[redacted]

DECLASSIFIED 2.2.01

990325-EI
(Closed)

EXHIBIT "A"

The information provided herein should be maintained as proprietary confidential business information pursuant to Section 366.093 and Rule 25-22.006, F.A.C.

Part 1 of 4

DOCUMENT NUMBER-DATE
06499 MAY 24 01
FPSC-RECORDS/REPORTING

CONFIDENTIAL

EXHIBIT NO. 8

DECLASSIFIED

Docket No: 990325-EI

Party: Gulf Power Company

Description: COMPOSITE EXHIBIT

(1) Gulf's **CONFIDENTIAL** Response to Staff Interrogatory Nos. 1 & 17

(2) **CONFIDENTIAL** Late-filed Exhibit Nos. 1, 2, and 4 from Deposition of William Pope

Proffered By: Commission Staff

DN 5936-99 (1) Interrog.
5/10/99

PART 1 + 2
DN 06499-99 (2) POPE
5/24/99

with memo 07169-99
Part 3 + 4 sent to source (Badders)

17. Identify and provide the forecast of all fixed and variable costs ($/MMBtu) for transporting natural gas for all self build alternatives and all RFP respondents from 2002 to 2021. Include any charge, fee, tax, levy or any other monetary or non-monetary consideration to transport natural gas. State all assumptions. (State whether costs are in nominal or real dollars.)

RESPONSE:

There were no fuel estimates performed for self-build option "Mulat Tower" since this concerned a cogeneration facility that had a delivered gas price and annual escalation provided as part of the input assumptions. Likewise, the fuel for Respondent C of the RFP analysis was assumed to be that which was quoted. The fuel projections used for Respondents A and B of the RFP analysis also had backup oil components added to their natural gas prices to account for those hours the gas would not be available under the terms of their non-firm gas proposal.

The remainder of this response was filed with Letter of Intent to request Confidential treatment.

STAFF COMPOSITE EXHIBIT
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FPSC Staff's First Set
Of Interrogatories
Docket No. 990325-EI
GULF POWER COMPANY
April 19, 1999
Item No. 1

1. Provide a 20-year, present worth revenue requirements (PWRR) analysis of Gulf's proposed Smith Unit 3, the other self-build options, and all respondents to Gulf's Request for Proposals (RFP). Provide both on an annual and a cumulative PWRR basis, and separate capital, fixed operations and maintenance (O&M), and variable costs for each year. Include all financial assumptions for the self-build options and the respondents.

RESPONSE:

The values requested for the four self-build analysis options are attached. The financial assumptions used for the Self-build analysis are those shown for 1997 in the answer to Interrogatory No. 13. The response for the figures pertaining to the RFP analyses have been filed with a Letter of Intent to request Confidential treatment.

Exhibit A

CONFIDENTIAL

20 Year Self-Build

Proposal Size (MW)	574.1		Pipeline Size (MW)	575		Base Case Size (MW)	600				Disc. Rate	8.47%				
Year	Capacity Costs ($/kw-Yr)	Fixed O&M ($/kw-Yr)	Fixed Fuel Charges ($/kw-Yr)	Pipeline Cost ($/kw-Yr)	Total Fixed Costs ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
											383.14					273.52
2002	44.86	2.46	17.95	0.00	**65.27**	2,887,357	2,864,129	38.71	**26.56**	1.0000	26.56	26.56	0.00	(16.20)	-16.20	10.35
2003	73.53	4.34	30.77	0.00	**108.64**	3,059,636	3,032,476	45.27	**63.38**	0.9220	58.43	84.99	0.00	(31.51)	-31.51	53.47
2004	69.89	4.46	30.77	0.00	**105.13**	3,234,907	3,206,518	47.31	**57.81**	0.8500	49.14	134.13	0.00	(46.55)	-46.55	87.58
2005	66.42	4.59	30.77	0.00	**101.79**	3,542,591	3,516,169	44.04	**57.75**	0.7837	45.26	179.38	0.00	(60.95)	-60.95	118.43
2006	63.11	4.73	30.77	0.00	**98.61**	3,736,644	3,713,465	38.63	**59.98**	0.7225	43.33	222.72	0.00	(74.71)	-74.71	148.01
2007	59.94	4.86	30.77	0.00	**95.57**	3,997,015	3,968,658	47.26	**48.31**	0.6661	32.18	254.90	0.00	(86.59)	-86.59	168.31
2008	56.87	5.00	30.77	0.00	**92.64**	4,242,135	4,210,209	53.21	**39.43**	0.6141	24.22	279.12	0.00	(96.44)	-96.44	182.68
2009	53.84	5.15	30.77	0.00	**89.76**	4,498,493	4,467,472	51.70	**38.06**	0.5662	21.55	300.66	0.00	(103.33)	-103.33	197.33
2010	50.80	5.29	30.77	0.00	**86.87**	4,520,869	4,489,006	53.11	**33.76**	0.5220	17.62	318.29	0.00	(107.62)	-107.62	210.67
2011	47.77	5.45	30.77	0.00	**83.99**	4,702,102	4,669,882	53.70	**30.29**	0.4813	14.58	332.87	0.00	(109.62)	-109.62	223.25
2012	44.73	5.60	30.77	0.00	**81.11**	4,997,471	4,963,511	56.60	**24.51**	0.4437	10.87	343.74	0.00	(109.62)	-109.62	234.12
2013	41.70	5.76	30.77	0.00	**78.24**	5,300,868	5,266,488	57.30	**20.94**	0.4091	8.56	352.30	0.00	(109.62)	-109.62	242.69
2014	38.66	5.93	30.77	0.00	**75.36**	5,612,784	5,581,931	51.42	**23.94**	0.3772	9.03	361.33	0.00	(109.62)	-109.62	251.72
2015	35.63	6.10	30.77	0.00	**72.50**	5,970,733	5,937,904	54.71	**17.79**	0.3477	6.19	367.52	0.00	(109.62)	-109.62	257.90
2016	32.59	6.28	30.77	0.00	**69.64**	6,341,677	6,305,529	60.25	**9.39**	0.3206	3.01	370.53	0.00	(109.62)	-109.62	260.91
2017	29.85	6.46	30.77	0.00	**67.08**	7,023,105	6,987,181	59.87	**7.21**	0.2956	2.13	372.66	0.00	(109.62)	-109.62	263.04
2018	27.68	6.64	30.77	0.00	**65.10**	7,571,537	7,537,738	56.33	**8.76**	0.2725	2.39	375.05	0.00	(109.62)	-109.62	265.43
2019	25.80	6.83	30.77	0.00	**63.41**	8,247,366	8,216,039	52.21	**11.20**	0.2512	2.81	377.86	0.00	(109.62)	-109.62	268.24
2020	23.91	7.03	30.77	0.00	**61.71**	8,859,275	8,826,029	55.41	**6.30**	0.2316	1.46	379.32	0.00	(109.62)	-109.62	269.70
2021	22.03	7.23	30.77	0.00	**60.04**	9,707,975	9,674,679	55.49	**4.54**	0.2135	0.97	380.29	0.00	(109.62)	-109.62	270.67
2022	8.64	3.10	12.82	0.00	**24.56**	10,449,507	10,443,448	10.10	**14.47**	0.1969	2.85	383.14	0.00	(109.62)	-109.62	273.52

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SBO Smith Unit 3 (with #3Fuel Supplier)

Proposal Size (MW): 540 | Pipeline Size (MW): 540 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Fixed O&M ($/kw-Yr)	Fixed Fuel Charges ($/kw-Yr)	Pipeline Cost ($/kw-Yr)	Total Fixed Costs ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
											388.77					279.15
2002	48.00	4.48	19.11	0	**68.60**	2,887,357	2,863,388	39.95	**28.65**	1	28.65	28.65	0.00	(16.20)	-16.20	12.44
2003	74.00	4.61	32.77	0	**111.38**	3,059,636	3,031,799	46.39	**64.99**	0.9220	59.91	88.56	0.00	(31.51)	-31.51	57.05
2004	71.00	4.75	32.77	0	**108.51**	3,234,907	3,205,443	49.11	**59.41**	0.8500	50.50	139.06	0.00	(46.55)	-46.55	92.51
2005	67.00	4.88	32.77	0	**104.65**	3,542,591	3,515,185	45.68	**58.97**	0.7837	46.22	185.28	0.00	(60.95)	-60.95	124.32
2006	64.00	5.02	32.77	0	**101.79**	3,736,644	3,711,987	41.10	**60.70**	0.7225	43.85	229.13	0.00	(74.71)	-74.71	154.42
2007	61.00	5.17	32.77	0	**98.94**	3,997,015	3,967,313	49.50	**49.43**	0.6661	32.93	262.06	0.00	(86.59)	-86.59	175.47
2008	58.00	5.32	32.77	0	**96.08**	4,242,135	4,210,037	53.50	**42.59**	0.6141	26.15	288.21	0.00	(96.44)	-96.44	191.77
2009	54.00	5.47	32.77	0	**92.24**	4,498,493	4,466,263	53.72	**38.52**	0.5662	21.81	310.02	0.00	(103.33)	-103.33	206.69
2010	51.00	5.63	32.77	0	**89.39**	4,520,869	4,487,615	55.42	**33.97**	0.5220	17.73	327.76	0.00	(107.62)	-107.62	220.14
2011	48.00	5.79	32.77	0	**86.56**	4,702,102	4,667,769	57.22	**29.34**	0.4813	14.12	341.87	0.00	(109.62)	-109.62	232.26
2012	45.00	5.96	32.77	0	**83.72**	4,997,471	4,962,738	57.89	**25.84**	0.4437	11.46	353.34	0.00	(109.62)	-109.62	243.72
2013	42.00	6.13	32.77	0	**80.90**	5,300,868	5,265,948	58.20	**22.70**	0.4091	9.28	362.62	0.00	(109.62)	-109.62	253.01
2014	39.00	6.30	32.77	0	**78.07**	5,612,784	5,581,476	52.18	**25.89**	0.3772	9.77	372.39	0.00	(109.62)	-109.62	262.77
2015	36.00	6.49	32.77	0	**75.25**	5,970,733	5,935,770	58.27	**16.98**	0.3477	5.91	378.29	0.00	(109.62)	-109.62	268.68
2016	33.00	6.67	32.77	0	**72.44**	6,341,677	6,304,990	61.15	**11.29**	0.3206	3.62	381.91	0.00	(109.62)	-109.62	272.30
2017	30.00	6.87	32.77	0	**69.63**	7,023,105	6,986,747	60.60	**9.04**	0.2956	2.67	384.58	0.00	(109.62)	-109.62	274.97
2018	26.00	7.06	32.77	0	**67.83**	7,571,537	7,537,255	57.14	**10.69**	0.2725	2.91	387.50	0.00	(109.62)	-109.62	277.88
2019	26.00	7.27	32.77	0	**66.03**	8,247,366	8,215,505	53.10	**12.93**	0.2512	3.25	390.75	0.00	(109.62)	-109.62	281.13
2020	24.00	7.48	32.77	0	**64.24**	8,859,275	8,825,582	56.16	**8.09**	0.2316	1.87	392.62	0.00	(109.62)	-109.62	283.00
2021	22.00	7.69	32.77	0	**62.46**	9,707,975	9,674,302	56.12	**6.34**	0.2135	1.35	393.97	0.00	(109.62)	-109.62	284.36
2022	9.00	7.91	13.65	0	**30.57**	10,449,507	10,415,299	57.01	**-26.45**	0.1969	-5.21	388.77	0.00	(109.62)	-109.62	279.15

HR @ max (MBTU/MWh)	6.787	
Fuel Volatility VOM ($/MWh)	N Fuel ($/MBTU)	Dispatch Price ($/MWh)
2.06	2.17	16.79
2.13	2.17	16.86
2.19	2.17	16.92
2.25	2.35	18.21
2.31	2.51	19.32
2.38	2.67	20.51
2.45	2.85	21.77
2.51	2.87	22.02
2.59	2.90	22.26
2.67	2.97	22.84
2.75	3.05	23.43
2.82	3.12	24.02
2.91	3.20	24.65
2.99	3.28	25.27
3.07	3.36	25.88
3.17	3.62	27.74
3.25	3.90	29.72
3.34	4.20	31.83
3.45	4.35	32.97
3.54	4.51	34.13
3.65	4.64	35.12

Capacity Cost Declining Rev. Req.for SBO using 187 million nominal costs

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Respondent A

Proposal Size (MW)	351.5	Base Case Size (MW)	600				Disc. Rate	8.47%				
Year	CapacityCosts ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
							500.57					591.99
2002	38.42	2,887,357	2,869,499	29.76	8.66	1	8.66	8.66	37.69	(11.84)	25.85	34.51
2003	67.84	3,059,636	3,042,551	28.47	39.36	0.9220	36.29	44.95	71.28	(23.02)	48.26	93.21
2004	69.87	3,234,907	3,217,114	29.65	40.22	0.8500	34.19	79.13	102.05	(34.02)	68.03	147.16
2005	71.97	3,542,591	3,526,309	27.14	44.83	0.7837	35.13	114.27	127.69	(44.57)	83.12	197.39
2006	74.13	3,736,644	3,723,086	22.60	51.53	0.7225	37.23	151.50	153.08	(54.68)	98.39	249.90
2007	76.35	3,997,015	3,978,524	30.82	45.53	0.6661	30.33	181.83	174.10	(63.44)	110.67	292.50
2008	78.64	4,242,135	4,222,519	32.69	45.95	0.6141	28.22	210.05	191.54	(70.69)	120.85	330.91
2009	81.00	4,498,493	4,476,971	35.87	45.13	0.5662	25.55	235.61	192.56	(75.75)	116.81	352.42
2010	83.43	4,520,869	4,498,724	36.91	46.52	0.5220	24.29	259.89	188.46	(78.90)	109.56	369.45
2011	85.94	4,702,102	4,679,843	37.10	48.84	0.4813	23.50	283.40	186.41	(80.37)	106.04	389.44
2012	88.51	4,997,471	4,974,259	38.69	49.83	0.4437	22.11	305.51	184.62	(80.37)	104.25	409.75
2013	91.17	5,300,868	5,277,409	39.10	52.07	0.4091	21.30	326.81	183.33	(80.37)	102.96	429.77
2014	93.90	5,612,784	5,591,894	34.82	59.09	0.3772	22.29	349.09	182.82	(80.37)	102.45	451.54
2015	96.72	5,970,733	5,948,642	36.82	59.90	0.3477	20.83	369.92	180.26	(80.37)	99.89	469.81
2016	99.62	6,341,677	6,318,920	37.93	61.69	0.3206	19.78	389.70	178.97	(80.37)	98.60	488.31
2017	102.61	7,023,105	6,998,748	40.59	62.02	0.2956	18.33	408.03	178.72	(80.37)	98.35	506.38
2018	105.69	7,571,537	7,548,000	39.23	66.46	0.2725	18.11	426.14	174.62	(80.37)	94.25	520.39
2019	108.86	8,247,366	8,224,042	38.87	69.99	0.2512	17.58	443.73	174.87	(80.37)	94.50	538.23
2020	112.13	8,859,275	8,836,370	38.18	73.95	0.2316	17.13	460.86	173.85	(80.37)	93.48	554.33
2021	115.49	9,707,975	9,683,562	40.69	74.80	0.2135	15.97	476.83	171.79	(80.37)	91.42	568.25
2022	59.48	10,449,507	10,486,167	-61.10	120.58	0.1969	23.74	500.57	171.79	(80.37)	91.42	591.99

HR @ max (MBTU/MWh)	7.1					
Fuel Volatility	Y	MW ==>	194.3	157.2	351.5	
Santa Rosa VOM ($/MWh)	Mobile VOM	Fuel ($/MBTU)	Santa Rosa Dispatch Price ($/MWh)	Mobile Dispatch Price ($/MWh)	Average Dispatch Price ($/MWh)	
2.300	2.720	2.44	19.65	20.07	19.84	
2.369	2.802	2.44	19.72	20.16	19.92	
2.440	2.886	2.44	19.79	20.24	19.99	
2.513	2.972	2.63	21.17	21.63	21.37	
2.589	3.061	2.78	22.32	22.80	22.53	
2.666	3.153	2.94	23.55	24.04	23.77	
2.746	3.248	3.11	24.86	25.36	25.08	
2.829	3.345	3.14	25.14	25.65	25.37	
2.914	3.446	3.17	25.43	25.96	25.66	
3.001	3.549	3.24	26.02	26.57	26.27	
3.091	3.655	3.32	26.64	27.20	26.89	
3.184	3.765	3.39	27.27	27.85	27.53	
3.279	3.878	3.47	27.92	28.51	28.18	
3.378	3.994	3.55	28.58	29.20	28.85	
3.479	4.114	3.63	29.26	29.89	29.54	
3.583	4.238	3.90	31.25	31.90	31.54	
3.691	4.365	4.17	33.31	33.99	33.61	
3.802	4.496	4.47	35.51	36.21	35.82	
3.916	4.631	4.62	36.69	37.41	37.01	
4.033	4.770	4.77	37.91	38.65	38.24	
4.154	4.913	4.92	39.05	39.81	39.39	

Capital Cost was supplied in $/kW-month -

Two sites were Proposal - 177 MW and 212 MW for a total of 389 MW, but have summer capacities of 157.2 and 194.3 MW
Capital costs for both sites were multiplied by their respective MW's and then divided by the total MW's

Year 2002 capital cost is for 7 months
Year 2012 capital cost is for 6 months

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Respondent B CC (7 Year Pricing)

Proposal Size (MW)	500		Base Case Size (MW)	600			Disc. Rate	8.47%				
Year	Capacity Costs ($/kw-Yr)	Fixed Fuel Transp. ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
								545.64					522.35
2002	35.95	18.40	2,887,357	2,867,958	32.33	**22.01**	1	22.01	**22.01**	10.00	(15.57)	-5.57	**16.44**
2003	63.33	31.54	3,059,636	3,039,545	33.48	**61.39**	0.9220	56.60	**78.61**	20.00	(30.27)	-10.27	**68.33**
2004	64.89	31.54	3,234,907	3,213,924	34.97	**61.45**	0.8500	52.23	**130.84**	28.00	(44.71)	-16.71	**114.13**
2005	66.45	31.54	3,542,591	3,523,133	32.43	**65.56**	0.7837	51.38	**182.22**	34.00	(58.55)	-24.55	**157.67**
2006	68.15	31.54	3,736,644	3,720,243	27.34	**72.35**	0.7225	52.27	**234.49**	42.00	(71.75)	-29.75	**204.74**
2007	69.90	31.54	3,997,015	3,975,268	36.24	**65.19**	0.6661	43.42	**277.92**	48.00	(83.16)	-35.16	**242.75**
2008	71.64	31.54	4,242,135	4,216,760	42.29	**60.89**	0.6141	37.39	**315.31**	52.00	(92.62)	-40.62	**274.69**
2009	30.68	13.14	4,498,493	4,522,735	-40.40	**84.23**	0.5662	47.69	**363.00**	58.00	(99.24)	-41.24	**321.76**
2010			4,520,869	4,545,548	-41.13	**41.13**	0.5220	21.47	**384.47**	60.00	(103.36)	-43.36	**341.11**
2011			4,702,102	4,727,151	-41.75	**41.75**	0.4813	20.09	**404.56**	64.00	(105.28)	-41.28	**363.28**
2012			4,997,471	5,021,682	-40.35	**40.35**	0.4437	17.90	**422.47**	68.00	(105.28)	-37.28	**385.18**
2013			5,300,868	5,325,037	-40.28	**40.28**	0.4091	16.48	**438.95**	70.00	(105.28)	-35.28	**403.66**
2014			5,612,784	5,639,132	-43.91	**43.91**	0.3772	16.56	**455.51**	74.00	(105.28)	-31.28	**424.22**
2015			5,970,733	5,995,351	-41.03	**41.03**	0.3477	14.27	**469.78**	76.00	(105.28)	-29.28	**440.49**
2016			6,341,677	6,366,726	-41.75	**41.75**	0.3206	13.38	**483.16**	76.00	(105.28)	-29.28	**453.88**
2017			7,023,105	7,046,641	-39.23	**39.23**	0.2956	11.59	**494.75**	80.00	(105.28)	-25.28	**469.47**
2018			7,571,537	7,597,414	-43.13	**43.13**	0.2725	11.75	**506.51**	80.00	(105.28)	-25.28	**481.22**
2019			8,247,366	8,273,585	-43.70	**43.70**	0.2512	10.98	**517.48**	82.00	(105.28)	-23.28	**494.20**
2020			8,859,275	8,884,251	-41.63	**41.63**	0.2316	9.64	**527.13**	82.00	(105.28)	-23.28	**503.84**
2021			9,707,975	9,734,812	-44.73	**44.73**	0.2135	9.55	**536.68**	82.00	(105.28)	-23.28	**513.39**
2022			10,449,507	10,476,817	-45.52	**45.52**	0.1969	8.96	**545.64**	82.00	(105.28)	-23.28	**522.35**

HR @ max (MBTU/MWh)	6.783	
Fuel Volatility	N	
VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
4.000	2.31	19.65
4.058	2.31	19.71
4.158	2.31	19.81
4.264	2.49	21.16
4.374	2.65	22.33
4.484	2.81	23.57
4.594	2.99	24.89
4.640	3.02	25.13

Capital Cost was supplied in $/kW-month -

The Proposal supplied monthly unit ratings with maximum summer rating of 500 MW;
We multiplied the monthly ratings by the monthly capital cost and then divided by the maximum summer rating

Year 2002 capital cost is for 7 months
Year 2009 capital cost is for 5 months

We used the heat rates supplied by Respondent B;
Avg. Heat Rate @ Max 6,783
Avg. Heat Rate @ Min 8,021

No maintenance schedule supplied -

Availability	95%	(Supplied value)
Forced Outage Rate	2%	(Supplied value)
Scheduled Maintenance	3%	11 days in April; 3 weeks every sixth year

Added Fixed Fuel Transportation Charge $15,768,000 per year

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Respondent B CC (10 Year Pricing)

Proposal Size (MW): 500 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Fixed Fuel Transp. ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
								528.02					504.74
2002	33.07	18.40	2,887,357	2,867,015	33.90	17.57	1	17.57	17.57	10.00	(15.57)	-5.57	11.99
2003	58.23	31.54	3,059,636	3,037,571	36.77	53.00	0.9220	48.86	66.43	20.00	(30.27)	-10.27	56.15
2004	59.69	31.54	3,234,907	3,211,498	39.01	52.21	0.8500	44.38	110.81	28.00	(44.71)	-16.71	94.09
2005	61.18	31.54	3,542,591	3,521,266	35.54	57.18	0.7837	44.81	155.62	34.00	(58.55)	-24.55	131.07
2006	62.71	31.54	3,736,644	3,719,148	29.16	65.09	0.7225	47.03	202.64	42.00	(71.75)	-29.75	172.89
2007	64.28	31.54	3,997,015	3,973,255	39.60	56.22	0.6661	37.45	240.09	48.00	(83.16)	-35.16	204.93
2008	65.89	31.54	4,242,135	4,215,970	43.61	53.82	0.6141	33.05	273.14	52.00	(92.62)	-40.62	232.52
2009	67.53	31.54	4,498,493	4,469,996	47.49	51.58	0.5662	29.20	302.34	58.00	(99.24)	-41.24	261.10
2010	69.22	31.54	4,520,869	4,491,815	48.42	52.34	0.5220	27.32	329.66	60.00	(103.36)	-43.36	286.30
2011	70.95	31.54	4,702,102	4,674,087	46.69	55.80	0.4813	26.85	356.52	64.00	(105.28)	-41.28	315.23
2012	30.39	13.14	4,997,471	5,022,848	-42.30	85.83	0.4437	38.08	394.60	68.00	(105.28)	-37.28	357.31
2013			5,300,868	5,327,146	-43.80	43.80	0.4091	17.92	412.51	70.00	(105.28)	-35.28	377.23
2014			5,612,784	5,641,242	-47.43	47.43	0.3772	17.89	430.40	74.00	(105.28)	-31.28	399.12
2015			5,970,733	5,997,461	-44.55	44.55	0.3477	15.49	445.89	76.00	(105.28)	-29.28	416.61
2016			6,341,677	6,368,836	-45.26	45.26	0.3206	14.51	460.40	76.00	(105.28)	-29.28	431.12
2017			7,023,105	7,048,751	-42.74	42.74	0.2956	12.63	473.04	80.00	(105.28)	-25.28	447.75
2018			7,571,537	7,599,524	-46.64	46.64	0.2725	12.71	485.75	80.00	(105.28)	-25.28	460.46
2019			8,247,366	8,275,695	-47.22	47.22	0.2512	11.86	497.61	82.00	(105.28)	-23.28	474.33
2020			8,859,275	8,886,361	-45.14	45.14	0.2316	10.46	508.07	82.00	(105.28)	-23.28	484.78
2021			9,707,975	9,736,922	-48.24	48.24	0.2135	10.30	518.37	82.00	(105.28)	-23.28	495.09
2022			10,449,507	10,478,927	-49.03	49.03	0.1969	9.65	528.02	82.00	(105.28)	-23.28	504.74

HR @ max (MBTU/MWh)	6.783	
Fuel Volatility	N	
VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
3.50	2.31	19.15
3.55	2.31	19.21
3.64	2.31	19.30
3.73	2.49	20.63
3.82	2.65	21.78
3.92	2.81	23.01
4.02	2.99	24.31
4.12	3.02	24.61
4.22	3.05	24.87
4.32	3.12	25.48
4.43	3.20	26.11

Capital Cost was supplied in $/kW-month -

The Proposal supplied monthly unit ratings with maximum summer rating of 500 MW;
We multiplied the monthly ratings by the monthly capital cost and then divided by the maximum summer rating

Year 2002 capital cost is for 7 months
Year 2012 capital cost is for 5 months

We used the heat rates supplied by Respondent B;
Avg. Heat Rate @ Max 6,783
Avg. Heat Rate @ Min 8,021

No maintenance schedule supplied -

Availability	95%	(Supplied value)
Forced Outage Rate	2%	(Supplied value)
Scheduled Maintenance	3%	11 days in April; 3 weeks every sixth year

Added Fixed Fuel Transportation Charge $15,768,000 per year

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Respondent B CC (20 Year Pricing)

Proposal Size (MW): 500 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Fixed Fuel Transp. ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
								576.60					553.31
2002	33.07	18.40	2,887,357	2,867,015	33.90	17.57	1	17.57	17.57	10.00	(15.57)	-5.57	11.99
2003	58.23	31.54	3,059,636	3,037,555	36.80	52.97	0.9220	48.84	66.40	20.00	(30.27)	-10.27	56.13
2004	59.69	31.54	3,234,907	3,211,504	39.00	52.22	0.8500	44.39	110.79	28.00	(44.71)	-16.71	94.08
2005	61.18	31.54	3,542,591	3,521,253	35.56	57.16	0.7837	44.79	155.58	34.00	(58.55)	-24.55	131.04
2006	62.71	31.54	3,736,644	3,719,138	29.18	65.07	0.7225	47.01	202.60	42.00	(71.75)	-29.75	172.84
2007	64.28	31.54	3,997,015	3,973,252	39.60	56.21	0.6661	37.44	240.04	48.00	(83.16)	-35.16	204.88
2008	65.89	31.54	4,242,135	4,215,968	43.61	53.81	0.6141	33.05	273.09	52.00	(92.62)	-40.62	232.47
2009	67.53	31.54	4,498,493	4,469,994	47.50	51.57	0.5662	29.20	302.29	58.00	(99.24)	-41.24	261.05
2010	69.22	31.54	4,520,869	4,491,796	48.46	52.30	0.5220	27.30	329.59	60.00	(103.36)	-43.36	286.23
2011	70.95	31.54	4,702,102	4,674,080	46.70	55.79	0.4813	26.85	356.44	64.00	(105.28)	-41.28	315.16
2012	72.74	31.54	4,997,471	4,969,047	47.37	56.90	0.4437	25.25	381.69	68.00	(105.28)	-37.28	344.41
2013	74.59	31.54	5,300,868	5,271,879	48.31	57.81	0.4091	23.65	405.34	70.00	(105.28)	-35.28	370.05
2014	76.46	31.54	5,612,784	5,586,273	44.19	63.81	0.3772	24.07	429.40	74.00	(105.28)	-31.28	398.12
2015	78.33	31.54	5,970,733	5,944,188	44.24	65.62	0.3477	22.82	452.22	76.00	(105.28)	-29.28	422.94
2016	80.27	31.54	6,341,677	6,312,864	48.02	63.79	0.3206	20.45	472.67	76.00	(105.28)	-29.28	443.39
2017	82.27	31.54	7,023,105	6,991,177	53.21	60.59	0.2956	17.91	490.58	80.00	(105.28)	-25.28	465.30
2018	84.34	31.54	7,571,537	7,539,560	53.30	62.58	0.2725	17.05	507.63	80.00	(105.28)	-25.28	482.35
2019	86.46	31.54	8,247,366	8,217,585	49.63	68.36	0.2512	17.17	524.81	82.00	(105.28)	-23.28	501.53
2020	88.58	31.54	8,859,275	8,827,746	52.55	67.57	0.2316	15.65	540.46	82.00	(105.28)	-23.28	517.18
2021	90.78	31.54	9,707,975	9,676,288	52.81	69.50	0.2135	14.84	555.30	82.00	(105.28)	-23.28	532.02
2022	38.88	13.14	10,449,507	10,483,187	-56.13	108.16	0.1969	21.29	576.60	82.00	(105.28)	-23.28	553.31

HR @ max (MBTU/MWh)	6.783	
Fuel Volatility	N	
VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
3.50	2.31	19.15
3.55	2.31	19.21
3.64	2.31	19.30
3.73	2.49	20.63
3.82	2.65	21.78
3.92	2.81	23.01
4.02	2.99	24.31
4.12	3.02	24.61
4.22	3.05	24.87
4.32	3.12	25.48
4.43	3.20	26.11
4.54	3.27	26.74
4.66	3.35	27.40
4.77	3.43	28.07
4.90	3.51	28.72
5.02	3.77	30.63
5.15	4.06	32.67
5.28	4.36	34.84
5.41	4.51	36.02
5.54	4.67	37.23
5.60	4.81	38.24

Capital Cost was supplied in $/kW-month -

The Proposal supplied monthly unit ratings with maximum summer rating of 500 MW;
We multiplied the monthly ratings by the monthly capital cost and then divided by the maximum summer rating

Year 2002 capital cost is for 7 months
Year 2022 capital cost is for 5 months

We used heat rate supplied by Respondent B;
Avg. Heat Rate @ Max 6,783
Avg. Heat Rate @ Min 8,021

No maintenance schedule supplied -

Availability	95%	(Supplied value)
Forced Outage Rate	2%	(Supplied value)
Scheduled Maintenance	3%	11 days in April; 3 weeks every sixth year

Added Fixed Fuel Transportation Charge $15,768,000 per year

Respondent B CT Proposal (7 Year Pricing)

Proposal Size (MW): 486 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
							467.84					539.17
2002	27.73	2,887,357	2,887,940	-0.97	28.71	1	28.71	28.71	10.00	(1.65)	8.35	37.06
2003	48.72	3,059,636	3,060,898	-2.10	50.83	0.9220	46.86	75.57	20.00	(3.19)	16.81	92.37
2004	49.60	3,234,907	3,234,483	0.71	48.90	0.8500	41.56	117.13	28.00	(4.67)	23.33	140.46
2005	48.51	3,542,591	3,541,644	1.58	46.94	0.7837	36.78	153.91	34.00	(6.08)	27.92	181.83
2006	51.35	3,736,644	3,735,788	1.43	49.93	0.7225	36.07	189.98	42.00	(7.38)	34.62	224.61
2007	52.23	3,997,015	3,994,674	3.90	48.33	0.6661	32.19	222.18	48.00	(8.48)	39.52	261.70
2008	53.11	4,242,135	4,240,166	3.28	49.83	0.6141	30.60	252.78	52.00	(9.40)	42.60	295.37
2009	22.72	4,498,493	4,523,451	-41.60	64.32	0.5662	36.42	289.19	58.00	(10.06)	47.94	337.13
2010		4,520,869	4,545,000	-40.22	40.22	0.5220	20.99	310.19	60.00	(10.48)	49.52	359.71
2011		4,702,102	4,726,602	-40.83	40.83	0.4813	19.65	329.84	64.00	(10.67)	53.33	383.17
2012		4,997,471	5,021,133	-39.44	39.44	0.4437	17.50	347.34	68.00	(10.67)	57.33	404.67
2013		5,300,868	5,324,487	-39.37	39.37	0.4091	16.10	363.44	70.00	(10.67)	59.33	422.77
2014		5,612,784	5,638,583	-43.00	43.00	0.3772	16.22	379.66	74.00	(10.67)	63.33	442.99
2015		5,970,733	5,994,803	-40.12	40.12	0.3477	13.95	393.61	76.00	(10.67)	65.33	458.94
2016		6,341,677	6,366,177	-40.83	40.83	0.3206	13.09	406.70	76.00	(10.67)	65.33	472.03
2017		7,023,105	7,046,092	-38.31	38.31	0.2956	11.32	418.02	80.00	(10.67)	69.33	487.35
2018		7,571,537	7,596,865	-42.21	42.21	0.2725	11.50	429.53	80.00	(10.67)	69.33	498.85
2019		8,247,366	8,273,036	-42.78	42.78	0.2512	10.75	440.28	82.00	(10.67)	71.33	511.60
2020		8,859,275	8,883,702	-40.71	40.71	0.2316	9.43	449.71	82.00	(10.67)	71.33	521.03
2021		9,707,975	9,734,263	-43.81	43.81	0.2135	9.36	459.06	82.00	(10.67)	71.33	530.39
2022		10,449,507	10,476,268	-44.60	44.60	0.1969	8.78	467.84	82.00	(10.67)	71.33	539.17

HR @ max (MBTU/MWh)	10.410	
Fuel Volatility	Y	
VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
2.50	3.32	37.10
2.52	3.35	37.43
2.57	3.38	37.80
2.61	3.57	39.74
2.66	3.72	41.42
2.71	3.89	43.20
2.75	4.07	45.08
2.77	4.13	45.71

Capital Cost was supplied in $/kW-month -

The Proposal supplied monthly unit ratings with maximum summer rating of 500 MW;
We multiplied the monthly ratings by the monthly capital cost and then divided by the maximum summer rating

Year 2002 capital cost is for 7 months
Year 2009 capital cost is for 5 months

Heat Rate supplied by Respondent B

Avg. Heat Rate @ Max 10,410
Avg. Heat Rate @ Min 18,610

No maintenance schedule supplied -

Availability	95%	(Supplied value)
Forced Outage Rate	2%	(Supplied value)
Scheduled Maintenance	3%	11 days in April; 3 weeks every sixth year

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Respondent B CT Proposal (10 Year Pricing)

Proposal Size (MW): 486 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
							455.76					527.09
2002	25.20	2,887,357	2,887,804	-0.74	25.94	1	25.94	25.94	10.00	(1.65)	8.35	34.29
2003	44.25	3,059,636	3,060,813	-1.96	46.21	0.9220	42.60	68.54	20.00	(3.19)	16.81	85.35
2004	45.02	3,234,907	3,234,378	0.88	44.14	0.8500	37.52	106.06	28.00	(4.67)	23.33	129.39
2005	45.81	3,542,591	3,541,517	1.79	44.02	0.7837	34.50	140.56	34.00	(6.08)	27.92	168.48
2006	46.61	3,736,644	3,735,679	1.61	45.00	0.7225	32.51	173.07	42.00	(7.38)	34.62	207.69
2007	47.43	3,997,015	3,994,483	4.22	43.21	0.6661	28.78	201.85	48.00	(8.48)	39.52	241.37
2008	48.26	4,242,135	4,239,975	3.60	44.66	0.6141	27.43	229.28	52.00	(9.40)	42.60	271.87
2009	49.10	4,498,493	4,494,843	6.08	43.02	0.5662	24.36	253.64	58.00	(10.06)	47.94	301.57
2010	49.96	4,520,869	4,517,965	4.84	45.12	0.5220	23.55	277.19	60.00	(10.48)	49.52	326.71
2011	50.83	4,702,102	4,697,553	7.58	43.25	0.4813	20.82	298.00	64.00	(10.67)	53.33	351.33
2012	21.76	4,997,471	5,022,858	-42.31	64.07	0.4437	28.43	326.43	68.00	(10.67)	57.33	383.76
2013		5,300,868	5,326,303	-42.39	42.39	0.4091	17.34	343.77	70.00	(10.67)	59.33	403.10
2014		5,612,784	5,640,400	-46.03	46.03	0.3772	17.36	361.13	74.00	(10.67)	63.33	424.46
2015		5,970,733	5,996,619	-43.14	43.14	0.3477	15.00	376.14	76.00	(10.67)	65.33	441.46
2016		6,341,677	6,367,993	-43.86	43.86	0.3206	14.06	390.20	76.00	(10.67)	65.33	455.52
2017		7,023,105	7,047,908	-41.34	41.34	0.2956	12.22	402.42	80.00	(10.67)	69.33	471.74
2018		7,571,537	7,598,682	-45.24	45.24	0.2725	12.33	414.74	80.00	(10.67)	69.33	484.07
2019		8,247,366	8,274,852	-45.81	45.81	0.2512	11.51	426.25	82.00	(10.67)	71.33	497.58
2020		8,859,275	8,885,519	-43.74	43.74	0.2316	10.13	436.38	82.00	(10.67)	71.33	507.71
2021		9,707,975	9,736,080	-46.84	46.84	0.2135	10.00	446.39	82.00	(10.67)	71.33	517.71
2022		10,449,507	10,478,084	-47.63	47.63	0.1969	9.38	455.76	82.00	(10.67)	71.33	527.09

HR @ max (MBTU/MWh): 10.410
Fuel Volatility: Y

VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
2.00	3.32	36.60
2.02	3.35	36.93
2.06	3.38	37.29
2.09	3.57	39.22
2.13	3.72	40.89
2.16	3.89	42.66
2.20	4.07	44.53
2.24	4.13	45.19
2.28	4.20	45.98
2.32	4.31	47.17
2.36	4.42	48.39

Capital Cost was supplied in $/kW-month -

The Proposal supplied monthly unit ratings with maximum summer rating of 500 MW;
We multiplied the monthly ratings by the monthly capital cost and then divided by the maximum summer rating

Year 2002 capital cost is for 7 months
Year 2012 capital cost is for 5 months

No specific heat rate information was supplied -

Avg. Heat Rate @ Max 10,410
Avg. Heat Rate @ Min 18,610

No maintenance schedule supplied -

Availability	95%	(Supplied value)
Forced Outage Rate	2%	(Supplied value)
Scheduled Maintenance	3%	11 days in April; 3 weeks every sixth year

Respondent B CT Proposal (20 Year Pricing)

Proposal Size (MW): 486 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Fixed Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
							424.18					495.51
2002	25.20	2,887,357	2,887,804	-0.74	25.94	1	25.94	25.94	10.00	(1.65)	8.35	34.29
2003	44.25	3,059,636	3,060,814	-1.96	46.21	0.9220	42.60	68.54	20.00	(3.19)	16.81	85.35
2004	45.02	3,234,907	3,234,378	0.88	44.14	0.8500	37.52	106.06	28.00	(4.67)	23.33	129.39
2005	45.85	3,542,591	3,541,518	1.79	44.06	0.7837	34.53	140.59	34.00	(6.08)	27.92	168.52
2006	46.64	3,736,644	3,735,679	1.61	45.03	0.7225	32.54	173.13	42.00	(7.38)	34.62	207.75
2007	47.47	3,997,015	3,994,481	4.22	43.24	0.6661	28.81	201.93	48.00	(8.48)	39.52	241.45
2008	48.29	4,242,135	4,239,973	3.60	44.68	0.6141	27.44	229.37	52.00	(9.40)	42.60	271.97
2009	49.10	4,498,493	4,494,844	6.08	43.02	0.5662	24.36	253.73	58.00	(10.06)	47.94	301.67
2010	49.96	4,520,869	4,517,966	4.84	45.12	0.5220	23.55	277.29	60.00	(10.48)	49.52	326.81
2011	50.83	4,702,102	4,697,555	7.58	43.26	0.4813	20.82	298.10	64.00	(10.67)	53.33	351.43
2012	51.72	4,997,471	4,990,447	11.71	40.02	0.4437	17.76	315.86	68.00	(10.67)	57.33	373.19
2013	52.68	5,300,868	5,289,525	18.90	33.77	0.4091	13.82	329.68	70.00	(10.67)	59.33	389.00
2014	53.61	5,612,784	5,602,549	17.06	36.55	0.3772	13.79	343.46	74.00	(10.67)	63.33	406.79
2015	54.56	5,970,733	5,957,433	22.17	32.39	0.3477	11.26	354.73	76.00	(10.67)	65.33	420.05
2016	55.49	6,341,677	6,328,921	21.26	34.23	0.3206	10.97	365.70	76.00	(10.67)	65.33	431.03
2017	56.44	7,023,105	7,009,367	22.90	33.54	0.2956	9.91	375.61	80.00	(10.67)	69.33	444.94
2018	57.44	7,571,537	7,557,584	23.26	34.18	0.2725	9.31	384.93	80.00	(10.67)	69.33	454.25
2019	58.44	8,247,366	8,232,743	24.37	34.07	0.2512	8.56	393.49	82.00	(10.67)	71.33	464.81
2020	59.44	8,859,275	8,842,715	27.60	31.84	0.2316	7.38	400.86	82.00	(10.67)	71.33	472.19
2021	60.52	9,707,975	9,691,540	27.39	33.12	0.2135	7.07	407.93	82.00	(10.67)	71.33	479.26
2022	25.91	10,449,507	10,483,469	-56.60	82.52	0.1969	16.25	424.18	82.00	(10.67)	71.33	495.51

HR @ max (MBTU/MWh)	10.410	
Fuel Volatility	Y	
VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
2.00	3.32	36.60
2.02	3.35	36.93
2.06	3.38	37.29
2.09	3.57	39.22
2.13	3.72	40.89
2.16	3.89	42.66
2.20	4.07	44.53
2.24	4.13	45.19
2.28	4.20	45.98
2.32	4.31	47.17
2.36	4.42	48.39
2.40	4.54	49.66
2.44	4.66	50.96
2.49	4.79	52.32
2.53	4.92	53.70
2.57	5.19	56.58
2.62	5.48	59.66
2.67	5.79	62.93
2.71	6.00	65.17
2.76	6.22	67.51
2.78	6.43	69.69

Capital Cost was supplied in $/kW-month -

The Proposal supplied monthly unit ratings with maximum summer rating of 500 MW;
We multiplied the monthly ratings by the monthly capital cost and then divided by the maximum summer rating

Year 2002 capital cost is for 7 months
Year 2022 capital cost is for 5 months

No specific heat rate information was supplied -

Avg. Heat Rate @ Max 10,410
Avg. Heat Rate @ Min 18,610

No maintenance schedule supplied -

Availability	95%	(Supplied value)
Forced Outage Rate	2%	(Supplied value)
Scheduled Maintenance	3%	11 days in April; 3 weeks every sixth year

Respondent C

Proposal Size (MW): 532 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Fixed O&M ($/kw-Yr)	Fuel Reserv. ($/kw-Yr)	Total Fixed Cost ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
										532.48					511.41
2002	37.08	4.57	19.14	**60.79**	2,887,357	2,866,864	34.16	**26.63**	1.0000	26.63	**26.63**	30.45	(27.86)	**2.59**	**29.23**
2003	63.56	8.07	32.81	**104.44**	3,059,636	3,038,049	35.98	**68.47**	0.9220	63.12	**89.75**	57.71	(54.09)	**3.61**	**93.37**
2004	63.56	8.31	32.81	**104.69**	3,234,907	3,212,409	37.50	**67.19**	0.8500	57.11	**146.87**	82.52	(80.20)	**2.32**	**149.18**
2005	63.56	8.56	32.81	**104.93**	3,542,591	3,521,701	34.82	**70.12**	0.7837	54.95	**201.82**	105.26	(105.33)	**-0.07**	**201.75**
2006	63.56	8.82	32.81	**105.19**	3,736,644	3,718,760	29.81	**75.38**	0.7225	54.47	**256.28**	127.44	(129.31)	**-1.87**	**254.42**
2007	26.49	3.79	13.67	**43.94**	3,997,015	4,018,462	-35.75	**79.69**	0.6661	53.08	**309.36**	148.31	(150.07)	**-1.76**	**307.60**
2008					4,242,135	4,266,718	-40.97	**40.97**	0.6141	25.16	**334.52**	164.29	(167.27)	**-2.98**	**331.54**
2009					4,498,493	4,523,326	-41.39	**41.39**	0.5662	23.43	**357.96**	168.23	(179.29)	**-11.05**	**346.90**
2010					4,520,869	4,544,432	-39.27	**39.27**	0.5220	20.50	**378.46**	166.17	(186.76)	**-20.59**	**357.87**
2011					4,702,102	4,726,035	-39.89	**39.89**	0.4813	19.20	**397.66**	167.67	(190.24)	**-22.57**	**375.08**
2012					4,997,471	5,020,566	-38.49	**38.49**	0.4437	17.08	**414.73**	169.17	(190.24)	**-21.07**	**393.67**
2013					5,300,868	5,323,921	-38.42	**38.42**	0.4091	15.72	**430.45**	168.98	(190.24)	**-21.26**	**409.20**
2014					5,612,784	5,638,016	-42.05	**42.05**	0.3772	15.86	**446.31**	171.05	(190.24)	**-19.19**	**427.12**
2015					5,970,733	5,994,235	-39.17	**39.17**	0.3477	13.62	**459.93**	169.92	(190.24)	**-20.32**	**439.62**
2016					6,341,677	6,365,610	-39.89	**39.89**	0.3206	12.79	**472.72**	169.55	(190.24)	**-20.69**	**452.03**
2017					7,023,105	7,045,525	-37.37	**37.37**	0.2956	11.04	**483.77**	171.62	(190.24)	**-18.63**	**465.14**
2018					7,571,537	7,596,298	-41.27	**41.27**	0.2725	11.25	**495.01**	169.17	(190.24)	**-21.07**	**473.94**
2019					8,247,366	8,272,469	-41.84	**41.84**	0.2512	10.51	**505.52**	169.55	(190.24)	**-20.69**	**484.83**
2020					8,859,275	8,883,135	-39.77	**39.77**	0.2316	9.21	**514.73**	171.05	(190.24)	**-19.19**	**495.54**
2021					9,707,975	9,733,696	-42.87	**42.87**	0.2135	9.15	**523.89**	169.92	(190.24)	**-20.32**	**503.57**
2022					10,449,507	10,475,701	-43.66	**43.66**	0.1969	8.60	**532.48**	169.17	(190.24)	**-21.07**	**511.41**

HR @ max (MBTU/MWh)	7.054	
Fuel Volatility	Y	
VOM ($/MWh)	**Fuel** ($/MBTU)	**Dispatch Price** ($/MWh)
1.726	2.49	19.28
1.778	2.49	19.34
1.831	2.49	19.39
1.886	2.68	20.79
1.943	2.84	21.96
2.001	3.01	23.21

Capital Cost, Fixed O&M, and Fuel Fixed Costs were supplied in $/kW-month -
Year 2002 values were multiplied by 7
Years 2003-2006 values were multiplied by 12
Year 2007 values were multiplied by 5

Using the supplied heat rate table, we modeled the following:

Maximum Capacity	600 MW
Avg. Heat Rate @ Max	7,054
Minimum Capacity	120 MW
Avg. Heat Rate @ Min	7,078

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Respondent C with Fixed and Levelized Energy Price

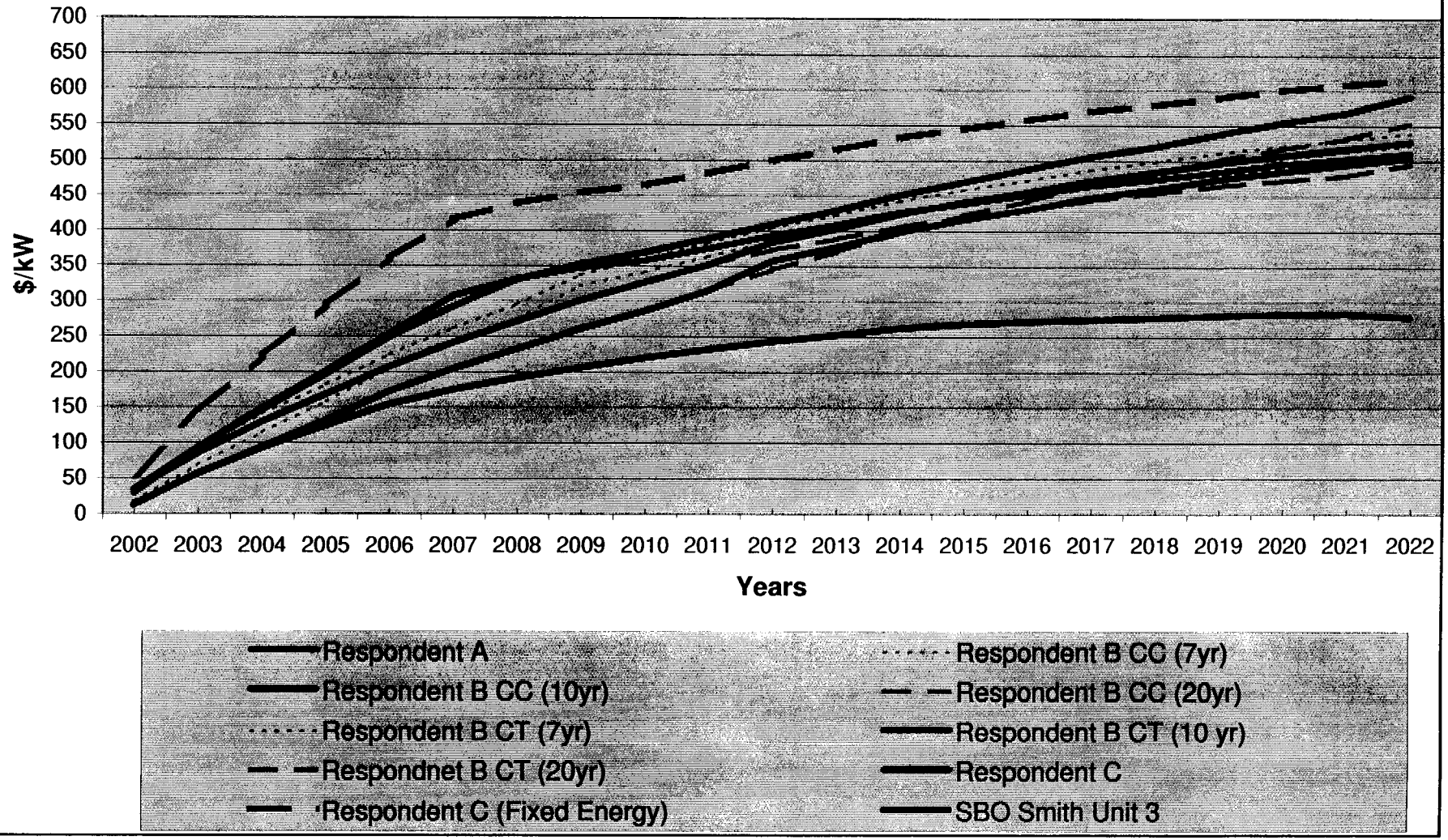
Proposal Size (MW): 532 | Base Case Size (MW): 600 | Disc. Rate: 8.47%

Year	Capacity Costs ($/kw-Yr)	Fixed O&M ($/kw-Yr)	Fuel Reserv. ($/kw-Yr)	Total Fixed Cost ($/kw-Yr)	Base Case Utility Cost (000's $)	Proposal Utility Cost (000's $)	Energy Savings & Exp. Plan ($/kW-Yr)	Total Cost ($/kW-Yr)	PV Factor	NPV of Total Gen.Cost ($/kW-Yr)	Generation Total Cost Accum. PV ($/kW-Yr)	Transm. Grid & Conn. Accum. PV ($/kW-Yr)	Transm. Losses Accum. PV ($/kW-Yr)	Transm. Total Cost Accum. PV ($/kW-Yr)	Gen. & Transm. Total Cost Accum. PV ($/kW-Yr)
										637.37					616.30
2002	37.08	4.57	19.14	**60.79**	2,887,357	2,880,888	10.78	**50.01**	1.0000	50.01	**50.01**	30.45	(27.86)	2.59	**52.60**
2003	63.56	8.07	32.81	**104.44**	3,059,636	3,054,925	7.85	**96.59**	0.9220	89.05	**139.06**	57.71	(54.09)	3.61	**142.67**
2004	63.56	8.31	32.81	**104.69**	3,234,907	3,229,040	9.78	**94.91**	0.8500	80.67	**219.73**	82.52	(80.20)	2.32	**222.05**
2005	63.56	8.56	32.81	**104.93**	3,542,591	3,536,645	9.91	**95.03**	0.7837	74.47	**294.20**	105.26	(105.33)	-0.07	**294.13**
2006	63.56	8.82	32.81	**105.19**	3,736,644	3,729,600	11.74	**93.45**	0.7225	67.52	**361.72**	127.44	(129.31)	-1.87	**359.85**
2007	26.49	3.79	13.67	**43.94**	3,997,015	4,020,471	-39.09	**83.03**	0.6661	55.31	**417.03**	148.31	(150.07)	-1.76	**415.26**
2008					4,242,135	4,266,417	-40.47	**40.47**	0.6141	24.85	**441.88**	164.29	(167.27)	-2.98	**438.90**
2009					4,498,493	4,523,025	-40.89	**40.89**	0.5662	23.15	**465.03**	168.23	(179.29)	-11.05	**453.98**
2010					4,520,869	4,544,131	-38.77	**38.77**	0.5220	20.24	**485.27**	166.17	(186.76)	-20.59	**464.68**
2011					4,702,102	4,725,733	-39.39	**39.39**	0.4813	18.96	**504.23**	167.67	(190.24)	-22.57	**481.65**
2012					4,997,471	5,020,264	-37.99	**37.99**	0.4437	16.86	**521.08**	169.17	(190.24)	-21.07	**500.01**
2013					5,300,868	5,323,619	-37.92	**37.92**	0.4091	15.51	**536.59**	168.98	(190.24)	-21.26	**515.34**
2014					5,612,784	5,637,715	-41.55	**41.55**	0.3772	15.67	**552.27**	171.05	(190.24)	-19.19	**533.08**
2015					5,970,733	5,993,934	-38.67	**38.67**	0.3477	13.45	**565.71**	169.92	(190.24)	-20.32	**545.40**
2016					6,341,677	6,365,308	-39.38	**39.38**	0.3206	12.63	**578.34**	169.55	(190.24)	-20.69	**557.65**
2017					7,023,105	7,045,223	-36.86	**36.86**	0.2956	10.90	**589.23**	171.62	(190.24)	-18.63	**570.61**
2018					7,571,537	7,595,997	-40.77	**40.77**	0.2725	11.11	**600.34**	169.17	(190.24)	-21.07	**579.27**
2019					8,247,366	8,272,167	-41.34	**41.34**	0.2512	10.38	**610.73**	169.55	(190.24)	-20.69	**590.03**
2020					8,859,275	8,882,834	-39.26	**39.26**	0.2316	9.09	**619.82**	171.05	(190.24)	-19.19	**600.63**
2021					9,707,975	9,733,395	-42.37	**42.37**	0.2135	9.05	**628.87**	169.92	(190.24)	-20.32	**608.55**
2022					10,449,507	10,475,399	-43.15	**43.15**	0.1969	8.50	**637.37**	169.17	(190.24)	-21.07	**616.30**

HR @ max (MBTU/MWh)		
Fuel Volatility	N	
VOM ($/MWh)	Fuel ($/MBTU)	Dispatch Price ($/MWh)
		$31.46
		$31.46
		$31.46
		$31.46
		$31.46
		$31.46
		$31.46

Capital Cost, Fixed O&M, and Fuel Fixed Costs were supplied in $/kW-month -
Year 2002 values were multiplied by 7
Years 2003-2006 values were multiplied by 12
Year 2007 values were multiplied by 5

Accumulated PV (2002$) of Generation and Transmission Total Cost



SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

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Gulf Power Company

Plant Smith - Contruct 532 MW Gas-fired Combined Cycle using a gas supplier bid to determine transprtation costs

Generation = 532,000 kw Pipeline Capacity = 86,567 MMBtu/day

Natural Gas Fuel Only NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF

4	Florida Gas Transmission				Florida Gas Transmission VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT & STORAGE	PIPELINE Facility CAPITAL	w/o Taxes Marginal Delivered Gas Prices				50.00% L.F. Average Total Gas Delivered	75.00% L.F. Average Total Gas Delivered	100.00% L.F. Average Total Gas Delivered
YEAR	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	COST	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	Price	Price	Price
1995	159.80	140.50	153.67	188.00	5.16	5.49	$0	$0	164.96	145.66	159.16	193.49			
1996	214.20	242.50	258.00	347.00	6.71	8.57	$0	$0	220.91	249.21	266.57	355.57			
1997	231.00	211.00	261.33	325.50	5.73	6.86	$0	$0	236.73	216.73	268.19	332.36			
1998	196.00	205.00	208.50	226.07	5.29	5.63	$0	$0	201.29	210.29	214.12	231.70			
1999	212.60	212.60	212.60	212.60	4.38	4.38	$0	$0	216.98	216.98	216.98	216.98			
2000	212.60	212.60	212.60	212.60	4.38	4.38	$0	$0	216.98	216.98	216.98	216.98			
2001	212.60	212.60	212.60	212.60	4.38	4.38	$0	$0	216.98	216.98	216.98	216.98			
2002	212.60	212.60	212.60	212.60	4.38	4.38	$17,694,303	$0	216.98	216.98	216.98	216.98	328.98	291.64	272.98
2003	212.60	212.60	212.60	212.60	4.38	4.38	$17,694,303	$0	216.98	216.98	216.98	216.98	328.98	291.64	272.98
2004	212.60	212.60	212.60	212.60	4.38	4.38	$17,694,303	$0	216.98	216.98	216.98	216.98	328.98	291.64	272.98
2005	230.43	230.43	230.43	230.43	4.72	4.72	$17,694,303	$0	235.15	235.15	235.15	235.15	347.15	309.82	291.15
2006	245.60	245.60	245.60	245.60	5.01	5.01	$17,694,303	$0	250.61	250.61	250.61	250.61	362.61	325.28	306.61
2007	261.76	261.76	261.76	261.76	5.32	5.32	$17,694,303	$0	267.08	267.08	267.08	267.08	379.08	341.75	323.08
2008	278.97	278.97	278.97	278.97	5.65	5.65	$17,694,303	$0	284.62	284.62	284.62	284.62	396.62	359.28	340.62
2009	281.79	281.79	281.79	281.79	5.70	5.70	$17,694,303	$0	287.49	287.49	287.49	287.49	399.49	362.16	343.49
2010	284.13	284.13	284.13	284.13	5.76	5.76	$17,694,303	$0	289.89	289.89	289.89	289.89	401.89	364.56	345.89
2011	291.31	291.31	291.31	291.31	5.89	5.89	$17,694,303	$0	297.21	297.21	297.21	297.21	409.21	371.87	353.21
2012	298.67	298.67	298.67	298.67	6.03	6.03	$17,694,303	$0	304.70	304.70	304.70	304.70	416.70	379.37	360.70
2013	306.21	306.21	306.21	306.21	6.18	6.18	$17,694,303	$0	312.39	312.39	312.39	312.39	424.39	387.06	368.39
2014	313.94	313.94	313.94	313.94	6.33	6.33	$17,694,303	$0	320.27	320.27	320.27	320.27	432.27	394.93	376.27
2015	321.87	321.87	321.87	321.87	6.48	6.48	$17,694,303	$0	328.34	328.34	328.34	328.34	440.34	403.01	384.34
2016	329.49	329.49	329.49	329.49	6.63	6.63	$17,694,303	$0	336.12	336.12	336.12	336.12	448.12	410.79	392.12
2017	354.92	354.92	354.92	354.92	7.12	7.12	$17,694,303	$0	362.04	362.04	362.04	362.04	474.04	436.71	418.04
2018	382.30	382.30	382.30	382.30	7.64	7.64	$17,694,303	$0	389.94	389.94	389.94	389.94	501.94	464.61	445.94
2019	411.59	411.59	411.59	411.59	8.20	8.20	$17,694,303	$0	419.79	419.79	419.79	419.79	531.79	494.45	475.79
2020	426.51	426.51	426.51	426.51	8.48	8.48	$17,694,303	$0	435.00	435.00	435.00	435.00	547.00	509.66	491.00
2021	441.98	441.98	441.98	441.98	8.78	8.78	$17,694,303	$0	450.76	450.76	450.76	450.76	562.76	525.42	506.76

Notes: Summer months = April through October. Winter Months = November, December and March

Fixed costs must be added to marginal costs to determine total fuel costs.

Capital Cost of Pipeline Lateral not Included in Fuel Cost.

04/19/99,GLF2002Z.WK4

SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES
FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

CONFIDENTIAL

Gulf Power Company

Polsky builds 213 MW, Gas-fired cogen, Santa Rosa - Pace, FL, Heat rate 7100
Same prices for 177 MW offer at International Paper

Generation = **kw =** 213,000 **Heat Rate =** 7,100 **btu/kw** **Transport Capacity Required =** 36,295 **MMBtu/day**

Natural Gas Fuel Only **NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF**

3	Koch Gateway Pipeline or FGT				Koch Gateway Pipeline or F VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT & STORAGE	Capital Cost of Pipeline	w/o Taxes Marginal Delivered Gas Prices			
YEAR	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	Facilities	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan
1995	164.00	144.00	157.00	192.00	7.00	7.00	$0	$0	171.00	151.00	164.00	199.00
1996	220.20	248.00	270.67	359.50	7.00	7.00	$0	$0	227.20	255.00	277.67	366.50
1997	240.00	218.00	269.33	330.50	7.00	7.00	$0	$0	247.00	225.00	276.33	337.50
1998	205.80	215.00	218.33	232.50	7.00	7.00	$0	$0	212.80	222.00	225.33	239.50
1999	221.59	231.59	249.92	264.09	7.00	7.00	$0	$0	228.59	238.59	256.92	271.09
2000	221.59	231.59	249.92	264.09	7.00	7.00	$0	$0	228.59	238.59	256.92	271.09
2001	221.59	231.59	249.92	264.09	7.00	7.00	$0	$0	228.59	238.59	256.92	271.09
2002	221.59	231.59	249.92	264.09	7.00	7.00	$0	$0	228.59	238.59	256.92	271.09
2003	221.59	231.59	249.92	264.09	7.00	7.00	$0	$0	228.59	238.59	256.92	271.09
2004	221.59	231.59	249.92	264.09	7.00	7.00	$0	$0	228.59	238.59	256.92	271.09
2005	239.91	249.91	268.25	282.41	7.00	7.00	$0	$0	246.91	256.91	275.25	289.41
2006	255.12	265.12	283.45	297.62	7.00	7.00	$0	$0	262.12	272.12	290.45	304.62
2007	271.31	281.31	299.64	313.81	7.00	7.00	$0	$0	278.31	288.31	306.64	320.81
2008	288.56	298.56	316.89	331.06	7.00	7.00	$0	$0	295.56	305.56	323.89	338.06
2009	291.38	301.38	319.72	333.88	7.00	7.00	$0	$0	298.38	308.38	326.72	340.88
2010	294.24	304.24	322.57	336.74	7.00	7.00	$0	$0	301.24	311.24	329.57	343.74
2011	301.44	311.44	329.78	343.94	7.00	7.00	$0	$0	308.44	318.44	336.78	350.94
2012	308.83	318.83	337.16	351.33	7.00	7.00	$0	$0	315.83	325.83	344.16	358.33
2013	316.40	326.40	344.73	358.90	7.00	7.00	$0	$0	323.40	333.40	351.73	365.90
2014	324.16	334.16	352.49	366.66	7.00	7.00	$0	$0	331.16	341.16	359.49	373.66
2015	332.12	342.12	360.45	374.62	7.00	7.00	$0	$0	339.12	349.12	367.45	381.62
2016	340.27	350.27	368.60	382.77	7.00	7.00	$0	$0	347.27	357.27	375.60	389.77
2017	365.84	375.84	394.17	408.34	8.00	8.00	$0	$0	373.84	383.84	402.17	416.34
2018	393.37	403.37	421.70	435.87	8.00	8.00	$0	$0	401.37	411.37	429.70	443.87
2019	422.81	432.81	451.14	465.31	8.00	8.00	$0	$0	430.81	440.81	459.14	473.31
2020	437.82	447.82	466.15	480.32	8.00	8.00	$0	$0	445.82	455.82	474.15	488.32
2021	453.36	463.36	481.70	495.86	8.00	8.00	$0	$0	461.36	471.36	489.70	503.86

)ctober. Winter Months = November through March
to marginal costs to determine total fuel costs.

SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES
FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

CONFIDENTIAL

Gulf Power Company

Sonat sells 500 MW at Holmes County, FL

Revised offer to include firm transport rates. Sonat allows SCS to buy gas for plant , hedge prices and do some trading. Assume transport is Primary Firm

Assumes that SCS Fuel Services has control over Fuel Prices, No gas storage, FGT Index type pricing, FS 2 commodity rates

Without Gas Storage - Assume 2 weeks oil burn per year during hurricane season

Generation = 500,000 **kw** 7,045 **btu/kw** **Pipeline Transportation Capacity =** 84,540 **MMBtu/day**

ıral Gas Fuel Only **NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF**

2	Florida Gas Transmission				Florida Gas Transmission VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT	Capital Cost of	w/o Taxes Marginal Delivered Gas Prices				w/o taxes No. 2 Fuel Oil
YEAR	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	Pipeline Facilities	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	2 weeks/yr in August
1995	168.80	149.50	162.67	197.00	9.34	9.71	$0	$0	178.14	158.84	172.38	206.71	352.10
1996	223.20	251.50	267.00	356.00	12.47	14.90	$0	$0	235.67	263.97	281.90	370.90	430.58
1997	240.00	220.00	270.33	334.50	9.56	11.47	$0	$0	249.56	229.56	281.80	345.97	395.13
1998	205.00	214.00	217.50	235.07	8.74	9.26	$0	$0	213.74	222.74	226.76	244.33	314.14
1999	221.60	221.60	221.60	221.60	9.17	9.17	$0	$0	230.77	230.77	230.77	230.77	435.75
2000	221.60	221.60	221.60	221.60	9.17	9.17	$0	$0	230.77	230.77	230.77	230.77	448.30
2001	221.60	221.60	221.60	221.60	9.17	9.17	$0	$0	230.77	230.77	230.77	230.77	460.73
2002	221.60	221.60	221.60	221.60	9.17	9.17	$15,768,000	$0	230.77	230.77	230.77	230.77	473.82
2003	221.60	221.60	221.60	221.60	9.17	9.17	$15,768,000	$0	230.77	230.77	230.77	230.77	487.95
2004	221.60	221.60	221.60	221.60	9.17	9.17	$15,768,000	$0	230.77	230.77	230.77	230.77	502.95
2005	239.43	239.43	239.43	239.43	9.72	9.72	$15,768,000	$0	249.15	249.15	249.15	249.15	518.42
2006	254.60	254.60	254.60	254.60	10.19	10.19	$15,768,000	$0	264.79	264.79	264.79	264.79	534.30
2007	270.76	270.76	270.76	270.76	10.69	10.69	$15,768,000	$0	281.45	281.45	281.45	281.45	550.68
2008	287.97	287.97	287.97	287.97	11.22	11.22	$15,768,000	$0	299.19	299.19	299.19	299.19	567.58
2009	290.79	290.79	290.79	290.79	11.31	11.31	$15,768,000	$0	302.10	302.10	302.10	302.10	585.01
2010	293.13	293.13	293.13	293.13	11.38	11.38	$15,768,000	$0	304.52	304.52	304.52	304.52	608.70
2011	300.31	300.31	300.31	300.31	11.60	11.60	$15,768,000	$0	311.92	311.92	311.92	311.92	633.37
2012	307.67	307.67	307.67	307.67	11.83	11.83	$15,768,000	$0	319.50	319.50	319.50	319.50	659.07
2013	315.21	315.21	315.21	315.21	12.06	12.06	$15,768,000	$0	327.28	327.28	327.28	327.28	685.83
2014	322.94	322.94	322.94	322.94	12.30	12.30	$15,768,000	$0	335.25	335.25	335.25	335.25	713.70
2015	330.87	330.87	330.87	330.87	12.55	12.55	$15,768,000	$0	343.41	343.41	343.41	343.41	742.87
2016	338.49	338.49	338.49	338.49	12.78	12.78	$15,768,000	$0	351.27	351.27	351.27	351.27	772.92
2017	363.92	363.92	363.92	363.92	13.57	13.57	$15,768,000	$0	377.49	377.49	377.49	377.49	803.59
2018	391.30	391.30	391.30	391.30	14.42	14.42	$15,768,000	$0	405.72	405.72	405.72	405.72	835.36
2019	420.59	420.59	420.59	420.59	15.32	15.32	$15,768,000	$0	435.91	435.91	435.91	435.91	868.55
2020	435.51	435.51	435.51	435.51	15.78	15.78	$15,768,000	$0	451.29	451.29	451.29	451.29	911.32
2021	450.98	450.98	450.98	450.98	16.26	16.26	$15,768,000	$0	467.23	467.23	467.23	467.23	956.17

October. Winter Months = November Thru March

to marginal costs to determine total fuel costs.

SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES
FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

CONFIDENTIAL

Gulf Power Company

Sonat Constructs 360 MW dual fuel Combustion Turbine Plant in Holmes Co., FL
Forecast of Daily Gas Prices delivered into FGT used. No demand Charges
Fuel Oil Used in July & August & 50% oil used in June

Generation = 360,000 **kw** **Heat Rate =** 12,000 **btu/kw** **Transport Capacity Required =** 103,680 **MMBtu/day**

Natural Gas & Fuel Oil **NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF**

3	Florida Gas Transmission				Florida Gas Transmission VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT & STORAGE	Capital Cost of Pipeline	w/o Taxes Marginal Delivered Gas Prices				No. 2 Fuel Oil Delivered 100%
YEAR	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	Facilities	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	Jul, Aug 50%-JUN
1995	169.60	150.50	163.00	202.50	33.98	26.29	$0	$0	203.58	184.48	189.29	228.79	352.10
1996	222.80	253.50	275.00	369.50	37.08	30.69	$0	$0	259.88	290.58	305.69	400.19	430.58
1997	245.40	221.50	274.67	325.00	61.69	49.19	$0	$0	307.09	283.19	323.86	374.19	395.13
1998	213.00	224.50	227.00	243.00	61.00	46.74	$0	$0	274.00	285.50	273.74	289.74	314.14
1999	220.60	230.60	253.93	268.10	61.22	47.52	$0	$0	281.82	291.82	301.46	315.62	435.75
2000	220.60	230.60	253.93	268.10	61.22	47.52	$0	$0	281.82	291.82	301.46	315.62	448.30
2001	220.60	230.60	253.93	268.10	61.22	47.52	$0	$0	281.82	291.82	301.46	315.62	460.73
2002	220.60	230.60	253.93	268.10	61.22	47.52	$0	$0	281.82	291.82	301.46	315.62	473.82
2003	220.60	230.60	253.93	268.10	61.22	47.52	$0	$0	281.82	291.82	301.46	315.62	487.95
2004	220.60	230.60	253.93	268.10	61.22	47.52	$0	$0	281.82	291.82	301.46	315.62	502.95
2005	238.93	248.93	272.26	286.43	61.79	48.09	$0	$0	300.71	310.71	320.35	334.51	518.42
2006	254.13	264.13	287.46	301.63	62.26	48.56	$0	$0	316.39	326.39	336.02	350.19	534.30
2007	270.32	285.32	303.66	317.82	62.80	49.06	$0	$0	333.12	348.12	352.72	366.88	550.68
2008	287.57	302.57	320.90	335.07	63.33	49.59	$0	$0	350.90	365.90	370.50	384.66	567.58
2009	290.40	305.40	323.73	337.90	63.42	49.68	$0	$0	353.82	368.82	373.41	387.58	585.01
2010	293.25	308.25	326.58	340.75	63.51	49.77	$0	$0	356.76	371.76	376.35	390.52	608.70
2011	300.46	315.46	333.79	347.96	63.73	49.99	$0	$0	364.19	379.19	383.78	397.95	633.37
2012	307.84	322.84	341.18	355.34	63.96	50.22	$0	$0	371.80	386.80	391.39	405.56	659.07
2013	315.41	330.41	348.75	362.91	64.19	50.45	$0	$0	379.61	394.61	399.20	413.37	685.83
2014	323.17	338.17	356.51	370.67	64.43	50.69	$0	$0	387.61	402.61	407.20	421.37	713.70
2015	331.13	346.13	364.46	378.63	64.68	50.94	$0	$0	395.81	410.81	415.40	429.57	742.87
2016	339.28	354.28	372.62	386.78	64.93	51.19	$0	$0	404.21	419.21	423.81	437.97	772.92
2017	364.85	379.85	398.19	412.35	65.72	51.98	$0	$0	430.58	445.58	450.17	464.33	803.59
2018	392.38	407.38	425.72	439.88	66.57	52.83	$0	$0	458.96	473.96	478.55	492.71	835.36
2019	421.82	436.82	455.16	469.32	67.48	53.74	$0	$0	489.31	504.31	508.90	523.07	868.55
2020	436.83	451.83	470.16	484.33	67.95	54.20	$0	$0	504.78	519.78	524.37	538.53	911.32
2021	452.38	467.38	485.71	499.88	68.43	54.68	$0	$0	520.80	535.80	540.39	554.56	956.17
2022	468.48	483.48	501.82	515.98	68.92	55.18	$0	$0	537.41	571.16	548.03	571.16	1,003.26

)ctober. Winter Months = November through March
to marginal costs to determine total fuel costs.

SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

CONFIDENTIAL

Gulf Power Company

SCS builds 125 mile pipeline from Plant Smith to Atmore, AL
Contract with FGT for Firm Transportation Space from Destin PL to Atmore. AL

Generation = 532,000 kw Pipeline Capacity = 86,567 MMBtu/day
Natural Gas Fuel Only NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF

5	Florida Gas Transmission				Florida Gas Transmission VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT & STORAGE	PIPELINE Facility CAPITAL	w/o Taxes MARGINAL DELIVERED			50.00% L.F. Average Total Gas Delivered	75.00% L.F. Average Total Gas Delivered	100.00% L.F. Average Total Gas Delivered
YEAR	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	COST	SUMMER	WINTER	AVERAGE	Price	Price	Price
1995	164.30	145.00	158.17	192.50	5.56	5.63	$0	$0	169.86	198.13	169.84			
1996	218.70	247.00	262.50	351.50	5.90	6.30	$0	$0	224.60	357.80	262.57			
1997	235.50	215.50	265.83	330.00	3.65	3.93	$0	$0	239.15	333.93	259.27			
1998	200.50	209.50	213.00	230.57	3.54	3.63	$0	$0	204.04	234.20	213.71			
1999	217.10	217.10	217.10	217.10	2.72	2.72	$0	$0	219.82	219.82	219.82			
2000	217.10	217.10	217.10	217.10	2.72	2.72	$0	$0	219.82	219.82	219.82			
2001	217.10	217.10	217.10	217.10	7.47	7.47	$16,114,454	$0	224.57	224.57	224.57			
2002	217.10	217.10	217.10	217.10	7.61	7.61	$16,114,454	$0	224.71	224.71	224.71	326.71	292.71	238.71
2003	217.10	217.10	217.10	217.10	7.77	7.77	$16,114,454	$0	224.87	224.87	224.87	326.87	292.87	238.87
2004	217.10	217.10	217.10	217.10	7.93	7.93	$16,114,454	$0	225.03	225.03	225.03	327.03	293.03	239.03
2005	234.93	234.93	234.93	234.93	8.18	8.18	$16,114,454	$0	243.11	243.11	243.11	345.11	311.11	257.11
2006	250.10	250.10	250.10	250.10	8.43	8.43	$16,114,454	$0	258.53	258.53	258.53	360.53	326.53	272.53
2007	266.26	266.26	266.26	266.26	8.68	8.68	$16,114,454	$0	274.94	274.94	274.94	376.94	342.94	288.94
2008	283.47	283.47	283.47	283.47	8.95	8.95	$16,114,454	$0	292.42	292.42	292.42	394.42	360.42	306.42
2009	286.29	286.29	286.29	286.29	9.15	9.15	$16,114,454	$0	295.44	295.44	295.44	397.44	363.44	309.44
2010	288.63	288.63	288.63	288.63	9.35	9.35	$16,114,454	$0	297.99	297.99	297.99	399.99	365.99	311.99
2011	295.81	295.81	295.81	295.81	9.59	9.59	$16,114,454	$0	305.40	305.40	305.40	407.40	373.40	319.40
2012	303.17	303.17	303.17	303.17	9.83	9.83	$16,114,454	$0	313.00	313.00	313.00	415.00	381.00	327.00
2013	310.71	310.71	310.71	310.71	10.08	10.08	$16,114,454	$0	320.79	320.79	320.79	422.79	388.79	334.79
2014	318.44	318.44	318.44	318.44	10.33	10.33	$16,114,454	$0	328.78	328.78	328.78	430.78	396.78	342.78
2015	326.37	326.37	326.37	326.37	10.59	10.59	$16,114,454	$0	336.96	336.96	336.96	438.96	404.96	350.96
2016	333.99	333.99	333.99	333.99	10.86	10.86	$16,114,454	$0	344.85	344.85	344.85	446.85	412.85	358.85
2017	359.42	359.42	359.42	359.42	11.21	11.21	$16,114,454	$0	370.64	370.64	370.64	472.64	438.64	384.64
2018	386.80	386.80	386.80	386.80	11.59	11.59	$16,114,454	$0	398.39	398.39	398.39	500.39	466.39	412.39
2019	416.09	416.09	416.09	416.09	11.98	11.98	$16,114,454	$0	428.06	428.06	428.06	530.06	496.06	442.06
2020	431.01	431.01	431.01	431.01	12.30	12.30	$16,114,454	$0	443.31	443.31	443.31	545.31	511.31	457.31
2021	446.48	446.48	446.48	446.48	12.63	12.63	$16,114,454	$0	459.11	459.11	459.11	561.11	527.11	473.11

Notes: Summer months = April through October. Winter Months = November, December and March
Fixed costs must be added to marginal costs to determine total fuel costs.
Capital Cost of Pipeline Lateral not Included in Fuel Cost.

04/19/99,GLF2002Z.WK4

SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES
FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

CONFIDENTIAL

Gulf Power Company

Gulf Power Purchases 4th unit at Plant Daniel (266 MW CC unit)
Assumes 1/4 allocation pipeline lateral costs & gas conditioning facilities
Gas storage is purchased, no fuel oil backup

Generation = 266,000 kw Pipeline Capacity = 43,284 MMBtu/day
Natural Gas Fuel Only NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF

5	Destin PL or Koch Gateway PL				Destin PL or Koch Gateway VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT & STORAGE	PIPELINE Facility CAPITAL	w/o Taxes Marginal Delivered Gas Prices				85.00% L.F. Average Total Gas Delivered	100.00% L.F. Average Total Gas Delivered
YEAR	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	COST	Apr,May,Jun Sep, Oct	Jul,Aug	Nov,Feb,Mar	Dec, Jan	Price	Price
1993	227.40	201.17	187.11	215.33	0.00	0.00	$0	$0	227.40	215.33	210.94			
1994	174.60	185.50	213.33	186.83	0.00	0.00	$0	$0	174.60	186.83	188.14			
1995	161.93	142.67	155.11	192.67	0.00	0.00	$0	$0	161.93	192.67	162.14			
1996	215.20	245.67	264.22	353.67	0.00	0.00	$0	$0	215.20	353.67	255.61			
1997	234.80	214.17	265.67	320.17	0.00	0.00	$0	$0	234.80	320.17	253.31			
1998	200.00	199.00	216.83	230.19	0.00	0.00	$0	$0	200.00	230.19	209.07			
1999	217.42	217.42	217.42	217.42	0.00	0.00	$0	$0	217.42	217.42	217.42			
2000	217.42	217.42	217.42	217.42	0.00	0.00	$0	$0	217.42	217.42	217.42			
2001	218.92	218.92	218.92	218.92	0.00	0.00	$1,648,401	$1,500,000	218.92	218.92	218.92		239.70	236.59
2002	218.92	218.92	218.92	218.92	0.00	0.00	$1,648,401	$0	218.92	218.92	218.92		239.70	236.59
2003	218.92	218.92	218.92	218.92	0.00	0.00	$1,648,401	$0	218.92	218.92	218.92		239.70	236.59
2004	218.92	218.92	218.92	218.92	0.00	0.00	$1,648,401	$0	218.92	218.92	218.92		239.70	236.59
2005	237.08	237.08	237.08	237.08	0.00	0.00	$1,660,191	$0	237.08	237.08	237.08		257.95	254.82
2006	252.27	252.27	252.27	252.27	0.00	0.00	$1,670,056	$0	252.27	252.27	252.27		273.22	270.08
2007	268.46	268.46	268.46	268.46	0.00	0.00	$1,680,562	$0	268.46	268.46	268.46		289.48	286.33
2008	285.69	285.69	285.69	285.69	0.00	0.00	$1,691,751	$0	285.69	285.69	285.69		306.80	303.63
2009	288.51	288.51	288.51	288.51	0.00	0.00	$1,693,584	$0	288.51	288.51	288.51		309.63	306.47
2010	291.20	291.20	291.20	291.20	0.00	0.00	$1,695,328	$0	291.20	291.20	291.20		312.33	309.16
2011	298.39	298.39	298.39	298.39	0.00	0.00	$1,700,000	$0	298.39	298.39	298.39		319.56	316.39
2012	305.77	305.77	305.77	305.77	0.00	0.00	$1,704,790	$0	305.77	305.77	305.77		326.98	323.80
2013	313.33	313.33	313.33	313.33	0.00	0.00	$1,709,699	$0	313.33	313.33	313.33		334.57	331.39
2014	321.08	321.08	321.08	321.08	0.00	0.00	$1,714,731	$0	321.08	321.08	321.08		342.36	339.17
2015	329.03	329.03	329.03	329.03	0.00	0.00	$1,719,889	$0	329.03	329.03	329.03		350.34	347.15
2016	337.00	337.00	337.00	337.00	0.00	0.00	$1,725,067	$0	337.00	337.00	337.00		358.36	355.16
2017	362.53	362.53	362.53	362.53	0.00	0.00	$1,741,640	$0	362.53	362.53	362.53		384.01	380.79
2018	390.01	390.01	390.01	390.01	0.00	0.00	$1,759,482	$0	390.01	390.01	390.01		411.62	408.38
2019	419.40	419.40	419.40	419.40	0.00	0.00	$1,778,562	$0	419.40	419.40	419.40		441.15	437.89
2020	434.38	434.38	434.38	434.38	0.00	0.00	$1,788,287	$0	434.38	434.38	434.38		456.20	452.93
2021	449.90	449.90	449.90	449.90	0.00	0.00	$1,798,362	$0	449.90	449.90	449.90		471.80	468.51

Notes: Summer months = April through October. Winter Months = November, December and March
Fixed costs must be added to marginal costs to determine total fuel costs.

020

SOUTHERN ELECTRIC SYSTEM 1998 PROJECTIONS OF GENERIC NOMINAL NATURAL GAS PRICES
FOR USE IN THE 1999 FUEL BUDGET AND OTHER LONG-TERM STUDIES

CONFIDENTIAL

Gulf Power Company

Build 323 MW CT Plant at Plant Smith no gas storage, Fuel Oil Backup, released firm & IT transport used
Gulf builds 29 mile - 12 inch lateral pipeline to FGT, Assume fuel oil burned in August

Generation = 323,000 **kw** **Heat Rate =** 11,683 **btu/kw** **Transport Capacity Required =** 90,567 **MMBtu/day**

NOMINAL CENTS/MMBTU - 1.030 MMBTU/MCF

3	Florida Gas Transmission				Florida Gas Transmission VARIABLE TRANSPORTATION		ANNUAL FIXED TRANSPORT & STORAGE	Capital Cost of Pipeline	w/o Taxes Marginal Delivered Gas Prices				No. 2 Fuel Oil Delivered
YEAR	Apr,May,Jun Sep, Oct	Jul	Nov,Feb,Mar	Dec, Jan	SUMMER	WINTER	COST	Facilities	Apr,May,Jun Sep, Oct	Jul	Nov,Feb,Mar	Dec, Jan	Aug
1995	162.80	150.00	156.67	191.00	33.98	26.29	$0	$0	196.78	183.98	182.96	217.29	451.97
1996	217.20	261.00	261.00	350.00	37.08	30.69	$0	$0	254.28	298.08	291.69	380.69	414.61
1997	234.00	213.00	264.33	328.50	61.69	49.19	$0	$0	295.69	274.69	313.52	377.69	329.56
1998	199.00	231.00	204.67	212.00	61.00	46.74	$0	$0	260.00	292.00	251.41	258.74	457.25
1999	210.60	225.60	243.93	258.10	61.22	47.52	$0	$0	271.82	286.82	291.46	305.62	470.44
2000	210.60	225.60	243.93	258.10	61.22	47.52	$0	$0	271.82	286.82	291.46	305.62	483.48
2001	210.60	225.60	243.93	258.10	61.22	47.52	$0	$0	271.82	286.82	291.46	305.62	497.22
2002	210.60	225.60	243.93	258.10	61.22	47.52	$0	$14,324,000	271.82	286.82	291.46	305.62	512.07
2003	210.60	225.60	243.93	258.10	61.22	47.52	$0	$0	271.82	286.82	291.46	305.62	527.81
2004	210.60	225.60	243.93	258.10	61.22	47.52	$0	$0	271.82	286.82	291.46	305.62	544.06
2005	228.93	243.93	262.26	276.43	61.79	48.09	$0	$0	290.71	305.71	310.35	324.51	560.73
2006	244.13	259.13	277.46	291.63	62.26	48.56	$0	$0	306.39	321.39	326.02	340.19	577.94
2007	260.32	275.32	293.66	307.82	62.80	49.06	$0	$0	323.12	338.12	342.72	356.88	595.68
2008	277.57	292.57	310.90	325.07	63.33	49.59	$0	$0	340.90	355.90	360.50	374.66	613.98
2009	280.40	295.40	313.73	327.90	63.42	49.68	$0	$0	343.82	358.82	363.41	377.58	638.85
2010	283.25	298.25	316.58	330.75	63.51	49.77	$0	$0	346.76	361.76	366.35	380.52	664.76
2011	290.46	305.46	323.79	337.96	63.73	49.99	$0	$0	354.19	369.19	373.78	387.95	691.74
2012	297.84	312.84	331.18	345.34	63.96	50.22	$0	$0	361.80	376.80	381.39	395.56	719.84
2013	305.41	320.41	338.75	352.91	64.19	50.45	$0	$0	369.61	384.61	389.20	403.37	749.10
2014	313.17	328.17	346.51	360.67	64.43	50.69	$0	$0	377.61	392.61	397.20	411.37	779.58
2015	321.13	336.13	354.46	368.63	64.68	50.94	$0	$0	385.81	400.81	405.40	419.57	811.14
2016	329.28	344.28	362.62	376.78	64.93	51.19	$0	$0	394.21	409.21	413.81	427.97	843.34
2017	354.85	369.85	388.19	402.35	65.72	51.98	$0	$0	420.58	435.58	440.17	454.33	876.70
2018	382.38	397.38	415.72	429.88	66.57	52.83	$0	$0	448.96	463.96	468.55	482.71	911.55
2019	411.82	426.82	445.16	459.32	67.48	53.74	$0	$0	479.31	494.31	498.90	513.07	956.46
2020	426.83	441.83	460.16	474.33	67.95	54.20	$0	$0	494.78	509.78	514.37	528.53	1,003.54
2021	442.38	457.38	475.71	489.88	68.43	54.68	$0	$0	510.80	525.80	530.39	544.56	1,052.99

Notes: Summer months = April through October. Winter Months = November through March
Fixed costs must be added to marginal costs to determine total fuel costs.

LATE-FILED EXHIBIT 1
DEPOSITION OF WILLIAM F. POPE

IRP FUEL ASSUMPTIONS

COAL
SUPPLY SIDE ASSUMPTIONS

ITEM	1998-2001	2002-2005	2006 - 2022
COMPANY REALIGNMENT	Active consolidations with positive impact on Supply	Consolidations Continue with Positive Impact	Market dominated by Major Companies - Sufficient Competition
CAPACITY	Excess.	Excess.	Near Balance New Capacity Needed in Later Years
PRODUCTIVITY	Competitive Pressures Increases 2-5%.	Competitive Pressures Increases 2-5%.	Competitive Pressures Increases 2-5%. Some New Technology
LABOR	Weak union 1998 Contract Year Minimum Impact	Weak union -- Labor stability.	Weak union -- Labor stability.
ENVIRONMENTAL REGULATION	No Impact	Limited Impact NOx? CO2?	Increasing impact.
FOREIGN SUPPLY AVAILABILITY	Impact on NS and PRB Market New Production Still Lagging World Demand	Production Still Lagging Demand Minimum Impact on Domestic Markets	Increasing Production Approaching Balance
TRANSPORTATION - RAIL	Western Coal Continues to Move East Merged RR's become more effective Slight Sourcing Shift Due to Mergers	Western Coal Continues to Move East Eastern RR's become more productive Merger Cost	Universal Rail Implications
TRANSPORTATION - BARGE	Minimal Excess Capacity Slight Overage	Barge Capacity Cycle at Equilibrium - Infrastructure Improvements	Barge Capacity Cycle at Equilibrium - Infrastructure Improvements

COAL
DEMAND SIDE ASSUMPTIONS

ITEM	1998-2001	2002-2005	2006 - 2022
ENVIRONMENTAL REGULATION	No Effect Emission Market Responds to PhaseII	Ozone Non-Attainment Impacts Specific Areas OTAG - Concerns Air Toxics Limited Impact	Struggle Between Environmental Costs & Competitive Energy Pricing
ALTERNATE FUELS GAS, OIL, RENEWABLES	Natural Gas is Majority of New Capacity Alternative Energy Sources Limited.	Natural Gas is Majority of New Capacity Alternative Energy Sources Growing.	15 - 20% of Requirements From Nat. Gas (Peaking & Intermediate) - Growing Alternative Energy Sources
LOAD GROWTH	2.63% Yearly	2.05% Yearly	1.84% Yearly
U.S. ECONOMY	2.61% Yearly	3.08% Yearly	3.30% Yearly
U.S. COAL EXPORTS	U.S. Increasing Growth as Swing Supplier	U.S. Increasing Growth as Swing Supplier	U.S. Increasing Growth as Swing Supplier
UTILITY DEREGULATION	No Impact	Market Based Electricity Has Limited Impact	Market Based Electricity Results in Increased Utilization

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Southern Company

1998 Fuel Price Workshop

COAL REGION & TRANSPORTATION ANALYSIS

June 23, 1998

SOUTHERN COMPANY

Energy to Serve Your World™

CENTRAL APPALACHIA

NSPS COAL - NS

* Limited Number of Players
* More Expensive Mining Conditions
* ALTERNATIVE TO UTILITY STEAM MARKETS
  - Export Market for Steam & Met Coal (Limited Growth)
* Allowance Market
* Continued Productivity Gains
* Limited Short Term Coal Growth Generation
* Pressures from Alternative Fuels
* Phase II - Real or Not?
* Environmental Concerns
* Deregulation of Utility Industry

CENTRAL APPALACHIA

LOW SULFUR COAL - CSX

1997 - 2004

* Excess Capacity
* Allowance Market
* Continued Productivity Gains
* Consolidations will Continue - Results in Most Efficient, Competitive Production of Product
* Growth in Coal Generation has Stalled - Some New Growth Over Short Term Possible from Increased Capacity at Existing Plants
* Pressures from Alternative Fuels such as Natural Gas , Increased Nuclear Generation, and Western Fuels
* Phase II - Real or Not?
* Environmental Concerns
* Deregulation of Utility Industry

CENTRAL APPALACHIA

LOW SULFUR COAL - CSX (con't)

2005 - 2020

* Capacity / Supply Reach Equilibrium
* Reserve Depletion; Difficult Mining Conditions
* Possible Increase in Demand as some Nuclear units will be Retired
* CO_2 Concerns
* New Technology will help Coal Compete with Gas and Other Alternatives

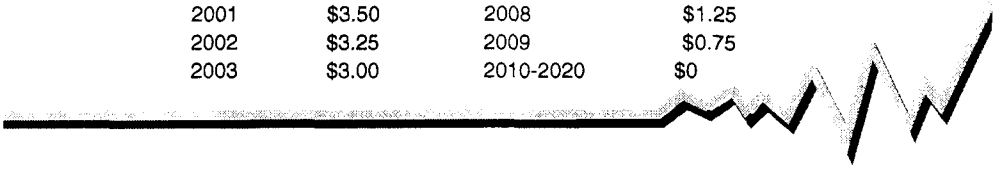
CENTRAL APPALACHIA

LOW SULFUR COAL - NS

* Limited Number of Players
* More Expensive Mining Conditions
* ALTERNATIVE TO UTILITY STEAM MARKETS
  - Export Market for Steam & Met Coal (Limited Growth)
* Same Pressures as CSX Coal, Environmental Issues, Alternative Fuels, Deregulation of Utility Industry

* PREMIUM FOR 1% SULFUR; 12000 BTU/ LB.; NS VS. CSX COAL

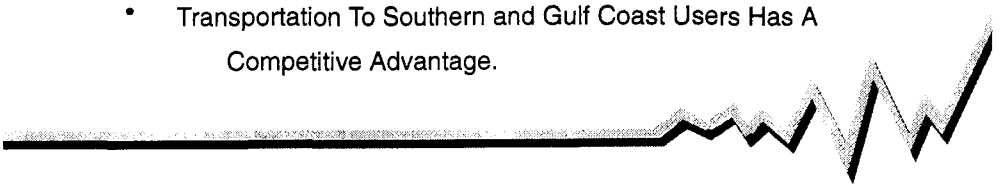
1997	$4.50	2004	$2.75
1998	$4.25	2005	$2.50
1999	$4.00	2006	$2.25
2000	$3.75	2007	$1.75
2001	$3.50	2008	$1.25
2002	$3.25	2009	$0.75
2003	$3.00	2010-2020	$0



ILLINOIS BASIN

MEDIUM SULFUR COAL

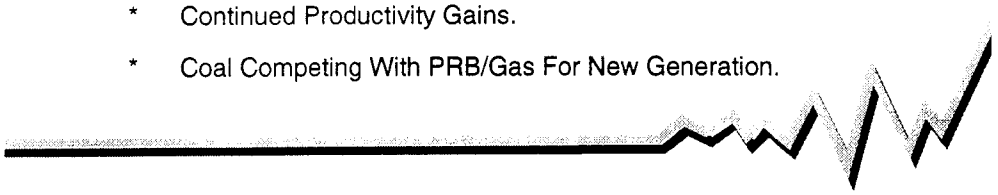
* Strong Demand With Increasing Supply Through 1999.
* Reserves For Low/Medium Sulfur Coals Are Projected To Be Depleted BY 2010.
* Productivity Improvements May Accelerate Depletion.
* Competing for New Generation with PRB / Natural Gas.
* Region Has Transportation Loading Flexibility For Both Rail and Barge.
* Transportation To Southern and Gulf Coast Users Has A Competitive Advantage.



ILLINOIS BASIN

HIGH SULFUR COAL

* Continuing Active Consolidation.
* Midwest States May Provide Economic Incentives To Promote "In-State" Coal Use.
* Coal Will Have Little Demand After Phase I, Except in Existing Scrubber Plants.
* Beginning in 2010, Scrubber Technology and Cost Should Improve Demand for These Coals.
* Continued Productivity Gains.
* Coal Competing With PRB/Gas For New Generation.



ALABAMA

NSPS COAL

1997 - 1999

* Business as Usual
* Continued Low Demand for "New" Coal
* Continued Export / Industrial

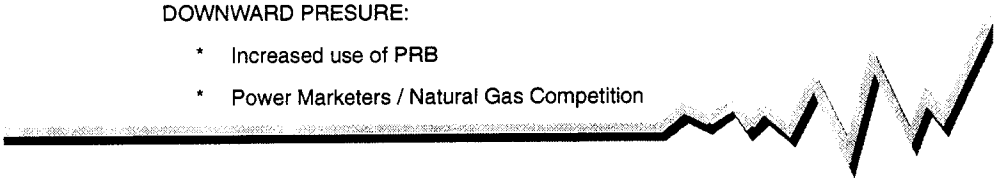
2000 - 2020

UPWARD PRESSURE:

* Increased Demand - Phase II
* Continued Export / Industrial
* Fewer Productivity Gains
* Geological Conditions

DOWNWARD PRESURE:

* Increased use of PRB
* Power Marketers / Natural Gas Competition



ALABAMA

LOW SULFUR COAL

1997 - 1999

Depressed 1997 Market

* Low Demand
* Increased Production

2000 - 2020

* Competes with Compliance Coal and SO2 Allowances

ALABAMA

MEDIUM SULFUR COAL

1997 - 1999

DOWNWARD MARKET PRESSURES:

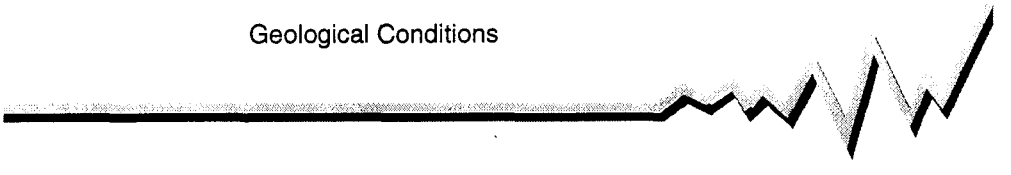
* Increased Production
* Plants Opening Specs & Blends

2000 - 2004

* Sulfur Penalties Force Thin Margins

2005 - 2020

* Costs Increase Due to Reserves and Geological Conditions



ALABAMA

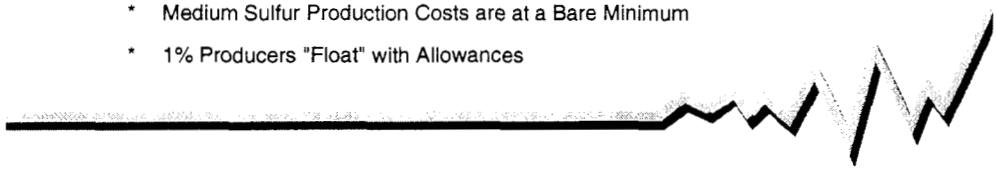
WHY BASE FORECAST ON NSPS AFTER 2000?

- PHASE II COMPLIANCE - ALL PLANTS AFFECTED

- MARKET SHARE
  - Over Half of Alabama Production is NSPS
  - Increased Production
  - Industrial / Export

- MAJOR PLAYERS WILL HAVE MORE CONTROL AS CURRENT CONTRACTS EXPIRE

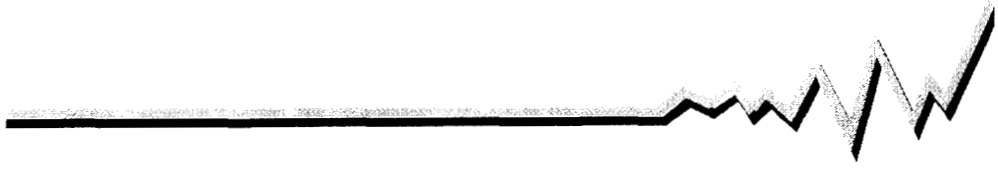
- ALL COALS ARE IN BALANCE
  - Medium Sulfur Production Costs are at a Bare Minimum
  - 1% Producers "Float" with Allowances



POWDER RIVER BASIN

9200 BTU COAL

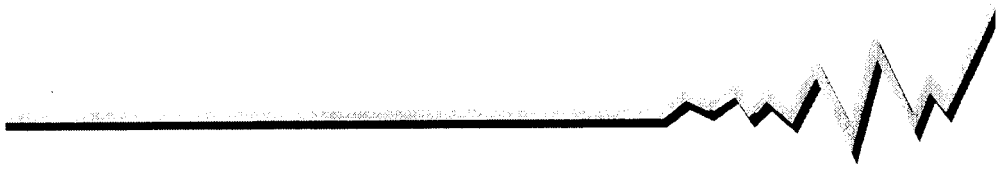
- Production / Capacity
- Demand
- Cost Implications



OTHER WESTERN

NSPS COAL

* Production / Capacity / Demand in Equilibrium Long Term
* Occasional Demand Spikes (Export)
* Cost Implications
* Local Coal



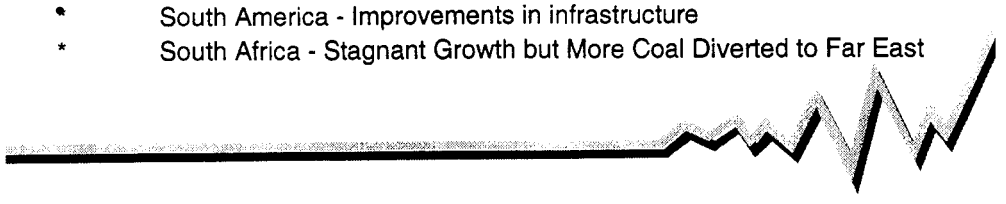
FOREIGN COAL

DEMAND

* No Strong U.S Demand for these Coals in Preparation for Phase II
* Strong Increase in Asian Demand
* Slight Increase in European Demand

SUPPLY

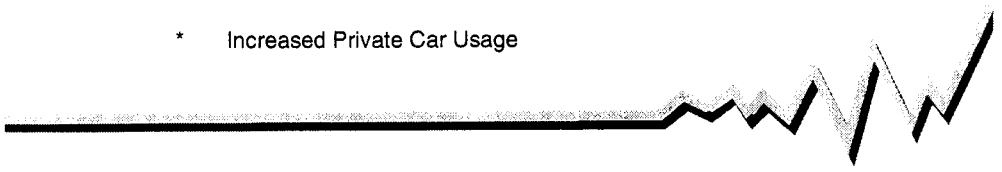
* Europe - Reduction in Indigenous Coal Production
  - Natural Gas Replaces Coal-Fired Generation
* Far East - Strong Increase in Indonesian Production
  - Continued Australian Production in Anticipation of Post 1999 Coal Demand
* South America - Improvements in infrastructure
* South Africa - Stagnant Growth but More Coal Diverted to Far East



FACTORS AFFECTING RAIL RATES

Downward Pressure

- Productivity Improvements
- Rail Construction Projects
- OPEN RAIL ACCESS IS THE WILDCARD!!
- New Electrical Capacity for Utilities will be Gas CT's and CC's
- Potential for Two Transcontinental Railroads
- Volume Discounts in Step Rates
- Increased Private Car Usage



FACTORS AFFECTING RAIL RATES

Upward Pressure

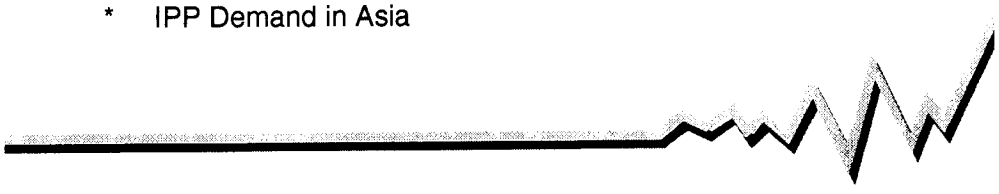
- Utility Deregulation Impact in Year 2000
- Increases in Intermodal Deliveries
- Merger Effects
- Exports Have Slight to Moderate Growth

FACTORS AFFECTING BARGE RATES

* Productivity Improvements - Moving Larger Volumes Over Greater Distances Creates Competition
* Grain and Steel Movements
* New Barge Construction and Delayed Retirements will Outpace Demand
* Utility Deregulation will have Impact in Year 2000
* Other Factors

FACTORS AFFECTING OCEAN RATES

* Gas Becoming a Bigger Player in Europe
* China has Switched From Net Exporter to Net Importer of Grain
* Demand for Iron Ore and Steel is Slowing
* Utility deregulation in U.S will have No Impact on Ocean Rates
* IPP Demand in Asia



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1998 Fuel Panel Workshop

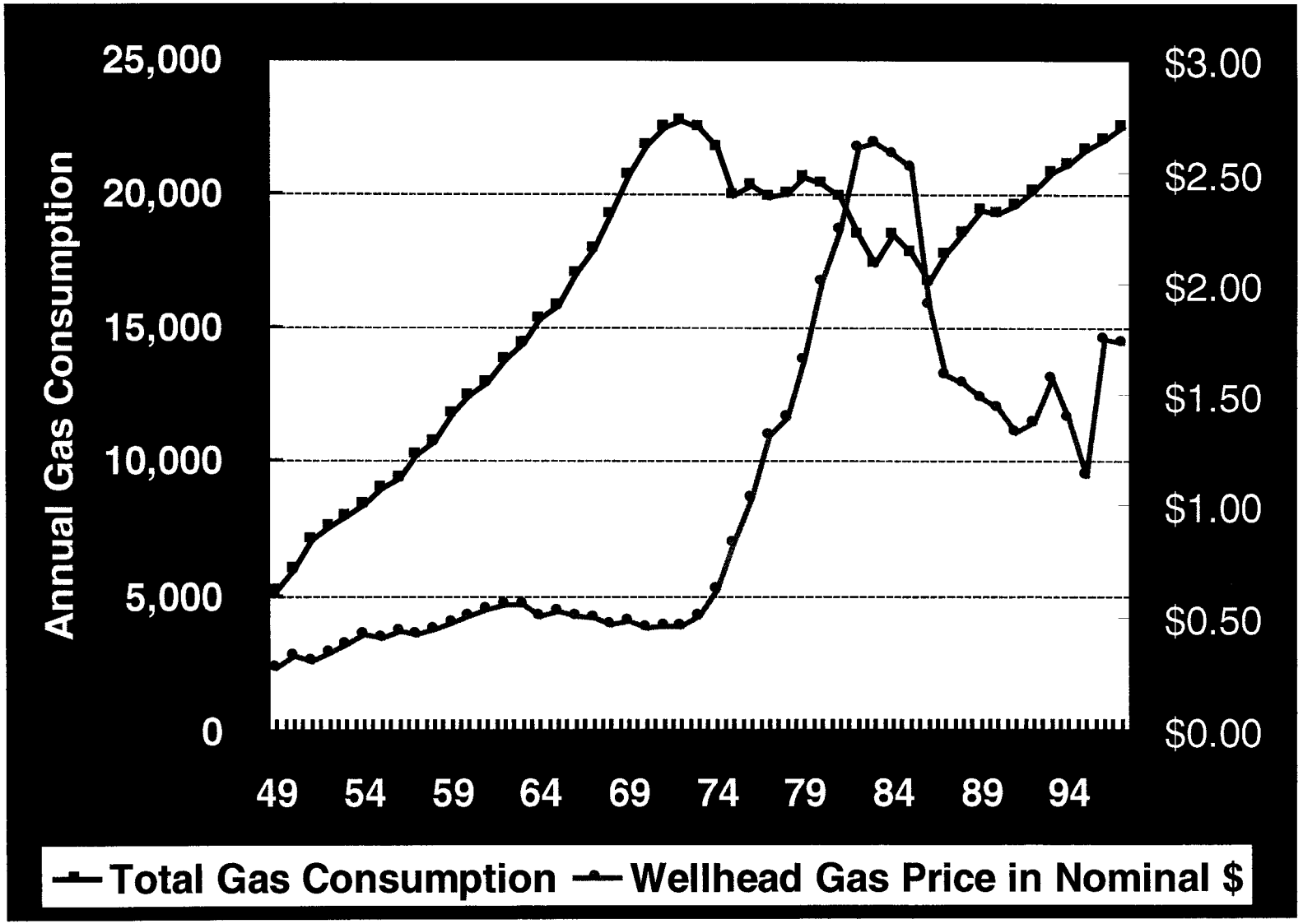
Natural Gas & Fuel Oil Price Forecasts

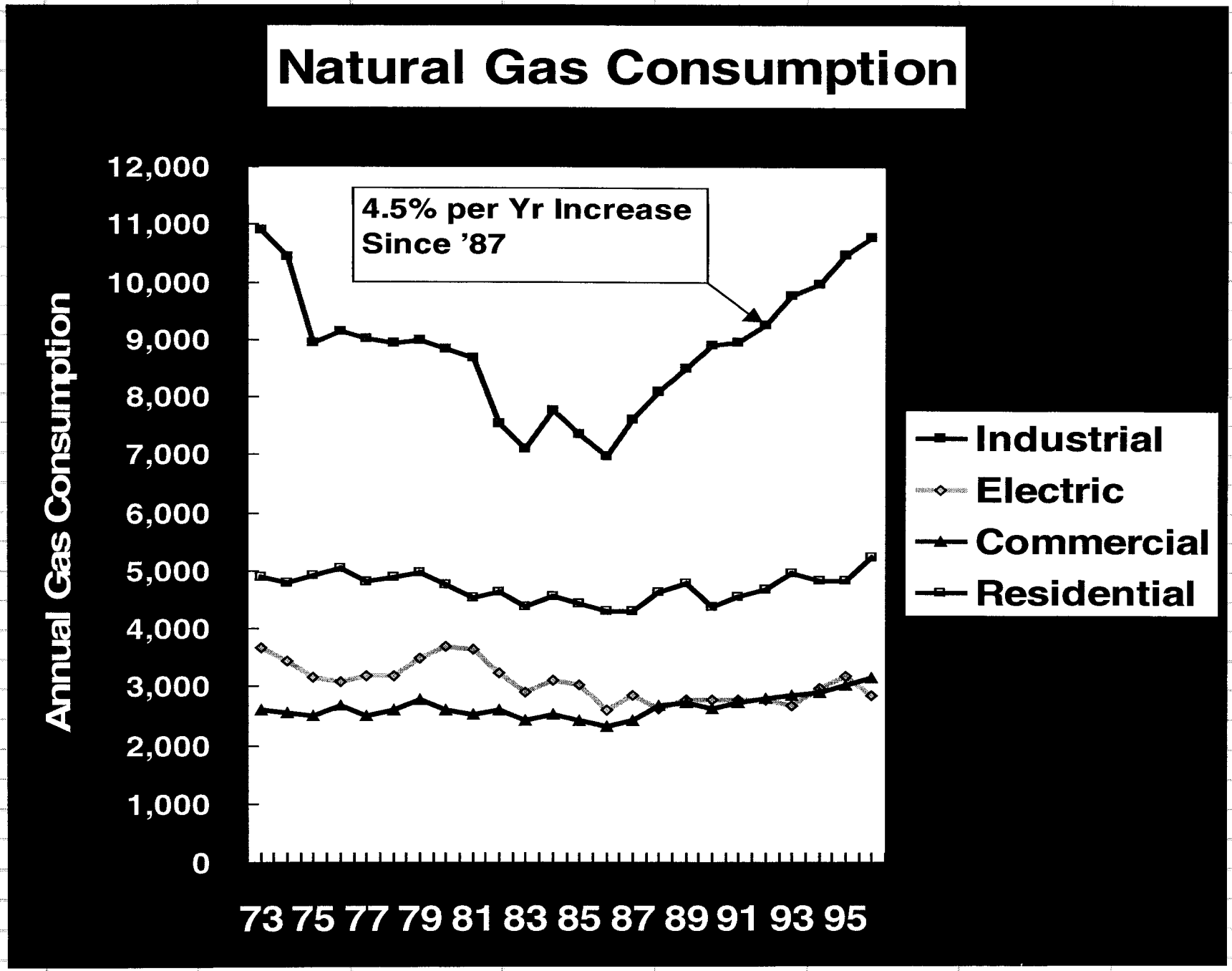
034

Historical Look - Gas Demand & Prices

- **1949 to 1973, Gas Demand Increased 3.1%/yr.**
- **Government Prices Controls set prices at about $0.50/MMBtu.**
- **Shortage of Gas as Prices were too low to make drilling economical.**
- **NGPA of 1978, set very high prices and deregulation of new gas by 1985.**
- **Higher prices stimulate drilling boom and gas surpluses.**
- **In 1985, surpluses & deregulation of gas prices caused lower gas prices.**
- **Lower prices simulated gas demand.**

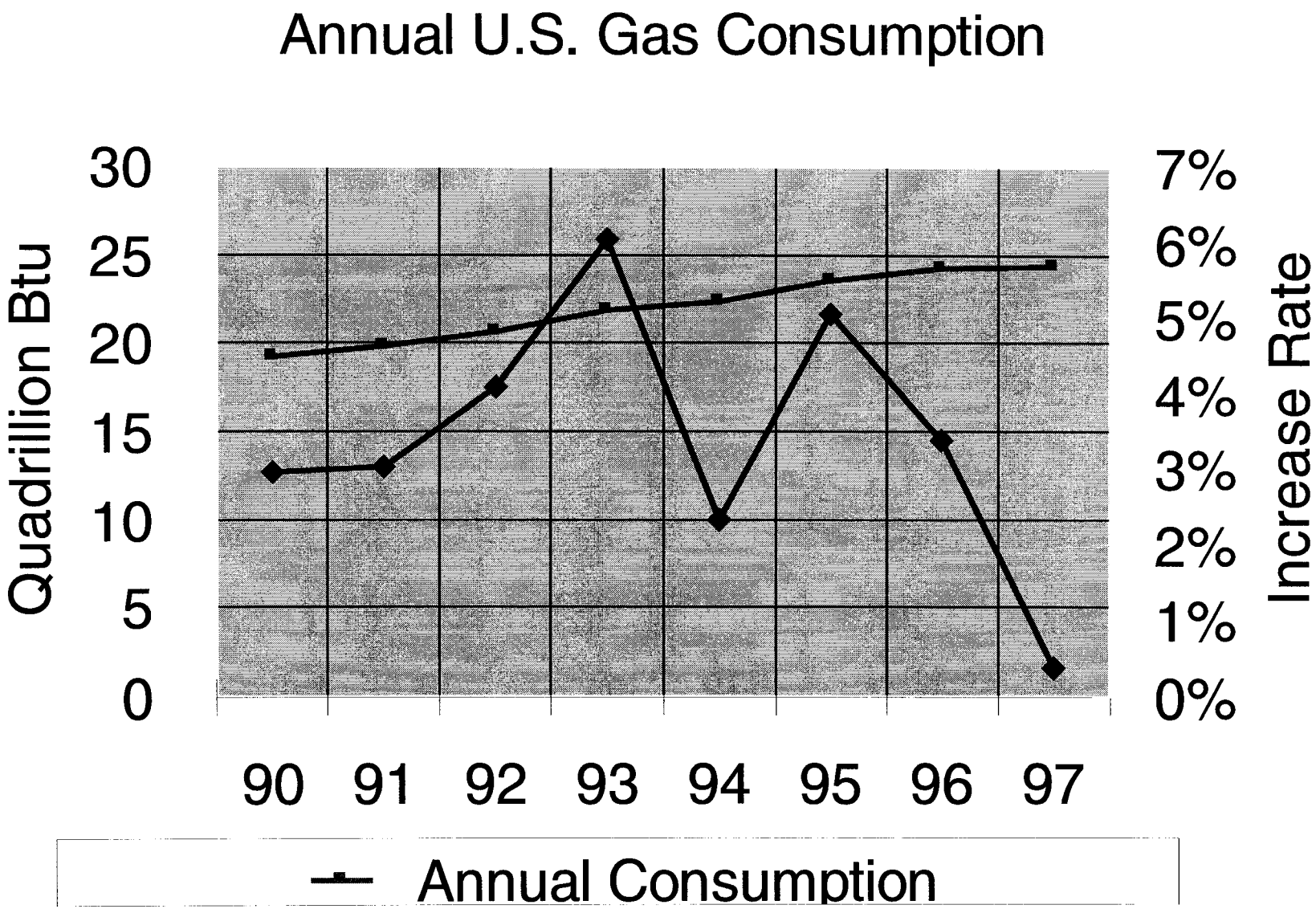
Historical Look at Gas Demand & Prices




Natural Gas Consumption
Annual Gas Consumption
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
4.5% per Yr Increase
Since '87
Industrial
Electric
Commercial
Residential
73 75 77 79 81 83 85 87 89 91 93 95

Natural Gas Consumption

- Since 1987, Industrial Gas Consumption has increased at the rate of 4.5% per year.
- Residential & Commercial have increased but only a small amount.
- Electric consumption has declined.
- The strong economy and industrial expansion have caused higher summer gas prices.


Annual U.S. Gas Consumption
Quadrillion Btu
30
25
20
15
10
5
0
7%
6%
5%
4%
3%
2%
1%
0%
Increase Rate
90
91
92
93
94
95
96
97
Annual Consumption

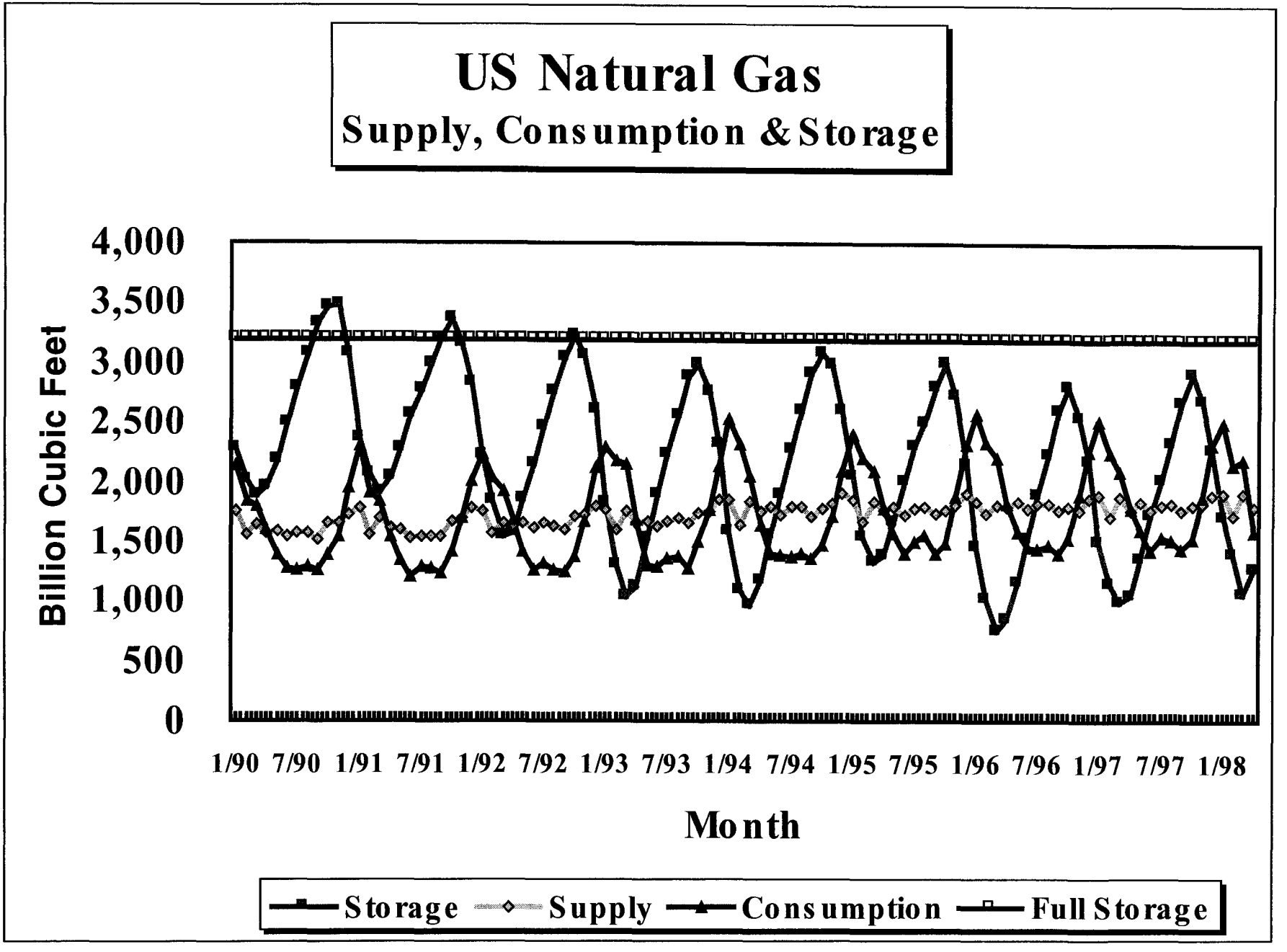
Industrial Gas Consumption

- **Since the 1990 recession, Industrial Gas Consumption has grown rapidly.**
- **In 1997, the Rate of growth in Industrial Gas Consumption slowed to near 0%.**
- **This makes sense due to low unemployment level and plant capacity being used.**
- **Therefore, we do not believe Industrial Gas Consumption will continue its rapid rate of increase.**

So, why have gas prices been higher the past two years?

Shortage of Gas

- **During the past three years, gas production has not increased as rapidly as gas demand.**
- **The result has been a 200 to 300 Bcf/yr shortage of gas.**
- **This is shown on the next chart that shows monthly gas storage, production and demand.**
- **The red level is gas storage levels. The black line is full gas storage.**

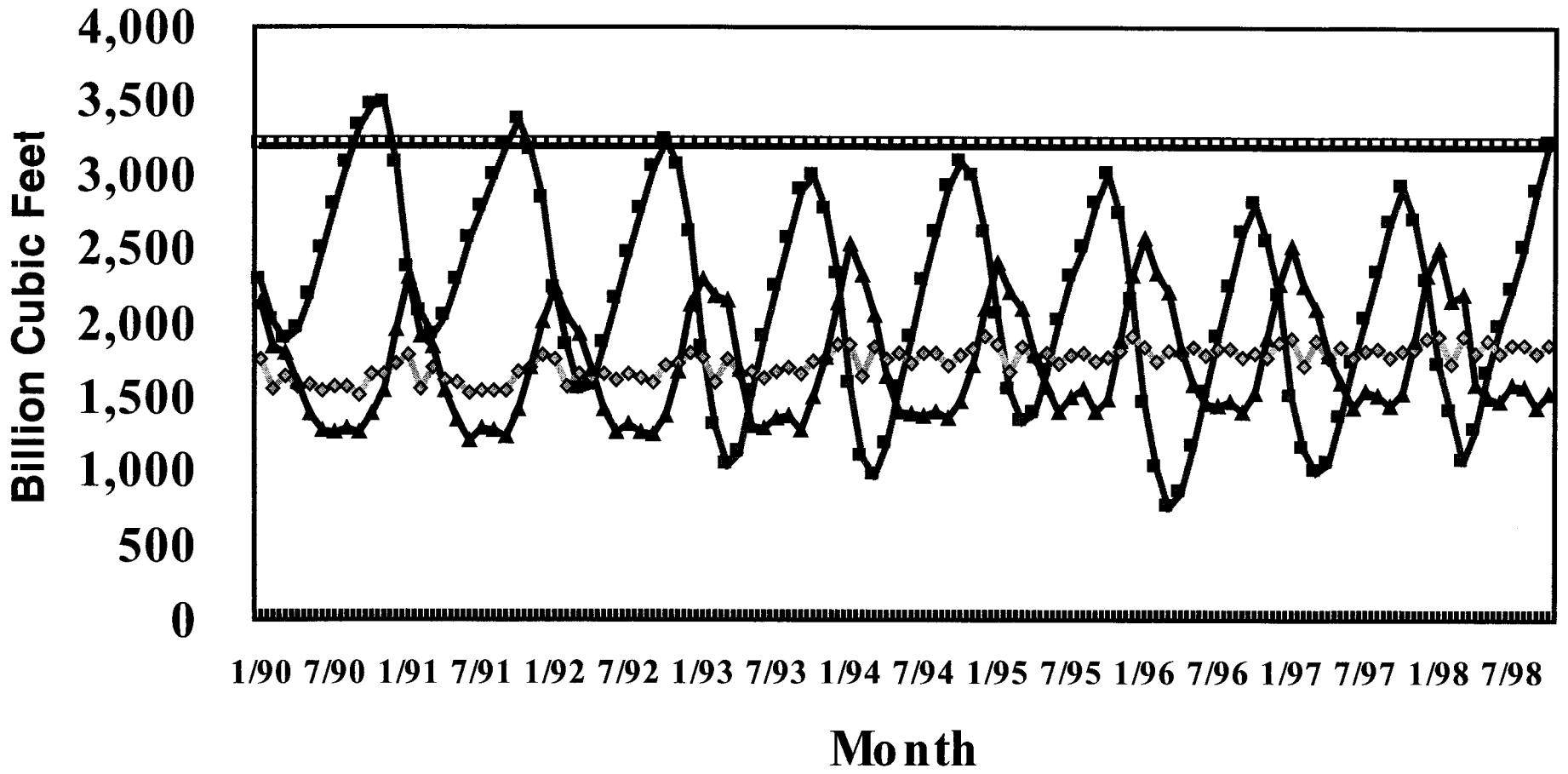

US Natural Gas
Supply, Consumption & Storage
Billion Cubic Feet
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1/90 7/90 1/91 7/91 1/92 7/92 1/93 7/93 1/94 7/94 1/95 7/95 1/96 7/96 1/97 7/97 1/98
Month
Storage
Supply
Consumption
Full Storage

Next, why are gas prices lower this year?

Next, why are gas prices lower this year?

- Gas supplies about 1 BCF higher.
- Nuclear generation higher.
- Hydro generation higher.
- Coal stocks higher.
- Rail improving.
- Gas storage levels higher.
- Oil Prices are lower.

US Natural Gas
Supply, Consumption & Storage



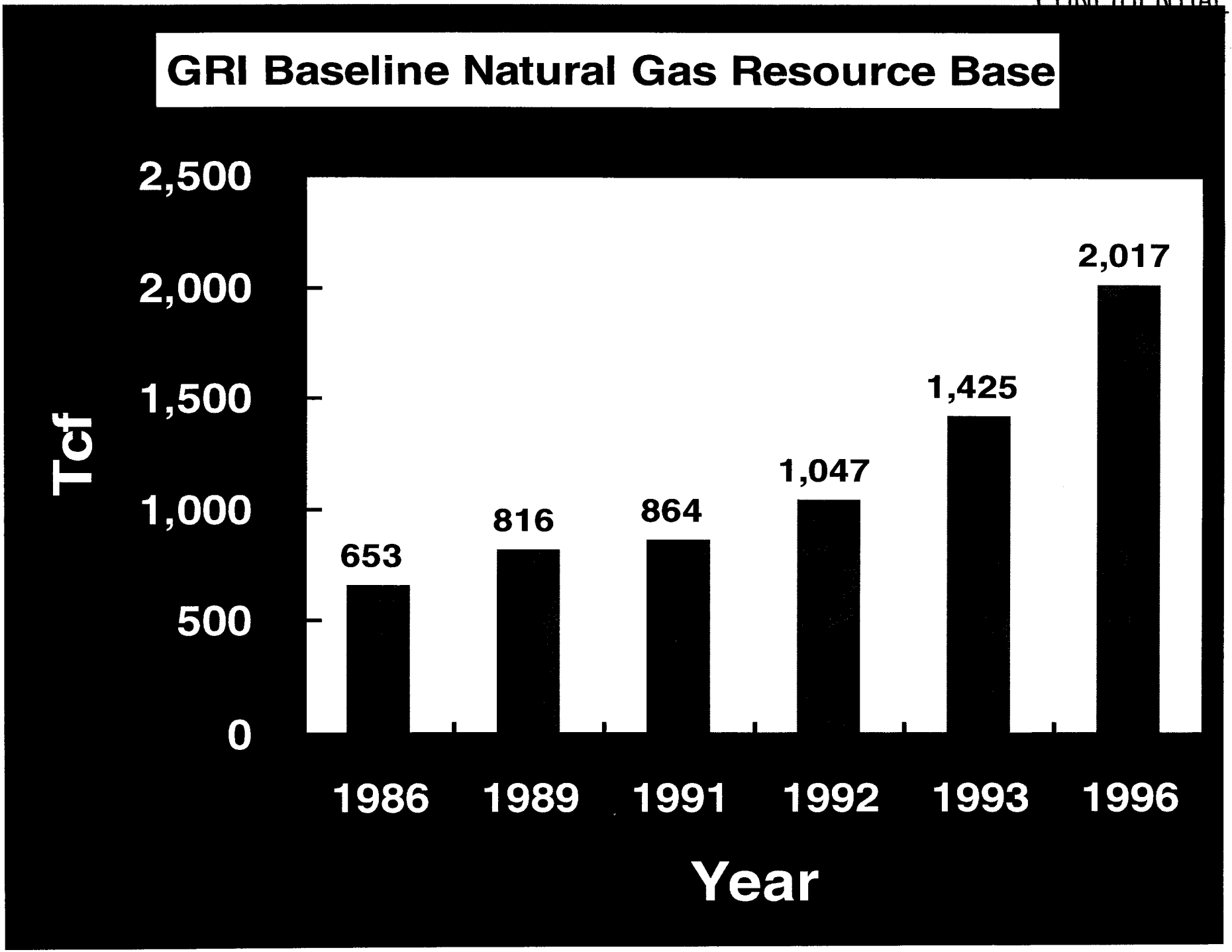
1999

We will enter 1999 with gas storage levels full for the first time in three years. Unless we have weather-related supply interruptions in the fall, gas prices should approach $1.50 per MMBtu by October. We will be better prepared to meet the expected cooler winter.

Where Are We Going?

Primarily driven by new gas-fired generation, gas demand wants to increase from 22 to 32 Trillion Cubic Feet per Year by 2010.

- **Will There Be Enough Supply?**



U.S. Resource Base

- If we believe GRI's numbers, the resource base is available.
- Will it be developed and at what price?
- Technology is the biggest factor in determining the long range marginal cost of develop new gas reserves.

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Planned Pipeline Expansions

Gulf of Mexico to Onshore

1999

Project	Cost Million $	Capacity (Bcf / Day)	Delivery Location	Planned Inservice
Mobile Bay (Transco)	$172	0.35	Mobile Bay	Mid-1998
Destin	$308	1.00	Meridian, MS	Mid-1998
Nautilus	$120	0.60	St. Mary's Parish, LA	Nov - 1997
DIGS	$54	0.50	Mobile Bay	Oct - 1997
Discovery	$188	0.60	La Rosa, LA	Dec - 1997
Green Canyon	$200	0.50	Offshore, LA	Mid - 1999
ANR	$52	0.46	Offshore, LA	Mid-1998
Mississippi Canyon	$25	0.30	Offshore, LA/MS	Jan - 1999
Trunkline	$52	0.50	Offshore, LA	Apr - 1998
Venice Gathering	$39	0.33	Offshore, LA	Oct - 1997
Total Capacity Additions	$1,210	4.14		
Annual BCF		1,511		
% Increase in U.S. Supply		7.48%		

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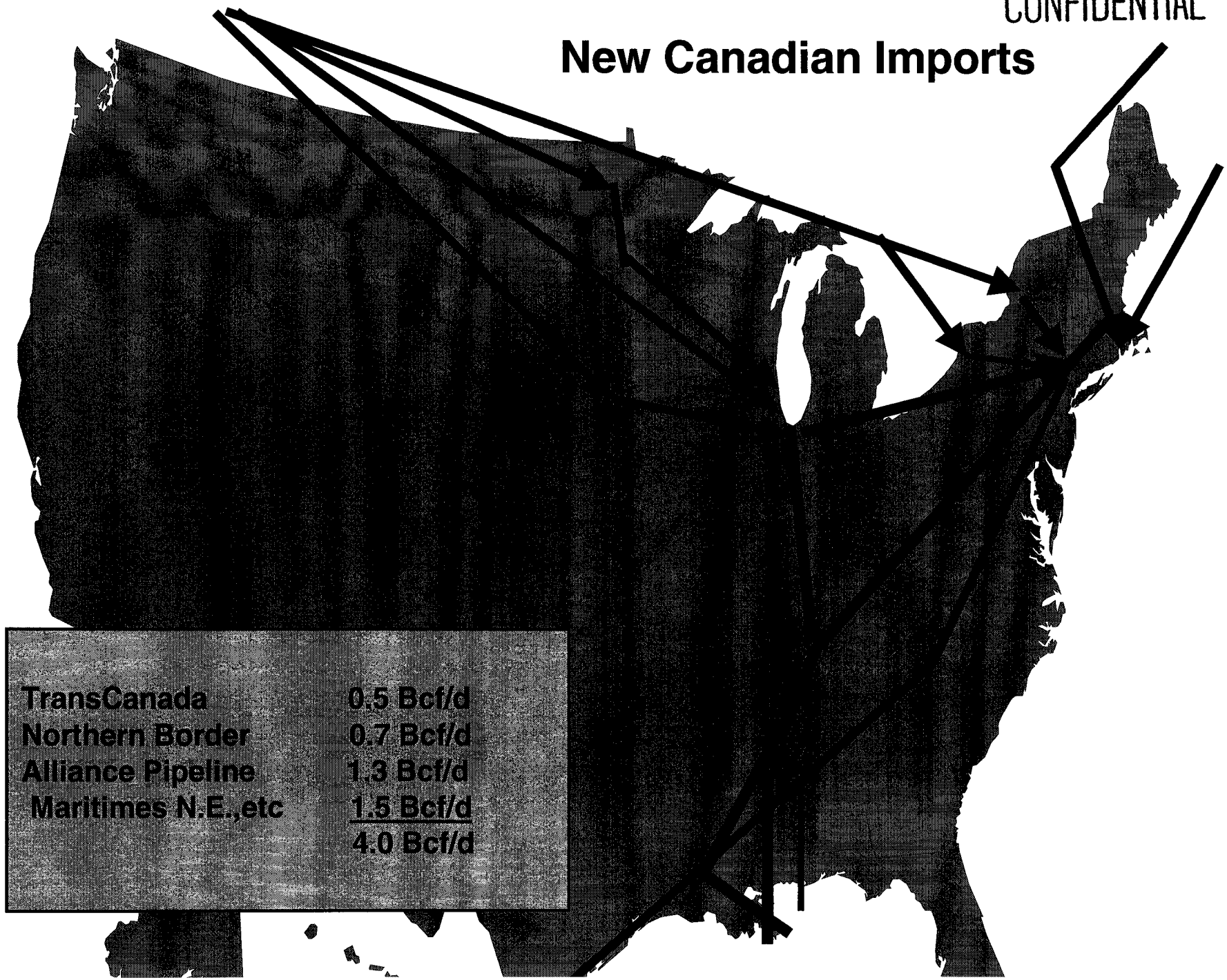
New Canadian Imports



TransCanada	0.5 Bcf/d
Northern Border	0.7 Bcf/d
Alliance Pipeline	1.3 Bcf/d
Maritimes N.E.,etc	1.5 Bcf/d
	4.0 Bcf/d

Gas Infrastructure

- By 2000, Deepwater Gas Projects will increase gas supply by 3 to 4.5 Bcf per day.
- By 2001, New Canadian Supplies will increase Supplies by 3 to 5 Bcf per day.
- By 2001, Western/Rocky Mountain Expansions will add 1 to 2 Bcf per day.
- Net results will be capacity to handle about 25,650 Bcf per year (about 26 Tcf per year).

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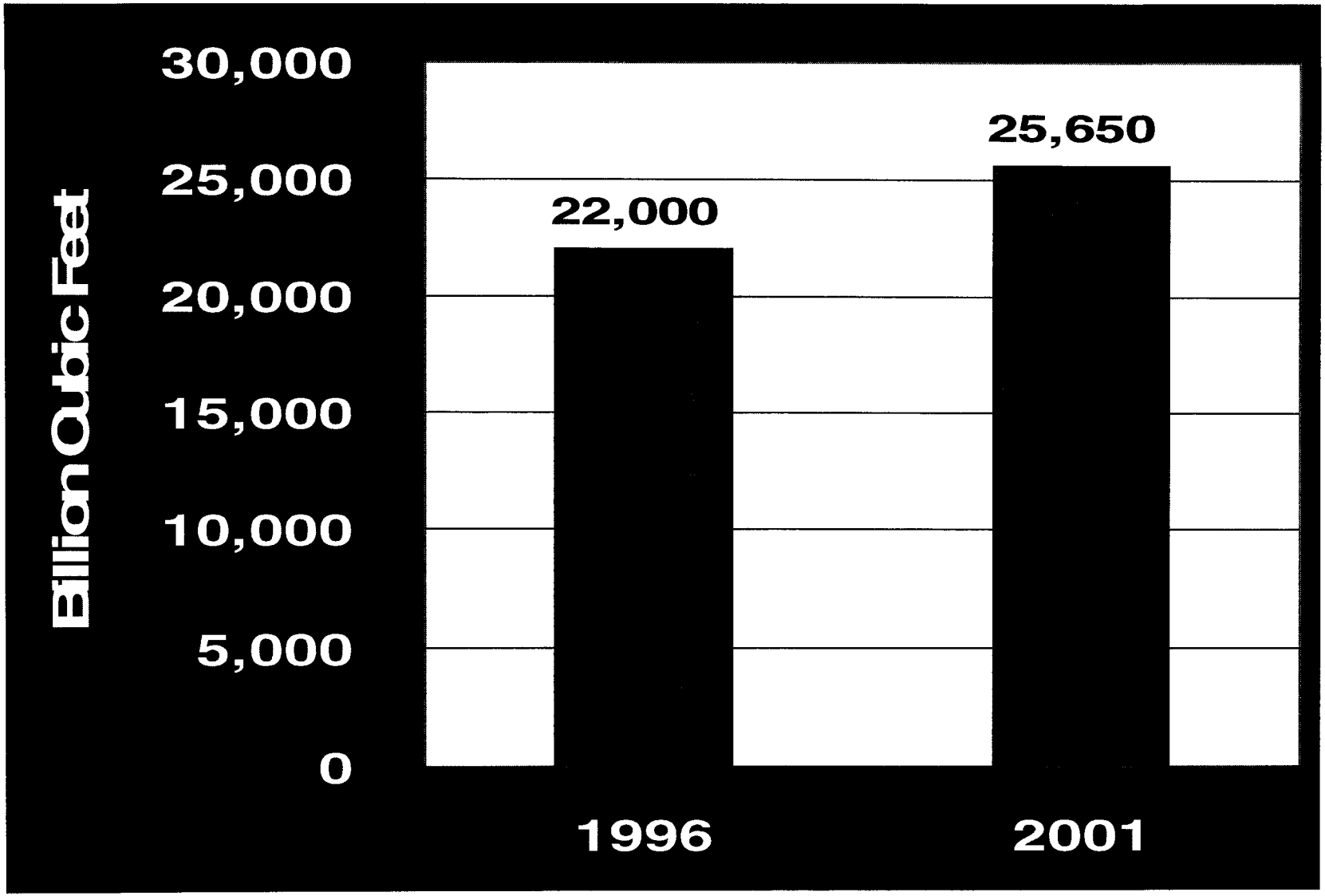
Annual Gas Infrastructure



Gas Supply and Pipeline Infrastructure - Year 2001

- **25,650 - 22,000 = 3,650 Bcf per year.**

- **10 Bcf per Year in new gas supplies and infrastructure by 2001.**

Gas Supply - Near Term

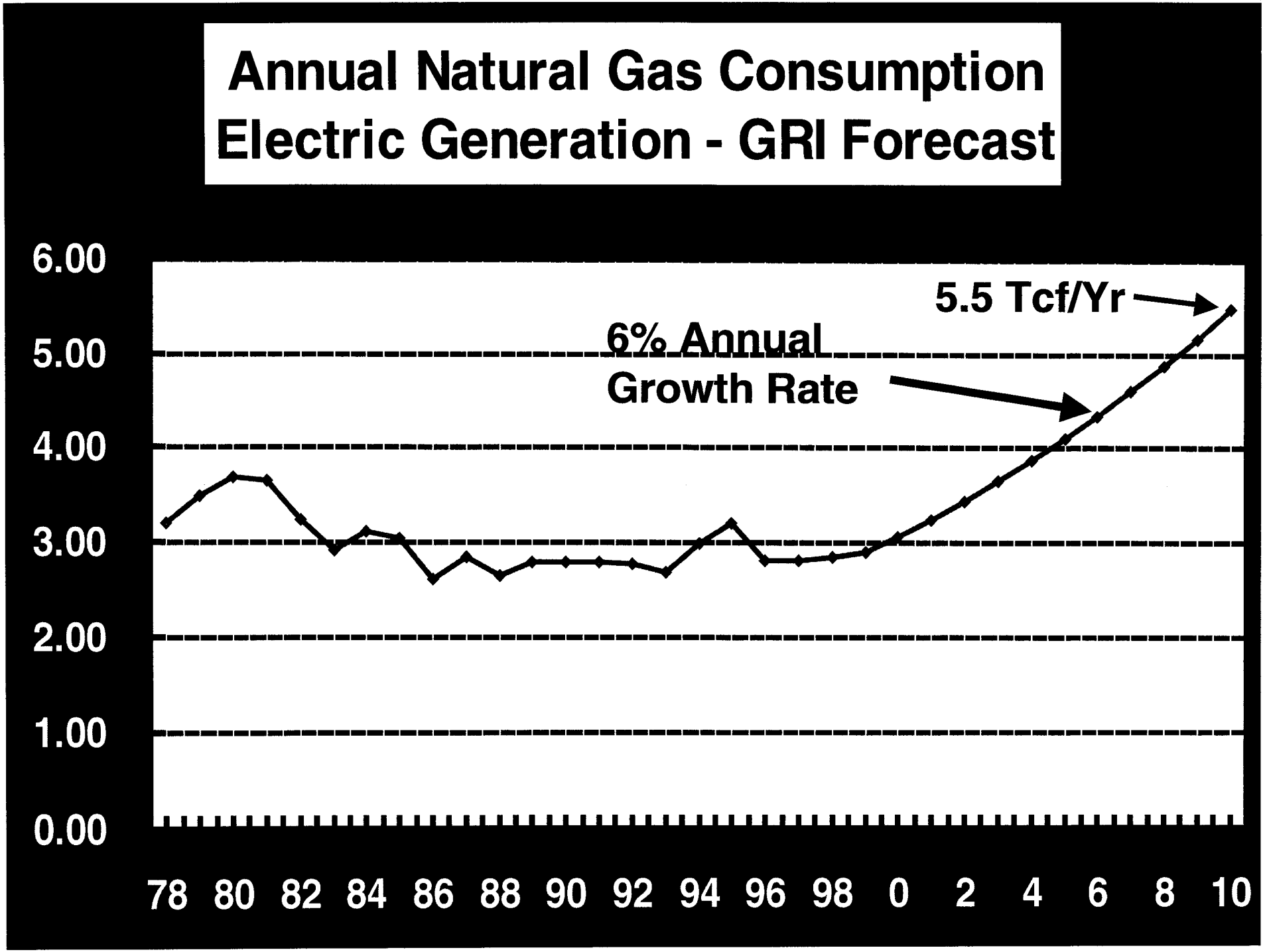
- The supply push should result in lower gas prices.
- Producers are responding to the lower gas prices by drilling less.
- How long will the surplus gas supplies last?

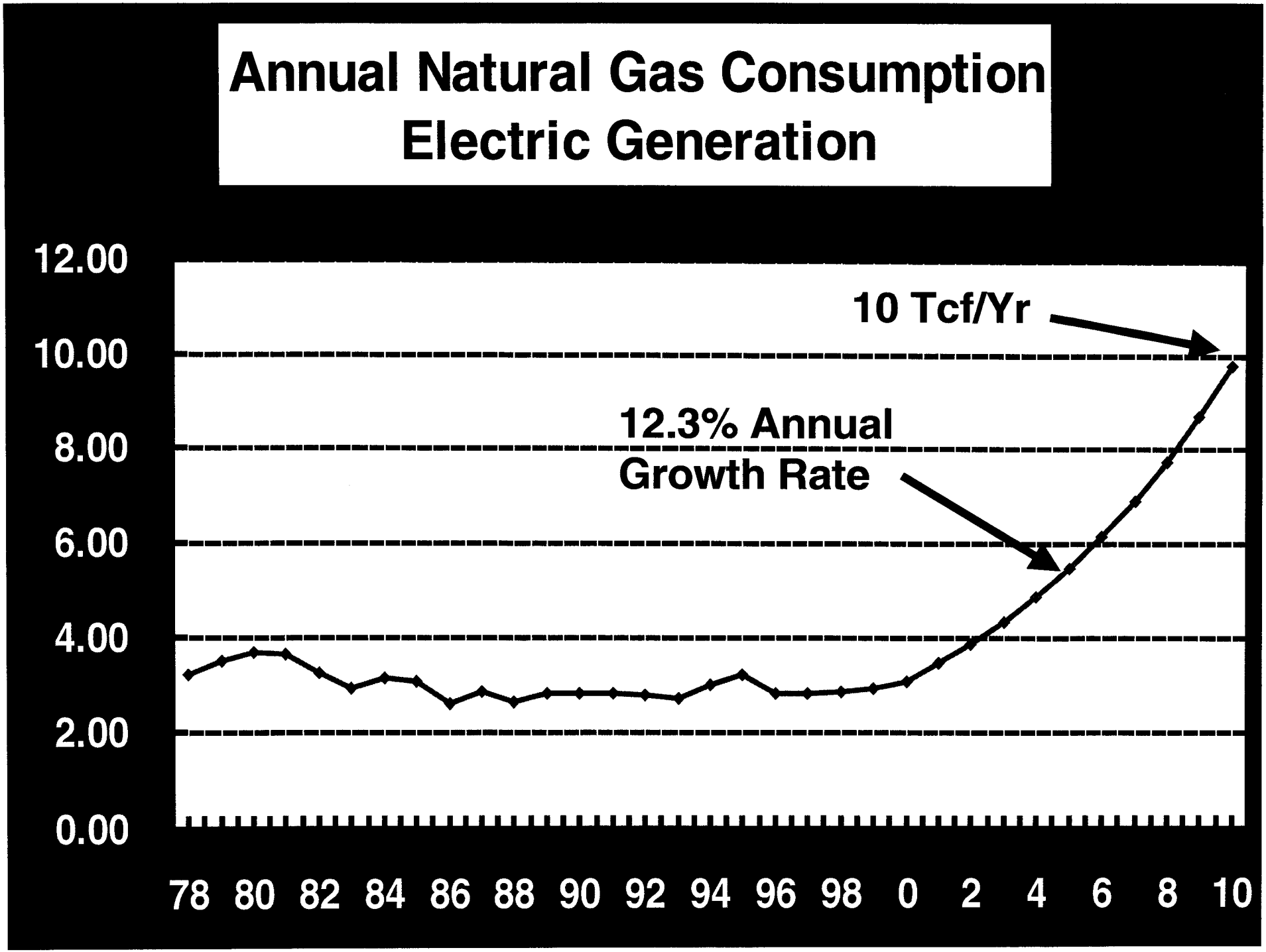
Future Gas Consumption

- Gas Prices will be very dependent on how long the current surplus capacity will last.
- With Industrial, Commercial & Residential growing very slowly, Growth in Gas Consumption will be very dependent on new gas-fired electric generation and co-firing of gas to reduce NOX and Ozone.

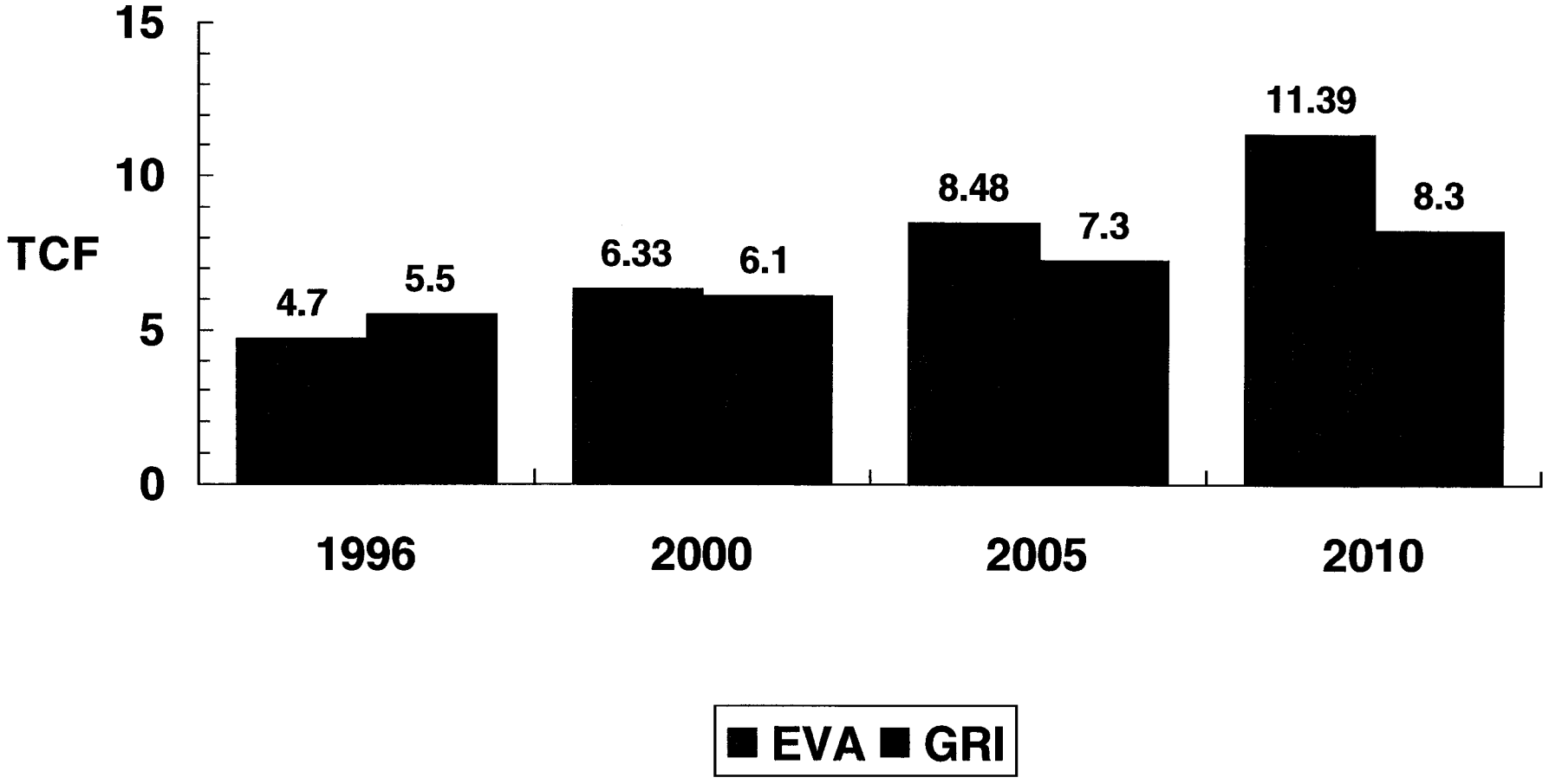
Future Gas Consumption

- DOE, EVA and GRI are assuming gas-fired consumption will grow at 5 to 7% per year.
- However, the rate could be as high as 20% per year. This depends on how fast new generation is added and how quickly co-firing or re-burn takes place. Most likely, it will be somewhere in between.
- If we assume a 6% growth rate, the new capacity additions will be "used" by 2005.

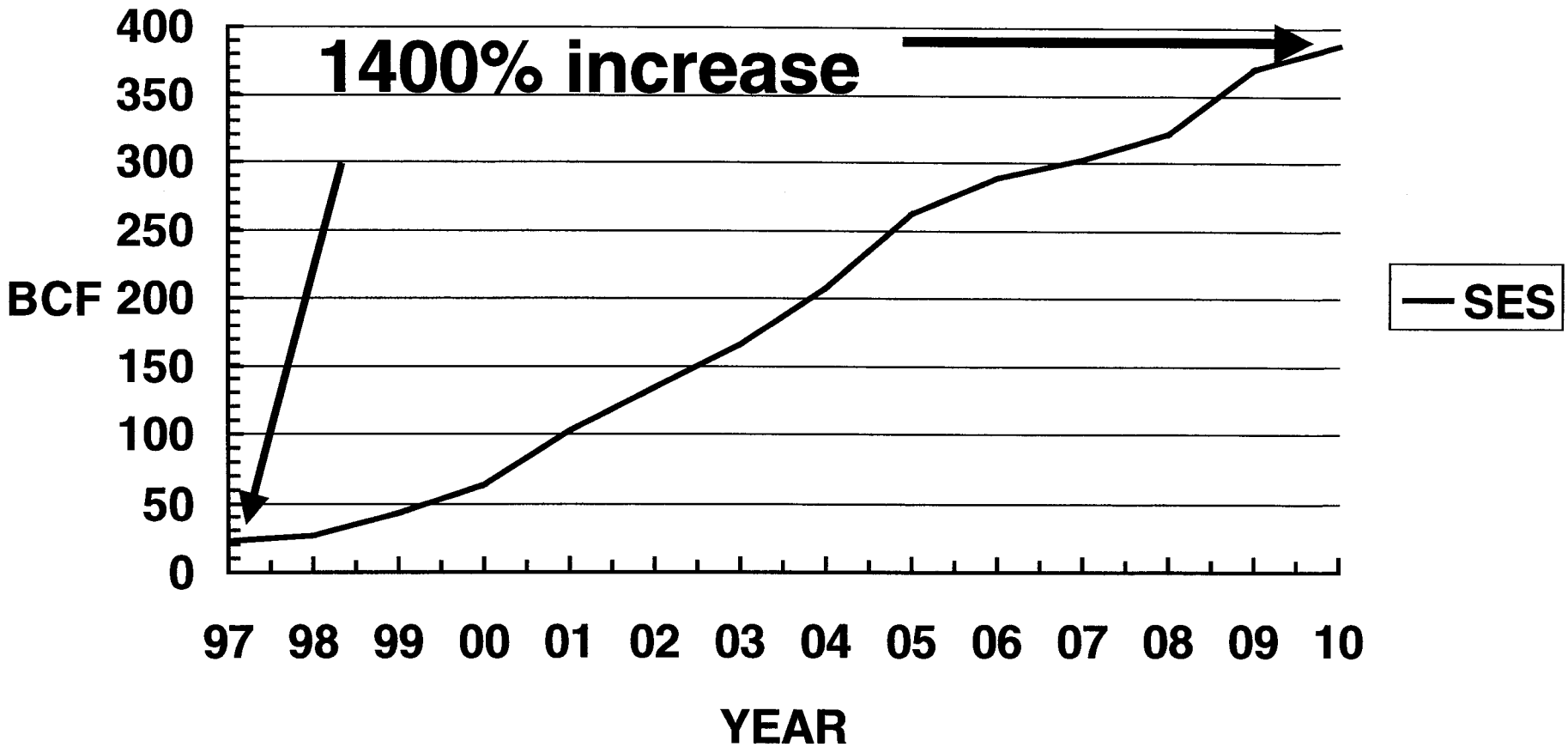

Annual Natural Gas Consumption
Electric Generation - GRI Forecast
6.00
5.00
4.00
3.00
2.00
1.00
0.00
5.5 Tcf/Yr
6% Annual
Growth Rate
78 80 82 84 86 88 90 92 94 96 98 0 2 4 6 8 10

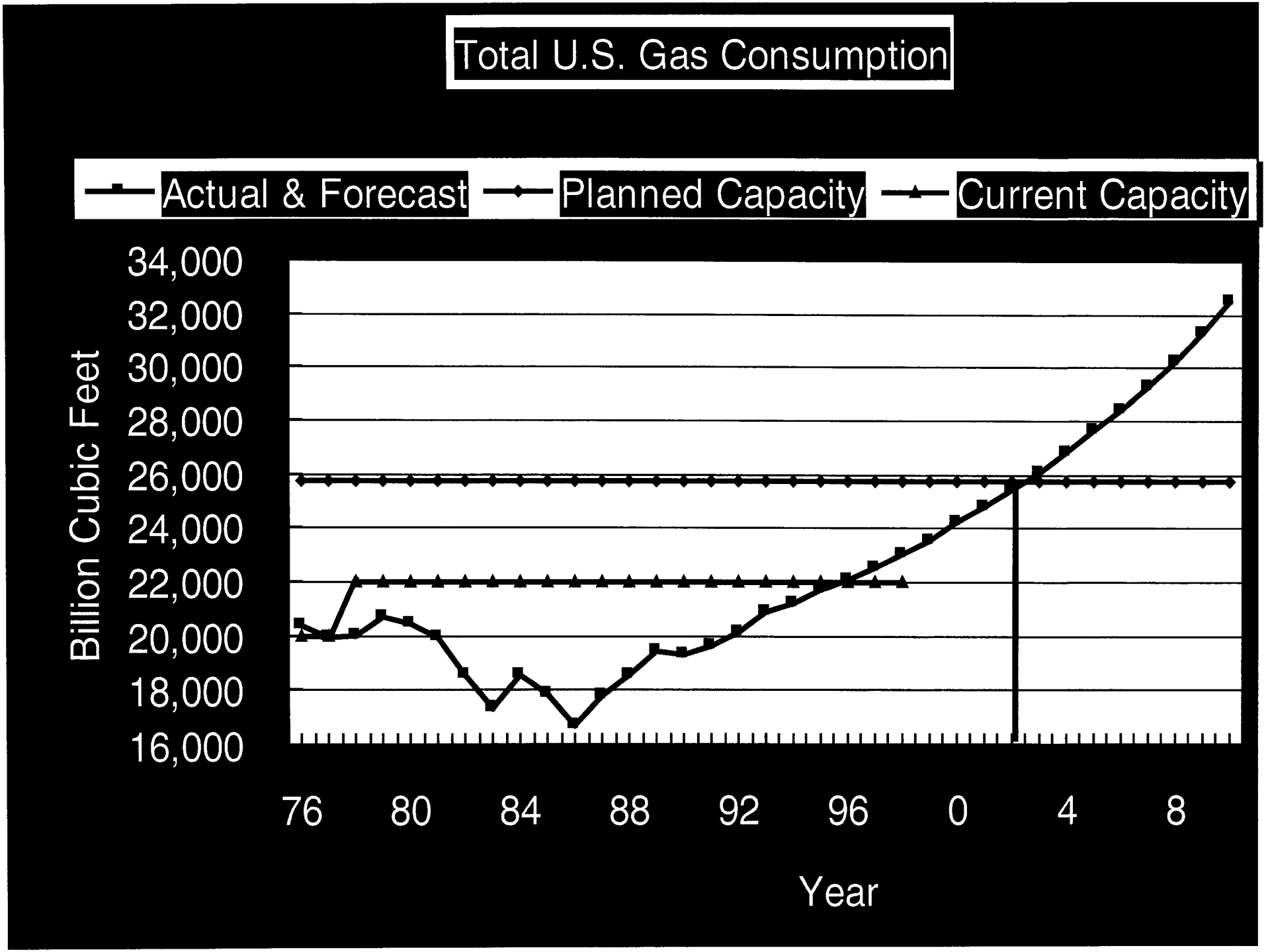

Annual Natural Gas Consumption
Electric Generation
12.00
10.00
8.00
6.00
4.00
2.00
0.00
10 Tcf/Yr
12.3% Annual
Growth Rate
78 80 82 84 86 88 90 92 94 96 98 0 2 4 6 8 10

TOTAL US GAS USAGE FOR POWER GENERATION
Without Kyoto or PM 2.5



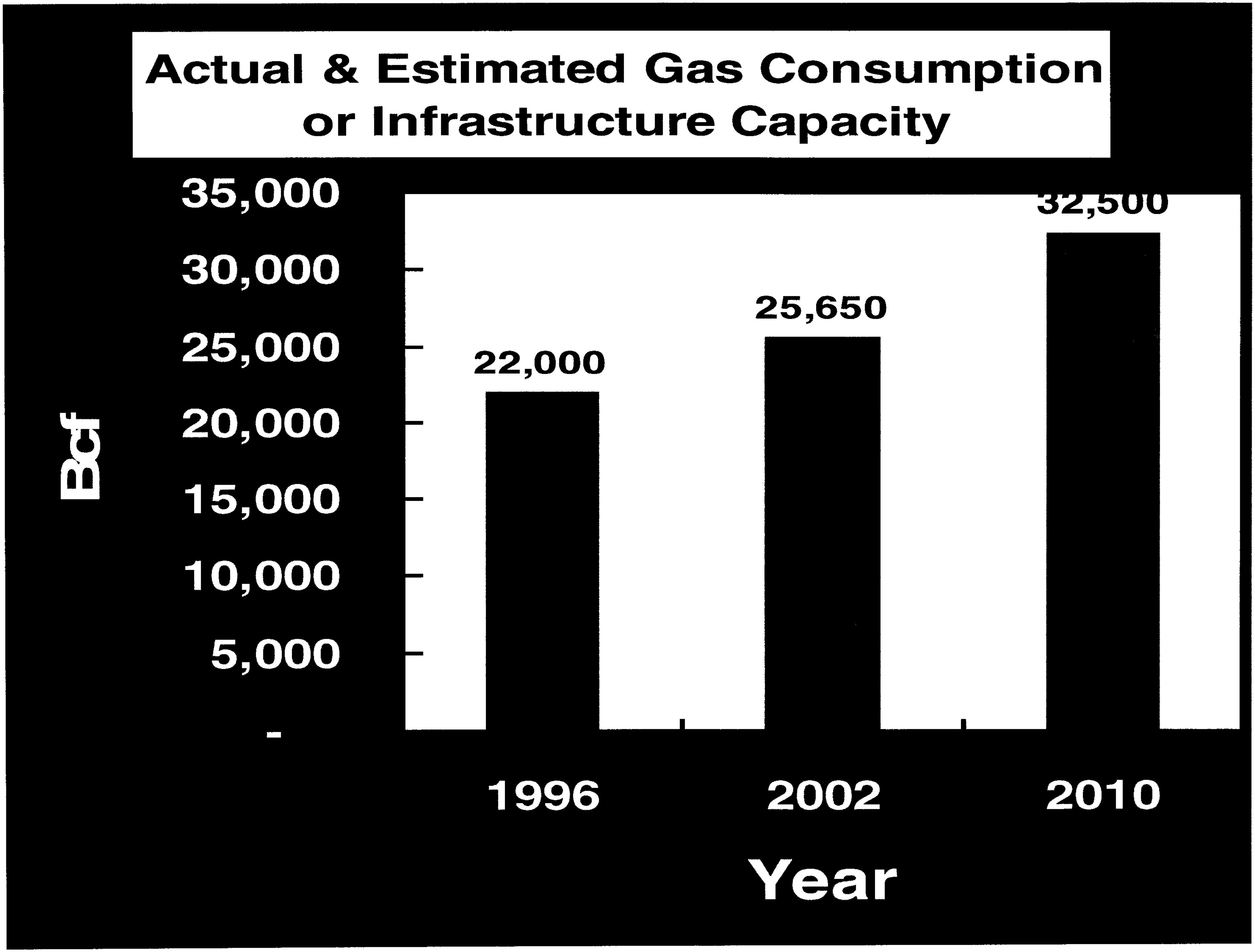
Southern Co.'s Electric System Gas Consumption





At this time, we are assuming that the new capacity will be used sometime between 2002 and 2004. However, the industry should respond to the increasing demand by continuing to expand. Therefore, in our forecast, we assume that demand will across the available supply line around 2005.

Next, because of the lower oil and gas prices we are experiencing today, drilling is beginning to slow. We have seen a drop of 10% in onshore drilling activity. Therefore, we are forecasting that prices will not be as low as some forecasters such as EVA or GRI.



32,500 - 26,650 =

5,850 Bcf per year

or

16 Bcf per day

Does Not Include PM 2.5

or Kyoto Treaty

Gas by Default Analysis

- US Energy Consumption Grows at 1.3% per year.
- No new hydro.
- No new Nuclear.
- No new Coal.
- Limited Re-newables i.e. Solar etc.
- Growth is mostly Gas by Default.

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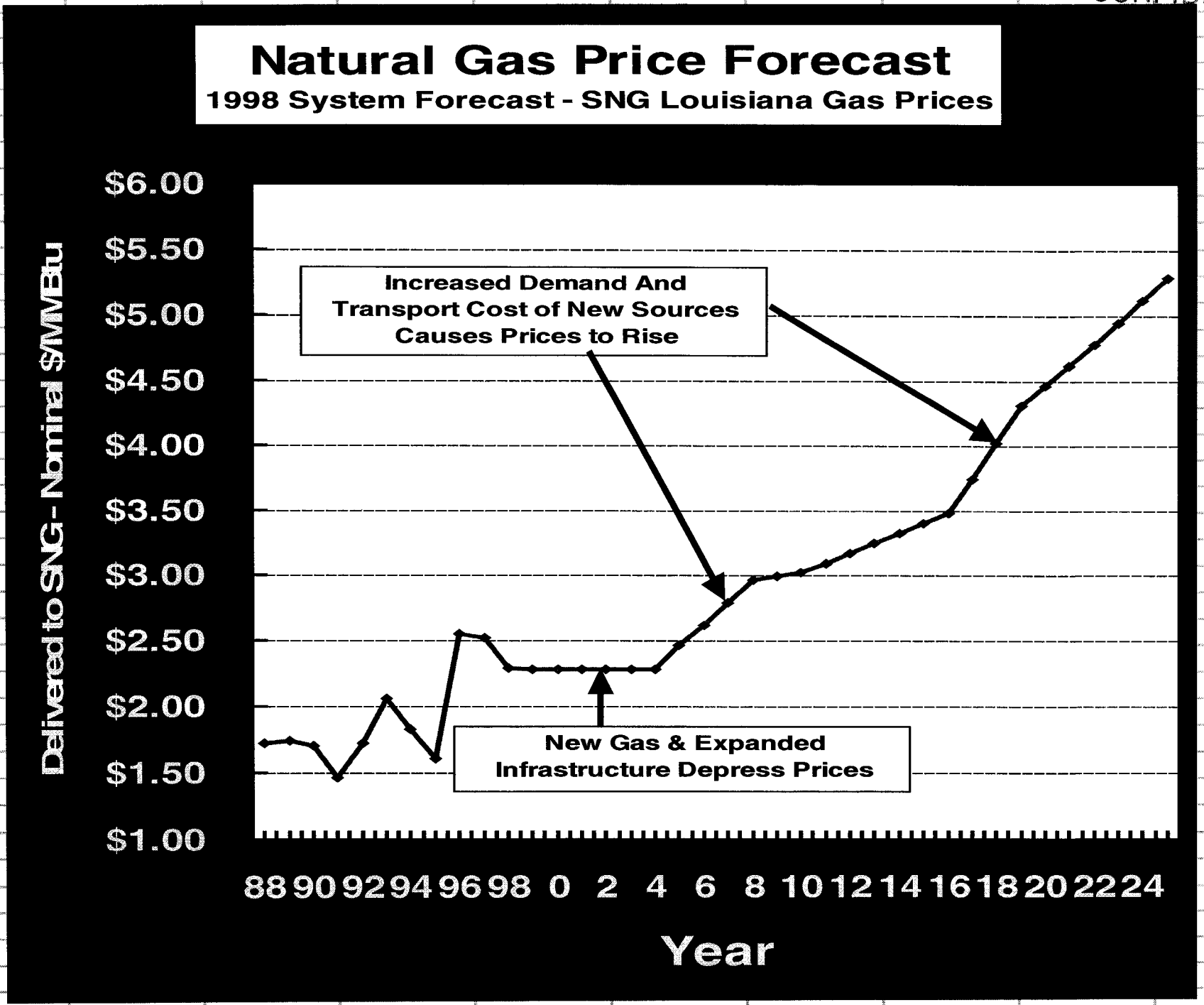
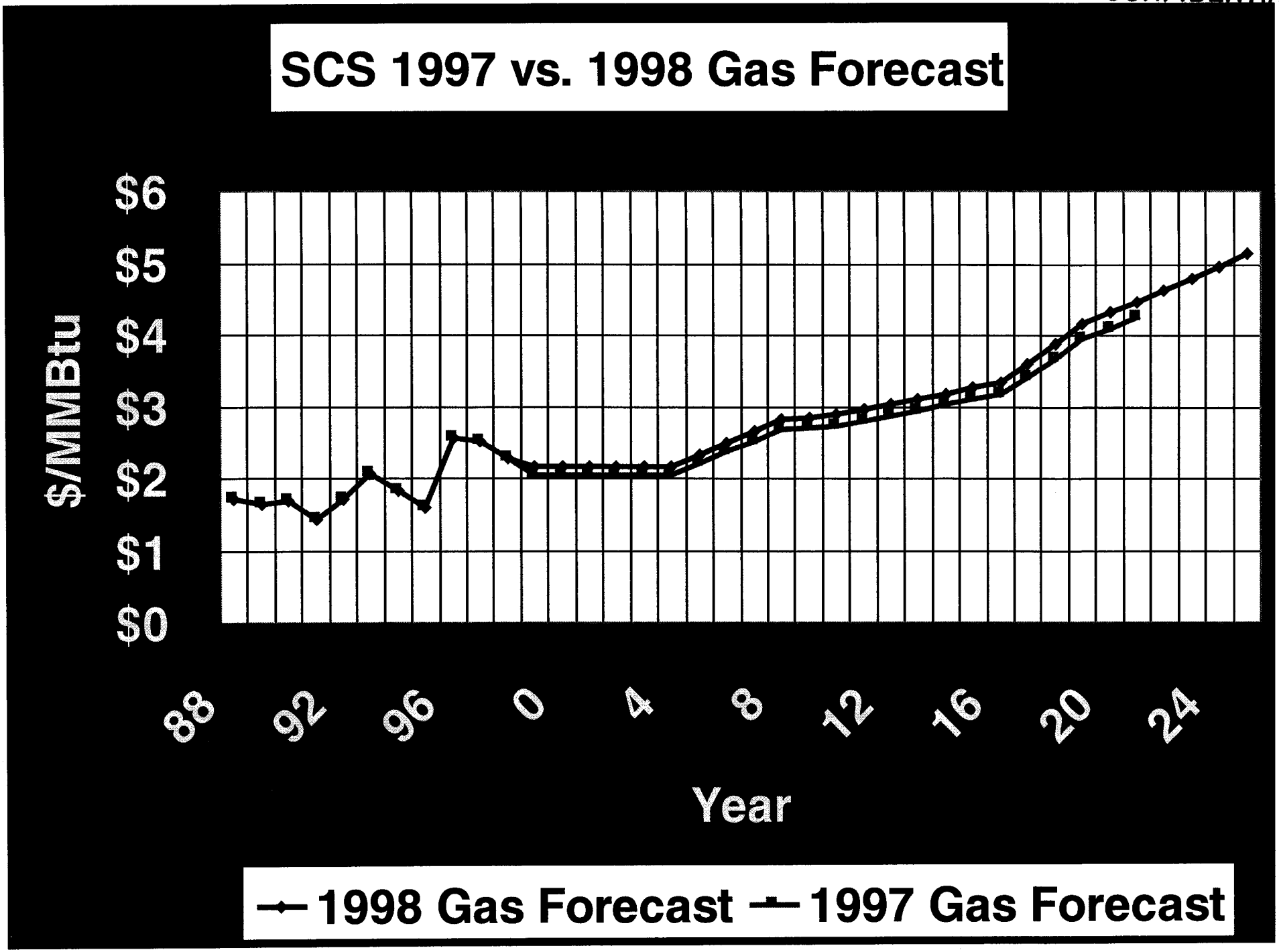
U.S. Energy Consumption in Quadrillion Btu

	Actual & Forecast						1996 to 2010 Estimated Annual Growth
	1990	% of Total	1996	% of Total	2010	% of Total	Rate
Coal	19,101	23.44%	20,498	22.80%	21,848	20.57%	0.47%
Natural Gas	19,296	23.68%	22,560	25.10%	32,500	30.60%	3.15%
Petroleum	33,553	41.18%	35,864	39.90%	41,225	38.81%	1.07%
Nuclear	6,579	8.07%	7,168	7.97%	6,853	6.45%	-0.31%
Hydro	2,946	3.62%	3,798	4.23%	3,800	3.58%	0.00%
Other	0	0.00%	0	0.00%	0	0.00%	
	81,475		89,888		106,226		1.30%
			1.72%				
Fossil Fuels	71,950	88.31%	78,922	87.80%	95,573	89.97%	

Actual #'s from DOE/EIA Monthly Energy Review
CO2 conversion factors from Form EIA-1605 (1996), Appendix B
Future Numbers are trend projections of the growth rate experienced from 1992 to 1996



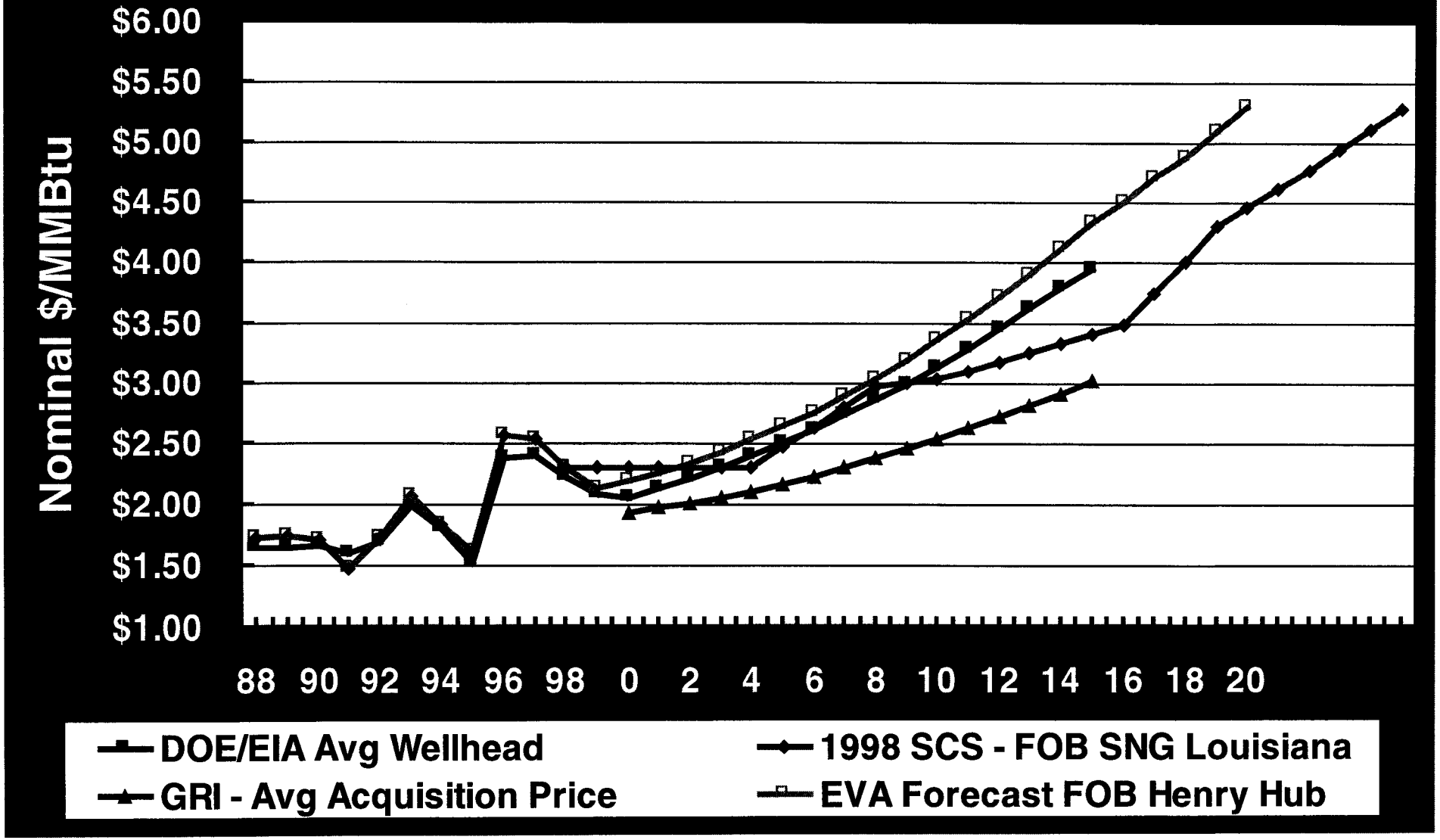

SCS 1997 vs. 1998 Gas Forecast
$/MMBtu
$6
$5
$4
$3
$2
$1
$0
88
92
96
0
4
8
12
16
20
24
Year
1998 Gas Forecast
1997 Gas Forecast

SCS 1998 Gas Price Forecast Baseload Plants

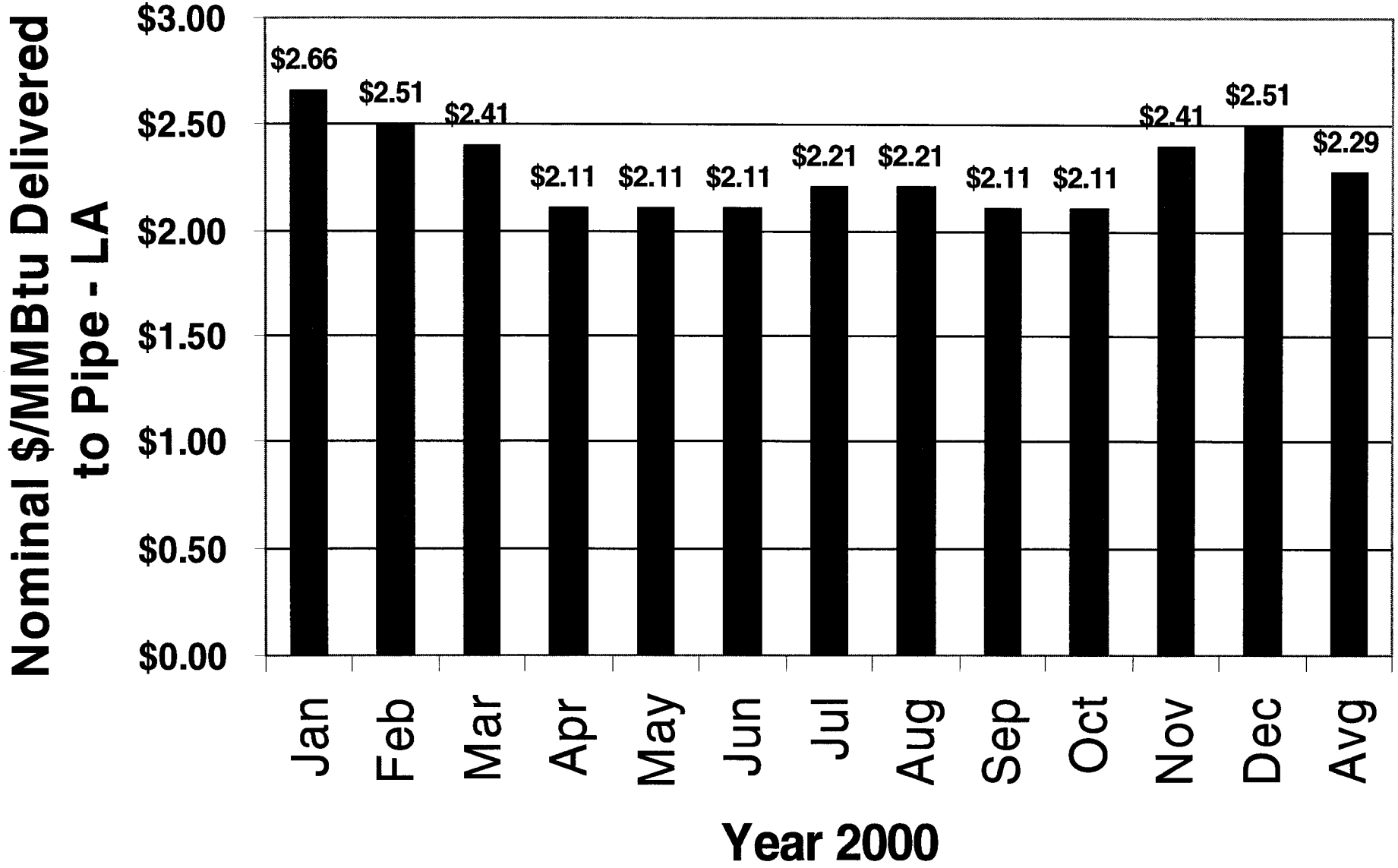
- Gas Price Forecast is about 5% higher than last year.
- Price curve has the same shape.
- Price increases in 2004 due to demand push.
- Demand push lasts for four years until new pipelines and productions flat prices again.
- Another demand push occurs in 2016.

Natural Gas Price Forecasts

SCS Forecast, DOE/EIA Annual Outlook, GRI Baseline & EVA



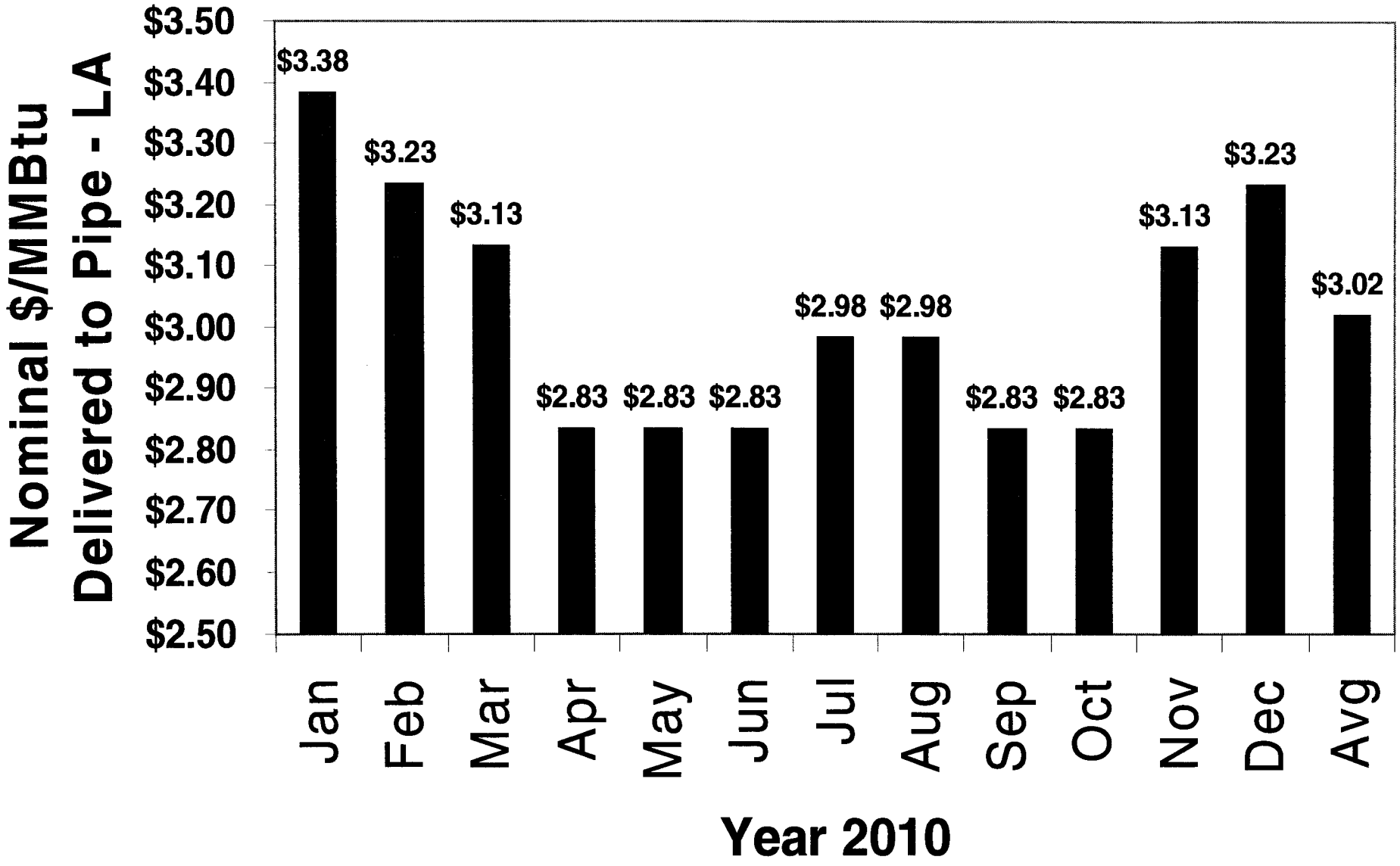
Monthly Forecasted Natural Gas Prices



Baseload Gas

We assume a difference pricing structure for baseload facilities. For instance, in 2001, we are assuming a level annual price of $2.156 per MMBtu - delivered into SNG - Louisiana, for baseload generation. This takes into account forward buying to reduce spikes and buying on down dips in prices. This is an aggressive goal. Spot Month Prices are expected to average $2.29 per MMBtu during 2001. This allows us to credit baseload facilities the advantage afforded by forward buying as opposed to taking what the market offers the day it is needed.

Monthly Forecasted Natural Gas Prices



Gas Transportation

- Limit CT expansions to 1,000 MW on Transco and 1,000 MW on SNG due to limited amount of interruptible capacity available.

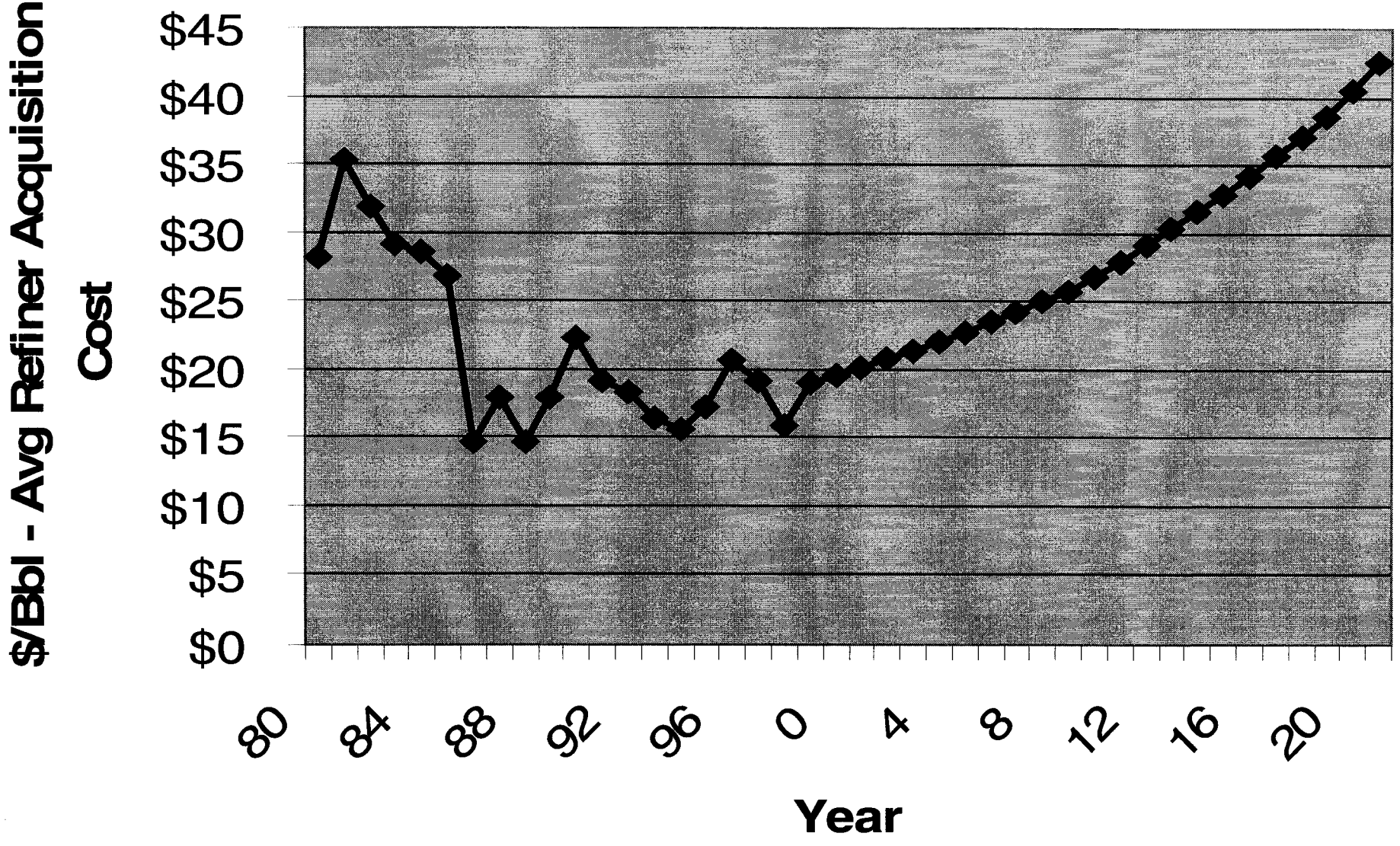
Gas Transportation

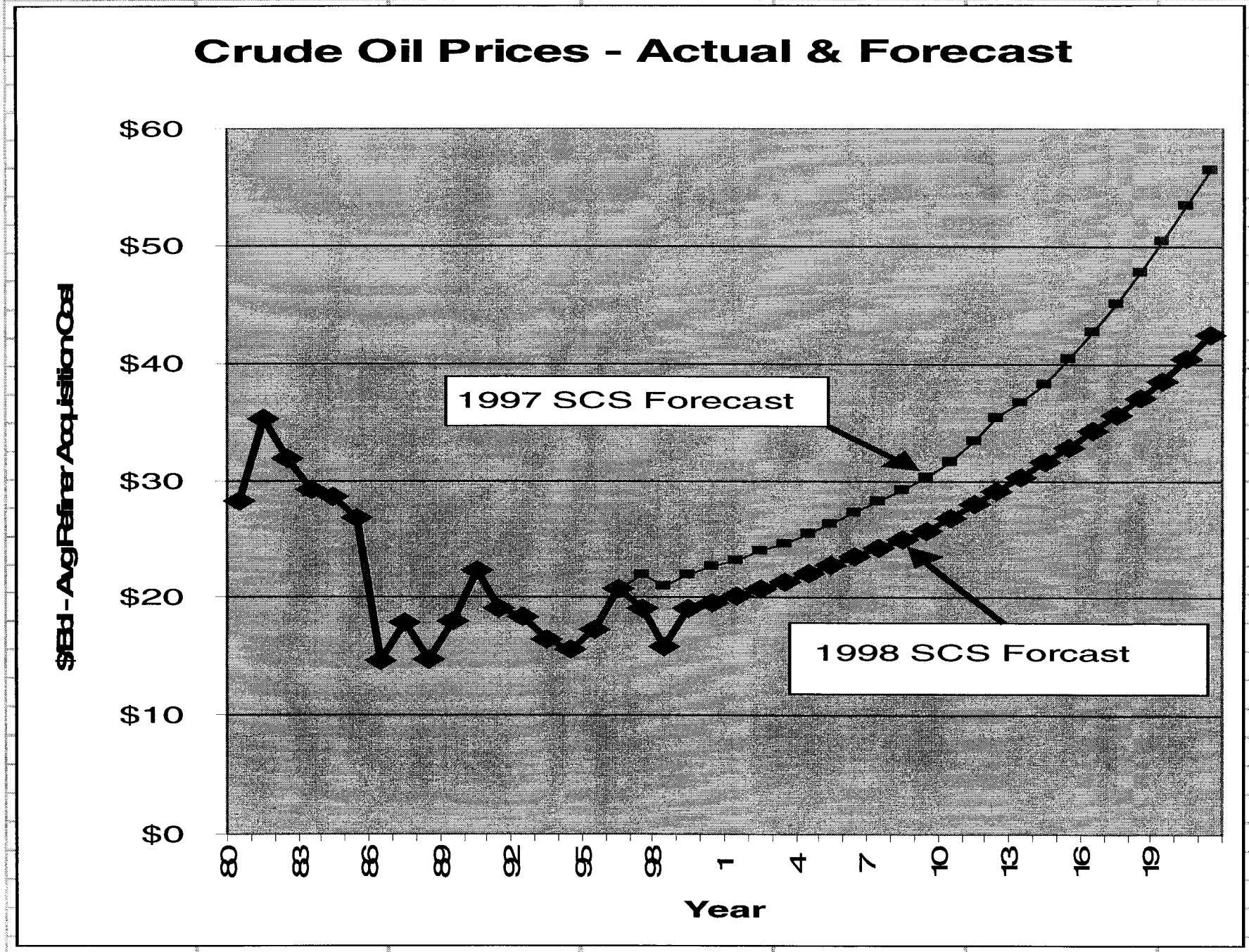
- Since area pipelines are fully subscribed, assume that pipelines must be expanded to accommodate new gas-fired combined cycle generation.
- Assume that 300,000 MMBtu per day of expansion can occur on Transco and SNG at maximum Tariff rates.

Gas Transportation

- Above 300,000 MMBtu/day, Transco and SNG will require higher firm transportation rates to expand pipelines.
- Assume that 5 to 10 days of storage capacity is purchased for new generation. This will cover cost of daily balancing and backup supplies.

Crude Oil Prices - Actual & Forecast




Crude Oil Prices - Actual & Forecast
$60
$50
$40
$30
$20
$10
$0
$/Bbl - Avg Refiner Acquisition Cost
1997 SCS Forecast
1998 SCS Forcast
80
83
86
89
92
95
98
1
4
7
10
13
16
19
Year

LATE-FILED EXHIBIT 2
DEPOSITION OF WILLIAM F. POPE

TRANSMISSION STUDY SUMMARIES

POD #2

GULF - TRANSMISSION COST ASSOCIATED WITH SELF-BUILD OPTIONS FOR ECONOMIC EVALUATION PURPOSES

DANIEL OPTION

Transmission Improvement to Coincide with Daniel Addition	Cost (millions,$98)
N. Brewton - Shoal River 500kv line, operate at 230kv, 60mi	60.0
Shoal River - Laguna 230kv line, 73 mi (Conversion of existing 115kv line & AEC tie)	46.5
Daniel CC connection and substation(includes GSU)	4.1
Allocation of Incremental Transmission Cost Assumption:	
41.88% of Ellicot - N. Brewton 500kv, 60mi, operate at 230kv(est. total = $57.5M)*	24.1
8.88% of Daniel - Big Creek 500kv, 21.5mi,operate at 230kv(est. total = $24.2M)**	2.1
TOTAL	**136.8**

ASSUMPTIONS:
Phase Shifter In-service
Barry - N. Brewton 500kv line in-service for 2001s
Silverhill - Brentwood 230kv line in-service for 2000s
Barry - Crist 230kv at 100°C operation for 2000s
APC local area transmission problems related to the Barry - Bay Minette and the Barry - Deurwagr 115kv lines are solved.
Gulf budgeted transmission improvements for 1998 - 2001 for local area requirements are in-service.
Glendale - Glendale tap 115kv line improvement in-service for 2001s
Short Circuit and Stability costs are assumed to not be significant to impact decision, hence they are not included.

NOTES:
Line construction lead time most likely will not allow the above improvements to be in-service to match the in-service date of the Daniel CC, then under certain contingency situations GULF may be required to institute combinations of 1) Back off generation at Daniel, and 2) Utilize operating procedures in APC and GULF, and possibly 3) Drop load.

* Based on APC's capital budget
** Based on APC and MPC budget PE

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3/6/1998;REV 3/10/98

POD # 2

GULF - TRANSMISSION COST ASSOCIATED WITH SELF-BUILD OPTIONS FOR ECONOMIC EVALUATION PURPOSES

CRIST COGEN OPTION

Transmission Improvement to Coincide With Crist Cogen Addition	Cost (millions,$98)		Cost (millions,$98)
Crist cogen connection and substation(includes GSU)	17.0		17.0
Shoal River - Laguna 230kv line, 73 mi (Conversion of existing 115kv line & AEC tie)	46.5	(1) (2)	0.0
Crist - Shoal River 230kv line, 45mi	20.3	(1) (2)	0.0
Ellicot - Crist #2 230kv(or similar line), 60mi	36.0	(2)	0.0
Allocation of Incremental Transmission Cost Assumption:	0.0		0.0
TOTAL	**119.8**		**17.0**

ASSUMPTIONS:
Phase Shifter In-service
Barry - N. Brewton 500kv line in-service for 2001s
Silverhill - Brentwood 230kv line in-service for 2000s
Barry - Crist 230kv at 100°C operation for 2000s
APC local area transmission problems related to the Barry - Bay Minette and the Barry - Deurwagr 115kv lines are solved.
Gulf budgeted transmission improvements for 1998 - 2001 for local area requirements are in-service.
Glendale - Glendale tap 115kv line improvement in-service for 2001s
Short Circuit and Stability costs are assumed to not be significant to impact decision, hence they are not included.

NOTE:
Line construction lead time most likely will not allow the above improvements to be in-service to match the in-service date of the Crist cogen, then under certain contingency situations GULF may be required to institute combinations of 1) Back off generation at Crist, and 2) Utilize operating procedures in APC and GULF, and possibly 3) Drop load.

(1) Could be avoided if willing to take risk until future additional generation added at L. Smith or if generation added at L. Smith first.
(2) Economic analysis to be run with and without this cost where additional risks are assumed.

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3/13/98

POD #2

GULF - TRANSMISSION COST ASSOCIATED WITH SELF-BUILD OPTIONS FOR ECONOMIC EVALUATION PURPOSES

L. SMITH CC OPTION

Transmission Improvement to Coincide With L. Smith Addition	Cost (millions,$98)		Cost (millions,$98)
L. Smith CC connection and substation(includes GSU)	4.6		4.6
Future Transmission Improvement(by 2003)			
Ellicot - Crist #2 230kv(or similar line), 60mi	36.0	(1)	0.0
Allocation of Incremental Transmission Cost Assumption:	0.0		0.0
TOTAL	**40.6**		**4.6**

ASSUMPTIONS:
Phase Shifter In-service
Barry - N. Brewton 500kv line in-service for 2001s
Silverhill - Brentwood 230kv line in-service for 2000s
Barry - Crist 230kv at 100°C operation for 2000s
APC local area transmission problems related to the Barry - Bay Minette and
the Barry - Deurwagr 115kv lines are solved.
Gulf budgeted transmission improvements for 1998 - 2001 for local area requirements are in-service.
Glendale - Glendale tap 115kv line improvement in-service for 2001s
Short Circuit and Stability costs are assumed to not be significant to impact decision, hence they are not included.

NOTE:
Assumes GULF continues to meet their capacity needs with next generation added at L. Smith and not Crist or west of Crist
(1) Economic analysis to be run with and without this cost where additional risks are assumed.

glfsmCC$.xls
3/13/98

Pod #2

GULF - TRANSMISSION COST ASSOCIATED WITH SELF-BUILD OPTIONS FOR ECONOMIC EVALUATION PURPOSES

L. SMITH CT OPTION (1)

Transmission Improvement to Coincide With L. Smith Addition	Cost (millions,$98)		Cost (millions,$98)
L. Smith CC connection and substation(includes GSU)	4.6		4.6
Future Transmission Improvement(by 2003)			
Ellicot - Crist #2 230kv(or similar line), 60mi	36.0	(2)	0.0
Allocation of Incremental Transmission Cost Assumption:	0.0		0.0
TOTAL	**40.6**		**4.6**

ASSUMPTIONS:
Phase Shifter In-service
Barry - N. Brewton 500kv line in-service for 2001s
Silverhill - Brentwood 230kv line in-service for 2000s
Barry - Crist 230kv at 100°C operation for 2000s
APC local area transmission problems related to the Barry - Bay Minette and
the Barry - Deurwagr 115kv lines are solved.
Gulf budgeted transmission improvements for 1998 - 2001 for local area requirements are in-service.
Glendale - Glendale tap 115kv line improvement in-service for 2001s
Short Circuit and Stability costs are assumed to not be significant to impact decision, hence they are not included.

NOTE:
Assumes GULF continues to meet their capacity needs with next generation added at L. Smith and not Crist or west of Crist
(1) Assumes the new CTs will be run, out of economic dispatch if necessary, when L. Smith 1 or 2 are out of service and GULF load is higher than 90% of peak.
(2) Economic analysis to be run with and without this cost where additional risks are assumed.

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3/13/98

GULF RFP Bid Evaluations

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Transmission Grid and Connections Cost

(98$, $m)

	(Sithe)								(Polsky)							
Daniel	1064								1064							
Barry	1064								1064							
Theo	205								205							
Smith	0								0							
Sithe	530								0							
Polsky-S	0								177							
Polsky-M	0								213							
Sonat	0								0							
TOTAL	2863								2723							
	2002	2003	2004	2005	2006	2007	2008	2009	2002	2003	2004	2005	2006	2007	2008	2009
Recond. Barry - Crist w 1351ACSS	-															
Recond. Barry - Chickasaw with 2-1033ACSF				6.5												
Recond. Chickasaw - S. Hill #1 w 1351ACSS	6.0															
Recond. Chickasaw - S. Hill #2 w 1351ACSS	6.4															
Recond. Big Crk. - Chickasaw w 1351ACSS	2.1															
Recond. Blakely Is - Spanish Ft. w 795ACSS	-															
Construct Shoal Rvr. - Laguna 230 or comparable fi:	46.0								46.0							
Construct Ellicot - Crist 230kv 1351SSAC,60m																
Construct Crist - Shoal River 230kv 1351SSAC,42m																
Construct N. Brewton- Shoal River 230, 75% Compensate	45.6								45.6							
Polsky Connection - Santa Ros									6.2							
Polsky Connection - Mobile									1.9							
Stability	-								-							
Short Circuit	-								-							
TOTAL	106.1	0.0	0.0	6.5	0.0	0.0	0.0	0.0	99.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRAN TOTAL								112.6								99.7
TOTAL (Nominal Dollars for RevReq)	116.6	0.0	0.0	7.7	0.0	0.0	0.0	0.0	109.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	(Sonat)								(Smith)															
Daniel	1064								1064															
Barry	1064								1064															
Theo	205								205															
Smith	0								532															
Sithe	0								0															
Polsky-S	0								0															
Polsky-M	0								0															
Sonat	500								0															
TOTAL	2833								2865															
	2002	2003	2004	2005	2006	2007	2008	2009	2002	2003	2004	2005	2006	2007	2008	2009	2002	2003	2004	2005	2006	2007	2008	2009
Recond. Barry - Crist w 1351ACSS	7.2								7.2															
Recond. Barry - Chickasaw with 2-1033ACSF	6.5								6.5															
Recond. Chickasaw - S. Hill #1 w 1351ACSS	6.0								6.0															
Recond. Chickasaw - S. Hill #2 w 1351ACSS	6.4								6.4															
Recond. Big Crk. - Chickasaw w 1351ACSS	2.1								2.1															
Recond. Blakely Is - Spanish Ft. w 795ACSS	2.4								2.4															
Construct Shoal Rvr. - Laguna 230 or comparable fi:																								
Construct Ellicot - Bellview 230kv 1351SSAC,60m																								
Construct Crist - Shoal River 230kv 1351SSAC,42m																								
Construct N. Brewton- Shoal River 230, 75% Compensate								45.6								45.6								
Construct Sonat - Laguna 230kv 1351SSA(	26.0																							
"Smith 532" improvements									3.1															
Smith Connection									2.2															
Sonat Connectior	2.4																							
Stability	-								1.2															
Short Circuit	-								0.3															
TOTAL	59.0	0.0	0.0	0.0	0.0	0.0	0.0	45.6	37.4	0.0	0.0	0.0	0.0	0.0	0.0	45.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRAN TOTAL								104.6								83.0								0.0
TOTAL (Nominal Dollars for RevReq)	64.8	0.0	0.0	0.0	0.0	0.0	0.0	59.1	41.1	0.0	0.0	0.0	0.0	0.0	0.0	59.1								

Comments:

- The ability to constuct some facilities by in-service date is questionable
- excludes GSU costs
- Assumes Capacity Added in 2002
- Costs are not TOTAL cost associated with generation option, but reflect those items that are not common among options.
- Does Not Include Losses

Assumptions:

- Utilized 1998 series base cases as starting point
- 3600 mw to FL
- Interface impacts not included
- Phase Shifter in service

rfp-options-costrev1.xls

POD #2 - RFP Process

CONFIDENTIAL

GULF RFP Bid Evaluations - Transmission Analysis- Grid and Connection Costs* (2002$, $millions)				
	Smith 532 Accum. PV RevRq (BASE)	Sonat 500 Accum. PV RevRq (Incremental over Base)	Sithe 532 Accum. PV RevRq (Incremental over Base)	Polsky 390 Accum. PV RevRq (Incremental over Base)
YEAR				
2002	0	5	16	15
2003	0	10	31	28
2004	0	14	44	40
2005	0	17	56	50
2006	0	21	68	60
2007	0	24	79	68
2008	0	26	87	75
2009	0	29	90	75
2010	0	30	88	74
2011	0	32	89	73
2012	0	34	90	72
2013	0	35	90	72
2014	0	37	91	71
2015	0	38	90	70
2016	0	38	90	70
2017	0	40	91	70
2018	0	40	90	68
2019	0	41	90	68
2020	0	41	91	68
2021	0	41	90	67
* Does not include losses				
Based on revenue requirements with 20 year depreciation.				
economicsGULF-RFPsumrevrq20yrrev1.xls				
11/13/98				

Late-filed Exhibit #4 from
Deposition of William Pope

(Confidential)

CONFIDENTIAL

20 Year Self-Build

Proposal Size (MW): 574.1

Year	Southern Units Additions CC MW	CT MW	Total MW	Accumulative MW	Summer Reserve Margin Southern %	Gulf %	Capital Costs (000$)	Fixed O&M (000$)	Fixed Fuel Charge (000$)	Trans. Grid/Conn (000$)	Trans. Losses (000$)	Var. O&M / Fuel (000$)	Expan. Plan Fixed Costs (000$)	Total (000$)	Present Worth Factor	PW Rev. Req. (000$)	Accum. PW Rev. Req. (000$)
2002	0	600	1174.1	1174.1	13.71	19.1%	25,754	1,413	10,306	0	(8,621)	2,845,354	19,676	2,893,881	1.0000	2,893,881	2,893,881
2003	600	300	900	2074.1	14.14	18.3%	42,214	2,491	17,667	0	(8,833)	2,970,115	63,277	3,086,930	0.9220	2,846,015	5,739,896
2004	600	0	600	2674.1	13.74	16.8%	40,124	2,563	17,667	0	(9,412)	3,110,154	97,434	3,258,529	0.8500	2,769,761	8,509,657
2005	1200	900	2100	4774.1	14.22	14.1%	38,132	2,637	17,667	0	(9,779)	3,318,365	198,701	3,565,722	0.7837	2,794,336	11,303,993
2006	600	0	600	5374.1	13.57	12.4%	36,231	2,713	17,667	0	(10,129)	3,480,084	234,153	3,760,718	0.7225	2,717,142	14,021,135
2007	0	1200	1200	6574.1	14.11	16.5%	34,412	2,791	17,667	0	(9,492)	3,693,345	276,997	4,015,719	0.6661	2,674,947	16,696,082
2008	300	300	600	7174.1	13.56	14.5%	32,649	2,871	17,667	0	(8,534)	3,905,621	306,733	4,257,007	0.6141	2,614,368	19,310,450
2009	600	600	1200	8374.1	14.06	12.2%	30,910	2,954	17,667	0	(6,478)	4,100,888	367,429	4,513,369	0.5662	2,555,486	21,865,936
2010	0	0	0	8374.1	14.4	18.3%	29,164	3,039	17,667	0	(4,370)	4,122,900	367,429	4,535,829	0.5220	2,367,771	24,233,707
2011	900	300	1200	9574.1	13.96	16.1%	27,425	3,126	17,667	0	(2,212)	4,231,956	438,991	4,716,953	0.4813	2,270,152	26,503,859
2012	900	600	1500	11074.1	14.06	11.0%	25,679	3,216	17,667	0	0	4,440,869	523,867	5,011,299	0.4437	2,223,587	28,727,445
2013	1800	0	1800	12874.1	14.23	9.4%	23,940	3,309	17,667	0	0	4,637,669	648,258	5,330,843	0.4091	2,180,771	30,908,216
2014	900	600	1500	14374.1	13.75	7.8%	22,195	3,404	17,667	0	0	4,846,042	736,511	5,625,819	0.3772	2,121,829	33,030,045
2015	1200	600	1800	16174.1	14.1	3.4%	20,455	3,502	17,667	0	0	5,090,296	847,938	5,979,858	0.3477	2,079,342	35,109,386
2016	1200	600	1800	17974.1	13.93		18,710	3,603	17,667	0	0	5,346,092	961,457	6,347,529	0.3206	2,034,932	37,144,319
2017	2100	600	2700	20674.1	13.64		17,137	3,707	17,667	0	0	5,845,007	1,144,105	7,027,623	0.2956	2,077,132	39,221,451
2018	1200	900	2100	22774.1	13.62		15,891	3,814	17,667	0	0	6,262,526	1,275,331	7,575,229	0.2725	2,064,248	41,285,699
2019	2100	0	2100	24874.1	14.09		14,812	3,924	17,667	0	0	6,778,473	1,437,584	8,252,459	0.2512	2,073,289	43,358,988
2020	1500	600	2100	26974.1	13.85		13,727	4,037	17,667	0	0	7,242,483	1,583,483	8,861,396	0.2316	2,052,527	45,411,515
2021	2100	1500	3600	30574.1	13.87		12,647	4,153	17,667	0	0	7,851,764	1,822,761	9,708,992	0.2135	2,073,344	47,484,859
2022	2100	300	2400	32974.1	13.78		4,960	1,780	7,361	0	0	8,407,006	2,008,764	10,429,872	0.1969	2,053,461	49,538,320

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YEAR	PEAK DEMAND (MW)	STARTING CAPACITY (MW)	CAPACITY ADDITION (MW)	ENDING CAPACITY (MW)	PERCENT RESERVES
2002	2,265	2,123	574	2,697	19.1%
2003	2,280	2,697	0	2,697	18.3%
2004	2,309	2,697	0	2,697	16.8%
2005	2,347	2,697	-19	2,678	14.1%
2006	2,383	2,678	0	2,678	12.4%
2007	2,425	2,678	148	2,826	16.5%
2008	2,466	2,826	-3	2,823	14.5%
2009	2,515	2,823	-2	2,821	12.2%
2010	2,565	2,821	214	3,035	18.3%
2011	2,614	3,035	0	3,035	16.1%
2012	2,651	3,035	-92	2,943	11.0%
2013	2,678	2,943	-13	2,930	9.4%
2014	2,711	2,930	-7	2,923	7.8%
2015	2,751	2,923	-78	2,845	3.4%
2016	2,787	2,845	-467	2,378	-14.7%
2017	2,829	2,378	-80	2,298	-18.8%
2018	2,871	2,298	-208	2,090	-27.2%
2019	2,914	2,090	-495	1,595	-45.3%
2020	2,957	1,595	0	1,595	-46.1%
2021	3,016	1,595	0	1,595	-47.1%

Respondent A - 2 Cogen Facilities

Proposal Size (MW): 351.5

Year	Southern Units Addition: CC MW	CT MW	Total MW	Accumula MW	Summer Reserve Margin: Southern %	Gulf % ***	Capital Costs (000$)	Fixed O&M (000$)	Fixed Fuel Charge (000$)	Trans. Grid/Conn (000$)	Trans. Losses (000$)	Proview GAF Var. O&M / Fuel (000$)	Proview Fixed Expan. Plan Fixed Costs (000$)	Total (000$)	Present Worth Factor	PW Rev. Req. (000$)	Accum. PW Rev. Req. (000$)	Delta Resp. - SelfBuild Accum. PW Rev. Req.
2002	300	600	1251.5	1251.5	13.95	9.2%	13,505			14,700	(4,617)	2,849,500	36,132	2,909,220	1.0000	2,909,220	2,909,220	18,339
2003	600	300	900	2151.5	14.37	8.5%	23,845			14,209	(4,730)	2,979,974	79,732	3,093,030	0.9220	2,851,639	5,760,859	20,963
2004	600	0	600	2751.5	13.97	7.2%	24,561			14,118	(5,048)	3,119,120	113,889	3,266,639	0.8500	2,776,655	8,537,513	27,856
2005	900	900	1800	4551.5	13.58	4.6%	25,297			12,761	(5,251)	3,332,824	197,757	3,563,388	0.7837	2,792,507	11,330,020	26,027
2006	600	300	900	5451.5	13.79	3.0%	26,056			13,702	(5,459)	3,494,161	244,016	3,772,477	0.7225	2,725,637	14,055,658	34,522
2007	0	1200	1200	6651.5	14.32		26,838			12,310	(5,127)	3,710,325	286,389	4,030,736	0.6661	2,684,950	16,740,608	44,526
2008	300	300	600	7251.5	13.77		27,643			11,073	(4,605)	3,925,396	316,125	4,275,632	0.6141	2,625,806	19,366,413	55,964
2009	900	300	1200	8451.5	14.26		28,472			706	(3,492)	4,112,282	384,964	4,522,933	0.5662	2,560,901	21,927,315	61,379
2010	0	0	0	8451.5	14.6		29,327			-3,065	(2,354)	4,133,298	384,964	4,542,170	0.5220	2,371,081	24,298,396	64,689
2011	600	600	1200	9651.5	14.16		30,206			-1,662	(1,190)	4,251,142	448,188	4,726,684	0.4813	2,274,835	26,573,231	69,372
2012	1200	300	1500	11151.5	14.25		31,113			-1,578	0	4,452,721	541,500	5,023,756	0.4437	2,229,114	28,802,345	74,900
2013	1500	0	1500	12651.5	13.68		32,046			-1,222	0	4,652,953	645,159	5,328,936	0.4091	2,179,991	30,982,336	74,120
2014	900	900	1800	14451.5	13.93		33,007			-530	0	4,866,361	745,858	5,644,696	0.3772	2,128,948	33,111,285	81,240
2015	1500	0	1500	15951.5	13.57		33,998			-2,876	0	5,097,448	853,445	5,982,015	0.3477	2,080,091	35,191,376	81,990
2016	1200	900	2100	18051.5	14.11		35,018			-1,560	0	5,358,861	979,880	6,372,199	0.3206	2,042,841	37,234,217	89,898
2017	1800	900	2700	20751.5	13.82		36,068			-338	0	5,866,194	1,153,355	7,055,279	0.2956	2,085,306	39,319,524	98,073
2018	1500	600	2100	22851.5	13.79		37,150			-5,872	0	6,276,676	1,293,927	7,601,882	0.2725	2,071,511	41,391,034	105,336
2019	1800	0	1800	24651.5	13.59		38,265			398	0	6,791,466	1,433,001	8,263,130	0.2512	2,075,970	43,467,004	108,016
2020	1800	600	2400	27051.5	14.02		39,413			-1,727	0	7,257,031	1,602,514	8,897,231	0.2316	2,060,828	45,527,832	116,317
2021	2100	1500	3600	30651.5	14.04		40,595			-3,746	0	7,866,821	1,841,792	9,745,462	0.2135	2,081,132	47,608,964	124,105
2022	2400	300	2700	33351.5	13.83		20,906			0	0	8,429,140	2,052,304	10,502,350	0.1969	2,067,731	49,676,695	138,374

*** *This alternative would require an additional 76 MW to achieve 12.6% reserve margin requirement for Gulf Pow*

Capital Cost was supplied in $/kW-month .
Two sites were included in the proposal - 177 MW and 212 MW for a total of 389 MW, but heve summer capacities of 157.2 and 194.3 MW
Capital costs for both sites were multiplied by their respective MW's and then divided by the total MW's

Year 2002 capital cost is for 7 months
Year 2012 capital cost is for 6 months

Additional MW Requried to get to 12.6% *76*

YEAR	PEAK DEMAND (MW)	STARTING CAPACITY (MW)	CAPACITY ADDITION (MW)	ENDING CAPACITY (MW)	PERCENT RESERVES
2002	2,265	2,123	352	2,475	9.2%
2003	2,280	2,475	0	2,475	8.5%
2004	2,309	2,475	0	2,475	7.2%
2005	2,347	2,475	-19	2,456	4.6%
2006	2,383	2,456	0	2,456	3.0%
2007	2,425	2,456	148	2,604	7.4%
2008	2,466	2,604	-3	2,601	5.5%
2009	2,515	2,601	-2	2,599	3.3%
2010	2,565	2,599	214	2,813	9.6%
2011	2,614	2,813	0	2,813	7.6%
2012	2,651	2,813	-92	2,721	2.6%
2013	2,678	2,721	-13	2,708	1.1%
2014	2,711	2,708	-7	2,701	-0.4%
2015	2,751	2,701	-78	2,623	-4.7%
2016	2,787	2,623	-467	2,156	-22.7%
2017	2,829	2,156	-80	2,076	-26.6%
2018	2,871	2,076	-208	1,868	-35.0%
2019	2,914	1,868	-495	1,373	-52.9%
2020	2,957	1,373	0	1,373	-53.6%
2021	3,016	1,373	0	1,373	-54.5%

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Respondent B - CC Proposal (7 Year Pricing)

Proposal Size (MW): 500

Year	Southern Units Additions CC MW	CT MW	Total MW	Accumulative MW	Summer Reserve Margin Southern %	Gulf %	Capital Costs (000$)	Fixed O&M (000$)	Fixed Fuel Charge (000$)	Trans. Grid/Conn (000$)	Trans. Losses (000$)	Var. O&M / Fuel (000$)	Expan. Plan Fixed Costs (000$)	Total (000$)	Present Worth Factor	PW Rev. Req. (000$)	Accum. PW Rev. Req. (000$)	Delta Resp. - SelfBuild Accum. PW Rev. Req. (000$)
2002	0	900	1400	1400	14.4	15.8%	17,975		9,198	5,000	(7,786)	2,850,599	29,514	2,904,500	1.0000	2,904,500	2,904,500	10,618
2003	600	0	600	2000	13.91	15.0%	31,667		15,768	5,423	(7,974)	2,979,099	63,043	3,087,027	0.9220	2,846,104	5,750,604	10,708
2004	600	0	600	2600	13.52	13.6%	32,443		15,768	4,706	(8,494)	3,119,762	97,200	3,261,384	0.8500	2,772,188	8,522,792	13,135
2005	900	1200	2100	4700	14.01	11.0%	33,227		15,768	3,828	(8,827)	3,333,174	191,625	3,568,796	0.7837	2,796,745	11,319,537	15,543
2006	900	0	900	5600	14.21	9.3%	34,075		15,768	5,536	(9,141)	3,487,933	244,802	3,778,973	0.7225	2,730,311	14,049,867	28,732
2007	0	900	900	6500	13.9		34,948		15,768	4,504	(8,565)	3,701,496	276,582	4,024,733	0.6661	2,680,951	16,730,819	34,737
2008	300	600	900	7400	14.17		35,822		15,768	3,257	(7,703)	3,915,419	317,162	4,279,724	0.6141	2,628,319	19,359,138	48,688
2009	1200	300	1500	8900	14.13		15,341		6,570	5,298	(5,849)	4,117,021	405,248	4,543,629	0.5662	2,572,619	21,931,757	65,822
2010	0	0	0	8900	14.47		0		0	1,916	(3,947)	4,139,628	405,248	4,542,844	0.5220	2,371,433	24,303,191	69,484
2011	600	600	1200	10100	14.02		0		0	4,156	(1,999)	4,258,007	468,471	4,728,635	0.4813	2,275,774	26,578,965	75,106
2012	1200	300	1500	11600	14.12		0		0	4,507	0	4,459,226	561,784	5,025,517	0.4437	2,229,896	28,808,861	81,415
2013	1500	0	1500	13100	13.55		0		0	2,444	0	4,658,921	665,443	5,326,808	0.4091	2,179,121	30,987,981	79,765
2014	900	900	1800	14900	13.81		0		0	5,303	0	4,872,318	766,141	5,643,762	0.3772	2,128,596	33,116,577	86,532
2015	1200	600	1800	16700	14.17		0		0	2,876	0	5,117,110	877,569	5,997,555	0.3477	2,085,495	35,202,072	92,686
2016	1500	300	1800	18500	13.99		0		0	0	0	5,365,961	1,000,092	6,366,053	0.3206	2,040,871	37,242,943	98,624
2017	1800	900	2700	21200	13.7		0		0	6,767	0	5,872,402	1,173,566	7,052,735	0.2956	2,084,554	39,327,498	106,047
2018	1500	600	2100	23300	13.68		0		0	0	0	6,282,603	1,314,138	7,596,741	0.2725	2,070,110	41,397,608	111,909
2019	1800	300	2100	25400	14.15		0		0	3,980	0	6,806,042	1,466,870	8,276,892	0.2512	2,079,427	43,477,035	118,047
2020	1500	600	2100	27500	13.9		0		0	0	0	7,270,810	1,612,768	8,883,578	0.2316	2,057,665	45,534,700	123,185
2021	2400	1200	3600	31100	13.93		0		0	0	0	7,872,211	1,861,928	9,734,139	0.2135	2,078,714	47,613,414	128,555
2022	2100	300	2400	33500	13.83		0		0	0	0	8,428,212	2,047,932	10,476,144	0.1969	2,062,572	49,675,986	137,666

YEAR	PEAK DEMAND (MW)	STARTING CAPACITY (MW)	CAPACITY ADDITION (MW)	ENDING CAPACITY (MW)	PERCENT RESERVES
2002	2,265	2,123	500	2,623	15.8%
2003	2,280	2,623	0	2,623	15.0%
2004	2,309	2,623	0	2,623	13.6%
2005	2,347	2,623	-19	2,604	11.0%
2006	2,383	2,604	0	2,604	9.3%
2007	2,425	2,604	148	2,752	13.5%
2008	2,466	2,752	-3	2,749	11.5%
2009	2,515	2,749	-502	2,247	-10.7%
2010	2,566	2,247	214	2,461	-4.1%
2011	2,614	2,461	0	2,461	-5.9%
2012	2,651	2,461	-92	2,369	-10.6%
2013	2,678	2,369	-13	2,356	-12.0%
2014	2,711	2,356	-7	2,349	-13.4%
2015	2,751	2,349	-78	2,271	-17.4%
2016	2,787	2,271	-467	1,804	-35.3%
2017	2,829	1,804	-80	1,724	-39.1%
2018	2,871	1,724	-208	1,516	-47.2%
2019	2,914	1,516	-495	1,021	-65.0%
2020	2,957	1,021	0	1,021	-65.5%
2021	3,016	1,021	0	1,021	-66.1%

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Respondent B - CC Proposal (10 Year Pricing)

Proposal Size (MW): 500

Year	Southern Units Additions CC MW	CT MW	Total MW	Accumulative MW	Summer Reserve Margin Southern %	Gulf %	Capital Costs (000$)	Fixed O&M (000$)	Fixed Fuel Charge (000$)	Trans. Grid/Conn (000$)	Trans. Losses (000$)	Var. O&M / Fuel (000$)	Expan. Plan Fixed Costs (000$)	Total (000$)	Present Worth Factor	PW Rev. Req. (000$)	Accum. PW Rev. Req. (000$)	Delta Resp. - SelfBuild Accum. PW Rev. Req. (000$)
2002	0	900	1400	1400	14.4	15.8%	16,537		9,198	5,000	(7,786)	2,849,873	29,514	2,902,336	1.0000	2,902,336	2,902,336	8,454
2003	600	0	600	2000	13.91	15.0%	29,117		15,768	5,423	(7,974)	2,977,438	63,043	3,082,816	0.9220	2,842,222	5,744,557	4,661
2004	600	0	600	2600	13.52	13.6%	29,845		15,768	4,706	(8,494)	3,117,630	97,200	3,256,655	0.8500	2,768,168	8,512,726	3,069
2005	900	1200	2100	4700	14.01	11.0%	30,591		15,768	3,828	(8,827)	3,331,506	191,625	3,564,492	0.7837	2,793,372	11,306,098	2,104
2006	900	0	900	5600	14.21	9.3%	31,356		15,768	5,536	(9,141)	3,486,960	244,802	3,775,281	0.7225	2,727,664	14,033,762	12,826
2007	0	900	900	6500	13.9		32,140		15,768	4,504	(8,565)	3,699,964	276,582	4,020,393	0.6661	2,678,061	16,711,822	15,740
2008	300	600	900	7400	14.17		32,944		15,768	3,257	(7,703)	3,914,713	317,162	4,276,140	0.6141	2,626,118	19,337,940	27,490
2009	600	300	900	8300	13.86		33,767		15,768	5,298	(5,849)	4,108,335	366,756	4,522,076	0.5662	2,560,416	21,898,356	32,420
2010	0	0	0	8300	14.2		34,611		15,768	1,916	(3,947)	4,129,873	366,756	4,544,977	0.5220	2,372,546	24,270,902	37,195
2011	900	300	1200	9500	13.77		35,477		15,768	4,156	(1,999)	4,239,282	438,318	4,731,002	0.4813	2,276,913	26,547,816	43,957
2012	1500	600	2100	11600	14.12		15,196		6,570	4,507	0	4,458,212	563,894	5,048,378	0.4437	2,240,040	28,787,855	60,410
2013	1500	0	1500	13100	13.55		0		0	2,444	0	4,658,921	667,553	5,328,918	0.4091	2,179,984	30,967,839	59,622
2014	900	900	1800	14900	13.81		0		0	5,303	0	4,872,318	768,251	5,645,872	0.3772	2,129,392	33,097,231	67,186
2015	1200	600	1800	16700	14.17		0		0	2,876	0	5,117,110	879,679	5,999,665	0.3477	2,086,229	35,183,459	74,073
2016	1500	300	1800	18500	13.99		0		0	0	0	5,365,961	1,002,202	6,368,163	0.3206	2,041,547	37,225,007	80,688
2017	1800	900	2700	21200	13.7		0		0	6,767	0	5,872,402	1,175,676	7,054,845	0.2956	2,085,178	39,310,185	88,734
2018	1500	600	2100	23300	13.68		0		0	0	0	6,282,603	1,316,248	7,598,851	0.2725	2,070,685	41,380,870	95,171
2019	1800	300	2100	25400	14.15		0		0	3,980	0	6,806,042	1,468,980	8,279,002	0.2512	2,079,957	43,460,827	101,840
2020	1500	600	2100	27500	13.9		0		0	0	0	7,270,810	1,614,878	8,885,688	0.2316	2,058,154	45,518,981	107,466
2021	2400	1200	3600	31100	13.93		0		0	0	0	7,872,211	1,864,038	9,736,249	0.2135	2,079,165	47,598,146	113,287
2022	2100	300	2400	33500	13.83		0		0	0	0	8,428,212	2,050,042	10,478,254	0.1969	2,062,987	49,661,133	122,813

YEAR	PEAK DEMAND (MW)	STARTING CAPACITY (MW)	CAPACITY ADDITION (MW)	ENDING CAPACITY (MW)	PERCENT RESERVES
2002	2,265	2,123	500	2,623	15.8%
2003	2,280	2,623	0	2,623	15.0%
2004	2,309	2,623	0	2,623	13.6%
2005	2,347	2,623	-19	2,604	11.0%
2006	2,383	2,604	0	2,604	9.3%
2007	2,425	2,604	148	2,752	13.5%
2008	2,466	2,752	-3	2,749	11.5%
2009	2,515	2,749	-2	2,747	9.2%
2010	2,565	2,747	214	2,961	15.4%
2011	2,614	2,961	0	2,961	13.3%
2012	2,651	2,961	-592	2,369	-10.6%
2013	2,678	2,369	-13	2,356	-12.0%
2014	2,711	2,356	-7	2,349	-13.4%
2015	2,751	2,349	-78	2,271	-17.4%
2016	2,787	2,271	-467	1,804	-35.3%
2017	2,829	1,804	-80	1,724	-39.1%
2018	2,871	1,724	-208	1,516	-47.2%
2019	2,914	1,516	-495	1,021	-65.0%
2020	2,957	1,021	0	1,021	-65.5%
2021	3,016	1,021	0	1,021	-66.1%

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