389

Revised

Incentives $15,500

IV. Cost Effectiveness Methodology:

Based on the cost effectiveness methodology used in currently approved conservation programs, and using the assumptions listed, a benefit/cost ratio of 57.1 to 1 with a payback period of .02 years will be achieved for the State of Florida. The ratepayers of West Florida Natural Gas Company will receive a benefit/cost ratio of 7.48 to 1 with a payback period of .13 years. The cost effectiveness calculations follow Table A-2.

V. Program Monitoring and Evaluation:

The progress of West Florida Natural Gas Company Gas Appliance Energy Savings Payback Program is monitored monthly at both divisions of the company. The Panama City office also submits a semi-annual report to the Florida Public Service Commission for both divisions. Feedback from both divisions is constantly evaluated and any necessary revisions will be proposed to the program based upon these evaluations. Allowances paid to eligible participants under the program guidelines are based upon documentation and information necessary for Florida Public Service Commission audit purposes.

REVISED

ATTACHMENT A - 1

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

PROJECTED FORECASTED CONSERVATION

YEAR	AVOIDED CAPACITY	ANNUAL KWH REDUCTION
1991	1,135	1,591,540
1992	1,203	1,687,032
1993	1,275	1,788,254
1994	1,351	1,895,550
1995	1,432	2,009,283
1996	1,518	2,129,840
1997	1,609	2,257,630
1998	1,706	2,393,088
1999	1,808	2,536,673
2000	1,917	2,688,873
TOTAL	14,955	20,977,762

REVISED

ATTACHMENT A-2

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

YEAR	# OF ELIGIBLE PARTICIPANTS	# OF ACTUAL APPLIANCES	% OF ACTUAL TO ELIGIBLE
1985	200,000	408	0.20%
1986	200,000	458	0.23%
1987	200,000	322	0.16%
1988	200,000	483	0.24%
1989	200,000	334	0.17%
1990	200,000	254	0.13%
1991	200,000	310	0.16%
1992	200,000	329	0.16%
1993	200,000	348	0.17%
1994	200,000	369	0.18%
1995	200,000	391	0.20%
1996	200,000	415	0.21%
1997	200,000	440	0.22%
1998	200,000	466	0.23%
1999	200,000	494	0.25%
2000	200,000	524	0.26%

REVISED

GAS APPLIANCE ENERGY SAVINGS PAYBACK (ESP) PROGRAM

RESULTS FROM ALLOWANCE PROGRAM

Estimated Gas Company Expenditures	
1. Personnel Costs	$23,725
2. Advertising Costs	$55,359
3. Installation Allowances	$204,302
4. Total Costs	$283,387
5. Present Value of Total	$179,927
Reductions	
6. KW	14,954
7. MWH	230,755
Estimated Electric Company Benefits	
8. Construction Savings	$14,164,432
9. Fuel Purchase Savings	
A. Oil	$1,684,170
B. Coal	$2,685,222
10. Total Savings	$18,533,824
Net Present Value of Total Program	
11. Net Present Value	$10,283,786
Net Benefits from Cumulative Totals	
Col 11 - Col 5	$10,103,859

REVISED

Benefit/Cost Ratio from Cumulative Totals

Col 11 / Col 5	57.1 TO 1

Discount Payback

Col 5 / Col 11 (Years)	0.02 YEARS

REVISED

LIST OF ASSUMPTIONS

GAS APPLIANCE ENERGY SAVINGS PAYBACK (ESP) PROGRAM

1.	1991 Program Personnel Costs. Escalation Rate - Personnel Costs.	1,800 /YR 6.0% /YR
2.	1991 Advertising Costs. Escalation Rate - Advertising Costs.	4,200 /YR 6.0% /YR
3.	Fuel Cost of Natural Gas 1991 Escalation Rate - Fuel Cost Natural Gas	$0.2864 /THERM 3.0% /YR
4.	KWH Produced from Ton of Coal	2076 KWH
5.	KWH Produced from Barrel #6 Oil	613 KWH
6.	Percentage Breakdown of Displaced Fuel from Reduced KWH Generation	19.6% OIL 80.4% COAL
7.	1991 Construction Cost per KW. (Pulverized Coal) Escalation Rate of Construction.	$721 /KW 5.4% /YR
8.	KW is eliminated at the time of its deferral.	
9.	Average Allowance for Each Energy Efficient Appliance Installed.	$50 /APP
10.	Demand Displacement	
	- Water Heating	.91 KW
	- Central Heating	7.50 KW
	- Range	NIL
	- Dryer	NIL
11.	Average Natural Gas Annual Therm Consumption per Installed Appliance	171 THERM

REVISED

12.	Period of Appliance Use.	10 YRS
13.	Price of Oil per Barrel	$20.50 /BL
	Escalation Rate	4.0% /YR
14.	Price of Coal per Ton	$42.00 /TON
	Escalation Rate	3.0% /YR
15.	Discount Rate or Rate of Time Preference	10.45% /YR
16.	Gas Appliances Installed During Program 1st Year	310 APPL
	Escalation Rate	6.0% /YR

	Number	Allowance	KW Displaced	KWH Avoided	Gas Therms
Water Heater	10	$50	0.91	4500	225
Central Heat	150	50	7.50	9450	300
Range	75	50	NIL	722	38
Dryer 75	50	NIL	1000	40	
Total	310				

Weighted Average Allowance	$50
Weighted Average KW	3.66
Weighted Avsrage KWH	5134
Weighted Average Therms Gas	171

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

TABLE - 1 - PROGRAM COSTS

YEAR	PERSONNEL COSTS	ADVERTISING COSTS	INSTALLATION ALLOWANCES	TOTAL COSTS
1991	1,800	4,200	15,500	21,500
1992	1,908	4,452	16,430	22,790
1993	2,022	4,719	17,416	24,157
1994	2,144	5,002	18,461	25,607
1995	2,272	5,302	19,568	27,143
1996	2,409	5,621	20,742	28,772
1997	2,553	5,958	21,987	30,498
1998	2,707	6,315	23,306	32,328
1999	2,869	6,694	24,705	34,268
2000	3,041	7,096	26,187	36,324
	23,725	55,359	204,302	283,387

SUMMARY SHEET ITEMS 1, 2, 3, AND 4.

TABLE - 2 - PRESENT VALUE OF TOTAL COSTS

YEAR	TOTAL COSTS	DISCOUNT FACTOR	PRESENT VALUE
1991	21,500	1.00000	21,500
1992	22,790	0.90539	20,634
1993	24,157	0.81973	19,803
1994	25,607	0.74217	19,005
1995	27,143	0.67195	18,239
1996	28,772	0.60838	17,504
1997	30,498	0.55081	16,799
1998	32,328	0.49870	16,122
1999	34,268	0.45152	15,473
2000	36,324	0.40880	14,849
TOTAL			179,927

SUMMARY SHEET ITEM 5

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

TABLE - 3 - ESTIMATED NUMBER OF NATURAL GAS APPLIANCES INSTALLED

YEAR	APPLIANCES INSTALLED	KW DISPLACED	KWH AVOIDED
1991	310	1,135	1,591,540
1992	329	1,203	1,687,032
1993	348	1,275	1,788,254
1994	369	1,351	1,895,550
1995	391	1,432	2,009,283
1996	415	1,518	2,129,840
1997	440	1,609	2,257,630
1998	466	1,706	2,393,088
1999	494	1,808	2,536,673
2000	524	1,917	2,688,873
	4,086	14,954	20,977,763

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

TABLE - 4 - KW AVOIDANCE AND KWH REDUCTIONS FROM PROGRAM

YEAR	KW	KWH	MWH CUMULATIVE
1991	1,135	1,591,540	1,592
1992	1,203	1,687,032	3,279
1993	1,275	1,788,254	5,067
1994	1,351	1,895,550	6,962
1995	1,432	2,009,283	8,972
1996	1,518	2,129,840	11,101
1997	1,609	2,257,630	13,359
1998	1,706	2,393,088	15,752
1999	1,808	2,536,673	18,289
2000	1,917	2,688,873	20,978
2001			20,978
2002			19,386
2003			17,699
2004			15,911
2005			14,015
2006			12,006
2007			9,876
2008			7,619
2009			5,226
2010			2,689
			230,755

SUMMARY SHEET ITEM 7

TABLE - 5 - TOTAL CONSTRUCTION COSTS DEFERRED

YEAR	KW DEFERRED	COSTS PER KW	TOTAL CONSTRUCTION COSTS DEFERRED
1991	1,135	721	818,335
1992	1,203	760	914,201
1993	1,275	801	1,021,237
1994	1,351	844	1,140,545
1995	1,432	890	1,274,209
1996	1,518	938	1,423,672
1997	1,609	989	1,590,505
1998	1,706	1,042	1,777,455
1999	1,808	1,098	1,985,440
2000	1,917	1,157	2,218,824
			14,164,432

SUMMARY SHEET ITEM 8

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

FUEL SAVINGS - OIL

YEAR	KWH REDUCED	19.6% OIL	KW/BBL	$/BBL	AVOIDED COSTS
1991	1,591,540	311,942	613	20.50	10,432
1992	3,278,572	642,600	613	21.32	22,349
1993	5,066,826	993,098	613	22.17	35,921
1994	6,962,376	1,364,626	613	23.06	51,334
1995	8,971,659	1,758,445	613	23.98	68,795
1996	11,101,499	2,175,894	613	24.94	88,531
1997	13,359,129	2,618,389	613	25.94	110,797
1998	15,752,217	3,087,435	613	26.98	135,870
1999	18,288,890	3,584,622	613	28.06	164,060
2000	20,977,763	4,111,642	613	29.18	195,708
2001	20,977,763	4,111,642	613	30.35	203,536
2002	19,386,223	3,799,700	613	31.56	195,618
2003	17,699,191	3,469,041	613	32.82	185,739
2004	15,910,937	3,118,544	613	34.13	173,652
2005	14,015,387	2,747,016	613	35.50	159,082
2006	12,006,104	2,353,196	613	36.92	141,727
2007	9,876,264	1,935,748	613	38.40	121,248
2008	7,618,634	1,493,252	613	39.93	97,273
2009	5,225,546	1,024,207	613	41.53	69,388
2010	2,688,873	527,019	613	43.19	37,132
TOTAL					2,268,194

FUEL SAVINGS - COAL

YEAR	KWH REDUCED	80.4% COAL	KW/TON	$/TON	AVOIDED COSTS
1991	1,591,540	1,279,598	2,076	42.00	25,888
1992	3,278,572	2,635,972	2,076	43.26	54,929
1993	5,066,826	4,073,728	2,076	44.56	87,436
1994	6,962,376	5,597,750	2,076	45.89	123,751
1995	8,971,659	7,213,214	2,076	47.27	164,248
1996	11,101,499	8,925,605	2,076	48.69	209,337
1997	13,359,129	10,740,740	2,076	50.15	259,465
1998	15,752,217	12,664,782	2,076	51.65	315,123
1999	18,288,890	14,704,268	2,076	53.20	376,845
2000	20,977,763	16,866,121	2,076	54.80	445,217
2001	20,977,763	16,866,121	2,076	56.44	458,574
2002	19,386,223	15,586,523	2,076	58.14	436,496
2003	17,699,191	14,230,150	2,076	59.88	410,467
2004	15,910,937	12,792,393	2,076	61.68	380,065
2005	14,015,387	11,268,371	2,076	63.53	344,829
2006	12,006,104	9,652,908	2,076	65.43	304,256
2007	9,876,264	7,940,516	2,076	67.40	257,790
2008	7,618,634	6,125,382	2,076	69.42	204,827
2009	5,225,546	4,201,339	2,076	71.50	144,704
2010	2,688,873	2,161,854	2,076	73.65	76,693
TOTAL					5,080,940

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

ANNUAL FUEL CONSUMPTION - NATURAL GAS

YEAR	THERMS CONSUMED	THERMS CUMULATIVE	$/THERM	TOTAL COSTS
1991	53,010	53,010	0.2864	15,182
1992	56,191	109,201	0.2950	32,213
1993	59,562	168,763	0.3038	51,277
1994	63,136	231,898	0.3130	72,574
1995	66,924	298,822	0.3223	96,324
1996	70,939	369,762	0.3320	122,767
1997	75,196	444,957	0.3420	152,165
1998	79,707	524,665	0.3522	184,806
1999	84,490	609,155	0.3628	221,003
2000	89,559	698,714	0.3737	261,100
2001		698,714	0.3849	268,933
2002		645,704	0.3964	255,986
2003		589,513	0.4083	240,721
2004		529,951	0.4206	222,891
2005		466,816	0.4332	202,227
2006		399,892	0.4462	178,432
2007		328,952	0.4596	151,183
2008		253,757	0.4734	120,122
2009		174,049	0.4876	84,862
2010		89,559	0.5022	44,977

NATURAL GAS FUEL COST - DISPLACEMENT DISTRIBUTION

YEAR	TOTAL NATURAL GAS COST	19.6% OIL	80.4% COAL
1991	15,182	2,976	12,206
1992	32,213	6,314	25,899
1993	51,277	10,050	41,227
1994	72,574	14,225	58,350
1995	96,324	18,880	77,445
1996	122,767	24,062	98,705
1997	152,165	29,824	122,341
1998	184,806	36,222	148,584
1999	221,003	43,317	177,686
2000	261,100	51,176	209,925
2001	268,933	52,711	216,222
2002	255,986	50,173	205,813
2003	240,721	47,181	193,539
2004	222,891	43,687	179,205
2005	202,227	39,637	162,591
2006	178,432	34,973	143,460
2007	151,183	29,632	121,551
2008	120,122	23,544	96,578
2009	84,862	16,633	68,229
2010	44,977	8,815	36,162
TOTAL		584,030	2,395,716

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

TABLE - 6 - FUEL SAVINGS OIL

YEAR	AVOIDED OIL COSTS	GAS COSTS	FUEL SAVINGS
1991	10,432	2,976	7,456
1992	22,349	6,314	16,035
1993	35,921	10,050	25,871
1994	51,334	14,225	37,109
1995	68,795	18,880	49,915
1996	88,531	24,062	64,469
1997	110,797	29,824	80,973
1998	135,870	36,222	99,648
1999	164,060	43,317	120,743
2000	195,708	51,176	144,532
2001	203,536	52,711	150,825
2002	195,618	50,173	145,445
2003	185,739	47,181	138,558
2004	173,652	43,687	129,965
2005	159,082	39,637	119,445
2006	141,737	34,973	106,764
2007	121,248	29,632	91,616
2008	97,273	23,544	73,729
2009	69,388	16,633	52,755
2010	37,132	8,815	28,317
			1,684,170

SUMMARY SHEET ITEM 9A

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

TABLE - 7 - FUEL SAVINGS COAL

YEAR	AVOIDED OIL COSTS	GAS COSTS	FUEL SAVINGS
1991	25,888	12,206	13,682
1992	54,929	25,899	29,030
1993	87,436	41,227	46,209
1994	123,751	58,350	65,401
1995	164,248	77,445	86,803
1996	209,337	98,705	110,632
1997	259,465	122,341	137,124
1998	315,123	148,584	166,539
1999	376,845	177,686	199,159
2000	445,217	209,925	235,292
2001	458,574	216,222	242,352
2002	436,496	205,813	230,683
2003	410,467	193,539	216,928
2004	380,065	179,205	200,860
2005	344,829	162,591	182,238
2006	304,256	143,460	160,796
2007	257,790	121,551	136,239
2008	204,827	96,578	108,249
2009	144,704	68,229	76,475
2010	76,693	36,162	40,531
		2,395,718	2,685,222

SUMMARY SHEET ITEM 9B

REVISED

GAS ENERGY SAVINGS PAYBACK (ESP) PROGRAM

TABLE - 8 - TOTAL SAVINGS

YEAR	CONSTRUCTION DEFERRED	OIL SAVINGS	COAL SAVINGS	TOTAL SAVINGS
1991	818,335	7,456	13,682	839,473
1992	914,201	16,035	29,030	959,266
1993	1,021,237	25,871	46,209	1,093,317
1994	1,140,545	37,109	65,401	1,243,055
1995	1,274,209	49,915	86,803	1,410,927
1996	1,423,672	64,469	110,632	1,598,773
1997	1,590,505	80,973	137,124	1,808,602
1998	1,777,455	99,648	166,539	2,043,642
1999	1,985,448	120,743	199,159	2,305,350
2000	2,218,824	144,532	235,292	2,598,648
2001		150,825	242,352	393,177
2002		145,445	230,683	376,128
2003		138,558	216,928	355,486
2004		129,965	200,860	330,825
2005		119,445	182,238	301,683
2006		106,764	160,796	267,560
2007		91,616	136,239	227,855
2008		73,729	108,249	181,978
2009		52,755	76,475	129,230
2010		28,317	40,532	68,849

TABLE - 9 - NET PRESENT VALUE OF TOTAL PROGRAM

YEAR	TOTAL COST	DISCOUNT RATE 10.5%	PRESENT VALUE
1991	839,473	1.0000	839,473
1992	959,266	0.9054	868,519
1993	1,093,317	0.8197	896,192
1994	1,243,055	0.7422	922,595
1995	1,410,927	0.6720	948,143
1996	1,598,773	0.6084	972,693
1997	1,808,602	0.5508	996,178
1998	2,043,642	0.4987	1,019,164
1999	2,305,350	0.4515	1,040,866
2000	2,598,648	0.4088	1,062,327
2001	393,177	0.3701	145,515
2002	376,128	0.3351	126,040
2003	355,486	0.3034	107,854
2004	330,825	0.2747	90,878
2005	301,683	0.2487	75,029
2006	267,560	0.2252	60,255
2007	227,855	0.2039	46,460
2008	181,978	0.1846	33,593
2009	129,230	0.1671	21,594
2010	68,849	0.1513	10,417
TOTAL			10,283,786

REVISED

WEST FLORIDA NATURAL GAS RATEPAYER BENEFITS

GAS APPLIANCE ENERGY SAVINGS PAYBACK (ESP) PROGRAM

Results from Allowance Program

Estimated Gas Company Expenditures	
1. Personnel Costs	$23,725
2. Advertising Costs	$55,359
3. Installation Allowances	$204,302
4. Total Costs	$283,387
5. Present Value of Total Costs	$179,926
Present Value of Total Program Benefits	
6. Present Value Benefits	$1,345,762
7. Present Value of Total Costs	$179,926
8. Line 6 - Line 7	$1,165,836
Benefit/Cost Ratio from Cumulative Totals	
Line 6 / Line 7	7.48 TO 1
Discount Payback	
Line 7 / Line 6 (Years)	.13 YRS

REVISED

GAS RATEPAYERS COST EFFECTIVENESS ANALYSIS

LIST OF ASSUMPTIONS

GAS APPLIANCE ENERGY SAVINGS PAYBACK (ESP) PROGRAM

1.	1991 Program Personnel Costs	$1,800 /YR
	Escalation Rate - Personnel Costs	6.0% /YR
2.	1991 Advertising Costs	$4,200 /YR
	Escalation Rate - Advertising Costs	6.0% /YR
3.	Applicable Non-Gas Energy Charge	$0.3026 /THERM
	Escalation Rate - Non-Gas Energy Charge	0.0% /YR
5.	Average Natural Gas Annual Therm Consumption per Installed Appliance	171 THERM
6.	Period of Appliance Use	10 YEARS
7.	Discount Rate or Rate of Time Preference	10.45% /YR
8.	Appliances Installed During Program 1ST Year	310
	Escalation Rate	6.0% /YR
9.	Average Allowance per Customer	$50
10.	Demand Charges ($/TH)	$0.02284
11.	Monthly Service Charge	$6
12.	Heat Only Disconnect Period (Months)	6
13.	Cost to Cap Service at Main	$125
	Escalation Rate	3.0%
14.	Cost to Run Service from Main/Set Regulator and Meter	$375
	Cost to Set Regulator and Meter Only	$120
	Escalation Rate	3.0%

REVISED

NUMBER OF APPLIANCES INSTALLED

YEAR	APPLIANCES INSTALLED	APPLIANCES IN SERVICE
1991	310	310
1992	329	639
1993	348	987
1994	369	1,356
1995	391	1,747
1996	415	2,162
1997	440	2,602
1998	466	3,068
1999	494	3,562
2000	524	4,086
TOTAL	4,086	

TABLE 1 - PROGRAM COSTS

YEAR	PERSONNEL COSTS	ADVERTISING COSTS	INSTALLATION ALLOWANCES	TOTAL COSTS
1991	1,800	4,200	15,500	21,500
1992	1,908	4,452	16,430	22,790
1993	2,022	4,719	17,416	24,157
1994	2,144	5,002	18,461	25,607
1995	2,272	5,302	19,568	27,143
1996	2,409	5,621	20,742	28,772
1997	2,553	5,958	21,987	30,498
1998	2,707	6,315	23,306	32,328
1999	2,869	6,694	24,705	34,268
2000	3,041	7,096	26,187	36,324
TOTAL	23,725	55,359	204,302	283,387

SUMMARY SHEET ITEMS 1, 2, 3 AND 4

REVISED
TABLE 2 - PRESENT VALUE OF TOTAL COSTS

YEAR	TOTAL COSTS	DISCOUNT FACTOR	PRESENT VALUE
1991	21,500	1.00000	21,500
1992	22,790	0.90539	20,634
1993	24,157	0.81973	19,802
1994	25,607	0.74217	19,005
1995	27,143	0.67195	18,239
1996	28,772	0.60838	17,504
1997	30,498	0.55081	16,799
1998	32,328	0.49870	16,122
1999	34,268	0.45152	15,473
2000	36,324	0.40880	14,849
TOTAL	283,387		179,926

SUMMARY SHEET ITEM 5

TABLE 3 - ESTIMATED NUMBER OF THERMS ADDED

YEAR	THERMS ADDED	THERMS CUMULATIVE	GROSS MARGIN	"A" TOTAL MARGIN
1991	53,010	53,010	0.2648	14,039
1992	56,191	109,201	0.2648	28,921
1993	59,562	168,763	0.2648	44,695
1994	63,136	231,898	0.2648	61,416
1995	66,924	298,822	0.2648	79,140
1996	70,939	369,762	0.2648	97,928
1997	75,196	444,957	0.2648	117,843
1998	79,707	524,665	0.2648	138,952
1999	84,490	609,155	0.2648	161,329
2000	89,559	698,714	0.2648	185,047
2001		698,714	0.2648	185,047
2002		698,714	0.2648	185,047
2003		698,714	0.2648	185,047
2004		698,714	0.2648	185,047
2005		698,714	0.2648	185,047
2006		698,714	0.2648	185,047
2007		698,714	0.2648	185,047
2008		698,714	0.2648	185,047
2009		698,714	0.2648	185,047
2010		698,714	0.2648	185,047
2011		698,714	0.2648	185,047
TOTAL	698,714			2,964,831

REVISED

NEW SERVICE & METER SETS

TABLE 4 - OPERATING COSTS & SAVINGS

YEAR	COSTS	CUT & CAP SAVINGS	"B" NET
1991	0	0	0
1992	0	0	0
1993	0	0	0
1994	0	0	0
1995	0	0	0
1996	0	0	0
1997	0	0	0
1998	0	0	0
1999	0	0	0
2000	0	0	0
TOTAL	0	0	0

TABLE 5 - DEMAND DISPLACEMENT CHARGES AND CUSTOMER SERVICE CHARGES

YEAR	APPLIANCE IN SERVICE	DEMAND DISPLACE	CUST SERVICE CHARGE	"C" TOTAL CONTRIB.
1991	310	1,211	22,320	23,531
1992	639	2,496	22,990	25,485
1993	987	3,855	23,679	27,534
1994	1,356	5,296	24,390	29,686
1995	1,747	6,823	25,121	31,945
1996	2,162	8,444	25,875	34,319
1997	2,602	10,162	26,651	36,814
1998	3,068	11,983	27,451	39,433
1999	3,562	13,912	28,274	42,186
2000	4,086	15,958	29,123	45,081
2001	4,086	15,958	36,168	52,126
2002	4,086	15,958	36,168	52,126
2003	4,086	15,958	36,168	52,126
2004	4,086	15,958	36,168	52,126
2005	4,086	15,958	36,168	52,126
2006	4,086	15,958	36,168	52,126
2007	4,086	15,958	36,168	52,126
2008	4,086	15,958	36,168	52,126
2009	4,086	15,958	36,168	52,126
2010	4,086	15,958	36,168	52,126
2011	4,086	15,958	36,168	52,126
TOTAL		255,683	653,722	909,405

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TABLE 6 - PRESENT VALUE OF TOTAL PROGRAM

YEAR	(A + B + C) TOTAL CONTRIB.	DISCOUNT FACTOR	PRESENT VALUE
1991	37,570	1.00000	37,570
1992	54,406	0.90539	49,259
1993	72,229	0.81973	59,208
1994	91,102	0.74217	67,613
1995	111,085	0.67195	74,643
1996	132,247	0.60838	80,456
1997	154,657	0.55081	85,186
1998	178,385	0.49870	88,961
1999	203,515	0.45152	91,891
2000	230,128	0.40880	94,076
2001	237,173	0.37012	87,783
2002	237,173	0.33510	79,477
2003	237,173	0.30340	71,958
2004	237,173	0.27469	65,149
2005	237,173	0.24870	58,985
2006	237,173	0.22517	53,404
2007	237,173	0.20387	48,353
2008	237,173	0.18458	43,777
2009	237,173	0.16712	39,636
2010	237,173	0.15130	35,884
2011	237,173	0.13699	32,490
TOTAL	3,874,232		1,345,762

SUMMARY SHEET ITEM NUMBER 6

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COP of .8 or above. Although the program is open to residential customers, commercial customers will receive the most benefit due to installations of high tonnage units in larger commercial establishments.

The allowance is $100.00 per ton, payable to a maximum 100 tons per project.

III. Benefits and Costs

The following effects in decreasing summer peak KWD and annual KWH consumptions are expected with the replacement of 1 (one) ton of electric space conditioning with energy efficient natural gas space conditioning:

Tonnage	KWD Displacement	Annual KWH Consumption
1 (one) Ton	1	2,500

Company-wide projections of the program with demand and energy savings are shown on Table A-1.

The number of customers anticipated to participate are shown as projections on Table A-2.

Based on projections of customers expected to participate in the program, first year costs are anticipated as follows:

Per Customer	$.76/52,260	Total Customers
Administrative	$13,250.00	
Incentives	$26,500.00	

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IV. Cost Effectiveness Methodology

Based on the cost effectiveness methodology used in currently approved conservation programs, and using the assumptions listed, a benefit/cost ratio of 8.29 to 1 with a payback period of .12 years will be achieved for the State of Florida. The ratepayers of West Florida Natural Gas Company will receive a benefit/cost ratio of 3.34 to 1 with a payback period of .30 years.

V. Program Monitoring and Evaluation

The progress of the West Florida Natural Gas Company Gas Space Conditioning Allowance Program will be monitored monthly at both divisions of the company. The Panama City office will also submit a semi-annual report to the Florida Public Service Commission for both divisions. Feedback received from both divisions will be constantly evaluated, and any revisions will be proposed to the program based upon these evaluations. Allowances paid to eligible participants under the program guidelines are based upon documentation and information necessary for Florida Public Service Commission audit purposes.

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GAS SPACE CONDITIONING ALLOWANCE PROGRAM

RESULTS FROM ALLOWANCE PROGRAM

Estimated Gas Company Expenditures	
1. Personnel Costs	$192,867
2. Advertising Costs	$98,197
3. Installation Allowances	$881,202
4. Total Costs	$1,172,266
5. Present Value of Total	$662,334
Reductions	
6. KW	9,693
7. MWH	261,133
Estimated Electric Company Benefits	
8. Construction Savings	$9,769,292
9. Fuel Purchase Savings	
A. Oil	$1,142,679
B. Coal	$(493,688)
10. Total Savings	$10,418,283
Net Present Value of Total Program	
11. Net Present Value	$5,492,161
Net Benefits from Cumulative Totals	
Col 11 - Col 5	$4,829,827

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Benefit/Cost Ratio from Cumulative Totals

Col 11 / Col 5	**8.29 TO 1**

Discount Payback

Col 5 / Col 11 (Years)	**0.12 YEARS**

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LIST OF ASSUMPTIONS

GAS SPACE CONDITIONING ALLOWANCE PROGRAM

1.	1991 Program Personnel Costs.	5,800	/YR
	Escalation Rate - Personnel Costs.	25.0%	/YR
2.	1991 Advertising Costs.	7,450	/YR
	Escalation Rate - Advertising Costs.	6.0%	/YR
3.	Fuel Cost of Natural Gas 1991	$0.2864	/THERM
	Escalation Rate - Fuel Cost Natural Gas	3.0%	/YR
4.	KWH Produced from Ton of Coal	2076	KWH
5.	KWH Produced from Barrel #6 Oil	613	KWH
6.	Percentage Breakdown of Displaced Fuel from Reduced KWH Generation	19.6%	OIL
		80.4%	COAL
7.	1990 Construction Cost per KW. (Pulverized Coal)	$721	/KW
	Escalation Rate of Construction.	5.4%	/YR
8.	Treatment of Deferred KW - It is treated as being eliminated at the time of its deferral.		
9.	Allowance per Customer Toward Installation of Gas AC/HEAT Unit on a $/Ton Basis.	$100.00	/TON
	Average KW Displaced per Ton	1.1	KW
10.	Demand Displacement Winter and Summer Peak.	1.1	KW
11.	Annual KWH Reductions 1st Year	728,750	KW
12.	Estimated Annual Hours of Operation.	2500	HRS/YR
13.	Natural Therm Consumption per Ton per Hour	0.0840	THERMS
14.	Natural Gas Annual Therm Consumption per Ton	210	THERMS

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GAS SPACE CONDITIONING ALLOWANCE PROGRAM

TABLE - 1 - PROGRAM COSTS

YEAR	PERSONNEL COSTS	ADVERTISING COSTS	INSTALLATION ALLOWANCES	TOTAL COSTS
1991	5,800	7,450	26,500	39,750
1992	7,250	7,897	33,125	48,272
1993	9,063	8,371	41,406	58,840
1994	11,328	8,873	51,758	71,959
1995	14,160	9,405	64,697	88,263
1996	17,700	9,970	80,872	108,542
1997	22,125	10,568	101,089	133,783
1998	27,657	11,202	126,362	165,220
1999	34,571	11,874	157,952	204,397
2000	43,213	12,587	197,440	253,240
	192,867	98,197	881,202	1,172,266

SUMMARY SHEET ITEMS 1, 2, 3, AND 4.

TABLE - 2 - PRESENT VALUE OF TOTAL COSTS

YEAR	TOTAL COSTS	DISCOUNT FACTOR	PRESENT VALUE
1991	39,750	1.00000	39,750
1992	48,272	0.90539	43,705
1993	58,840	0.81973	48,233
1994	71,959	0.74217	53,406
1995	88,263	0.67195	59,308
1996	108,542	0.60838	66,035
1997	133,783	0.55081	73,689
1998	165,220	0.49870	82,395
1999	204,397	0.45152	92,289
2000	253,240	0.40880	103,525
TOTAL			662,334

SUMMARY SHEET ITEM 5

REVISED

WEST FLORIDA NATURAL GAS RATE PAYER BENEFITS

GAS SPACE CONDITIONING ALLOWANCE PROGRAM

Results from Allowance Program

Estimated Gas Company Expenditures	
1. Personnel Costs	$192,867
2. Advertising Costs	$98,197
3. Installation Allowances	$881,202
4. Total Costs	$1,172,266
5. Present Value of Total Costs	$662,335
Present Value of Total Program Benefits	
6. Present Value Benefits	$2,210,395
7. Present Value of Total Costs	$662,335
8. Line 6 - Line 7	$1,548,060
Benefit/Cost Ratio from Cumulative Totals	
Line 6 / Line 7	3.34 TO 1
Discount Payback	
Line 7 / Line 6 (Years)	.30 YRS

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GAS RATEPAYERS COST EFFECTIVENESS ANALYSIS

LIST OF ASSUMPTIONS

GAS SPACE CONDITIONING ALLOWANCE PROGRAM

1.	1991 Program Personnel Costs	$5,800 /YR
	Escalation Rate - Personnel Costs	25.0% /YR
2.	1991 Advertising Costs	$7,450 /YR
	Escalation Rate - Advertising Costs	6.0% /YR
3.	Applicable Non-Gas Energy Charge	$0.1382 /THERM
	Escalation Rate - Non-Gas Energy Charge	0.0% /YR
5.	Average Natural Gas Annual Therm Consumption per Installed Appliance	1391 THERM
6.	Period of Appliance Use	10 YEARS
7.	Discount Rate or Rate of Time Preference	10.45% /YR
8.	Appliances Installed During Program 1st Year	40
	Escalation Rate	25.0% /YR
9.	Average Allowance per Customer	$663
10.	Demand Charges ($/TH)	$0.02284
11.	Monthly Service Charge	$15
12.	Heat Only Disconnect Period (Months)	6
13.	Cost to Cap Service at Main	$125
	Escalation Rate	3.0%
14.	Cost to Run Service from Main/Set Regulator and Meter	$510
	Cost to Set Regulator and Meter Only	$195
	Escalation Rate	3.0%

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NUMBER OF APPLIANCES INSTALLED

YEAR	APPLIANCES INSTALLED	APPLIANCES IN SERVICE
1991	40	40
1992	50	90
1993	63	153
1994	78	231
1995	98	328
1996	122	450
1997	153	603
1998	191	794
1999	238	1,032
2000	298	1,330
2001	0	1,330
2002	0	1,330
2003	0	1,330
2004	0	1,330
2005	0	1,330
2006	0	1,330
2007	0	1,330
2008	0	1,330
2009	0	1,330
2010	0	1,330
TOTAL	1,330	

TABLE 1 - PROGRAM COSTS

YEAR	PERSONNEL COSTS	ADVERTISING COSTS	INSTALLATION ALLOWANCES	TOTAL COSTS
1991	5,800	7,450	26,500	39,750
1992	7,250	7,897	33,125	48,272
1993	9,063	8,371	41,406	58,840
1994	11,328	8,873	51,758	71,959
1995	14,160	9,405	64,697	88,263
1996	17,700	9,970	80,872	108,542
1997	22,125	10,568	101,089	133,783
1998	27,657	11,202	126,362	165,220
1999	34,571	11,874	157,952	204,397
2000	43,213	12,587	197,440	253,240
TOTAL	192,867	98,197	881,202	1,172,266

SUMMARY SHEET ITEMS 1, 2, 3 AND 4

REVISED
TABLE 2 - PRESENT VALUE OF TOTAL COSTS

YEAR	TOTAL COSTS	DISCOUNT FACTOR	PRESENT VALUE
1991	39,750	1.00000	39,750
1992	48,272	0.90539	43,705
1993	58,840	0.81973	48,233
1994	71,959	0.74217	53,406
1995	88,263	0.67195	59,308
1996	108,542	0.60838	66,035
1997	133,783	0.55081	73,689
1998	165,220	0.49870	82,395
1999	204,397	0.45152	92,289
2000	253,240	0.40880	103,525
TOTAL	1,172,266		662,335

SUMMARY SHEET ITEM 5

TABLE 3 - ESTIMATED NUMBER OF THERMS ADDED

YEAR	THERMS ADDED	THERMS CUMULATIVE	GROSS MARGIN	"A" TOTAL MARGIN
1991	55,640	55,640	0.12928	7,193
1992	69,550	125,190	0.12928	16,185
1993	139,163	264,353	0.12928	34,176
1994	108,498	372,851	0.12928	48,202
1995	136,318	509,169	0.12928	65,825
1996	169,702	678,871	0.12928	87,764
1997	212,823	891,694	0.12928	115,278
1998	265,681	1,157,375	0.12928	149,625
1999	331,058	1,488,433	0.12928	192,425
2000	414,518	1,902,951	0.12928	246,014
2001		1,902,951	0.12928	246,014
2002		1,902,951	0.12928	246,014
2003		1,902,951	0.12928	246,014
2004		1,902,951	0.12928	246,014
2005		1,902,951	0.12928	246,014
2006		1,902,951	0.12928	246,014
2007		1,902,951	0.12928	246,014
2008		1,902,951	0.12928	246,014
2009		1,902,951	0.12928	246,014
2010		1,902,951	0.12928	246,014
2011		1,902,951	0.12928	246,014
TOTAL	1,902,951			3,668,836

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WEST FLORIDA NATURAL GAS COMPANY

CUMULATIVE IMPACT OF CONSERVATION PROGRAM

Year	Avoided Capacity	Annual KWH Reduced
1991	8,616	21,908,385
1992	9,013	22,840,113
1993	9,442	23,846,725
1994	9,911	24 940,895
1995	10,424	26,138,211
1996	10,988	27,457,891
1997	11,614	28,923,661
1998	12,625	31,000,583
1999	13,473	32,938,525
2000	14,435	35,140,332

Attachment 4
April 25, 1991

West Florida
Natural Gas Co.
"energy for all seasons"

Caller Box 1460
301 Maple Avenue
Panama City, FL 32402
(904) 872-6100

J.E. McIntyre
President

March 5, 1991

Mr. William Troy Rendell
Regulatory Analyst
Florida Public Service Commission
Fletcher Building, 101 East Gaines Street
Tallahassee, Florida 32399-0850

Dear Mr. Rendell:

Enclosed please find the responses to the data requested in your February 12, 1991 letter regarding our newly proposed conservation programs. The responses were formulated by Ron Sott, Cindy Arnold or Tom Goodwin, and each answer is so noted.

1. **The conservation programs refer to "energy efficient gas appliances." Define the energy efficiency of appliances eligible for use in your programs using a measurable level of efficient performance, such as AFUE or some other readily identifiable term.**

   Answer: West Florida Natural Gas used the phrase "energy efficient gas appliances" to refer to the fact that virtually any natural gas appliance is more energy efficient than a comparable electric appliance. However, because of our belief that it is necessary to continue to become even more energy efficient, we set criteria in the Residential Electric Resistance Appliance & Oil Heating Replacement Program as stipulated on page 14, numbers 1, 2 and 3. Rather than set any specific rating to be carried on throughout the program, we chose to comply with the minimum AFUEs for central furnaces and efficiency ratings for water heaters as listed in the Florida Energy Efficiency Code for Building Construction. Efficiency ratings developed by the Florida Department of Community Affairs sets a minimum rating of .68 for furnaces in 1991. Water heater efficiency is presently .56.

These appliances, as well as minimum ratings for central air conditioning units, minimum insulation in walls and ceilings and other minimums for the entire home envelope are reviewed and have been increased every other year since the Code's inception. West Florida Natural Gas has adopted these minimums and will increase them as they are increased in Section 9 of the Florida Energy Code. This will allow us to be in compliance with Florida Building Codes as well as increase our minimums for appliances without undue hardship on those who participate in the program. (Sott)

2. **Provide the calculations referenced in your assumption number 2 on page 6, used to calculate the weighted average therm usage by appliances type.**

   Answer: The calculations which were used to calculate the weighted average therm usage are detailed on attachment A. (Arnold)

3. **In addition to the programs submitted, is WFNG involved in support of industry research, development, and demonstration of state-of-the-art efficient appliances?**

   Answer: WFNG supports industry research, development, and demonstration of state-of-the-art efficient appliances through contribution and support of the Florida Gas Research Institute, Florida Natural Gas Association, Southern Gas Association and American Gas Association. (Sott)

4. **What forms of gas technology are anticipated to be implemented in the Electric Resistance Commercial Program?**

   Answer: Minimum state energy ratings will be applied in this program which target the replacement of electric heating systems, high and low pressure boilers, water heaters, and cooking equipment such as ranges, fryers and ovens. (Sott)

5. **Provide an explanation as to why different escalation rates were used for Personnel and Advertising costs from program to program.**

   Answer: We believe that programs will grow at different rates. Experience with existing programs was used to project growth as was a review of the future

expansion of the marketplace. (Sott)

6. **Provide detailed justification and assumptions for the 25% escalation rate for personnel costs in the Natural Gas Space Conditioning Allowance Program.**

Answer: We anticipate that the Gas Space Conditioning Allowance Program will begin small and experience tremendous growth as technological advances in equipment are made available to the public. Initial efforts will be to educate potential residential and commercial customers. We project a growth rate of 25% from the relatively small 1991 projected figure. (Sott)

7. **Provide the average wage and salary increases for the years 1987, 1988, 1989 and 1990.**

Answer: WFNG conservation personnel are paid on a bonus basis based on the number and kinds of appliances under each program, therefore historically no wages or salaries have been charged to the program. (Sott)

8. **What are the average costs of piping and venting a home for appliances for each conservation program?**

Answer: The customer incentive payments are approximately equal to the labor and material costs for installation of appliances in each program.

We have a unique situation at WFNG with divisions in Ocala and Panama City, Florida. Overall, labor costs are higher in Ocala. For example, labor and material for gas piping and venting for replacing an electric water heater with a natural gas water heater costs between $250 and $300 in Ocala and $175 to $225 in Panama City. We have averaged the costs in the two divisions to get the Company average. (Sott)

9. **How were these averages obtained?**

Answer: Averages were obtained from bills for work submitted by customers and charges from independent gas contractors, as well as actual experience with existing conservation programs. (Sott)

10. **Do the proposed incentive payments cover the entire amount of piping and**

venting for the respective appliances for each program?

Answer: The incentive payments usually cover the entire amount for piping and venting in Panama, but not in Ocala. (Sott)

11. **Provide documentation, including calculations, to support the projected Personnel and Advertising Costs for each conservation program. Include a breakdown of these cost by program.**

Answer: The Personnel costs were determined by taking the first year projected units and multiplying them by the corresponding load bonus amount. In addition to this, we have included an amount to cover legal and professional fees, as well as 27% of our Conservation Clerk's salary. Advertising calculations for the three existing programs are consistent with figures obtained from the previous five years of operating the Energy Conservation Program. Advertising costs for the water heater retention, commercial replacement and gas space conditioning program were based on the same percentages used by Peoples Gas System, Inc. in their 1991 approved conservation program. See attachment B. (Arnold, Sott)

12. **Are the incentives that are paid through the Residential Electric Resistance Appliance & Oil Heating Replacement Program to be applied to the piping and venting costs only, or are these incentives also intended to help cover the cost of the appliance?**

Answer: As stated in the response to question 10, incentives are designed to apply to piping and venting costs. In many cases, they do not cover the entire amount of these costs. (Sott)

13. **Explain the "Demand Charges" listed as assumption #10 for the Gas Ratepayers Cost Effectiveness Analysis for the conservation programs.**

Answer: The "Demand Charges" listed as assumption #10 for the Gas Ratepayers Cost Effectiveness Analysis are a reservation fee included in Florida Gas Transmission's tariff (approved by FERC) to recover the cost, to the pipeline, of reserving capacity on the pipeline for movement of West Florida Natural Gas

Company requirements. (Goodwin)

14. **Explain why the Cumulative Therm Usage on Table 3 remains constant after the year 2000, in the Gas Ratepayers Cost Effectiveness Analysis, while it decreases in the Annual Fuel Consumption - Natural Gas Table for the Electric Ratepayers Cost Effectiveness Analysis.**

Answer: Methodology used in calculations on the table followed that used in the Peoples Gas System approved plan. (Sott)

15. **Explain the "Cut & Cap Savings" listed in Table 4 of the Gas Ratepayers Cost Effectiveness Analysis for the conservation programs.**

Answer: If through participation in one of these conservation programs, we can influence an individual to install a gas appliance, we will not have to remove the natural gas service line from his property after five consecutive years of inactivity, as stipulated by Florida law. This would save the ratepayers from having to bear the burden of cost of removal of the service line. (Sott)

16. **Does WFNG plan to hire additional personnel to implement, manage, and/or promote its proposed conservation programs? If so, how many and at what salary?**

Answer: If the programs are successful and grow, staff will be added to handle the extra work. No additional salaries were included in the program projections, since additional staff would also be paid on the load bonus plan. (Sott)

17. **Does WFNG have written policies and procedures in which to operate its proposed conservation programs? If so, provide copies. If not, provide a date when they will be available.**

Answer: Yes, a written procedure exists for the three current conservation programs. Written procedures for the new programs will be available within thirty days after their approval. See Attachment C. (Sott)

18. **How did WFNG determine the amount of incentives for its proposed conservation programs?**

Answer: We used a combination of factors to determine proposed incentives. Actual experience with the existing programs have helped us, together with actual invoices for work submitted by customers and charges submitted by independent gas contractors. We also relied upon independent gas contractor invoices for certain projects such as the water heater retention program. (Each commercial job is unique in that one might require only minimal labor and material, while others may require a hundred feet of gas piping, 10" vent pipe and other materials costing much more than is actually being offered through incentives.) We also relied heavily upon the Peoples Gas program and knowledge of WFNG service personnel and outside contractors to determine gas space conditioning costs. (Sott)

19. **Explain the necessity of the Gas Water Heater Load Retention Program if the Company's proposed Gas Appliance Energy Savings Payback (ESP) Program is approved?**

Answer: The Gas Water Heater Retention Program is designed to promote the continued use of gas for water heating rather than to have a "quick fix" electric water heater replace the natural gas water heater. The Energy Savings Payback Program is designed to promote the replacement of standard gas appliances (such as a pilot type range) and electric ranges, with pilotless ignition type appliances which are even more energy efficient. With regard to the water heater portion of the program, a replacement water heater would have to be of a deluxe energy saver type, far exceeding the minimum requirements under the state code, in order to warrant a $50 rebate in addition to the $100 water heater retention rebate. (Sott)

20. **Explain how the Residential Electric Resistance Appliance & Oil Heating Replacement Program helps to alleviate the need to cut and cap services thereby retaining existing gas customers?**

Answer: As in the answer to question 15, reactivating a service line before the

five year mandated timeframe for removal under state law would save the cost of labor and material to remove the line. (Sott)

21. **Provide the titles of the "Gulf Power Company publications" referenced on page 4 of WFNG proposed conservation programs.**

Answer: "Consuming Energy in the Eighties", a reference guide to the economical use of electricity, published by Gulf Power Company in 1986. (Sott)

22. **Explain the difference, if any, in the types of appliances eligible under the Gas Appliance Energy Savings Payback (ESP) Program, as opposed to the Home Builder, Electric Resistance Replacement, or the Water Heater Retention programs.**

Answer: The ESP program pays only for pilotless ignition ranges, dryers, central furnaces and deluxe energy mizer type water heaters, when replacing electric or "standard" gas and/or pilot type appliances. The Home Builders Program pays no ESP. It is for new and/or completely remodeled homes and calls for all appliances and other features to meet the existing State Energy Code minimums. ESP is paid in addition to the Electric Replacement Program when the appliance is of a pilotless type which exceeds the minimum standards set forth by the State Energy Efficiency Code for Building Construction. The ESP is not paid under the Water Heater Retention Program unless the water heater replacement is of the deluxe energy mizer type. (Sott)

23. **Does WFNG have any procedures in place, such as bidding, for selecting contractors and/or builders participating under the Home Builder Program?**

Answer: All builders constructing natural gas homes are eligible to receive incentives under this program, as long as the home being constructed meets the Energy Point Index for new construction under Section 9 of the Florida Energy Efficiency Code. (Sott)

24. **The Cost/Benefit evaluations for West Florida Natural Gas ratepayers assume that natural gas service lines will be a direct expense to the program. Why**

Is this an appropriate assumption and how does it change your analysis from one that treats service lines as a capital expenditure?

Answer: In an effort to be conservative on the ratepayers Cost/Benefits, natural gas service lines were assumed to be a direct expense to the program. Our actual practice is to capitalize service lines; if these costs were removed, it would only serve to make the Benefit/Cost ratio greater. (Arnold)

25. **Provide an explanation as to why it was assumed that beginning with 1991, the number of appliances added annually under the residential Electric Resistance Appliance and Oil Heating Replacement Program will increase. (Attachment 2-1, p.18) Have there been any improvements to attract more eligible customers than in the past?**

Answer: The improvement to the program that will attract more participants is the increased dollar amount of the incentive payments. (Sott)

26. **For the Attachment 2-A, page 18, provide a breakdown of the number of appliances installed by appliance type for each year's total.**

Answer: The breakdown of the number of appliances installed by appliance type for each year's total follows on attachment D. (Arnold)

27. **Why does the residential Home Builder Program builder incentive payments only cover 63% of the added costs for installing natural gas appliances?**

Answer: 100% of the average costs for contractors in our area are paid by the program. However, installation costs in our area averaged only 63% of the State's average. Costs in our area are anticipated to continue below the Florida average. (Sott)

28. **Are seasonal (heating only) customers disconnected or gas service turned off during the summer months?**

Answer: WFNG has no "summer cut" program. The Company is making every effort to convince customers that the more of the major four appliances (heaters, water heaters, ranges and dryers) added to the household, the greater the

customer will save in his overall utility bills and in energy. (Sott)

29. **Was the "Average Natural Gas Therm consumption per appliance" used for the calculation of the cost/benefit analysis or the projected therm usage by specific appliance used?**

Answer: The "Average Natural Gas Therm consumption per appliance" was used. (Arnold)

30. **Table 3 on page 48 shows KW Displaced remaining constant after 1997, while water heaters displaced increases. Provide an explanation for this discrepancy.**

Answer: The Table on page 48 should show water heaters displaced increasing. An error in the formula made them remain constant. A corrected page 48 is included as attachment E. (Arnold)

If you have any further questions, please give me a call.

Sincerely,

Patti Smith

Patti Smith
Controller

PS:trp
Att.

ATTACHMENT A

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE
AND OIL HEATING REPLACEMENT PROGRAM

	Number	x Gas Therms =	Total
Water Heater	370	300	111,000
Central Heat	240	380	91,200
Range	150	110	16,500
Dryer	150	120	18,000
Space Heat			
<50,000 Btu	37	270	9,990
>50,000 Btu	38	270	10,260
Total	985		256,950
Average allowance	256,950	divided by	985 = 261

ATTACHMENT A

RESIDENTIAL HOME BUILDER PROGRAM

	Number	x Gas Therms =	Total
Water Heater	385	300	115,500
Central Heat	385	380	146,300
Range	150	110	16,500
Dryer	120	120	14,400
Total	1040		292,700

Average allowance 292,700 divided by 385 (# Homes) = 760

ATTACHMENT A

GAS APPLIANCE ENERGY SAVINGS PAYBACK (ESP) PROGRAM

	Number	x	Gas Therms	=	Total
Water Heater	10		225		2,250
Central Heat	150		300		45,000
Range	75		38		2,850
Dryer	75		40		3,000
Total	310				53,100
Average allowance	53,100		divided by		310 = 171

ATTACHMENT A

GAS SPACE CONDITIONING ALLOWANCE PROGRAM

The average natural gas annual therm consumption for this program is calculated as follows.

Natural Gas Annual Therm Consumption per Ton (times) the first year total (divided by) the first year total units installed.

210 Times 265 Divided by 40 = 1391

ATTACHMENT A

COMMERCIAL ELECTRIC APPLIANCE RESISTANCE PROGRAM

The average natural gas annual therm consumption for this program is calculated as follows,

Natural Gas Annual Therm Consumption per installed appliance (times) the first year total units (divided by) total number of first year appliances.

2645 Times 120 Divided by 120 = 2645

ATTACHMENT B

RESIDENTIAL ELECTRIC RESISTANCE APPLIANCE
AND OIL HEATING REPLACEMENT PROGRAM

	# UNITS	X	LOAD BONUS	=	TOTAL
WATER HEATER	370		$30		11,100
CENTRAL HEAT	240		30		7,200
RANGE	150		10		1,500
DRYER	150		10		1,500
SPACE HEAT <50,000 BTU	37		30		1,110
>50,000 BTU	38		30		1,140
TOTAL FOR 1991	985		140		23,550

In addition to the above total, $500 has been allocated to personnel costs for Legal and Professional Fees, and $1,350 is included to cover a portion of the conservation clerk's salary.

For the remainder of the program years we just increased the 1991 total by the escalation % .

1991	23,550 + 500 + 1350 = 25,400
1992	25,400 + 6% = 26,924
1993	26,924 + 6% = 28,539
1994	28,539 + 6% = 30,252
1995	30,252 + 6% = 32,067
1996	32,067 + 6% = 33,991
1997	33,991 + 6% = 36,030
1998	36,030 + 6% = 38,192
1999	38,192 + 6% = 40,484
2000	40,484 + 6% = 42,913
Total for Program	334,792

ATTACHMENT B

RESIDENTIAL HOME BUILDER

	# UNITS	X	LOAD BONUS	=	TOTAL
WATER HEATER	385		$30		11,550
CENTRAL HEAT	385		25		9,625
RANGE	150		15		2,250
DRYER	120		15		1,800
TOTAL FOR 1991	1040		85		25,225

In addition to the above total, $500 has been allocated to personnel costs for Legal and Professional Fees, and $1,500 is included to cover a portion of the conservation clerk'

For the remainder of the program years we just increased the 1991 total by the escalation % .

1991	25,225 + 500 + 1500 = 27,225
1992	27,225 + 3% = 28,042
1993	28,042 + 3% = 28,883
1994	28,883 + 3% = 29,749
1995	29,749 + 3% = 30,642
1996	30,642 + 3% = 31,561
1997	31,561 + 3% = 32,508
1998	32,508 + 3% = 33,483
1999	33,483 + 3% = 34,488
2000	34,488 + 3% = 35,522
Total for Program	312,104

ATTACHMENT B

GAS APPLIANCE ENERGY SAVINGS PAYBACK (ESP) PROGRAM

	# UNITS	X	LOAD BONUS	=	TOTAL
WATER HEATER	10		$5		50
CENTRAL HEAT	150		5		750
RANGE	75		5		375
DRYER	75		5		375
TOTAL FOR 1991	310		20		1,550

In addition to the above total, $125 has been allocated to personnel costs for Legal and Professional Fees, and $125 is included to cover a portion of the conservation clerk's salary.

For the remainder of the program years we just increased the 1991 total by the escalation % .

1991	1,550 + 125 + 125 = 1,800
1992	1,800 + 3% = 1,854
1993	1,854 + 3% = 1,910
1994	1,910 + 3% = 1,967
1995	1,967 + 3% = 2,026
1996	2,026 + 3% = 2,087
1997	2,087 + 3% = 2,149
1998	2,149 + 3% = 2,214
1999	2,214 + 3% = 2,280
2000	2,280 + 3% = 2,349
Total for Program	20,635

ATTACHMENT B

WATER HEATER LOAD RETENTION PROGRAM

	# UNITS	X	LOAD BONUS	=	TOTAL
WATER HEATER	315		$20		6,300
CENTRAL HEAT	0		0		0
RANGE	0		0		0
DRYER	0		0		0
TOTAL FOR 1991	315		20		6,300

In addition to the above total, $250 has been allocated to personnel costs for Legal and Professional Fees, and $250 is included to cover a portion of the conservation clerk's salary.

For the remainder of the program years we just increased the 1991 total by the escalation % .

1991	6,300 + 250 + 250 = 6,800
1992	6,800 + 3% = 7,004
1993	7,004 + 3% = 7,214
1994	7,214 + 3% = 7,431
1995	7,431 + 3% = 7,653
1996	7,653 + 3% = 7,883
1997	7,883 + 3% = 8,120
1998	8,120 + 3% = 8,363
1999	8,363 + 3% = 8,614
2000	8,614 + 3% = 8,872
Total for Program	77,954

ATTACHMENT B

GAS SPACE CONDITIONING ALLOWANCE PROGRAM

To determine the personnel costs for 1991 we took the projected first year tons installed and multiplied it by the corresponding load bonus amount.

1991 265 x 20 = 5,300

In addition to the above total, $250 has been allocated to personnel costs for Legal and Professional Fees, and $250 is included to cover a portion of the conservation clerk's salary.

*Note: We changed the first years tons installed from 212 to 265; however, we forgot to change the personnel costs to reflect this change.

For the remainder of the program years we just increased the 1991 total by the escalation % .

1991	5,300 + 250 + 250 =	5,800
1992	5,800 + 25% =	7,250
1993	7,250 + 25% =	9,063
1994	9,063 + 25% =	11,328
1995	11,328 + 25% =	14,160
1996	14,160 + 25% =	17,700
1997	17,700 + 25% =	22,125
1998	22,125 + 25% =	27,657
1999	27,657 + 25% =	34,571
2000	34,571 + 25% =	43,213
Total for Program		192,867

ATTACHMENT B

Commercial Electric Appliance Resistance Program

To determine the personnel costs for 1991 we took the average KW for each water heater being replaced and multiplied it by the first year total projected water heaters displaced times the corresponding load bonus amount.

(25 x 120) x 5 = 15,000

In addition to the above total, $250 has been allocated to personnel costs for Legal and Professional Fees, and $500 is included to cover a portion of the conservation clerk's salary.

For the remainder of the program years we just increased the 1991 total by the escalation % .

1991	15,000 + 250 + 500 =	15,750
1992	15,750 + 3% =	16,223
1993	16,223 + 3% =	16,709
1994	16,709 + 3% =	17,210
1995	17,210 + 3% =	17,727
1996	17,727 + 3% =	18,259
1997	18,259 + 3% =	18,806
1998	18,806 + 3% =	19,371
1999	19,371 + 3% =	19,952
2000	19,952 + 3% =	20,550
Total for Program		180,556

CONSERVATION PROGRAM POLICY

Attachment C

1. Sales order or receipt must be attached to the conservation form when it is submitted for approval.

2. Attach one of the following:
   a. Copy of service order confirming service line has been run, with original signature of construction supervisor.

   b. Print-screen of existing account.

3. The above forms will be held by the salesman until the work is complete. At that time they will be submitted to the General Manager for approval.

4. The General Manager will check the following before approval.
   a. Above forms are attached
   b. Receipt is valid
   c. (Builders only) Check folder for duplicate payment.

5. After approval by the General Manager, the forms are **not** to be returned to the salesman. They are to be sent directly to Cindy Arnold in Accounting.

6. All checks will be mailed directly to the customer. Accounts payable will be alert for P.O. boxes, and similar addresses. When a new builder is set up, Accounts payable will verify by phone the mailing address.

7. Accounting will spot check endorsements on cancelled checks.

ATTACHMENT D

Year	Water Heater	Central Heater	Range	Dryer	Space Heater <50,000 BTU	Space Heater >50,000 BTU	Total Units
1991	370	240	150	150	37	38	985
1992	392	255	159	159	39	40	1044
1993	416	270	168	168	42	43	1107
1994	441	285	179	179	44	45	1173
1995	467	304	189	189	47	48	1244
1996	495	320	201	201	50	51	1318
1997	525	339	213	213	53	54	1397
1998	525	339	213	213	53	54	1397
1999	525	339	213	213	53	54	1397
2000	525	339	213	213	53	54	1397

ATTACHMENT E

REVISED

RESIDENTIAL HOME BUILDER PROGRAM

TABLE - 3 - ESTIMATED INSTALLATIONS OF NATURAL GAS HOMES

YEAR	WATER HEATERS DISPLACED	KW DISPLACED	KWH AVOIDED
1991	385	3,238	4,390,540
1992	397	3,335	4,522,256
1993	408	3,435	4,657,924
1994	421	3,538	4,797,662
1995	433	3,644	4,941,591
1996	446	3,754	5,089,839
1997	460	3,866	5,242,534
1998	474	3,982	5,399,810
1999	488	4,102	5,561,805
2000	502	4,225	5,728,659
	4,414	37,118	50,332,621