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June 23, 2005

BY HAND DELIVERY AND E-FILE

Mary L. Cottrell, Secretary
Department of Telecommunications and Energy
One South Station
Boston, MA 02110

Re: Bay State Gas Company, D.T.E. 05-27

Dear Ms. Cottrell:

Enclosed for filing, on behalf of Bay State Gas Company ("Bay State"), please find Bay State's responses to the following information requests:

From the Attorney General:

AG-1-61 (Supp)		AG-8-3	AG-8-12	AG-8-14
AG-9-2	AG-9-4	AG-9-27	AG-11-6	AG-11-19
AG-11-15	AG-13-3	AG-14-2	AG-14-12	AG-14-25
AG-14-28	AG-14-29	AG-14-30	AG-15-1	AG-15-3
AG-15-5	AG-16-1	AG-16-2	AG-17-1	AG-17-2
AG-17-3	AG-17-4	AG-17-5	AG-17-6	AG-17-7
AG-19-26	AG-19-36	AG-22-52	AG-23-5	AG-23-8
AG-23-10	AG-23-11			

From the Department:

DTE-1-17	DTE-3-1 (Revised)	DTE-3-4 (Bulk)	DTE-3-20

DTE-3-23	DTE-3-24	DTE-5-9	DTE-6-13	DTE-8-5
DTE-8-6	DTE-9-16	DTE-9-21	DTE-9-22	DTE-10-1
DTE-11-9	DTE-11-10	DTE-11-11	DTE-11-22	DTE-11-25
DTE-11-26	DTE-12-1	DTE-12-2	DTE-12-3	DTE-12-4
DTE-12-5	DTE-12-6	DTE-12-7	DTE-12-8	DTE-12-12
DTE-12-13	DTE-12-14	DTE-13-7	DTE-13-8	DTE-13-9
DTE-13-10	DTE-13-27	DTE-14-3	DTE-15-19	DTE-15-20
DTE-15-21	DTE-15-22	DTE-15-23	DTE-15-24	DTE-15-25
DTE-15-26	DTE-15-28	DTE-15-29	DTE-15-30	DTE-15-31
DTE-15-32	DTE-15-36	DTE-15-37	DTE-15-38	DTE-15-39
DTE-15-40	DTE-15-41	DTE-15-42	DTE-15-43	DTE-15-44
DTE-15-45	DTE-15-49	DTE-15-51	DTE-16-4	
DTE-16-5	DTE-16-6	DTE-16-16	DTE-16-17	DTE-16-25
DTE-16-26	DTE-16-27	DTE-16-28	DTE-16-30	DTE-16-31
DTE-16-36	DTE-16-37	DTE-16-39	DTE-16-40	DTE-17-11
DTE-18-19	DTE-18-21	DTE-18-22		

<u>From the MA OilHeat Council:</u>

MOC-1-4	MOC-1-11	MOC-3-11	MOC-4-6

<u>From the UWUA Local 273:</u>

UWUA-1-4	UWUA-2-26	UWUA-2-27	UWUA-3-21	UWUA-3-24

UWUA-3-27 UWUA-3-37 UWUA-3-52

From the DOER:

DOER-1-1 DOER-1-2 DOER-1-3 DOER-1-4 DOER-1-5

DOER-1-6 DOER-1-7 DOER-1-10 DOER-1-11 DOER-1-12

DOER-1-13 DOER-1-14 DOER-1-15 DOER-1-16

From MASSPOWER:

MP-1-14 MP-1-15 MP-1-25 MP-1-26 MP-1-30

Please do not hesitate to telephone me with any questions whatsoever.

Very truly yours,

Patricia M. French

cc: Per Ground Rules Memorandum issued June 13, 2005:

Paul E. Osborne, Assistant Director – Rates and Rev. Requirements Div. (1 copy)
A. John Sullivan, Rates and Rev. Requirements Div. (4 copies)
Andreas Thanos, Assistant Director, Gas Division (1 copy)
Alexander Cochis, Assistant Attorney General (4 copies)
Service List (1 electronic copy)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FIRST SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

SUPPLEMENTAL AND REVISED RESPONSE

AG-1-61 Please provide the following information regarding the Company's insurance policies:

1. A breakdown of the insurance expenses recorded in each of the years 2003 and 2004 and, for each insurance expense, please provide a detailed explanation for any differences between the expense amounts included in the test year and the insurance premiums paid during that year;

2. The invoices for the insurance premiums paid in each of the years 2003 and 2004 and, if the Company only pays a portion of the insurance expense, please provide a summary of each insurance invoice showing the total expense and the Company's allocated portion of the expense;

3. If any insurance expense (including premiums) recorded in each of the years 2003 and 2004 have been allocated or assigned to the Company from any affiliate, please indicate the amount allocated or assigned and the method of assignment and provide copies of all policies for which expenses are allocated or assigned; and

4. An itemization and quantification of any insurance proceeds (e.g. reimbursements, recoveries, refunds, distributions, adjustments) received by the Company during or since the year 2003, along with a complete and detailed description of the accounting treatment given those proceeds.

Response:

1. Attachment AG-1-61 (A) and Attachment AG-1-61 (B) provide a summary of insurance related expenses paid in 2004 and 2003, respectively. On these attachments, Column C indicates the total premium paid at the Nisource consolidated level. Columns D and E indicate the percent allocated and actual dollars assigned to Bay State Gas Company. Columns F and G indicate the calendar year in which the insurance prepayments were expensed.

   The major renewal dates are July 1, November 1, and December 1 for NiSource's liability and property insurance policies. For accounting purposes the prepayment is amortized over the term of the policy. Therefore the payments made in 2004 will not line up with the actual expense recorded in

2004. Columns F and G on Attachments AG-1-61 (A) and (B) indicate the calendar year expense associated with each prepayment.

2. Copies of insurance invoices and other detail for 2004 payments are provided in Attachment AG-1-61 (C) **(BULK)**. Column B in Attachment AG-1-61 (A) can be cross-referenced with the detail in Attachment AG-1-61 (C) **(BULK)**.

   Copies of insurance invoices and other detail for 2003 payments are provided in Attachment AG-1-61 (D) **(BULK)** with cross-references to Attachment AG-1-61 (B) working in the same manner.

3. Please see Attachment AG-1-61 (A) & Attachment AG-1-61 (B). The allocation methodology and calculations are developed by the actuarial firm, Milliman USA, Inc. The allocations were derived by assigning 20% weight to loss experience and 80% to exposure. The exposure basis is as follows:

   - Primary & Excess Liability - revenue
   - Workers Compensation – payroll
   - Auto Liability – number of autos
   - Primary and Excess Property – property value
   - Crime – employees
   - D&O and Fiduciary – historic corporate billing

4. The following funds were recovered in 2004:

2004 RECOVERIES				
Company	Claim Type	Admin	Ref #	Recovery
Bay State Gas	Auto	CEI	335599	$1,141.04
Bay State Gas	Auto	CEI	275692	$3,286.61
Bay State Gas	Auto	CEI	337314	$1,181.73
Bay State Gas	Auto	CEI	309735	$3,579.53
Bay State Gas	Auto	CEI	286145	$3,718.70
Bay State Gas	Auto	CEI	359094	$1,609.90
Bay State Gas	Auto	CEI	329414	$1,606.83
Bay State Gas	Auto	CEI	292558	$623.25
Bay State Gas	Auto	CEI	356088	$361.13
Bay State Gas	Auto	CEI	375039	$746.22
Bay State Gas	Auto	CEI	359533	$938.96
Bay State Gas	Auto	CEI	367399	$3,543.29
Bay State Gas	Auto	CEI	374043	$3,393.20
Bay State Gas	Auto	CEI	378005	$2,385.45
Bay State Gas	Auto	CEI	389035	$2,088.38
Bay State Gas	WC	Travelers	N/A	$0
Bay State Gas	Liability	Travelers	N/A	$0

Bay State Gas	Insurance Premium(s)	N/A	N/A	$0
Total				$30,204.22

SUPPLEMENTAL and REVISED RESPONSE:

2. Please see Confidential Attachment DTE 6-14 which contains premiums, invoices and summary of each insurance invoice showing the total expense and the Company's allocated portion of the expense in lieu of Attachments AG-1-61(C) and AG-1-61(D). These materials are deemed confidential pursuant to a Motion for Protective Treatment filed with DTE-6-14. Any party seeking access to this material may do so pursuant to a mutually agreed upon confidentiality agreement.

INSURANCE PAYMENTS - 2004

(A)	(B)	(C)	(D)	(E)	(F)	(G)
Type of Coverage 2004-2005 Policy Year		**Premium**	**Bay State Portion**	**Bay State Premium**	**2004 Payment Expensed in 2004**	**2004 Payment Expensed in 2005**
Primary Liability						
AEGIS (NICL)	A	2,465,000	6.40%	157,760	78,880	78,880
Excess General Liability						
Park Bermuda Limited	B	225,000	7.60%	17,100	8,550	8,550
Park Bermuda Limited	C	1,301,020	7.63%	99,268	49,634	49,634
Agnew Higgins Pickering	D	200,000	7.60%	15,200	7,600	7,600
Agnew Higgins Pickering	E	989,000	7.63%	75,460	37,730	37,730
AEGIS	F	122,500	7.60%	9,310	4,655	4,655
AEGIS	A	2,503,621	6.40%	160,232	80,116	80,116
EIM	G	912,688	7.63%	69,638	34,819	34,819
MSW (Incl Service Fee)	H	2,350,750	7.60%	178,657	89,328	89,329
EIB	I	72,107	7.60%	5,480	2,740	2,740
Workers Compensation						
AEGIS (NICL)	J	6,589,752	7.40%	487,642	243,821	243,821
McGriff, Seibels & Williams	K	2,186,821	7.48%	163,631	81,816	81,815
AEGIS	L	325,000	7.40%	24,050	12,025	12,025
Auto Liability						
AEGIS (NICL)	A	435,000	7.80%	33,930	16,965	16,965
AEGIS	A	441,816	7.80%	34,462	17,231	17,231
SIR Buydown Liability	M	4,229,545	4.52%	191,380	191,380	0
Property (Primary)						
AEGIS (NICL)	N	3,295,284	0.98%	32,294	16,147	16,147
Property (Excess)						
OIL Ltd (1st quarter)	O	97,243	0.98%	953	953	0
OIL Ltd (2nd quarter)	P	102,110	0.98%	1,001	1,001	0
Park Bermuda Limited	Q	1,037,916	0.98%	10,172	5,086	5,086
GARD AS Energy	R	92,870	0.98%	910	455	455
JLT Risk Solutions	S	4,249,488	0.98%	41,645	20,823	20,823
Property (Engineering Fees)						
Zurich Services Corp.	T	224,040	0.98%	2,196	1,098	1,098
AON (1st installment of 4)	U	99,000	1.79%	1,772	443	1,329
AON (2nd installment of 4)	V	26,000	1.79%	465	116	349
AON (3RD installment of 4)	AZ	25,000	1.79%	448	224	224
AON	BZ	525,000	0.98%	5,141	857	4,284
OIL Ltd	CZ	86,178	1.56%	1,344	1,344	0
OIL Ltd	DZ	109,756	0.98%	1,076	0	1,076
Directors & Officers Liability						
EIM (Energy Insurance Mutual)	W	1,417,850	8.73%	123,778	20,629	103,149
Park Bermuda (Incl Fiduciary)	X	1,111,200	8.73%	97,008	16,168	80,840
McGriff, Seibels & Williams (Includes Fiduciary & Crime)	Y	3,079,900	8.73%	268,875	44,812	224,063
Fiduciary Liability						
EIM (Energy Insurance Mutual)	W	203,568	8.73%	17,771	2,961	14,810
Commercial Crime (Included In D&O)						
Special Crime						
Total 2004-2005 Premiums		**41,132,023**		**2,330,049**	**1,090,407**	**1,239,642**
2003 Payments Expensed in 2004					**1,201,872**	
Total 2004 Expense					**2,292,278**	

INSURANCE PREMIUM EXPENSE - 2003

(A)	(B)		(C)	(D)	(E)	(F)	(G)
Type of Coverage 2003-2004 Policy Year			**Premium**	**Bay State Portion**	**Bay State Premium**	**2003 Payment Expensed in 2003**	**2003 Payment Expensed in 2004**
Primary Liability							
AEGIS (NICL)	AA	1	2,800,000	7.26%	203,280	101,640	101,640
AEGIS	AA	2	2,940,553	7.26%	213,484	106,740	106,744
McGriff, Seibels & Williams	BB	1	736,932	7.26%	53,501	26,751	26,751
Excess General Liability							
Park Bermuda Limited	CC	1	1,556,950	7.26%	113,035	56,520	56,515
EIM	DD	1	605,125	7.26%	43,932	7,322	36,610
EIM			0	7.26%	0	0	0
McGriff, Seibels & Williams	BB	2	1,369,133	7.26%	99,399	49,700	49,700
Agnew Higgins Pickering	EE	1	1,223,231	7.26%	88,807	44,400	44,407
Workers Compensation							
Travelers-Bermuda (NICL)	FF	1	3,144,583	7.31%	229,869	114,934	114,935
McGriff, Seibels & Williams	GG	1	2,049,287	7.31%	149,803	74,902	74,902
AEGIS	HH	1	315,000	7.31%	23,027	11,514	11,513
Auto Liability							
AEGIS	II	1	502,233	7.05%	35,407	17,704	17,704
Porperty							
Cananwill	UU	1	647,938	0.60%	3,888	3,888	0
Cananwill	UU	2	647,938	0.60%	3,888	3,888	0
Cananwill	UU	3	647,938	0.60%	3,888	3,888	0
Cananwill	UU	4	647,938	0.60%	3,888	3,888	0
Cananwill	UU	5	647,938	0.60%	3,888	3,888	0
Cananwill	UU	6	647,938	0.60%	3,888	3,888	0
McGriff, Seibels & Williams	VV	1	776,403	8.47%	65,751	65,751	0
McGriff, Seibels & Williams	WW	1	776,403	8.47%	65,751	65,751	0
OIL Ltd	XX	1	234,413	0.60%	1,406	1,406	0
OIL Ltd	XX	2	234,413	0.60%	1,406	1,406	0
OIL Ltd	YY	1	288,105	2.92%	8,413	8,413	0
Property (Primary)							
AEGIS (NICL)	JJ	1	3,950,417	0.79%	31,208	15,600	15,608
Property (Excess)							
Park Bermuda Limited	KK	1	1,517,403	0.76%	11,532	5,766	5,766
AON (Lloyds)	LL	1	6,798,623	0.79%	53,709	26,853	26,856
Property (Engineering Fees)							
AON (Zurich)	MM	1	257,830	0.79%	2,037	1,017	1,020
AON	NN	1	175,000	0.76%	1,330	666	664
AON Property Service Fee	OO	1	600,000	0.86%	5,160	860	4,300
Directors & Officers Liability							
McGriff, Seibels & Williams	QQ	1	2,716,784	8.29%	225,221	37,537	187,684
EIM (Excess)	DD	2	1,417,850	8.29%	117,540	19,590	97,950
Park Bermuda Ltd (Excess)	PP	1	1,193,300	8.29%	98,925	16,488	82,437
Punitive Damages							
EIB	RR	1	88,567	7.26%	6,430	3,216	3,214
Fiduciary XS Liability							
Park Bermuda Ltd (AWAC)	PP	2	72,250	8.29%	5,990	998	4,992
Park Bermuda Ltd (Starr)	PP	3	72,250	8.29%	5,990	998	4,992
EIM	DD	3	212,500	8.29%	17,616	2,936	14,680
McGriff, Seibels & Williams	QQ	2	550,290	8.29%	45,619	7,603	38,016
Commercial Crime							
McGriff, Seibels & Williams	QQ	3	113,199	8.29%	9,384	1,564	7,820
XS Crime							
McGriff, Seibels & Williams	QQ	4	70,183	8.29%	5,818	970	4,848
Terrorism	SS	1	166,482	7.48%	12,453	3,111	9,342
MSW Broker Fee	TT	1	1,175,000	7.26%	85,305	42,651	42,654
EIM	ZZ	1	412,000	7.26%	29,911	29,911	0
OIL Ltd	AAA	1	108,308	2.92%	3,163	0	3,163
2002 Payments Expensed in 2004							4,446
Total 2003-2004 Premiums			**45,108,628**		**2,193,940**	**996,515**	**1,201,872**
2002 Payments Expensed in 2003						**338,086**	
Total 2003 Expense						**1,334,601**	

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Earl M. Robinson, Consultant (Depreciation)

AG-8-3 Data - Please identify the minimum length of pipe by year for the period 1980 through 2003 that constituted a property unit.

Response: A minimum length of pipe is considered a property unit based on the following criteria:

1. Under 10 feet and less than $2,000	Expensed
2. Over 10 feet	Capitalized
3. Under 10 feet but over $2,000.	Capitalized

This policy has been in effect since the 1980's

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Earl M. Robinson, Consultant (Depreciation)

AG-8-12 Net Salvage - Please identify the dollar amount of retirements and corresponding cost of removal by year for the period 1980 through 2003 for Account 376 and 380 that were associated with emergency replacement activity rather than specifically pre-planned replacements.

Response: The Company does not differentiate the recording of retirement and removal costs associated with emergency replacements as compared to pre-planned replacements.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Earl M. Robinson, Consultant (Depreciation)

AG-8-14 Net Salvage - If an item of plant is retired and an outside party provides $1,000 associated with such retirement and no replacement activity occurs, how is the $1,000 accounted for (e.g., added to gross salvage amount, reduction to the cost of removal, or other method). Further, please provide all justification for whatever policy is utilized by the Company. In addition, identify when the Company first implemented such policy.

Response: The $1,000 is netted against cost of removal. The Company follows the DTE Uniform System of Accounts as prescribed as of January 1, 1961.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
NINTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Joseph A. Ferro, Manager Regulatory Policy

AG-9-2 Please recalculate the Company's proposed rates for each class based on bill determinants that reflect the weather normalization computations produced in response to the immediately preceding request. Include the Company's assessment of the differences between these rates and the proposed and whether it would be appropriate to have the allocated accounting costs of service re-run to incorporate the affects of this weather normalization.

Response: Please refer to Attachment AG-9-2.

For this request, the Company modified the allocation of test year revenue in its rate design to the special contract customers. The test year special contract revenues were increased by $404,852 to account for the inclusion of one customer's minimum annual payment obligation that was inadvertently excluded in the filing. The additional revenues allocated to the special contracts were offset by a corresponding decrease of revenue requirement allocated to all tariff rate classes.

Considering that the change in billing determinants were minor, and that the special contract revenue allocation has a minor off-setting impact of lowering tariff rates (on average lowering rates by $0.0008 per therm - $404,852 / 493,498,312), the resulting rate design is quite similar to the Company's original filing presented in Schedule JAF-2-1. For example, the Residential Heating rates compare as follows:

	Sch. JAF-2-1	AG-9-2	Difference
Peak & Off-peak			
Head	$0.3183	$0.3172	$0.0011
Tail	$0.2224	$0.2223	$0.0001

Also, please note, for this request, the revised billing determinants nor the revision to test year special contract revenues were run through the Allocated Cost of Service ("ACOS") study to capture any minor impacts to the allocation of the revenue requirement. The Company, however, plans to reflect the additional special contract revenues of $404,852 in all subsequent ACOS runs in this proceeding.

Bay State Gas Company
Rate Design

line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
1	**CURRENT BASE RATES**											
2	Monthly Customer Charge		$7.47	$5.97		$7.46	$5.97	$3.32	$12.61	$12.61	$45.04	$45.04
3	Winter Volumetric Rates											
4	First Block Rate		$0.4000	$0.2247		$0.4349	$0.2869		$0.3694	$0.3597	$0.1979	$0.1708
5	Second Block Rate		$0.2076	$0.0709		$0.3758	$0.2396		$0.2315	$0.2268	$0.1572	$0.1315
6	Summer Volumetric Rates											
7	First Block Rate		$0.2317	$0.1243		$0.3848	$0.2517		$0.3288	$0.3240	$0.1246	$0.1000
8	Second Block Rate		$0.1639	$0.0700		$0.2965	$0.1811		$0.1855	$0.1884	$0.0988	$0.0765
9	Demand Rate											
10	Winter											
11	Summer											
12												
13	First Block Size											
14	Winter		90	90		12	12		125	125	1,000	700
15	Summer		30	30		10	10		35	80	300	500
16												
17	**TEST YEAR BILLING DETERMINANTS**											
18	**Number of Bills**											
19	Sales Customers - Annual	2,666,054	2,449,833	216,221	400,456	380,442	20,014	144	190,903	35,847	43,826	15,250
20	Sales Customers - Winter	1,341,210	1,227,579	113,631	194,724	184,413	10,311	72	96,712	18,101	21,670	7,692
21	Sales Customers - Summer	1,324,844	1,222,254	102,590	205,732	196,029	9,703	72	94,191	17,746	22,156	7,558
22												
23	Transportation - Annual	440	440	0	59	59	0	0	9,303	4,061	12,369	5,823
24	Transportation - Winter	223	223	0	29	29	0	0	4,602	2,070	6,291	3,026
25	Transportation - Summer	217	217	0	30	30	0	0	4,701	1,991	6,078	2,797
26												
27	Total - Annual	2,666,494	2,450,273	216,221	400,515	380,501	20,014	144	200,206	39,908	56,195	21,073
28	Total - Winter	1,341,433	1,227,802	113,631	194,753	184,442	10,311	72	101,314	20,171	27,961	10,718
29	Total - Summer	1,325,061	1,222,471	102,590	205,762	196,059	9,703	72	98,892	19,737	28,234	10,355
30												
31	**First Block Therms**											
32	Sales Customers - Winter	107,037,212	98,463,834	8,573,378	1,683,697	1,600,411	83,286	1,377	8,832,346	1,241,063	17,780,066	4,610,322
33	Sales Customers - Summer	30,484,363	28,058,462	2,425,901	1,470,616	1,394,657	75,959	1,343	1,139,737	732,240	2,760,786	3,109,000
34												
35	Transportation Customers - Winter	18,101	18,101	0	306	306	0	0	505,042	155,620	5,567,137	1,959,445
36	Transportation Customers- Summer	5,279	5,279	0	265	265	0	0	90,364	98,759	1,123,508	1,234,826
37												
38	Total First Block - Winter	107,055,313	98,481,935	8,573,378	1,684,003	1,600,717	83,286	1,377	9,337,388	1,396,683	23,347,203	6,569,767
39	Total First Block- Summer	30,489,642	28,063,741	2,425,901	1,470,881	1,394,922	75,959	1,343	1,230,101	830,999	3,884,294	4,343,826
40												
41	**Second Block Therms**											
42	Sales Customers - Winter	94,594,234	86,212,819	8,381,415	2,007,498	1,807,170	200,328	0	12,020,297	1,380,765	15,690,330	3,547,453
43	Sales Customers - Summer	15,581,663	13,822,756	1,758,907	1,221,653	1,107,336	114,317	0	1,314,541	1,061,126	2,406,140	2,360,870
44												
45	Transportation Customers - Winter	44,724	44,724	0	708	708	0	0	1,114,564	347,538	7,427,838	2,685,815
46	Transportation Customers- Summer	11,471	11,471	0	629	629	0	0	190,262	196,296	1,411,867	1,727,032
47												
48	Total Second Block - Winter	94,638,958	86,257,543	8,381,415	2,008,206	1,807,878	200,328	0	13,134,861	1,728,303	23,118,168	6,233,268
49	Total Second Block- Summer	15,593,134	13,834,227	1,758,907	1,222,282	1,107,965	114,317	0	1,504,803	1,257,422	3,818,007	4,087,902
50												
51	**Total Therms**											
52	Total Therms - Annual	247,777,047	226,637,446	21,139,601	6,385,372	5,911,482	473,890	2,720	25,207,153	5,213,407	54,167,672	21,234,763
53	Total Therms - Winter	201,694,271	184,739,478	16,954,793	3,692,209	3,408,595	283,614	1,377	22,472,249	3,124,986	46,465,371	12,803,035
54	Total Therms - Summer	46,082,776	41,897,968	4,184,808	2,693,163	2,502,887	190,276	1,343	2,734,904	2,088,421	7,702,301	8,431,728
55	**Peak Day Therms**											
56	Total Peak Therms - Winter											
57	Total Peak Therms - Summer											

Bay State Gas Company
Rate Design

line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
1	**CURRENT BASE RATES**							
2	Monthly Customer Charge	$109.37	$109.37	$298.53	$298.53			
3	Winter Volumetric Rates							
4	First Block Rate	$0.1658	$0.1638	$0.0389	$0.0389			
5	Second Block Rate	$0.1317	$0.1288					
6	Summer Volumetric Rates							
7	First Block Rate	$0.0687	$0.0712	$0.0170	$0.0170			
8	Second Block Rate	$0.0573	$0.0569					
9	Demand Rate							
10	Winter			$1.9787	$1.9787			
11	Summer			$0.8723	$0.8723			
12								
13	First Block Size							
14	Winter	9,000	10,000					
15	Summer	2,200	8,000					
16								
17	**TEST YEAR BILLING DETERMINANTS**							
18	**Number of Bills**							Linked to Revenue File
19	Sales Customers - Annual	3,331	1,100	61	91	0		line 20 + line 21
20	Sales Customers - Winter	1,612	558	32	56	0		
21	Sales Customers - Summer	1,719	542	29	35	0		
22								
23	Transportation - Annual	4,101	1,889	120	708	60		line 24 + line 25
24	Transportation - Winter	2,050	972	60	354	30		
25	Transportation - Summer	2,051	917	60	354	30		
26								
27	Total - Annual	7,432	2,989	181	799	60	3,395,996	line 28 + line 29
28	Total - Winter	3,662	1,530	92	410	30	1,702,146	line 20 + line 24
29	Total - Summer	3,770	1,459	89	389	30	1,693,850	line 21 + line 25
30								
31	**First Block Therms**							
32	Sales Customers - Winter	10,546,755	3,149,792	3,128,697	2,305,520	0		
33	Sales Customers - Summer	1,723,995	2,057,697	1,303,249	849,330	0		
34								
35	Transportation Customers - Winter	14,755,633	7,251,802	4,082,507	26,364,876	68,058,131		
36	Transportation Customers- Summer	2,478,355	5,104,139	953,578	24,632,723	48,156,552		
37								
38	Total First Block - Winter	25,302,388	10,401,594	7,211,204	28,670,396	68,058,131		line 32 + line 35
39	Total First Block- Summer	4,202,350	7,161,836	2,256,827	25,482,053	48,156,552		line 33 + line 36
40								
41	**Second Block Therms**							
42	Sales Customers - Winter	4,052,965	645,280	0	0	0		
43	Sales Customers - Summer	1,159,973	765,604	0	0	0		
44								
45	Transportation Customers - Winter	7,451,026	3,688,750	0	0	0		
46	Transportation Customers- Summer	1,966,704	2,701,776	0	0	0		
47								
48	Total Second Block - Winter	11,503,991	4,334,030	0	0	0		line 42 + line 45
49	Total Second Block- Summer	3,126,677	3,467,380	0	0	0		line 43 + line 46
50								
51	**Total Therms**							
52	Total Therms - Annual	44,135,406	25,364,840	9,468,031	54,152,449	116,214,683	609,323,543	line 53 + line 54
53	Total Therms - Winter	36,806,379	14,735,624	7,211,204	28,670,396	68,058,131	445,735,232	line 38 + line 48
54	Total Therms - Summer	7,329,027	10,629,216	2,256,827	25,482,053	48,156,552	163,588,311	line 39 + line 49
55	**Peak Day Therms**							
56	Total Peak Therms - Winter			342,526	1,388,815			
57	Total Peak Therms - Summer			103,257	1,184,822			

line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
58												
59	**TEST YEAR REVENUE AND AVERAGE RATES**											
60	**Base Revenue Proof**											
61	Customer Revenue											
62	Winter	$9,850,058	$9,171,681	$678,377	$1,437,494	$1,375,937	$61,557	$239	$1,277,570	$254,356	$1,259,363	$482,739
63	Summer	$9,744,321	$9,131,858	$612,462	$1,520,527	$1,462,600	$57,927	$239	$1,247,028	$248,884	$1,271,659	$466,389
64	Volumetric Revenue - First Block											
65	Winter	$41,319,212	$39,392,774	$1,926,438	$720,047	$696,152	$23,895	$0	$3,449,231	$502,387	$4,620,411	$1,122,116
66	Summer	$6,803,908	$6,502,369	$301,539	$555,885	$536,766	$19,119	$0	$404,457	$269,244	$483,983	$434,383
67	Volumetric Revenue - Second Block											
68	Winter	$18,501,308	$17,907,066	$594,242	$727,399	$679,401	$47,999	$0	$3,040,720	$391,979	$3,634,176	$819,675
69	Summer	$2,390,553	$2,267,430	$123,123	$349,214	$328,512	$20,703	$0	$279,141	$236,898	$377,219	$312,725
70	Demand Revenue											
71	Winter											
72	Summer											
73	Total Base Revenue											
74	Annual	$88,609,361	$84,373,178	$4,236,183	$5,310,566	$5,079,367	$231,199	$478	$9,698,147	$1,903,748	$11,646,812	$3,638,026
75	Winter	$69,670,578	$66,471,521	$3,199,057	$2,884,940	$2,751,490	$133,450	$239	$7,767,521	$1,148,722	$9,513,951	$2,424,530
76	Summer	$18,938,782	$17,901,657	$1,037,125	$2,425,626	$2,327,878	$97,749	$239	$1,930,626	$755,026	$2,132,861	$1,213,496
77												
78	**Test Year Revenues Other Than Base**											
79	Direct Gas Adjustment Factor											
80	Winter	$174,306,694	$159,773,693	$14,533,001	$2,914,246	$2,692,032	$222,214	$1,034	$18,024,913	$2,085,373	$27,393,764	$6,204,954
81	Summer	$37,333,509	$34,020,880	$3,312,629	$2,107,029	$1,961,271	$145,758	$1,026	$2,090,032	$1,392,246	$4,386,163	$4,261,106
82	Indirect Gas Adjustment Factor											
83	Winter	$10,641,317	$9,758,192	$883,125	$138,206	$127,791	$10,415	$46	$1,040,877	$119,846	$1,625,902	$322,490
84	Summer	$2,639,584	$2,399,794	$239,790	$155,611	$144,615	$10,996	$82	$137,439	$104,374	$302,266	$322,176
85	Distribution Adjustment Factor											
86	Winter	$2,766,916	$2,540,251	$226,665	$20,072	$18,776	$1,296	$2	$264,069	$37,607	$548,879	$158,064
87	Summer	$718,890	$653,608	$65,282	$33,395	$31,036	$2,359	$6	$55,792	$42,605	$157,127	$172,009
88												
89	**Test Year Average Rates**											
90	Direct Gas Adjustment Factor											
91	Winter		$0.8645	$0.8645		$0.7895	$0.7895	$0.7509	$0.8644	$0.7954	$0.8184	$0.7606
92	Summer		$0.8104	$0.8104		$0.7826	$0.7826	$0.7640	$0.8516	$0.7763	$0.8489	$0.7790
93	Indirect Gas Adjustment Factor											
94	Winter		$0.0528	$0.0528		$0.0374	$0.0374	$0.0334	$0.0499	$0.0457	$0.0486	$0.0395
95	Summer		$0.0573	$0.0573		$0.0578	$0.0578	$0.0611	$0.0560	$0.0582	$0.0585	$0.0589
96	Distribution Adjustment Factor											
97	Winter		$0.0137	$0.0137		$0.0054	$0.0054	$0.0015	$0.0119	$0.0119	$0.0119	$0.0119
98	Summer		$0.0156	$0.0156		$0.0124	$0.0124	$0.0045	$0.0204	$0.0204	$0.0204	$0.0204
99	Deferred Gas Cost Factor											
100	Winter		$0.0467	$0.0467		$0.0467	$0.0467	$0.0467	$0.0467	$0.0467	$0.0467	$0.0467
101	Summer		$0.0467	$0.0467		$0.0467	$0.0467	$0.0467	$0.0467	$0.0467	$0.0467	$0.0467
102												
103	**Imputed Gas Costs for Trans. Cust. (TY)**											
104	Direct Gas Adjustment Factor											
105	Winter	$57,243	$57,243	$0	$848	$848	$0	$0	$1,475,571	$423,690	$11,242,221	$3,750,079
106	Summer	$14,357	$14,357	$0	$741	$741	$0	$0	$252,075	$242,832	$2,270,594	$2,445,568
107	Indirect Gas Adjustment Factor											
108	Winter	$3,316	$3,316	$0	$38	$38	$0	$0	$80,844	$23,000	$631,261	$183,635
109	Summer	$960	$960	$0	$52	$52	$0	$0	$15,715	$17,172	$148,320	$174,454

line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
58								
59	**TEST YEAR REVENUE AND AVERAGE RATES**							
60	**Base Revenue Proof**							
61	Customer Revenue							
62	Winter	$400,513	$167,336	$27,465	$122,397	$1,673,238		line 2 * line 28
63	Summer	$412,325	$159,571	$26,569	$116,128	$1,700,847		line 2 * line 29
64	Volumetric Revenue - First Block							
65	Winter	$4,195,136	$1,703,781	$280,516	$1,115,278	$478,540		line 4 * line 38
66	Summer	$288,701	$509,923	$38,366	$433,195	$54,492		line 7 * line 39
67	Volumetric Revenue - Second Block							
68	Winter	$1,515,076	$558,223					line 5 * line 48
69	Summer	$179,159	$197,294					line 8 * line 49
70	Demand Revenue							
71	Winter			$677,756	$2,748,048	$0		line 10 * line 57
72	Summer			$90,071	$1,033,520	$0		line 11 * line 58
73	Total Base Revenue							
74	Annual	$6,990,909	$3,296,128	$1,140,743	$5,568,567	$3,907,117	$141,710,603	line 75 + line 76
75	Winter	$6,110,724	$2,429,340	$985,737	$3,985,724	$2,151,778	$109,073,784	line 62 + line 65 + line 68 + line 71
76	Summer	$880,185	$866,787	$155,006	$1,582,843	$1,755,339	$32,636,818	line 63 + line 66 + line 69 + line 72
77								
78	**Test Year Revenues Other Than Base**							
79	Direct Gas Adjustment Factor						$307,308,649	
80	Winter	$11,386,539	$2,918,614	$2,283,880	$1,836,620		$249,356,631	
81	Summer	$2,406,876	$2,219,734	$1,097,293	$657,004		$57,952,018	
82	Indirect Gas Adjustment Factor							
83	Winter	$701,197	$149,182	$143,101	$99,216		$14,981,380	
84	Summer	$172,174	$174,198	$77,805	$52,403		$4,138,112	
85	Distribution Adjustment Factor							
86	Winter	$434,212	$180,931	$79,946	$347,115		$4,837,813	
87	Summer	$149,511	$216,837	$46,039	$519,834		$2,112,045	
88								
89	**Test Year Average Rates**							
90	Direct Gas Adjustment Factor							Some classes are combined.
91	Winter	$0.7711	$0.7795	$0.7711	$0.7795			line 80 / (line 32 + line 42)
92	Summer	$0.8369	$0.7833	$0.8369	$0.7833			line 81 / (line 33 + line 43)
93	Indirect Gas Adjustment Factor							
94	Winter	$0.0476	$0.0407	$0.0476	$0.0407			line 83 / (line 32 + line 42)
95	Summer	$0.0827	$0.0686	$0.0827	$0.0686			line 84 / (line 33 + line 43)
96	Distribution Adjustment Factor							
97	Winter	$0.0119	$0.0119	$0.0119	$0.0119			line 86 / line 53
98	Summer	$0.0204	$0.0204	$0.0204	$0.0204			line 87 / line 54
99	Deferred Gas Cost Factor							
100	Winter	$0.0467	$0.0467	$0.0467	$0.0467			INPUT from COS
101	Summer	$0.0467	$0.0467	$0.0467	$0.0467			INPUT from COS
102								
103	**Imputed Gas Costs for Trans. Cust. (TY)**							Calculated using average rates and
104	Direct Gas Adjustment Factor							transportation volumes.
105	Winter	$18,160,054	$9,038,471	$3,338,573	$21,781,184		$69,267,934	(line 91 + line 100) * (line 35 + line 45)
106	Summer	$3,927,415	$6,478,627	$842,530	$20,444,270		$36,919,008	(line 92 + line 101) * (line 36 + line 46)
107	Indirect Gas Adjustment Factor							
108	Winter	$1,057,570	$445,467	$194,425	$1,073,500		$3,693,054	line 94 * (line 35 + line 45)
109	Summer	$367,701	$535,614	$78,881	$1,690,211		$3,029,080	line 95 * (line 36 + line 46)

line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
110												
111	**Summary of TY Rev. w/ Imputed Gas Costs**											
112	Test Year Base Revenue											
113	Annual	$88,609,361	$84,373,178	$4,236,183	$5,310,566	$5,079,367	$231,199	$478	$9,698,147	$1,903,748	$11,646,812	$3,638,026
114	Winter	$69,670,578	$66,471,521	$3,199,057	$2,884,940	$2,751,490	$133,450	$239	$7,767,521	$1,148,722	$9,513,951	$2,424,530
115	Summer	$18,938,782	$17,901,657	$1,037,125	$2,425,626	$2,327,878	$97,749	$239	$1,930,626	$755,026	$2,132,861	$1,213,496
116	Direct Cost of Gas Revenue											
117	Annual	$211,711,803	$193,866,173	$17,845,630	$5,022,864	$4,654,892	$367,972	$2,060	$21,842,591	$4,144,141	$45,292,742	$16,661,707
118	Winter	$174,363,937	$159,830,936	$14,533,001	$2,915,094	$2,692,880	$222,214	$1,034	$19,500,484	$2,509,063	$38,635,985	$9,955,033
119	Summer	$37,347,866	$34,035,237	$3,312,629	$2,107,770	$1,962,012	$145,758	$1,026	$2,342,107	$1,635,078	$6,656,757	$6,706,674
120	Indirect Cost of Gas Revenue											
121	Annual	$13,285,176	$12,162,261	$1,122,915	$293,907	$272,496	$21,411	$128	$1,274,875	$264,392	$2,707,749	$1,002,754
122	Winter	$10,644,633	$9,761,508	$883,125	$138,244	$127,829	$10,415	$46	$1,121,721	$142,846	$2,257,163	$506,125
123	Summer	$2,640,544	$2,400,754	$239,790	$155,663	$144,667	$10,996	$82	$153,154	$121,546	$450,586	$496,630
124	Deferred Gas Costs											
125	Annual	$11,560,802	$10,574,152	$986,650	$297,936	$275,818	$22,118	$127	$1,087,806	$206,071	$1,803,323	$636,044
126	Winter	$9,410,759	$8,619,427	$791,332	$172,279	$159,042	$13,237	$64	$973,257	$122,369	$1,562,166	$380,748
127	Summer	$2,150,043	$1,954,725	$195,318	$125,656	$116,776	$8,881	$63	$114,549	$83,702	$241,156	$255,296
128	LDAC Revenue											
129	Annual	$3,485,806	$3,193,859	$291,947	$53,467	$49,812	$3,655	$8	$319,861	$80,212	$706,006	$330,073
130	Winter	$2,766,916	$2,540,251	$226,665	$20,072	$18,776	$1,296	$2	$264,069	$37,607	$548,879	$158,064
131	Summer	$718,890	$653,608	$65,282	$33,395	$31,036	$2,359	$6	$55,792	$42,605	$157,127	$172,009
132	Total											
133	Annual	$328,652,948	$304,169,623	$24,483,325	$10,978,740	$10,332,385	$646,355	$2,801	$34,223,280	$6,598,563	$62,156,632	$22,268,605
134	Winter	$266,856,824	$247,223,643	$19,633,181	$6,130,629	$5,750,017	$380,612	$1,385	$29,627,052	$3,960,607	$52,518,144	$13,424,500
135	Summer	$61,796,125	$56,945,980	$4,850,144	$4,848,111	$4,582,369	$265,742	$1,416	$4,596,228	$2,637,956	$9,638,487	$8,844,105
136												
137	**COST STUDY INFORMATION**											
138												
139	Target ACS Base Revenue											
140	Annual	$100,492,047			$10,856,303			$345	$11,303,039	$2,347,139	$12,855,832	$4,199,180
141	Winter	$67,185,084			$5,808,404			$243	$7,702,146	$1,390,455	$10,179,177	$2,876,642
142	Summer	$33,306,963			$5,047,899			$101	$3,600,893	$956,684	$2,676,656	$1,322,539
143												
144	Direct Gas Cost for New Rates											
145	Annual	$220,161,443	$201,373,712	$18,787,730	$5,553,949	$5,141,627	$412,321	$2,374	$20,721,910	$3,861,651	$34,343,363	$11,913,936
146	Winter	$179,486,460	$164,393,795	$15,092,665	$3,213,507	$2,966,596	$246,911	$1,198	$18,561,038	$2,243,719	$29,794,722	$6,971,671
147	Summer	$40,674,983	$36,979,917	$3,695,066	$2,340,442	$2,175,031	$165,411	$1,176	$2,160,872	$1,617,932	$4,548,641	$4,942,265
148												
149	Indirect Gas Cost for New Rates											
150	Annual	$12,195,212	$11,164,124	$1,031,088	$230,000	$212,510	$17,490	$90	$1,219,393	$160,200	$1,979,489	$496,754
151	Winter	$11,363,866	$10,408,301	$955,565	$200,503	$185,097	$15,406	$75	$1,175,172	$140,351	$1,886,397	$436,187
152	Summer	$831,346	$755,823	$75,523	$29,497	$27,413	$2,085	$15	$44,222	$19,849	$93,092	$60,566
153												
154	Direct Cost of Gas Rates (New)											
155	Winter	$0.8902	$0.8902	$0.8902	$0.8706	$0.8706	$0.8706	$0.8702	$0.8901	$0.8558	$0.8902	$0.8546
156	Summer	$0.8830	$0.8830	$0.8830	$0.8693	$0.8693	$0.8693	$0.8756	$0.8805	$0.9022	$0.8803	$0.9035
157	Indirect Cost of Gas Rates (New)											
158	Winter	$0.0564	$0.0564	$0.0564	$0.0543	$0.0543	$0.0543	$0.0543	$0.0564	$0.0535	$0.0564	$0.0535
159	Summer	$0.0180	$0.0180	$0.0180	$0.0110	$0.0110	$0.0110	$0.0110	$0.0180	$0.0111	$0.0180	$0.0111
160												
161	Target Customer Charge-MCOS	$32.45			$33.41				$47.73	$51.52	$85.47	$82.21
162	Target Customer Charge-ACS	$23.30			$24.22			$0.61	$34.63	$42.57	$82.80	$89.22
163	Unit Marginal Cost ($ / winter therm)	$0.1156			$0.0652		NA		$0.1396	$0.0683	$0.1255	$0.0643
164	Unit Marginal Cost ($ / summer therm)	$0.0640			$0.0307		NA		$0.0804	$0.0324	$0.0711	$0.0306

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line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
110								
111	**Summary of TY Rev. w/ Imputed Gas Costs**							
112	Test Year Base Revenue							
113	Annual	$6,990,909	$3,296,128	$1,140,743	$5,568,567	$3,907,117		line 114 + line 115
114	Winter	$6,110,724	$2,429,340	$985,737	$3,985,724	$2,151,778		line 75
115	Summer	$880,185	$866,787	$155,006	$1,582,843	$1,755,339		line 76
116	Direct Cost of Gas Revenue							
117	Annual	$35,880,883	$20,655,447	$7,562,276	$44,719,077		$413,495,591	line 118 + line 119
118	Winter	$29,546,593	$11,957,085	$5,622,453	$23,617,804			line 80 + line 105
119	Summer	$6,334,291	$8,698,361	$1,939,823	$21,101,274			line 81 + line 106
120	Indirect Cost of Gas Revenue							
121	Annual	$2,298,642	$1,304,461	$494,212	$2,915,329		$25,841,626	line 122 + line 123
122	Winter	$1,758,767	$594,649	$337,526	$1,172,716			line 83 + line 108
123	Summer	$539,875	$709,812	$156,686	$1,742,614			line 84 + line 109
124	Deferred Gas Costs							$17,071,125
125	Annual	$816,017	$308,900	$206,853	$147,247		$17,071,125	line 126 + line 127
126	Winter	$681,414	$177,128	$146,026	$107,606			line 100 * (line 32 + line 42)
127	Summer	$134,604	$131,772	$60,827	$39,641			line 101 * (line 33 + line 43)
128	LDAC Revenue							
129	Annual	$583,723	$397,768	$125,985	$866,949		$6,949,858	line 130 + line 131
130	Winter	$434,212	$180,931	$79,946	$347,115			line 86
131	Summer	$149,511	$216,837	$46,039	$519,834			line 87
132	Total							
133	Annual	$46,570,175	$25,962,703	$9,530,069	$54,217,169		$601,161,685	line 134 + line 135
134	Winter	$38,531,710	$15,339,133	$7,171,688	$29,230,964			line 114 + line 118 + line 122 + line 126 + line 130
135	Summer	$8,038,465	$10,623,570	$2,358,381	$24,986,206			line 115 + line 119 + line 123 + line 127 + line 131
136								
137	**COST STUDY INFORMATION**							
138								
139	Target ACS Base Revenue							
140	Annual	$8,252,580	$3,549,167	$1,455,970	$5,790,935	$3,921,013	$161,102,537	line 141 + line 142
141	Winter	$6,953,781	$2,626,714	$1,284,399	$4,397,478		$110,404,524	without special contracts
142	Summer	$1,298,798	$922,452	$171,571	$1,393,457		$50,698,013	without special contracts
143								
144	Direct Gas Cost for New Rates							
145	Annual	$15,540,169	$5,792,104	$3,938,465	$2,729,254		$324,558,618	line 146 + line 147
146	Winter	$12,980,232	$3,267,937	$2,781,643	$1,964,403		$261,266,529	
147	Summer	$2,559,938	$2,524,167	$1,156,822	$764,851		$63,292,089	
148								
149	Indirect Gas Cost for New Rates							
150	Annual	$874,164	$235,400	$199,734	$132,355		$17,722,791	line 151 + line 152
151	Winter	$821,964	$204,230	$176,146	$122,960		$16,527,850	
152	Summer	$52,200	$31,170	$23,589	$9,396		$1,194,941	
153								
154	Direct Cost of Gas Rates (New)							
155	Winter	$0.8891	$0.8577	$0.8891	$0.8577			line 146 / (line 32 + line 42)
156	Summer	$0.8876	$0.8955	$0.8876	$0.8955			line 147 / (line 33 + line 43)
157	Indirect Cost of Gas Rates (New)							
158	Winter	$0.0563	$0.0536	$0.0563	$0.0536			line 151 / (line 32 + line 42)
159	Summer	$0.0181	$0.0110	$0.0181	$0.0110			line 152 / (line 33 + line 43)
160								
161	Target Customer Charge-MCOS	$351.39	$355.73	$1,001.16	$906.18			Linked to COS Schedules
162	Target Customer Charge-ACS	$261.13	$307.22	$799.10	$762.87			
163	Unit Marginal Cost ($ / winter therm)	$0.1134	$0.0543	$0.1272	$0.0618			
164	Unit Marginal Cost ($ / summer therm)	$0.0634	$0.0254	$0.0669	$0.0272			

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line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
165	**Imputed Gas Costs for Trans. Cust.**											
166	Direct Gas Adjustment Factor											
167	Winter	$57,243	$57,243	$0	$848	$848	$0	$0	$1,475,571	$423,690	$11,242,221	$3,750,079
168	Summer	$14,357	$14,357	$0	$741	$741	$0	$0	$252,075	$242,832	$2,270,594	$2,445,568
169	Indirect Gas Adjustment Factor											
170	Winter	$3,316	$3,316	$0	$38	$38	$0	$0	$80,844	$23,000	$631,261	$183,635
171	Summer	$960	$960	$0	$52	$52	$0	$0	$15,715	$17,172	$148,320	$174,454
172												
173	**Incremental LDAC Revenue**											
174												
175	Incremental LDAC Rate											
176	Winter	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114
177	Summer	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114	$0.0114
178	Incremental LDAC Revenue											
179	Winter	$2,302,931	$2,109,342	$193,589	$42,157	$38,919	$3,238	$16	$256,587	$35,681	$530,538	$146,184
180	Summer	$526,170	$478,388	$47,782	$30,750	$28,578	$2,173	$15	$31,227	$23,845	$87,944	$96,273
181												
182	**Revenue Other Than Base (New)**											
183												
184	Direct Cost of Gas Revenue											
185	Annual	$220,233,042	$201,445,312	$18,787,730	$5,555,538	$5,143,217	$412,321	$2,374	$22,449,556	$4,528,173	$47,856,178	$18,109,583
186	Winter	$179,543,703	$164,451,039	$15,092,665	$3,214,355	$2,967,444	$246,911	$1,198	$20,036,609	$2,667,409	$41,036,943	$10,721,750
187	Summer	$40,689,339	$36,994,274	$3,695,066	$2,341,183	$2,175,773	$165,411	$1,176	$2,412,948	$1,860,764	$6,819,235	$7,387,834
188	Indirect Cost of Gas Revenue											
189	Annual	$12,199,488	$11,168,400	$1,031,088	$230,090	$212,600	$17,490	$90	$1,315,952	$200,372	$2,759,069	$854,842
190	Winter	$11,367,182	$10,411,617	$955,565	$200,541	$185,135	$15,406	$75	$1,256,016	$163,351	$2,517,658	$619,822
191	Summer	$832,305	$756,783	$75,523	$29,549	$27,464	$2,085	$15	$59,937	$37,021	$241,412	$235,020
192	LDAC Revenue											
193	Annual	$6,314,907	$5,781,589	$533,317	$126,375	$117,309	$9,066	$39	$607,674	$139,738	$1,324,489	$572,530
194	Winter	$5,069,847	$4,649,593	$420,254	$62,229	$57,695	$4,534	$18	$520,656	$73,288	$1,079,417	$304,248
195	Summer	$1,245,060	$1,131,996	$113,064	$64,145	$59,614	$4,532	$21	$87,019	$66,450	$245,071	$268,282
196	Total											
197	Annual	$238,747,437	$218,395,301	$20,352,135	$5,912,003	$5,473,125	$438,878	$2,503	$24,373,183	$4,868,283	$51,939,736	$19,536,955
198	Winter	$195,980,732	$179,512,249	$16,468,483	$3,477,125	$3,210,274	$266,851	$1,291	$21,813,280	$2,904,048	$44,634,018	$11,645,820
199	Summer	$42,766,705	$38,883,053	$3,883,652	$2,434,878	$2,262,851	$172,027	$1,212	$2,559,903	$1,964,235	$7,305,718	$7,891,135
200												
201	**REVENUE ALLOCATION**											
202												
203	Percent ACS Base Revenue											
204	Annual	62.38%			6.74%			0.0002%	7.02%	1.46%	7.98%	2.61%
205	Winter	60.85%			5.26%			0.0002%	6.98%	1.26%	9.22%	2.61%
206	Summer	65.70%			9.96%			0.0002%	7.10%	1.89%	5.28%	2.61%
207	Base Revenue Requirement											
208	Other Fees Increase											
209	Revenue Assigned to Special Contracts											
210												
211	Incremental LDAC	$2,829,101			$72,908			$31	$287,813	$59,526	$618,483	$242,457
212	Remaining Revenue Requirement											
213	Target Allocation of Revenue Requirement	$96,698,449			$10,446,475			$332	$10,876,347	$2,258,534	$12,370,522	$4,040,660
214	Base Revenue Increment											
215	Total Revenue											
216	Test Year Revenue	$328,652,948			$10,978,740			$2,801	$34,223,280	$6,598,563	$62,156,632	$22,268,605
217	Target Revenue	$335,445,886			$16,358,477			$2,834	$35,249,530	$7,126,817	$64,310,257	$23,577,616
218	Increase at Target	$6,792,937			$5,379,738			$33	$1,026,250	$528,254	$2,153,626	$1,309,011
219	Percent Increase at Target	2.07%			49.00%			1.19%	3.00%	8.01%	3.46%	5.88%

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line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
165	**Imputed Gas Costs for Trans. Cust.**						$112,909,076	Hold Constant at Test Year Levels
166	Direct Gas Adjustment Factor						$112,909,076	
167	Winter	$18,160,054	$9,038,471	$3,338,573	$21,781,184		$69,267,934	line 105
168	Summer	$3,927,415	$6,478,627	$842,530	$20,444,270		$36,919,008	line 106
169	Indirect Gas Adjustment Factor							
170	Winter	$1,057,570	$445,467	$194,425	$1,073,500		$3,693,054	line 108
171	Summer	$367,701	$535,614	$78,881	$1,690,211		$3,029,080	line 109
172								
173	**Incremental LDAC Revenue**						$5,630,282	Exhibit BSG/JES-4
174								
175	Incremental LDAC Rate						$0.0114	line 173 / (total therms-special contracts)
176	Winter	$0.0114	$0.0114	$0.0114	$0.0114			Company Total: line 175
177	Summer	$0.0114	$0.0114	$0.0114	$0.0114			
178	Incremental LDAC Revenue						$5,630,282	check
179	Winter	$420,253	$168,250	$82,337	$327,357		$4,312,290	line 53 * line 176
180	Summer	$83,682	$121,364	$25,768	$290,952		$1,317,992	line 54 * line 177
181								
182	**Revenue Other Than Base (New)**							
183								
184	Direct Cost of Gas Revenue							
185	Annual	$37,627,638	$21,309,203	$8,119,568	$44,954,708		$430,745,560	line 186 + line 187
186	Winter	$31,140,285	$12,306,409	$6,120,216	$23,745,587		$330,534,463	line 146 + line 167
187	Summer	$6,487,352	$9,002,794	$1,999,352	$21,209,121		$100,211,097	line 147 + line 168
188	Indirect Cost of Gas Revenue							
189	Annual	$2,299,435	$1,216,482	$473,041	$2,896,065		$24,444,925	line 190 + line 191
190	Winter	$1,879,534	$649,697	$370,571	$1,196,459		$20,220,905	line 151 + line 170
191	Summer	$419,901	$566,785	$102,470	$1,699,606		$4,224,020	line 152 + line 171
192	LDAC Revenue							
193	Annual	$1,087,658	$687,382	$234,090	$1,485,258		$12,580,140	line 194 + line 195
194	Winter	$854,465	$349,181	$162,283	$674,472		$9,150,103	line 130 + line 179
195	Summer	$233,193	$338,201	$71,807	$810,786		$3,430,037	line 131 + line 180
196	Total							
197	Annual	$41,014,730	$23,213,066	$8,826,699	$49,336,031		$467,770,625	line 198 + line 199
198	Winter	$33,874,284	$13,305,287	$6,653,070	$25,616,517		$359,905,471	line 186 + line 190 + line 194
199	Summer	$7,140,446	$9,907,779	$2,173,629	$23,719,514		$107,865,154	line 187 + line 191 + line 195
200								
201	**REVENUE ALLOCATION**							
202								
203	Percent ACS Base Revenue							
204	Annual	5.12%	2.20%	0.90%	3.59%	NA	100.00%	line 140 / (company total - sp contracts)
205	Winter	6.30%	2.38%	1.16%	3.98%	NA	100.00%	line 141 / (company total - sp contracts)
206	Summer	2.56%	1.82%	0.34%	2.75%	NA	100.00%	line 142 / (company total - sp contracts)
207	Base Revenue Requirement						$165,023,551	
208	Other Fees Increase						**$46,525**	Schs. JAF-1-8, 1-10; Input
209	Revenue Assigned to Special Contracts					$4,325,865	$4,325,865	Test year plus allocated increase
210								
211	Incremental LDAC	$503,935	$289,614	$108,105	$618,309	$0	$5,630,282	line 179 + line 180
212	Remaining Revenue Requirement						$155,020,878	line 208 - sum (lines 208, 209, and 211)
213	Target Allocation of Revenue Requirement	$7,941,043	$3,415,185	$1,401,006	$5,572,326		$155,020,878	line 204 * Company Total line 212
214	Base Revenue Increment						$17,217,392	line 213 -(Company Total:line 74-Contracts:line 74)
215	Total Revenue							
216	Test Year Revenue	$46,570,175	$25,962,703	$9,530,069	$54,217,169		$601,161,685	line 133
217	Target Revenue	$48,955,773	$26,628,251	$10,227,705	$54,908,357		$622,791,503	line 197 + line 213
218	Increase at Target	$2,385,598	$665,548	$697,636	$691,188		$21,629,818	line 217 - line 216
219	Percent Increase at Target	5.12%	2.56%	7.32%	1.27%		3.60%	line 218 / line 216

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line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
220	**Revenue Increase Cap of 6%**	**$19,719,177**			**$658,724**			**$168**	**$2,053,397**	**$395,914**	**$3,729,398**	**$1,336,116**
221	Revenue to Re-allocate	NA			$4,721,013			NA	NA	$132,340	NA	NA
222												
223	Total Revenue to Re-allocate											
224	Test Year Revenue for Re-allocation	$328,652,948			NA			$2,801	$34,223,280	NA	$62,156,632	$22,268,605
225	Percent Assignment	57.25%						0.00%	5.96%		10.83%	3.88%
226	First Re-allocation	$2,850,643						$24	$296,843		$539,129	$193,152
227	Increase with First Re-allocation	$9,643,580			$658,724			$58	$1,323,093	$395,914	$2,692,755	$1,502,163
228	Revenue to Re-allocate	none			none			none	none	none	none	$166,046
229	Test Year Revenue for Re-allocation	$328,652,948			NA			NA	$34,223,280	NA	$62,156,632	NA
230	Percent Assignment	59.56%							6.20%		11.26%	
231	Second Re-allocation	$98,900							$10,299		$18,705	
232	Increase with Second Re-allocation	$9,742,481			$658,724			$58	$1,333,392	$395,914	$2,711,459	$1,336,116
233	Revenue to Re-allocate	none			none			none	none	none	none	none
234	Test Year Revenue for Re-allocation	$328,652,948			NA			NA	$34,223,280	NA	$62,156,632	NA
235	Percent Assignment	65.05%							6.77%		12.30%	
236	Third Re-allocation	$6,075							$633		$1,149	
237	Increase with Third Re-allocation	$9,748,556			$658,724			$58	$1,334,024	$395,914	$2,712,608	$1,336,116
238	Revenue to Re-allocate	none			none			none	none	none	none	none
239												
240	Change from Target Allocation	$2,955,618			-$4,721,013			$24	$307,774	-$132,340	$558,983	$27,105
241												
242	**Base Revenue Requirement**	$99,654,067			$5,725,461			$356	$11,184,121	$2,126,194	$12,929,504	$4,067,766
243	Total Revenue Requirement	$338,401,504			$11,637,464			$2,859	$35,557,304	$6,994,477	$64,869,240	$23,604,721
244	Percent Increase	2.97%			6.00%			2.06%	3.90%	6.00%	4.36%	6.00%
245												
246												
247	**RATE DESIGN**											
248												
249	**Proposed Block Sizes**											
250												
251	First Block Size											
252	Winter		**125**	NA		**12**	NA	NA	NA	NA	NA	NA
253	Summer		**30**	NA		**10**	NA	NA	NA	NA	NA	NA
254												
255	Test Year Therms											
256	Annual	247,777,047	226,637,446	21,139,601	6,385,372	5,911,482	473,890	2,720	25,207,153	5,213,407	54,167,672	21,234,763
257	Winter	201,694,271	184,739,478	16,954,793	3,692,209	3,408,595	283,614	1,377	22,472,249	3,124,986	46,465,371	12,803,035
258	Summer	46,082,776	41,897,968	4,184,808	2,693,163	2,502,887	190,276	1,343	2,734,904	2,088,421	7,702,301	8,431,728
259												
260	Percent of Therms in Proposed 1st Block											
261	Winter	67.61%	67.61%	67.61%	45.61%	45.61%	45.61%	100.00%	100.00%	100.00%	100.00%	100.00%
262	Summer	66.16%	66.16%	66.16%	54.62%	54.62%	54.62%	100.00%	100.00%	100.00%	100.00%	100.00%
263												
264	Proposed First Block Therms											
265	Winter	136,365,497	124,902,361	11,463,136	1,684,003	1,554,648	129,355	1,377	22,472,249	3,124,986	46,465,371	12,803,035
266	Summer	30,489,642	28,063,741	2,425,901	1,470,881	1,394,922	75,959	1,343	2,734,904	2,088,421	7,702,301	8,431,728
267												
268	Proposed Second Block Therms											
269	Winter	65,328,774	59,837,117	5,491,657	2,008,206	1,853,947	154,259	0	0	0	0	0
270	Summer	15,593,134	13,834,227	1,758,907	1,222,282	1,107,965	114,317	0	0	0	0	0
271												
272	Base Revenue Requirement	$99,654,067			$5,725,461			$356	$11,184,121	$2,126,194	$12,929,504	$4,067,766
273												

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line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
220	**Revenue Increase Cap of 6%**	**$2,794,210**	**$1,557,762**	**$571,804**	**$3,253,030**			line 216 * 6%
221	Revenue to Re-allocate	NA	NA	$125,832	NA		$4,979,185	line 218 - line 220
222								
223	Total Revenue to Re-allocate						$4,979,185	line 221 - line 222
224	Test Year Revenue for Re-allocation	$46,570,175	$25,962,703	NA	$54,217,169		$574,054,313	line 216
225	Percent Assignment	8.11%	4.52%		9.44%		100.00%	line 224 / Company Total line 224
226	First Re-allocation	$403,937	$225,193		$470,264		$4,979,185	line 225 * Company Total line 223
227	Increase with First Re-allocation	$2,789,535	$890,741	$571,804	$1,161,452		$21,629,818	line 220 or line 226 + line 218
228	Revenue to Re-allocate	none	none	none	none		$166,046	line 227 - line 220
229	Test Year Revenue for Re-allocation	$46,570,175	$25,962,703	NA	$54,217,169		$551,782,907	line 224
230	Percent Assignment	8.44%	4.71%		9.83%		100.00%	line 229 / Company Total line 229
231	Second Re-allocation	$14,014	$7,813		$16,315		$166,046	line 230 * Company Total line 228
232	Increase with Second Re-allocation	$2,803,549	$898,554	$571,804	$1,177,768		$21,629,818	line 227 + line 231 or line 220
233	Revenue to Re-allocate	$9,339	none	none	none		$9,339	
234	Test Year Revenue for Re-allocation	NA	$25,962,703	NA	$54,217,169		$505,212,732	
235	Percent Assignment		5.14%		10.73%		100.00%	
236	Third Re-allocation		$480		$1,002		$9,339	
237	Increase with Third Re-allocation	$2,794,210	$899,034	$571,804	$1,178,770		$21,629,818	
238	Revenue to Re-allocate	none	none	none	none			
239								
240	Change from Target Allocation	$408,612	$233,486	-$125,832	$487,582		$0	line 237 - line 218
241								
242	**Base Revenue Requirement**	$8,349,655	$3,648,671	$1,275,174	$6,059,908		$155,020,878	line 213 + line 240
243	Total Revenue Requirement	$49,364,385	$26,861,737	$10,101,873	$55,395,939		$622,791,503	line 217 + line 240
244	Percent Increase	6.00%	3.46%	6.00%	2.17%			(line 243 - line 216) / line 216
245								
246								
247	**RATE DESIGN**							
248								
249	**Proposed Block Sizes**							
250								
251	First Block Size							
252	Winter	NA	NA	NA	NA			See Ex. BSG/JAF-2; Schedule JAF-2-3
253	Summer	NA	NA	NA	NA			See Ex. BSG/JAF-2; Schedule JAF-2-3
254								
255	Test Year Therms							
256	Annual	44,135,406	25,364,840	9,468,031	54,152,449		493,108,860	line 257 + line 258
257	Winter	36,806,379	14,735,624	7,211,204	28,670,396			line 53
258	Summer	7,329,027	10,629,216	2,256,827	25,482,053			line 54
259								
260	Percent of Therms in Proposed 1st Block							See Ex. BSG/JAF-2; Schedule JAF-2-3
261	Winter	100.00%	100.00%	100.00%	100.00%			
262	Summer	100.00%	100.00%	100.00%	100.00%			
263								
264	Proposed First Block Therms							
265	Winter	36,806,379	14,735,624	7,211,204	28,670,396			line 257 * line 261
266	Summer	7,329,027	10,629,216	2,256,827	25,482,053			line 258 * line 262
267								
268	Proposed Second Block Therms							
269	Winter	0	0	0	0			line 257 - line 265
270	Summer	0	0	0	0			line 258 - line 266
271								
272	Base Revenue Requirement	$8,349,655	$3,648,671	$1,275,174	$6,059,908		$155,020,878	line 242
273								

Bay State Gas Company
Rate Design

line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
274	Proposed Customer Charge	$12.10			$11.60			$2.47	$19.00	$19.00	$65.00	$65.00
275	Customer Charge Revenue	$32,264,577			$4,645,974			$356	$3,803,914	$758,252	$3,652,675	$1,369,745
276	Winter Customer Charge Revenue	$16,231,339			$2,259,135				$1,924,966	$383,249	$1,817,465	$696,670
277	Remaining Revenue	$67,389,490			$1,079,487			$0	$7,380,207	$1,367,942	$9,276,829	$2,698,021
278												
279	Volumetric Revenue Requirement	$67,389,490			$1,079,487			$0	$7,380,207	$1,367,942	$9,276,829	$2,698,021
280	Demand-Based Revenue Requirement	$0			$0			$0	$0	$0	$0	$0
281	Average Volumetric Rate	$0.2720			$0.1691			$0.0000	$0.2928	$0.2624	$0.1713	$0.1271
282	ACS Seasonal Split - Volumetric Req.											
283	Winter Percentage	74.68%			57.15%			70.64%	77.04%	63.39%	90.86%	77.05%
284	Summer Percentage	25.32%			42.85%			29.36%	22.96%	36.61%	9.14%	22.95%
285	Average Volumetric Rate - Winter	$0.2495			$0.1671			$0.0000	$0.2530	$0.2775	$0.1814	$0.1624
286	Average Volumetric Rate - Summer	$0.3702			$0.1717			$0.0000	$0.6196	$0.2398	$0.1101	$0.0734
287	Volumetric Revenue Requirement - Winter	$50,327,923			$616,939			$0	$5,685,568	$867,147	$8,428,648	$2,078,722
288	Volumetric Revenue Requirement - Summer	$17,061,567			$462,549			$0	$1,694,639	$500,795	$848,182	$619,299
289												
290	Unit Marginal Cost ($ / winter therm)	$0.1156			$0.0652			NA	$0.1396	$0.0683	$0.1255	$0.0643
291	Unit Marginal Cost ($ / summer therm)	$0.0640			$0.0307			NA	$0.0804	$0.0324	$0.0711	$0.0306
292	Ratio of Second Block to MC											
293	Winter	1.80			2.30			NA	flat	flat	flat	flat
294	Summer	NA			NA			NA	flat	flat	flat	flat
295												
296	Second Block Rate											
297	Winter	$0.2081			$0.1499			$0.0000	$0.2928	$0.2624	$0.1814	$0.1624
298	Summer	$0.2081			$0.1499			$0.0000	$0.2928	$0.2624	$0.1101	$0.0734
299												
300	Revenue Generated											
301	Annual	$51,570,254			$957,240			$0	$7,380,207	$1,367,942	$9,276,829	$2,698,021
302	Winter	$41,978,968			$553,504			$0	$6,579,476	$819,963	$8,428,648	$2,078,722
303	Summer	$9,591,286			$403,736			$0	$800,731	$547,979	$848,182	$619,299
304												
305	Remaining Revenue											
306	Annual	$15,819,236			$122,248			$0	$0	$0	$0	$0
307	Winter	$8,348,955			$63,435			$0	$0	$0	$0	$0
308	Summer	$7,470,281			$58,813			$0	$0	$0	$0	$0
309												
310	First Block Surcharge											
311	Winter	$0.0948			$0.0387			NA	NA	NA	NA	NA
312	Summer	$0.0948			$0.0387			NA	NA	NA	NA	NA
313												
314	Demand Charge Revenue Requirement											
315	Winter	NA			NA			NA	NA	NA	NA	NA
316	Summer	NA			NA			NA	NA	NA	NA	NA
317												
318	Demand Charge Rates											
319	Winter	NA			NA			NA	NA	NA	NA	NA
320	Summer	NA			NA			NA	NA	NA	NA	NA
321												

Bay State Gas Company
Rate Design

line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
274	Proposed Customer Charge	$213.00	$213.00	$781.00	$781.00			See Ex. BSG/JAF-2; Schedule JAF-2-2
275	Customer Charge Revenue	$1,583,016	$636,657	$141,361	$624,019		$49,480,546	line 274 * line 27
276	Winter Customer Charge Revenue	$780,006	$325,890	$71,852	$320,210			line 274 * line 28
277	Remaining Revenue	$6,766,639	$3,012,014	$1,133,813	$5,435,889		$105,540,332	line 272 - line 275
278								
279	Volumetric Revenue Requirement	$6,766,639	$3,012,014	$340,144	$1,630,767			For 43 & 53, 30% of the remaining revenues
280	Demand-Based Revenue Requirement	$0	$0	$793,669	$3,805,122			are assigned to the volumetric charges.
281	Average Volumetric Rate	$0.1533	$0.1187	$0.0359	$0.0301			line 279 / line 256
282	ACS Seasonal Split - Volumetric Req.							
283	Winter Percentage	92.57%	79.00%	92.24%	78.91%			(line 141 - line 276) / (line 140 - line 275)
284	Summer Percentage	7.43%	21.00%	7.76%	21.09%			100% - line 283
285	Average Volumetric Rate - Winter	$0.1702	$0.1615	$0.0435	$0.0449			line 287 / line 257
286	Average Volumetric Rate - Summer	$0.0686	$0.0595	$0.0117	$0.0135			line 288 / line 258
287	Volumetric Revenue Requirement - Winter	$6,263,635	$2,379,430	$313,736	$1,286,855			line 283 * line 279
288	Volumetric Revenue Requirement - Summer	$503,004	$632,583	$26,408	$343,912			line 279 - line 287
289								
290	Unit Marginal Cost ($ / winter therm)	$0.1134	$0.0543	$0.1272	$0.0618			line 163
291	Unit Marginal Cost ($ / summer therm)	$0.0634	$0.0254	$0.0669	$0.0272			line 164
292	Ratio of Second Block to MC							
293	Winter	flat	flat	flat	flat			Inputs
294	Summer	flat	flat	flat	flat			
295								
296	Second Block Rate							
297	Winter	$0.1702	$0.1615	$0.0446	$0.0446			line 293 * line 290 or line 287 / line 53
298	Summer	$0.0686	$0.0595	$0.0134	$0.0134			line 294 * line 291 or line 288 / line 54
299								
300	Revenue Generated							
301	Annual	$6,766,639	$3,012,014	$351,803	$1,619,107			line 302 + line 303
302	Winter	$6,263,635	$2,379,430	$321,674	$1,278,917			line 257 * line 297
303	Summer	$503,004	$632,583	$30,129	$340,190			line 258 * line 298
304								
305	Remaining Revenue							
306	Annual	$0	$0	$0	$0			line 307 + line 308
307	Winter	$0	$0	$0	$0			line 287 - line 302
308	Summer	$0	$0	$0	$0			line 288 - line 303
309								
310	First Block Surcharge							
311	Winter	NA	NA	NA	NA			line 307 / line 265
312	Summer	NA	NA	NA	NA			line 308 / line 266
313								
314	Demand Charge Revenue Requirement							
315	Winter	NA	NA	$732,052	$3,002,662			line 280 * line 283
316	Summer	NA	NA	$61,618	$802,460			line 280 - line 315
317								
318	Demand Charge Rates							
319	Winter	NA	NA	$2.1571	$2.1571			line 315 / line 56
320	Summer	NA	NA	$0.6708	$0.6708			line 316 / line 57
321								

Bay State Gas Company
Rate Design

line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
322	**Base Rates w/o Low Inc. Discount**											
323												
324	Monthly Customer Charge	$12.10			$11.60			$2.47	$19.00	$19.00	$65.00	$65.00
325	Winter Volumetric Rates											
326	First Block Rate	$0.3029			$0.1887			$0.0	$0.2928	$0.2624	$0.1814	$0.1624
327	Second Block Rate	$0.2081			$0.1499			$0.0	NA	NA	NA	NA
328	Summer Volumetric Rates											
329	First Block Rate	$0.3029			$0.1887			$0.0	$0.2928	$0.2624	$0.1101	$0.0734
330	Second Block Rate	$0.2081			$0.1499			$0.0	NA	NA	NA	NA
331	Demand Rate											
332	Winter	NA			NA			NA	NA	NA	NA	NA
333	Summer	NA			NA			NA	NA	NA	NA	NA
334												
335	**Revenue Generated**											
336	Monthly Customer Charge	$32,264,577			$4,645,974			$356	$3,803,914	$758,252	$3,652,675	$1,369,745
337	Winter Volumetric Rates											
338	First Block Rate	$41,310,548			$317,704			NA	$6,579,476	$819,963	$8,428,648	$2,078,722
339	Second Block Rate	$13,596,988			$301,053			NA	NA	NA	NA	NA
340	Summer Volumetric Rates											
341	First Block Rate	$9,236,529			$277,497			NA	$800,731	$547,979	$848,182	$619,299
342	Second Block Rate	$3,245,425			$183,234			NA	NA	NA	NA	NA
343	Demand Rate											
344	Winter	NA			NA			NA	NA	NA	NA	NA
345	Summer	NA			NA			NA	NA	NA	NA	NA
346	TOTAL PROPOSED BASE REVENUE	$99,654,067			$5,725,461			$356	$11,184,121	$2,126,194	$12,929,504	$4,067,766
347	check	$0			$0			$0	$0	$0	$0	$0
348	**Class Bill Impacts**											
349	Total Test Year Revenue	$328,652,948			$10,978,740			$2,801	$34,223,280	$6,598,563	$62,156,632	$22,268,605
350	Total Proposed Revenue	$338,401,504			$11,637,464			$2,859	$35,557,304	$6,994,477	$64,869,240	$23,604,721
351	check											
352	Percent Change	2.97%			6.00%			2.06%	3.90%	6.00%	4.36%	6.00%
353												
354												
355	**Allocation of Low-Income Discount**											
356	Distribution Rate Base	$228,590,466			$17,817,354			$948	$25,270,507	$4,722,501	$36,540,684	$11,146,787
357	20% Burner-tip Discount Amount (1)			$5,737,005			$150,007					
358	Allocation Percentages	59.18%			4.61%			0.0002%	6.54%	1.22%	9.46%	2.89%
359	Amount Allocated (1)	$3,484,004			$271,559			$14	$385,154	$71,977	$556,926	$169,891
360												
361	Volumetric Surcharge (1)	$0.0141			$0.0425			NA	$0.0153	$0.0138	$0.0103	$0.0080
362												
363	Revised Discount Amount (2)			$5,796,454			$154,038					
364	Amount Allocated (2)	$3,521,572			$274,487			$15	$389,307	$72,753	$562,931	$171,723
365												
366	Volumetric Surcharge (2)	$0.0142			$0.0430			NA	$0.0154	$0.0140	$0.0104	$0.0081
367												
368	Revised Discount Amount (3)			$5,797,095			$154,082					
369	Amount Allocated (3)	$3,521,977			$274,518			$15	$389,352	$72,761	$562,996	$171,743
370												
371	Volumetric Surcharge (3)	$0.0142			$0.0430			NA	$0.0154	$0.0140	$0.0104	$0.0081
372												
373	Proposed Base Revenue		$94,542,670	$2,836,272		$5,668,447	$177,451	$371	$11,573,473	$2,198,955	$13,492,500	$4,239,508
374	Revised Total Revenue		$312,937,971	$23,188,408		$11,141,572	$616,328	$2,873	$35,946,656	$7,067,238	$65,432,236	$23,776,464
375	Total Test Year Revenue		$304,169,623	$24,483,325		$10,332,385	$646,355	$2,801	$34,223,280	$6,598,563	$62,156,632	$22,268,605
376	Revised Percent Change		2.88%	-5.29%		7.83%	-4.65%	2.58%	5.04%	7.10%	5.27%	6.77%

Bay State Gas Company
Rate Design

line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
322	**Base Rates w/o Low Inc. Discount**							
323								
324	Monthly Customer Charge	$213.00	$213.00	$781.00	$781.00			line 274
325	Winter Volumetric Rates							
326	First Block Rate	$0.1702	$0.1615	$0.0446	$0.0446			line 311 + line 327 or line 297
327	Second Block Rate	NA	NA	NA	NA			line 297
328	Summer Volumetric Rates							
329	First Block Rate	$0.0686	$0.0595	$0.0134	$0.0134			line 312 + line 330 or line 298
330	Second Block Rate	NA	NA	NA	NA			line 298
331	Demand Rate							
332	Winter	NA	NA	$2.1571	$2.1571			line 319
333	Summer	NA	NA	$0.6708	$0.6708			line 320
334								
335	**Revenue Generated**							
336	Monthly Customer Charge	$1,583,016	$636,657	$141,361	$624,019			line 324* line 27
337	Winter Volumetric Rates							
338	First Block Rate	$6,263,635	$2,379,430	$321,674	$1,278,917			line 326 * line 265
339	Second Block Rate	NA	NA	NA	NA			line 327 * line 269
340	Summer Volumetric Rates							
341	First Block Rate	$503,004	$632,583	$30,129	$340,190			line 329 * line 266
342	Second Block Rate	NA	NA	NA	NA			line 330 * line 270
343	Demand Rate							
344	Winter	NA	NA	$738,870	$2,995,843			line 332 * line 56
345	Summer	NA	NA	$69,268	$794,810		$0	line 333 * line 57
346	TOTAL PROPOSED BASE REVENUE	$8,349,655	$3,648,671	$1,301,302	$6,033,780		$155,020,878	sum (lines 336 through 345)
347	check	$0	$0	$26,128	-$26,128			
348	**Class Bill Impacts**							
349	Total Test Year Revenue	$46,570,175	$25,962,703	$9,530,069	$54,217,169		$601,161,685	line 133
350	Total Proposed Revenue	$49,364,385	$26,861,737	$10,128,001	$55,369,811		$622,791,503	line 346 + line 197
351	check							
352	Percent Change	6.00%	3.46%	6.27%	2.13%			(line 350 - line 349) / line 349
353								
354								
355	**Allocation of Low-Income Discount**							
356	Distribution Rate Base	$26,258,806	$11,106,815	$4,945,453	$19,854,998		$386,255,320	COS Input
357	20% Burner-tip Discount Amount (1)						$5,887,012	Schedule JAF-2-5; line 45
358	Allocation Percentages	6.80%	2.88%	1.28%	5.14%		100.00%	line 356 / Company Total line 356
359	Amount Allocated (1)	$400,217	$169,282	$75,375	$302,615		$5,887,012	line 358 * Company Total line 357
360								
361	Volumetric Surcharge (1)	$0.0091	$0.0067	$0.0059	$0.0059			line 359 / line 52
362								
363	Revised Discount Amount (2)						$5,950,492	Schedule JAF-2-5; line 69
364	Amount Allocated (2)	$404,532	$171,107	$76,188	$305,878		$5,950,492	line 358 * Company Total line 363
365								
366	Volumetric Surcharge (2)	$0.0092	$0.0067	$0.0060	$0.0060			line 364 / line 52
367								
368	Revised Discount Amount (3)						$5,951,177	Schedule JAF-2-5; line 95
369	Amount Allocated (3)	$404,579	$171,127	$76,196	$305,913			line 358 * Company Total line 368
370								
371	Volumetric Surcharge (3)	$0.0092	$0.0067	$0.0060	$0.0060			line 369 / line 52
372								
373	Proposed Base Revenue	$8,754,234	$3,819,797	$1,377,499	$6,339,693		**$155,020,871**	JAF-2-5; line 121 or line 346 + line 369
374	Revised Total Revenue	$49,768,964	$27,032,864	$10,204,198	$55,675,724		$622,791,496	JAF-2-5; line 122 or line 350 + line 369
375	Total Test Year Revenue	$46,570,175	$25,962,703	$9,530,069	$54,217,169		$601,161,685	line 349
376	Revised Percent Change	6.87%	4.12%	7.07%	2.69%			(line 374 - line 375) / line 375

Bay State Gas Company
Rate Design

line	Description	Residential Heating Total	Residential Heating R&T-3	Residential Heating (4) Low-Income	Residential Non-Heating Total	Residential Non-Heating R&T-1	Residential Non-Heat (2) Low-Income	Outdoor Lighting	C&I (40) Low Annual High Winter	C&I (50) Low Annual Low Winter	C&I (41) Med. Annual High Winter	C&I (51) Med. Annual Low Winter
377												
378	**Proposed Rates w/ Low Income Discount**											
379												
380	Monthly Customer Charge	NA	$12.10	$6.25	NA	$11.60	$6.25	$2.57	$19.00	$19.00	$65.00	$65.00
381	Winter Volumetric Rates											
382	First Block Rate	NA	$0.3172	$0.0702	NA	$0.2317	$0.1105	$0.0	$0.3082	$0.2763	$0.1918	$0.1704
383	Second Block Rate	NA	$0.2223		NA	$0.1929		$0.0				
384	Summer Volumetric Rates											
385	First Block Rate	NA	$0.3172	$0.0702	NA	$0.2317	$0.1105	$0.0	$0.3082	$0.2763	$0.1205	$0.0815
386	Second Block Rate	NA	$0.2223		NA	$0.1929		$0.0				
387	Demand Rate											
388	Winter	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
389	Summer	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
390												
391	**Revenue Proof**											
392												
393	Monthly Customer Charge	NA	$29,648,303	$1,351,381	NA	$4,413,812	$125,088	$371	$3,803,914	$758,252	$3,652,675	$1,369,745
394	Winter Volumetric Rates											
395	First Block Rate	NA	$39,613,306	$1,190,941	NA	$360,137	$31,338	$0	$6,926,584	$863,577	$8,911,589	$2,182,270
396	Second Block Rate	NA	$13,304,543		NA	$357,632		$0	NA	NA	NA	NA
397	Summer Volumetric Rates											
398	First Block Rate	NA	$8,900,533	$293,950	NA	$323,136	$21,025	$0	$842,975	$577,126	$928,236	$687,493
399	Second Block Rate	NA	$3,075,985		NA	$213,730		$0	NA	NA	NA	NA
400	Demand Rate											
401	Winter	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
402	Summer	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
403	TOTAL BASE REVENUE		$94,542,670	$2,836,272		$5,668,447	$177,451	$371	$11,573,473	$2,198,955	$13,492,500	$4,239,508
404												
405	**Class Bill Impacts**											
406												
407	Total Test Year Revenue	NA	$304,169,623	$24,483,325	NA	$10,332,385	$646,355	$2,801	$34,223,280	$6,598,563	$62,156,632	$22,268,605
408	Total Proposed Revenue	NA	$312,937,971	$23,188,408	NA	$11,141,572	$616,328	$2,873	$35,946,656	$7,067,238	$65,432,236	$23,776,464
409												
410	Percent Change	NA	2.88%	-5.29%	NA	7.83%	-4.65%	2.58%	5.04%	7.10%	5.27%	6.77%

Bay State Gas Company
Rate Design

line	Description	C&I (42) High Annual High Winter	C&I (52) High Annual Low Winter	C&I (43) Ex. High Ann. High Winter	C&I (53) Ex. High Ann. Low Winter	Special Contract	Company Total	Notes
377								
378	**Proposed Rates w/ Low Income Discount**							
379								
380	Monthly Customer Charge	$213.00	$213.00	$781.00	$781.00			line 324
381	Winter Volumetric Rates							
382	First Block Rate	$0.1793	$0.1682	$0.0506	$0.0506			line 326 + line 371
383	Second Block Rate							line 327 + line 371
384	Summer Volumetric Rates							
385	First Block Rate	$0.0778	$0.0663	$0.0194	$0.0194			line 329 + line 371
386	Second Block Rate							line 330 + line 371
387	Demand Rate							
388	Winter	NA	NA	$2.1571	$2.1571			line 332
389	Summer	NA	NA	$0.6708	$0.6708			line 333
390								
391	**Revenue Proof**							
392								
393	Monthly Customer Charge	$1,583,016	$636,657	$141,361	$624,019			line 27 * line 380
394	Winter Volumetric Rates							
395	First Block Rate	$6,601,030	$2,478,846	$364,985	$1,451,114			line 265 * line 382 or line 53 * line 382
396	Second Block Rate	NA	NA	NA	NA			line 269 * line 383
397	Summer Volumetric Rates							
398	First Block Rate	$570,188	$704,294	$43,684	$493,237			line 266 * line 385 or line 54 * line 385
399	Second Block Rate	NA	NA	NA	NA			line 270 * line 386
400	Demand Rate							
401	Winter	NA	NA	$738,870	$2,995,843			line 56 * line 388
402	Summer	NA	NA	$69,268	$794,810			line 57 * line 389
403	TOTAL BASE REVENUE	$8,754,234	$3,819,797	$1,358,168	$6,359,024		**$155,020,871**	Sum lines 393 through 402
404								
405	**Class Bill Impacts**							
406								
407	Total Test Year Revenue	$46,570,175	$25,962,703	$9,530,069	$54,217,169		$601,161,685	line 375
408	Total Proposed Revenue	$49,768,964	$27,032,864	$10,184,867	$55,695,055		$622,791,496	line 197 + line 403
409								
410	Percent Change	6.87%	4.12%	6.87%	2.73%		**3.60%**	(line 408 - line 407) / line 407

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
NINTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Joseph A. Ferro, Manager Regulatory Policy

AG-9-4 Refer to Exhibit BSG/JAF-1, p. 3-177. Please provide a monthly comparison of SSI data and the Meteorlogix for the 20 year period for which the Company has the data. Include copies (paper and working electronic spreadsheet models) of the original data and any calculations performed on the data supplied by the vendors.

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Response: SSI provides hourly temperatures and wind speeds. This data is so voluminous that all calculations are performed on the Company mainframe computer. There are no spreadsheet models. The calculations performed are described in the testimony of Joseph A. Ferro on page 29, lines 1 - 9.

Meteorlogix provides daily EDD. It does not provide the base data from which EDD are calculated. The Company performs no calculations on this data.

The Company switched weather vendors in 2001 and no longer maintains the system that retrieved weather data from Meteorlogix to calculate weather-normalized volume. Attachment AG-9-4(a) – Brockton; AG-9-4(b) – Lawrence and AG-9-4(c) - Springfield shows a comparison of SSI and Meteorlogix data before the switch. This schedule shows that for the 16-years of historical comparisons (1985 – 2000), for the Brockton and Lawrence divisions, SSI data/results showed lower values of EDD and that the deviation between the most recent year (2000) and the 16-year average was generally either slightly more colder than average or less warmer than average. For the Springfield division, SSI and Meteorlogix were quite similar.

The fact that Meteorlogix did not provide the base data combined with the opportunity to obtain the base data at no incremental cost from SSI were the key reasons for the switch. Having the base data allows the Company the flexibility to test various weather measurements in an effort to improve its analysis of seasonal and peak day volume.

Bay State Gas Effective Heating Degree Days
Brockton Division
SSI v Metorlogix EDD

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1985	-4%	-4%	-4%	-7%	-14%	-34%			-43%	-19%	-8%	-5%
1986	-3%	-3%	-4%	0%	-3%	-36%			-33%	-16%	-7%	-5%
1987	0%	0%	-2%	-4%	-15%	-45%			-28%	-6%	-3%	-2%
1988	-1%	-2%	-5%	-7%	-19%	-45%			-46%	-10%	-7%	-3%
1989	-4%	-4%	-5%	-9%	-29%	-41%			-26%	-25%	-10%	-4%
1990	-3%	-3%	-6%	-9%	-19%	-57%			-36%	-18%	-7%	-4%
1991	-3%	-4%	-6%	-14%	-32%	-56%			-26%	-17%	-6%	-3%
1992	-3%	-3%	-5%	-8%	-19%	-65%			-26%	-3%	1%	1%
1993	0%	-3%	-4%	-10%	-37%	-54%			-34%	-20%	-10%	-6%
1994	-4%	-5%	-7%	-18%	-29%	-76%			-51%	-24%	-14%	-7%
1995	-7%	-7%	-9%	-14%	-30%	-77%			-40%	-26%	-7%	-4%
1996	-4%	-3%	-3%	2%	-2%	-49%			-21%	-14%	-6%	-5%
1997	-3%	-4%	-1%	-2%	-5%	-7%			-29%	-13%	-6%	-3%
1998	-3%	-1%	-3%	-3%	2%	-4%			-43%	-9%	-6%	-4%
1999	-3%	-3%	-2%	-1%	-4%	-44%			-40%	-12%	-4%	-4%
2000	-2%	-4%	0%	5%	12%	-15%			-14%	-4%	-2%	1%
Average	-3%	-3%	-4%	-6%	-15%	-41%			-33%	-14%	-6%	-4%

Bay State Gas Effective Heating Degree Days

Brockton Division SSI Calculated BPT= 65

Division	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BROC	1985	1436	1012	859	510	234	92	2	16	83	350	650	1157
BROC	1986	1190	1123	859	557	284	82	26	26	123	404	774	1012
BROC	1987	1294	1165	901	587	249	40	2	33	111	487	766	1059
BROC	1988	1337	1096	896	607	241	70	7	13	93	549	650	1142
BROC	1989	1095	1096	948	610	188	46	3	16	128	331	726	1496
BROC	1990	1016	983	847	556	303	31	6	8	103	284	634	888
BROC	1991	1222	914	814	430	123	38	0	3	152	314	662	1023
BROC	1992	1172	1068	972	611	274	28	15	10	134	510	793	1123
BROC	1993	1211	1240	1009	501	141	35	0	0	115	412	660	1048
BROC	1994	1470	1185	885	410	245	11	0	10	83	335	550	916
BROC	1995	1003	1102	814	544	215	13	0	0	111	240	777	1197
BROC	1996	1253	1117	998	588	308	23	3	6	110	410	823	909
BROC	1997	1222	876	983	606	333	93	4	3	99	429	793	1037
BROC	1998	1046	904	828	516	219	77	0	3	53	381	682	891
BROC	1999	1186	933	905	528	226	31	3	6	55	406	593	948
BROC	2000	1309	989	764	603	278	81	7	4	132	409	713	1224
	16-yr Avg	1216	1050	893	548	241	49	5	10	105	391	703	1067
	2000 vs Avg	93	-61	-129	55	37	32	2	-6	27	18	10	157

BSG Co Divisional Effective Degree Days

Brockton Division Meterorlogix Provided

Division	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BROC	1985	1493	1056	898	551	272	139	18	47	145	434	703	1214
BROC	1986	1227	1162	894	555	292	128	42	63	183	482	828	1061
BROC	1987	1298	1166	920	611	292	73	21	66	155	519	788	1079
BROC	1988	1349	1123	945	650	298	128	17	40	172	609	698	1182
BROC	1989	1141	1136	999	670	265	78	20	45	174	441	809	1554
BROC	1990	1043	1013	897	614	373	72	21	24	161	345	684	928
BROC	1991	1256	955	867	500	180	87	17	17	205	379	708	1056
BROC	1992	1203	1106	1023	666	340	80	44	42	181	526	782	1115
BROC	1993	1211	1277	1050	557	225	76	17	19	175	516	736	1116
BROC	1994	1534	1246	956	503	345	45	6	49	170	438	636	984
BROC	1995	1075	1180	893	633	306	57	6	36	186	324	833	1253
BROC	1996	1301	1153	1031	579	314	45	6	16	139	478	879	956
BROC	1997	1262	911	996	621	349	100	19	25	139	494	840	1068
BROC	1998	1075	915	854	530	214	80	5	15	93	419	726	932
BROC	1999	1227	961	921	531	235	55	11	29	92	461	615	990
BROC	2000	1337	1026	762	573	248	95	28	20	154	428	724	1217

Bay State Gas Effective Heating Degree Days
Lawrence Division
SSI v Metorlogix EDD

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1985	-3%	-5%	-4%	-6%	-11%	-30%			-35%	-15%	-7%	-4%
1986	-3%	-3%	-3%	-1%	-2%	-31%			-25%	-14%	-6%	-5%
1987	0%	0%	-2%	-3%	-15%	-34%			-25%	-6%	-1%	3%
1988	-1%	-3%	-5%	-7%	-17%	-40%			-39%	-9%	-7%	-3%
1989	-4%	-3%	-5%	-9%	-26%	-31%			-31%	-28%	-11%	-4%
1990	-3%	-3%	-5%	-9%	-18%	-36%			-31%	-15%	-6%	-4%
1991	-2%	-4%	-5%	-13%	-26%	-50%			-21%	-15%	-5%	-3%
1992	-3%	-3%	-5%	-8%	-17%	-57%			-20%	-2%	1%	1%
1993	0%	-3%	-4%	-10%	-27%	-45%			-29%	-18%	-9%	-6%
1994	-4%	-5%	-8%	-17%	-26%	-63%			-42%	-22%	-12%	-7%
1995	-6%	-6%	-8%	-13%	-26%	-61%			-33%	-23%	-6%	-5%
1996	-4%	-3%	-4%	1%	-1%	-47%			-22%	-14%	-7%	-5%
1997	-3%	-4%	-2%	-3%	-6%	-8%			-26%	-13%	-5%	-3%
1998	-3%	-1%	-2%	-2%	2%	3%			-37%	-9%	-5%	-5%
1999	-4%	-3%	-2%	-1%	-3%	-33%			-33%	-11%	-3%	-3%
2000	-2%	-3%	-2%	0%	0%	-13%			-20%	-9%	-3%	-2%
Average	-3%	-3%	-4%	-6%	-14%	-34%			-29%	-14%	-6%	-3%

Bay State Gas Effective Heating Degree Days

Lawrence Division SSI Calculated BPT= 65

Division	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LAWR	1985	1456	1031	910	578	275	111	4	31	117	408	704	1188
LAWR	1986	1246	1159	881	563	320	106	27	31	174	455	826	1050
LAWR	1987	1341	1213	954	625	276	73	5	37	134	511	777	1127
LAWR	1988	1331	1130	924	604	260	84	11	21	113	541	661	1174
LAWR	1989	1109	1114	975	631	199	74	1	23	139	351	757	1538
LAWR	1990	1068	1038	877	571	342	67	9	14	125	335	671	950
LAWR	1991	1281	957	852	469	156	53	2	7	182	356	697	1118
LAWR	1992	1240	1124	1018	635	314	46	25	15	169	550	840	1181
LAWR	1993	1271	1300	1051	541	206	54	2	2	144	469	714	1104
LAWR	1994	1585	1254	937	459	272	19	1	15	115	369	611	980
LAWR	1995	1082	1174	866	604	252	27	5	16	158	287	819	1243
LAWR	1996	1323	1169	1043	633	336	36	7	6	112	415	832	956
LAWR	1997	1294	941	1047	653	351	100	9	6	130	477	843	1104
LAWR	1998	1128	954	860	546	238	101	0	6	73	422	727	958
LAWR	1999	1275	985	954	568	265	38	3	10	76	460	634	1017
LAWR	2000	1386	1053	805	624	329	99	18	12	158	451	748	1283
	16-yr Avg	1276	1100	935	582	274	68	8	16	132	429	741	1123
	2000 vs Avg	110	-47	-130	43	55	31	10	-4	26	22	7	160

BSG Co Divisional Effective Degree Days

Lawrence Division Meterorlogix Provided

Division	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LAWR	1985	1508	1081	947	612	310	158	23	63	180	480	756	1241
LAWR	1986	1283	1198	912	566	326	154	46	70	232	530	878	1101
LAWR	1987	1341	1214	972	647	323	110	24	73	178	545	786	1098
LAWR	1988	1343	1159	969	647	315	139	21	47	186	597	713	1211
LAWR	1989	1153	1152	1027	697	268	107	29	59	202	488	852	1595
LAWR	1990	1096	1071	928	627	415	105	27	33	182	395	717	986
LAWR	1991	1311	1000	901	537	210	106	20	23	231	420	736	1151
LAWR	1992	1273	1163	1070	688	379	106	60	54	210	559	829	1174
LAWR	1993	1272	1339	1092	600	282	98	23	23	204	569	784	1169
LAWR	1994	1647	1314	1013	553	370	51	8	56	199	474	698	1050
LAWR	1995	1157	1250	943	693	341	69	12	52	236	372	873	1305
LAWR	1996	1373	1209	1081	628	341	68	10	18	144	481	891	1005
LAWR	1997	1333	978	1064	672	373	109	25	33	175	548	885	1138
LAWR	1998	1161	963	877	555	233	98	11	23	116	462	769	1008
LAWR	1999	1324	1014	975	571	272	57	14	39	113	515	653	1052
LAWR	2000	1414	1089	819	627	330	114	41	29	197	495	775	1312

Bay State Gas Effective Heating Degree Days
Springfield Division
SSI v Metorlogix EDD

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1985	0%	-1%	0%	-3%	-9%	-24%			-14%	0%	0%	0%
1986	0%	-1%	-1%	-2%	-12%	-23%			-16%	1%	0%	-1%
1987	0%	0%	0%	-3%	-9%	-44%			-14%	-1%	0%	0%
1988	0%	0%	-1%	0%	-11%	-18%			-23%	1%	0%	0%
1989	0%	-1%	0%	-1%	-14%	-22%			-10%	-2%	0%	0%
1990	0%	1%	1%	-2%	-4%	-33%			-11%	-4%	0%	1%
1991	0%	0%	1%	-4%	-12%	-33%			-4%	-1%	0%	0%
1992	0%	0%	0%	1%	-7%	-43%			-4%	0%	0%	0%
1993	0%	0%	0%	-2%	-16%	-33%			1%	-4%	1%	0%
1994	0%	0%	1%	-2%	-6%	-45%			-15%	-1%	2%	0%
1995	0%	1%	1%	1%	-9%	-55%			-6%	-6%	0%	0%
1996	0%	1%	1%	-2%	-5%	-61%			-4%	-1%	-1%	1%
1997	0%	-1%	1%	-1%	-4%	-24%			-13%	-3%	1%	1%
1998	0%	-1%	-1%	-1%	-18%	-7%			-18%	0%	0%	1%
1999	0%	0%	0%	1%	-10%	-58%			-13%	-1%	1%	0%
2000	1%	1%	1%	-1%	-5%	-14%			-4%	-2%	1%	0%
Average	0%	0%	0%	-1%	-9%	-29%			-10%	-1%	0%	0%

Bay State Gas Effective Heating Degree Days

Springfield Division SSI Calculated BPT= 65

Division	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SPR	1985	1452	1063	871	476	193	93	2	18	128	444	710	1233
SPR	1986	1267	1172	886	461	189	68	17	36	129	446	860	1066
SPR	1987	1323	1162	852	504	216	23	2	34	121	534	760	1070
SPR	1988	1385	1144	902	584	201	84	8	21	114	595	724	1208
SPR	1989	1155	1116	940	595	187	42	0	20	131	405	804	1560
SPR	1990	1029	993	838	528	289	24	7	7	123	302	696	970
SPR	1991	1263	954	840	405	120	30	1	0	183	365	721	1088
SPR	1992	1235	1123	1034	631	251	40	14	17	162	526	783	1131
SPR	1993	1213	1280	1032	497	149	44	0	1	165	487	758	1129
SPR	1994	1561	1258	976	437	245	18	0	21	103	415	634	1006
SPR	1995	1088	1174	810	588	223	17	0	4	162	306	878	1285
SPR	1996	1353	1173	1037	514	252	9	3	4	136	459	856	989
SPR	1997	1266	912	987	572	307	56	3	5	117	467	853	1118
SPR	1998	1083	882	849	485	129	63	3	9	69	414	748	946
SPR	1999	1287	997	909	502	163	16	0	15	87	449	635	1017
SPR	2000	1381	1059	733	582	226	67	5	17	173	452	769	1314
	16-yr Avg	1271	1091	906	523	209	43	4	14	131	442	762	1133
	2000 vs Avg	110	-32	-173	59	17	24	1	3	42	10	7	181

BSG Co Divisional Effective Degree Days

Springfield Division Meterorlogix Provided

Division	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SPFD	1985	1447	1070	875	492	212	122	9	32	148	446	712	1237
SPFD	1986	1270	1180	898	471	215	88	20	55	153	442	858	1072
SPFD	1987	1323	1164	852	518	237	41	14	61	140	537	763	1067
SPFD	1988	1385	1148	907	583	225	102	10	41	148	592	722	1203
SPFD	1989	1158	1125	942	599	217	54	7	38	146	412	800	1564
SPFD	1990	1024	985	830	539	301	36	11	9	138	313	694	964
SPFD	1991	1264	952	833	424	137	45	5	5	190	370	721	1090
SPFD	1992	1230	1120	1036	625	269	70	25	31	168	528	782	1129
SPFD	1993	1210	1278	1029	505	177	66	2	11	164	506	750	1125
SPFD	1994	1557	1256	968	444	261	33	0	34	121	419	623	1005
SPFD	1995	1083	1163	804	584	245	38	4	31	172	325	877	1283
SPFD	1996	1358	1165	1029	527	266	23	3	10	142	463	869	978
SPFD	1997	1271	919	980	575	320	74	15	27	134	482	847	1106
SPFD	1998	1086	888	856	489	157	68	7	12	84	416	745	940
SPFD	1999	1291	1001	907	499	182	38	7	24	100	452	627	1016
SPFD	2000	1374	1051	726	586	237	78	14	24	181	462	765	1316

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
NINTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Joseph A. Ferro, Manager Regulatory Policy

AG-9-27 Based on the response to the preceding request, what is the estimated annual revenue increase (based on the proposed rates) that can be attributed to the proposed dual fuel tariff provisions compared to the revenue without the proposed dual fuel provisions? Include all supporting documentation, workpapers, calculations and assumptions.

Response: There is no estimated annual revenue increase that can be attributed to the proposed dual fuel tariff provisions because it is uncertain as to the net effect from the response of dual fuel customers to the proposed tariff provisions. It is likely that some dual fuel customers will not elect to continue to take firm service. The revenue loss resulting from discontinued firm service can be expected to offset any revenue increase that existing dual fuel customers taking firm service pay under the proposed tariff revisions. The net result from the dual fuel tariff provisions could, in fact, be a decrease in revenues.

Note that, in addition to the dual fuel tariff provision purpose of having all firm customers pay their fair share of having access to the Company's distribution system, the provision could:

(a) remove any risk of distribution system constraints by avoiding having unidentified and/or unanticipated capacity impositions on the system, and
(b) allow the Company to plan to optimally use its distribution capacity, by identifying most of the dual fuel potential load on its system to which the Company is obligated to serve.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: John Skirtich, Consultant (Revenue Requirements)

AG-11-6 Referring to the Company's 2004 Annual Return to the Department, page 51, please itemize and quantify all costs allocated and assigned to the "Merchandising, Jobbing, and Contract Work." Please also provide all workpapers, calculations, formulas, assumptions, and supporting documentation for those allocations and assignments.

Response: Attachment AG-11-6 (A) identifies the allocated costs included in Merchandising, Jobbing, and Contract Work. Attachments AG-11-6 (B) and (C) provide supporting information for the allocations.

	Total Cost	Allocated	Method of Allocation
Cost of Merchandise Sold.....	1,152,313	0	
Install. expenses	421,251	0	
Servicing installed appliance (net).....	184,773	0	
Storeroom expenses.....	56,745	0	
Fleet expenses.....	89,641	89,641	(A)
Clerical salaries and wages.....	140,849	86,546	(B)
Employee Benefits & Payroll Tax.....	221,323	221,323	(C)
Income Tax.....	131,397	0	
Uncollectible Accounts.....	(44,095)	0	
Total	2,354,197	397,510	

(A) The vehicle clearing process is described in Attachment AG-11-6 (C).

(B) See Attachment AG-11-6 (B) for detail of the allocation for clerical salaries and wages. This process allocates non-productive time (sick time, vacation, holidays, etc.) taken and assigns it to various productive accounts.

(C) The allocations for Employee Benefits and Payroll Taxes are described in the response to AG-1-27.

The allocation percentage for non-productive service labor is supplied by the budgeting/planning department. Total dollars to be allocated are derived from non-productive payroll information and is based on accounting unit.

	Brockton				
NP	01250 6002 5185-49	0.00	482,803.17	482,803.17	100.00%
NP	01250 6002 6878-97	0.00	0.00	0.00	0.00%
NP	01250 6002 6879-97	376,586.47	0.00	(376,586.47)	78.00%
NP	01250 6002 6894-97	33,796.22	0.00	(33,796.22)	7.00%
NP	01250 6002 6415-97	62,764.41	0.00	(62,764.41)	13.00%
NP	01250 6002 5185-96	9,656.06	0.00	(9,656.06)	2.00%
NP	01250 6002 5185-99	0.00	0.00	0.00	0.00%
	Springfield				
NP	02250 6002 5185-49	0.00	266,212.99	266,212.99	100.00%
NP	02250 6002 6878-97	0.00	0.00	0.00	0.00%
NP	02250 6002 6879-97	199,659.74	0.00	(199,659.74)	75.00%
NP	02250 6002 6894-97	15,972.78	0.00	(15,972.78)	6.00%
NP	02250 6002 6415-97	18,634.91	0.00	(18,634.91)	7.00%
NP	02250 6002 5185-96	31,945.56	0.00	(31,945.56)	12.00%
NP	02250 6002 5185-99	0.00	0.00	0.00	0.00%
	Lawrence				
NP	04250 6002 5185-49	0.00	102,926.56	102,926.56	100.00%
NP	04250 6002 6878-97	34,995.03	0.00	(34,995.03)	34.00%
NP	04250 6002 6879-97	27,790.17	0.00	(27,790.17)	27.00%
NP	04250 6002 6894-97	3,087.80	0.00	(3,087.80)	3.00%
NP	04250 6002 6415-97	5,146.33	0.00	(5,146.33)	5.00%
NP	04250 6002 5185-99	29,848.70	0.00	(29,848.70)	29.00%
NP	04250 6002 5185-96	2,058.53	0.00	(2,058.53)	2.00%
NP	04250 6002 6902-97	0.00	0.00	0.00	0.00%
	641597 Total	86,545.65			

Total represents the portion of non-productive time (sick time, vacation, holiday, etc.) that has been allocated based on a percentage supplied by budgeting/planning to productive accounts for each of the three service areas.

Witness: John E. Skirtich
D.T.E 05-27
Attachment AG-11-06 (C)

PROCEDURE: VEHICLE FLEET EXPENSE ALLOCATION

PURPOSE: To allocate fleet costs to utility and non-utility operations.

OVERVIEW: Vehicle Fleet Expenses are the costs of operating and maintaining the fleet of vehicles throughout the Company. These costs are accumulated in clearing accounts and allocated to the user departments based on the number of factored vehicles in each department and the use of these vehicles in various utility and non-utility operations as reflected in payroll hours charged. A computerized program clears the fleet expenses from the clearing account and automatically records the journal entries.

EXHIBIT: Auto Clearing Audit Listing (Exhibit A)

STEPS: The following calculations take place within the vehicle fleet clearing program to clear monthly fleet expenses:

Vehicle Clearing Program:

1. The Garage or Storeroom Supervisor at each division (Brockton, Springfield, Lawrence) tracks the number of vehicles (cars, light trucks, heavy trucks and work equipment) assigned to each department. This inventory of actual vehicle information is converted to a "factored vehicle" by a weighting factor and is stored on a table in the vehicle clearing program (Exhibit A). For example, a heavy truck is weighted more than a car or a light truck.

2. Total vehicle operating and maintenance costs for the month, which include payroll and non-payroll costs, are calculated from the sum of accumulated totals by division in accounts 184-00 through 184-07 plus 184-26 through 184-29. This total represents the total fleet operating and maintenance expenses for a particular month being processed. The journal entry to record these costs is as follows:

(DR) Auto Payroll Costs	184-xx	
(DR) Auto Non-Payroll Costs	184-xx	
(CR) A/P		232-00
(CR) Payroll Payable		232-02
(CR) Materials & Supplies		154-xx

Example: Division fleet expense $31,640.97 / 79 vehicles - $400.52 per vehicle

4. The fleet expense for each department is then calculated by multiplying the number of factored vehicles assigned to the department by the rate per vehicle.

   Example: 2 vehicles x $400.52 = $801.04 fleet expense for department

5. The fleet expense rate per labor hour is then calculated by dividing the department fleet expense by the department's total labor hours for the month.

   Example: $801.04 / 2858.58 department payroll hours worked = $.28 per labor hour

6. An allocated fleet expense amount for a particular capital project or expense account is calculated by multiplying the department fleet expense rate per labor hour by the total number of hours charged by the department to each account or capital project.

   Example: $.28 per hour x 1008 hours = $282.24 charged to account or project

7. Upon completion of each division's calculations, the vehicle clearing program will produce a contra credit entry to account 184-08 - Auto Clearing Contra by totaling the individual allocated amounts produced by Steps 2 through 6. This amount is then compared to the total vehicle cost for the month as described in Step 2. Any roundings are accumulated in a balancing account 184-00 - Miscellaneous Vehicle Expenses. The rounding variance from the month's calculation is included in the next month's calculation and will ultimately net to zero.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

AG-11-19 Referring to the Company's 2004 Annual Return to the Department, page 47, line 5, please provide a complete and detailed description of the reasons for the 20 percent increase in the amount of Customer Records and Collections expense during the last two years.

Response: The increase in Customer Records and Collections expense over the two-year period is driven by two factors. Bay State had an increase in personnel and therefore payroll to me call volume demand and customer satisfaction targets. Also, Bay State had an increase in outside credit agency fees over the two-year period.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

AG-11-15 Referring to the Company's 2004 Annual Return to the Department, page 33, line 17, please provide a complete and detailed description of the nature of the REG Asset being transferred and why it is being transferred. Please also provide the DTE docket numbers where the Department approved the establishment of that regulatory asset.

Response: Attachment AG-11-15 provides a revised copy of Page 27 from the 2004 Annual Report to the Department. The change from the original page filed is in lines 16 and 16A.

In the original page 27, included in the Production & Storage account was the activity in a new account titled "Reg Assets – Credit Balance Transfer". The activity and balance in this new asset account is offset by the Credit Balance Reg Asset Transfer detailed on Page 33, Line 17 in the 2004 Annual Report to the Commission.

At the end of the accounting closing process in December 2004, a review was made of all the various regulatory assets accounts and sub-accounts to identify those with credit balances. The following memo entry was made to reflect those credit balance assets as a liability for external reporting purposes.

Account 186 – Reg Assets – Credit Balance Transfer	$3,677,457
Account 253 – Credit Balance Reg Asset Transfer	($3,677,457)

EXTRAORDINARY PROPERTY LOSSES (Account 182)

1. Report below particulars concerning the accounting for extraordinary property losses.
2. In column (a) describe the property abandoned or extraordinary loss suffered, date of abandonment or loss, date of Department authorization of use of Account 182, and period over which amortization is being made.

Line No.	Description of Property Loss or Damage (a)	Total Amount of Loss (b)	Previously Written Off (c)	Written off During Year		Balance End of Year (f)
				Account Charged (d)	Amount Amount	
1						
2						
3			NONE			
4						
5						
6						
7						
8						
9						
10						
11	TOTALS					

MISCELLANEOUS DEFERRED DEBITS (Account 186)

1. Report below the particulars called for concerning miscellaneous deferred debits.
2. For any deferred debit being amortized show period of amortization.
3. Minor items may be grouped by classes, showing number of such items.

Line No.	Description (a)	Balance Beginning of Year (b)	Debits (c)	Credits		Balance End of Year (f)
				Account Charged (d)	Amount (d)	
12	**Reg Asset-Customer Choice**	$ (62,408)	$ 65,893	923	$ 1,081	$ 2,404
13	**Reg Asset - Working Capital**	884,813	1,421,739	495	2,356,106	(49,554)
14	**Reg Asset-DSM**	(136,037)	8,584,086	923,486	7,321,072	1,126,977
15	**LDAC Recoveries Unbilled**	(343,246)	3,301,951	921	3,675,686	(716,981)
16	**Reg Asset-Production&Storage**	393,254	10,992,048	495	9,919,869	1,465,433
16A	**Reg Assets - Credit Balance Transfer**	0	3,677,457			3,677,457
17	**L/T Asset-Pension**	7,369,751	197,280	219,926	802,031	6,765,000
18	**L/T Asset-PostRetirement**	5,479,207	258,800	219,926	1,492,000	4,246,007
19	**Reg Asset-ERC**	10,672,982	24,610,517	932,430	23,850,817	11,432,682
20	**Bad Debt-Gas Portion**	7,270,699	16,561,624	904,186	14,481,381	9,350,942
21	**Debt Redemption**	453,954	1,675,035	428	631,005	1,497,984
22	**Reg Asset-SQI**	18,799	250	480	19,049	0
23	**Reg Asset-Interruptible Transporation**	(77,297)	88,370	495	26,118	(15,045)
24						
25	**Total end of 2003**	31,924,471				
26						
27	**Accounts Reported in 2003 as**					
28	**Deferred fuel cost - Account 175**					
29	**BSG - Cares**	(17,167)	78,083	495	184,261	(123,345)
30	**Reg Asset-FAS 109 Taxes**	5,717,382	222,018	278,114	286,330	5,653,070
31						
32						
33						
34						
	TOTALS	$ 37,624,686	$ 71,735,150		$ 65,046,805	$ 44,313,030

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
THIRTEENTH SET OF INFORMATION REQUESTS FROM ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Lawrence Kaufmann, Consultant (PBR)

AG-13-3 Please provide a complete copy of the Boston Gas Company O&M cost analysis referred to on page 12 of Mr. Kaufmann's prefiled testimony in this case. Please also provide the associated workpapers, calculations, formulas, assumptions, and supporting documentation for that analysis.

Response: This analysis was prepared by Mssr. Bodanza and Silvestrini of Boston Gas Company in response to DTE-6-1 in DTE-3-40. Their response and associated workpapers are attached as Attachment AG-13-3.

BOSTON GAS COMPANY D/B/A KEYSPAN ENERGY DELIVERY NEW ENGLAND
Operations & Maintenance Expense & Distribution Revenue - Total

Current Dollars

Line	Acct	Description	1985-1996	1996-2002	1985	1986	1987	1988	1989	1990	1991	1992
	Operation & Maintenance Expenses											
1	(850-854)	TOTAL T&D EXPENSE			32,543,220	34,478,749	40,211,263	42,840,266	47,731,636	48,695,754	49,434,434	52,531,705
2	(901-905)	TOTAL CUSTOMER ACCT EXPENSE			24,996,482	25,785,598	27,090,360	27,752,283	29,805,592	31,176,315	37,114,923	37,180,267
3	(911-916)	TOTAL MKG SERVICES EXPENSES			3,282,096	3,733,830	3,698,723	3,573,271	4,645,609	4,882,812	4,914,504	5,688,904
4	(920-932)	TOTAL A&G EXPENSE			27,867,178	28,679,958	29,147,502	34,518,282	36,484,262	31,722,908	34,878,647	37,085,789
5		TOTAL			88,688,976	92,678,135	100,147,848	108,684,102	118,667,099	116,477,789	126,342,508	132,486,665
6												
7	Trend											
8		1985-1996			89,336,687	95,397,316	101,457,945	107,518,573	113,579,202	119,639,831	125,700,460	131,761,089
9		1996-2002										
10		Slope	6,060,629	5,175,665								
11		Intercept	83,276,058	77,366,317								
12												
13	Growth Rate											
14		Growth Rate (Annual)	**4.9%**	**2.3%**		4.5%	8.1%	8.5%	9.2%	-1.8%	8.5%	4.9%
15		Growth Rate (based on 1985)	**70.1%**	**24.6%**	0.0%	4.5%	12.9%	22.5%	33.8%	31.3%	42.5%	49.4%
16												
17	**Distribution Revenue**											
18		TOTAL				186,481,000	186,648,000	181,853,000	201,385,000	193,197,000	203,187,000	236,633,000
19												
20	Trend											
21		1985-1996				166,193,364	177,943,709	189,694,055	201,444,400	213,194,745	224,945,091	236,695,436
22		1996-2002										
23		Slope	11,750,345	4,681,067								
24		Intercept	142,692,673	232,050,700								
25												
26	Growth Rate											
27		Growth Rate (Annual)	**4.6%**	**1.9%**			0.1%	-2.6%	10.7%	-4.1%	5.2%	16.5%
28		Growth Rate (based on 1986)	**56.2%**	**18.7%**		0.0%	0.1%	-2.5%	8.0%	3.6%	9.0%	26.9%
29												

BOSTON GAS COMPANY D/B/A KEYSPAN ENERGY DELIVERY NEW ENGLA
Operations & Maintenance Expense & Distribution Revenue - Total

Current Dollars

Line	Acct	Description	1985-1996	1996-2002	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	Operation & Maintenance Expenses													
1	(850-854)	TOTAL T&D EXPENSE			58,055,882	57,620,130	54,083,028	57,516,366	52,636,009	48,508,853	55,858,910	66,836,040	63,779,011	60,010,638
2	(901-905)	TOTAL CUSTOMER ACCT EXPENSE			35,826,328	40,571,756	38,418,338	37,240,664	36,797,811	36,447,295	36,081,450	37,331,998	27,784,953	34,539,820
3	(911-916)	TOTAL MKG SERVICES EXPENSES			6,015,927	6,156,169	6,483,512	6,745,397	7,449,445	6,775,425	7,096,080	11,577,813	12,685,953	13,907,825
4	(920-932)	TOTAL A&G EXPENSE			40,573,121	42,916,382	50,272,992	49,372,632	52,302,075	39,088,044	45,241,972	49,879,047	67,318,171	64,199,394
5		TOTAL			140,471,258	147,264,437	149,257,870	150,875,059	149,185,340	130,819,617	144,278,412	165,624,898	171,568,087	172,657,678
6														
7	Trend													
8		1985-1996			137,821,718	143,882,346	149,942,975	156,003,604						
9		1996-2002						139,474,302	144,649,968	149,825,633	155,001,299	160,176,964	165,352,630	170,528,295
10		Slope	6,060,629	5,175,665										
11		Intercept	83,276,058	77,366,317										
12														
13	Growth Rate													
14		Growth Rate (Annual)	**4.9%**	**2.3%**	6.0%	4.8%	1.4%	1.1%	-1.1%	-12.3%	10.3%	14.8%	3.6%	0.6%
15		Growth Rate (based on 1985)	**70.1%**	**24.6%**	58.4%	66.0%	68.3%	70.1%	68.2%	47.5%	62.7%	86.7%	93.4%	94.7%
16														
17	**Distribution Revenue**													
18		TOTAL			239,191,000	276,446,000	278,167,000	291,208,000	302,379,000	285,777,000	297,695,000	308,545,000	304,104,826	326,158,071
19														
20	Trend													
21		1985-1996			248,445,782	260,196,127	271,946,473	283,696,818						
22		1996-2002						288,223,500	292,904,566	297,585,633	302,266,700	306,947,766	311,628,833	316,309,899
23		Slope	11,750,345	4,681,067										
24		Intercept	142,692,673	232,050,700										
25														
26	Growth Rate													
27		Growth Rate (Annual)	**4.6%**	**1.9%**	1.1%	15.6%	0.6%	4.7%	3.8%	-5.5%	4.2%	3.6%	-1.4%	7.3%
28		Growth Rate (based on 1986)	**56.2%**	**18.7%**	28.3%	48.2%	49.2%	56.2%	62.2%	53.2%	59.6%	65.5%	63.1%	74.9%
29														

BOSTON GAS COMPANY D/B/A KEYSPAN ENERGY DELIVERY NEW ENGLAND
Operations & Maintenance Expense & Distribution Revenue - Total

In 1985 Dollars

Line	Description	1985-1996	1996-2002	1985	1986	1987	1988	1989	1990	1991	1992
1	GDP IPD Index										
2	GDPIPD			0.7370	0.7532	0.7757	0.8022	0.8327	0.8653	0.8966	0.9185
3	GDP PI Index 100			73.70	75.32	77.57	80.22	83.27	86.53	89.66	91.85
4	GDPIPD Ratio to Year 1985			1.00	0.98	0.95	0.92	0.89	0.85	0.82	0.80
5											
6	**Operation & Maintenance Expenses in 1985 Dollars**										
7	(850-854) TOTAL T&D EXPENSE			32,543,220	33,733,764	38,201,283	39,356,916	42,243,100	41,472,710	40,630,928	42,150,623
8	(901-905) TOTAL CUSTOMER ACCT EXPENSE			24,996,482	25,228,446	25,736,235	25,495,740	26,378,325	26,551,930	30,505,331	29,832,868
9	(911-916) TOTAL MKG SERVICES EXPENSES			3,282,096	3,653,153	3,513,840	3,282,728	4,111,423	4,158,544	4,039,307	4,564,688
10	(920-932) TOTAL A&G EXPENSE			27,867,178	28,060,268	27,690,550	31,711,594	32,289,032	27,017,447	28,667,301	29,757,060
11	TOTAL			88,688,976	90,675,630	95,141,908	99,846,977	105,021,879	99,200,632	103,842,868	106,305,240
12											
13	Trend										
14	1985-1996			90,901,783	93,088,440	95,275,096	97,461,753	99,648,410	101,835,067	104,021,724	106,208,380
15	1996-2002										
16	Slope	2,186,657	1,699,657								
17	Intercept	88,715,126	82,895,431								
18											
19	Growth Rate										
20	Growth Rate (Annual)	**2.1%**	**0.6%**		2.2%	4.9%	4.9%	5.2%	-5.5%	4.7%	2.4%
21	Growth Rate (based on 1985)	**25.4%**	**4.3%**	0.0%	2.2%	7.3%	12.6%	18.4%	11.9%	17.1%	19.9%
22											
23	**Distribution Revenue in 1985 Dollars**										
24	TOTAL				182,451,688	177,318,307	167,066,498	178,228,264	164,540,078	167,002,548	189,870,640
25											
26	Trend										
27	1985-1996				165,130,757	169,371,177	173,611,596	177,852,015	182,092,435	186,332,854	190,573,273
28	1996-2002										
29	Slope	4,240,419	-394,535								
30	Intercept	156,649,919	217,569,730								
31											
32	Growth Rate										
33	Growth Rate (Annual)	**1.6%**	**0.2%**			-2.8%	-5.8%	6.7%	-7.7%	1.5%	13.7%
34	Growth Rate (based on 1986)	**17.6%**	**1.4%**		0.0%	-2.8%	-8.4%	-2.3%	-9.8%	-8.5%	4.1%
35											

Total O & M Expenses and Distribution Revenue Growth Rates

Line	Description	1985-1996	1996-2002	1985	1986	1987	1988	1989	1990	1991	1992
	Total Operation & Maintenance Expenses Growth Rate										
	Annual Growth Rate										
	Actual	4.9%	2.3%	0.0%	4.5%	8.1%	8.5%	9.2%	-1.8%	8.5%	4.9%
	1985 Dollar	2.1%	0.6%	0.0%	2.2%	4.9%	4.9%	5.2%	-5.5%	4.7%	2.4%
	Since 1985										
	Actual	70.1%	24.6%	0.0%	4.5%	12.9%	22.5%	33.8%	31.3%	42.5%	49.4%
	1985 Dollar	25.4%	4.3%	0.0%	2.2%	7.3%	12.6%	18.4%	11.9%	17.1%	19.9%
	Distribution Revenue Growth Rate										
	Annual Growth Rate										
	Actual	4.6%	1.9%	0.0%	0.0%	0.1%	-2.6%	10.7%	-4.1%	5.2%	16.5%
	1985 Dollar	1.6%	0.2%	0.0%	0.0%	-2.8%	-5.8%	6.7%	-7.7%	1.5%	13.7%
	Since 1985										
	Actual	56.2%	18.7%	0.0%	0.0%	0.1%	-2.5%	8.0%	3.6%	9.0%	26.9%
	1985 Dollar	17.6%	1.4%	0.0%	0.0%	-2.8%	-8.4%	-2.3%	-9.8%	-8.5%	4.1%

BOSTON GAS COMPANY D/B/A KEYSPAN ENERGY DELIVERY NEW ENGLA
Operations & Maintenance Expense & Distribution Revenue - Total

In 1985 Dollars

Line	Description	1985-1996	1996-2002	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	GDP IPD Index												
2	GDPIPD			0.9405	0.9601	0.9810	1.0000	1.0195	1.0320	1.0469	1.0689	1.0942	1.1066
3	GDP PI Index 100			94.05	96.01	98.10	100.00	101.95	103.20	104.69	106.89	109.42	110.66
4	GDPIPD Ratio to Year 1985			0.78	0.77	0.75	0.74	0.72	0.71	0.70	0.69	0.67	0.67
5													
6	**Operation & Maintenance Expenses in 1985 Dollars**												
7	(850-854) TOTAL T&D EXPENSE			45,489,787	44,228,998	40,627,392	42,386,686	38,049,101	34,638,605	39,321,629	46,078,513	42,955,040	39,966,237
8	(901-905) TOTAL CUSTOMER ACCT EXPENSE			28,071,782	31,142,729	28,860,013	27,444,507	26,600,110	26,025,836	25,399,375	25,737,655	18,713,112	23,003,032
9	(911-916) TOTAL MKG SERVICES EXPENSES			4,713,790	4,725,452	4,870,441	4,971,020	5,384,996	4,838,112	4,995,254	7,982,047	8,543,965	9,262,415
10	(920-932) TOTAL A&G EXPENSE			31,791,140	32,942,455	37,765,278	36,385,161	37,807,709	27,911,510	31,847,883	34,387,918	45,338,658	42,755,890
11	TOTAL			110,066,499	113,039,634	112,123,124	111,187,375	107,841,915	93,414,063	101,564,141	114,186,133	115,550,775	114,987,575
12													
13	Trend												
14	1985-1996			108,395,037	110,581,694	112,768,351	114,955,008						
15	1996-2002						103,291,312	104,990,969	106,690,626	108,390,282	110,089,939	111,789,596	113,489,253
16	Slope	2,186,657	1,699,657										
17	Intercept	88,715,126	82,895,431										
18													
19	Growth Rate												
20	Growth Rate (Annual)	**2.1%**	**0.6%**	3.5%	2.7%	-0.8%	-0.8%	-3.0%	-13.4%	8.7%	12.4%	1.2%	-0.5%
21	Growth Rate (based on 1985)	**25.4%**	**4.3%**	24.1%	27.5%	26.4%	25.4%	21.6%	5.3%	14.5%	28.7%	30.3%	29.7%
22													
23	**Distribution Revenue in 1985 Dollars**												
24	TOTAL			187,418,524	212,198,922	208,960,190	214,605,736	218,581,333	204,064,125	209,561,060	212,718,986	204,814,011	217,216,669
25													
26	Trend												
27	1985-1996			194,813,693	199,054,112	203,294,531	207,534,951						
28	1996-2002						212,835,308	212,440,773	212,046,238	211,651,703	211,257,168	210,862,633	210,468,097
29	Slope	4,240,419	-394,535										
30	Intercept	156,649,919	217,569,730										
31													
32	Growth Rate												
33	Growth Rate (Annual)	**1.6%**	**0.2%**	-1.3%	13.2%	-1.5%	2.7%	1.9%	-6.6%	2.7%	1.5%	-3.7%	6.1%
34	Growth Rate (based on 1986)	**17.6%**	**1.4%**	2.7%	16.3%	14.5%	17.6%	19.8%	11.8%	14.9%	16.6%	12.3%	19.1%
35													

Total O & M Expenses and Distribution Revenue Growth Rates

Line	Description	1985-1996	1996-2002	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	Total Operation & Maintenance Expenses Growth Rate												
	Annual Growth Rate												
	Actual	4.9%	2.3%	6.0%	4.8%	1.4%	1.1%	-1.1%	-12.3%	10.3%	14.8%	3.6%	0.6%
	1985 Dollar	2.1%	0.6%	3.5%	2.7%	-0.8%	-0.8%	-3.0%	-13.4%	8.7%	12.4%	1.2%	-0.5%
	Since 1985												
	Actual	70.1%	24.6%	58.4%	66.0%	68.3%	70.1%	68.2%	47.5%	62.7%	86.7%	93.4%	94.7%
	1985 Dollar	25.4%	4.3%	24.1%	27.5%	26.4%	25.4%	21.6%	5.3%	14.5%	28.7%	30.3%	29.7%
	Distribution Revenue Growth Rate												
	Annual Growth Rate												
	Actual	4.6%	1.9%	1.1%	15.6%	0.6%	4.7%	3.8%	-5.5%	4.2%	3.6%	-1.4%	7.3%
	1985 Dollar	1.6%	0.2%	-1.3%	13.2%	-1.5%	2.7%	1.9%	-6.6%	2.7%	1.5%	-3.7%	6.1%
	Since 1985												
	Actual	56.2%	18.7%	28.3%	48.2%	49.2%	56.2%	62.2%	53.2%	59.6%	65.5%	63.1%	74.9%
	1985 Dollar	17.6%	1.4%	2.7%	16.3%	14.5%	17.6%	19.8%	11.8%	14.9%	16.6%	12.3%	19.1%

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

DTE Return

Line	Acct	Description	1985	1986	1987	1988	1989	1990	1991	1992	1993
1	(850-854)	TOTAL T&D EXPENSE	32,543,220	34,478,749	40,211,263	42,840,266	47,731,636	48,695,754	49,434,434	52,531,705	58,055,882
2											
3	(901-905)	TOTAL CUSTOMER ACCT EXPENSE	24,996,482	25,785,598	27,090,360	27,752,283	29,805,592	31,176,315	37,114,923	37,180,267	35,826,328
4											
5	(911-916)	TOTAL MKG SERVICES EXPENSES	3,282,096	3,733,830	3,698,723	3,573,271	4,645,609	4,882,812	4,914,504	5,688,904	6,015,927
6											
7	(920-932)	TOTAL A&G EXPENSE	27,867,178	28,679,958	29,147,502	34,518,282	36,484,262	31,722,908	34,878,647	37,085,789	40,573,121
8											
9		TOTAL	88,688,976	92,678,135	100,147,848	108,684,102	118,667,099	116,477,789	126,342,508	132,486,665	140,471,258
		(TREND)	88,688,976	94,342,256	99,995,537	105,648,817	111,302,097	116,955,377	122,608,658	128,261,938	133,915,218
		total 85-96	88,688,976	92,678,135	100,147,848	108,684,102	118,667,099	116,477,789	126,342,508	132,486,665	140,471,258
		total 96-02									
		Trend 85-96	89,336,687	95,397,316	101,457,945	107,518,573	113,579,202	119,639,831	125,700,460	131,761,089	137,821,718
		Trend 96-02									
	Margin	Total Margin 86-96		186,481,000	186,648,000	181,853,000	201,385,000	193,197,000	203,187,000	236,633,000	239,191,000
		Total Margin 96-02									
		Trend 85-96		166,193,364	177,943,709	189,694,055	201,444,400	213,194,745	224,945,091	236,695,436	248,445,782
		Trend 96-02									

DTE Return in 2002 Dollar

Line		Description	1985	1986	1987	1988	1989	1990	1991	1992	1993
1	GDP IPD Index										
2		GDPIPD	0.7370	0.7532	0.7757	0.8022	0.8327	0.8653	0.8966	0.9185	0.9405
3		GDP PI Index 100	73.70	75.32	77.57	80.22	83.27	86.53	89.66	91.85	94.05
4		GDPIPD Ratio to Year 2002	1.50	1.47	1.43	1.38	1.33	1.28	1.23	1.20	1.18
5		Actual Index (2002=1)	1.95	1.86	1.72	1.59	1.45	1.48	1.37	1.30	1.23
6											
7	(850-854)	TOTAL T&D EXPENSE	48,864,730	50,652,371	57,360,500	59,095,722	63,429,423	62,272,657	61,008,694	63,290,567	68,304,433
8											
9	(901-905)	TOTAL CUSTOMER ACCT EXPENSE	37,533,051	37,881,353	38,643,815	38,282,703	39,607,934	39,868,609	45,804,772	44,795,046	42,150,716
10											
11	(911-916)	TOTAL MKG SERVICES EXPENSES	4,928,177	5,485,331	5,276,149	4,929,125	6,173,438	6,244,193	6,065,154	6,854,031	7,077,913
12											
13	(920-932)	TOTAL A&G EXPENSE	41,843,497	42,133,427	41,578,284	47,616,016	48,483,058	40,567,598	43,044,909	44,681,219	47,735,456
14											
15		TOTAL	133,169,455	136,152,483	142,858,748	149,923,566	157,693,853	148,953,057	155,923,529	159,620,863	165,268,518
		(TREND)	133,169,455	136,240,555	139,311,654	142,382,754	145,453,853	148,524,953	151,596,053	154,667,152	157,738,252
		total 85-96	133,169,455	136,152,483	142,858,748	149,923,566	157,693,853	148,953,057	155,923,529	159,620,863	165,268,518
		total 96-02									
		Trend 85-96	136,492,059	139,775,397	143,058,735	146,342,073	149,625,411	152,908,749	156,192,087	159,475,425	162,758,763
		Trend 96-02									
	Margin	Total Margin 86-96		273,957,294	266,249,351	250,855,918	267,615,682	247,062,413	250,759,895	285,097,098	281,415,164
		Total Margin 96-02									
		Trend 85-96		247,949,339	254,316,470	260,683,601	267,050,732	273,417,863	279,784,994	286,152,125	292,519,256
		Trend 96-02									

DTE Return in 1985 Dollar

Line		Description	1985	1986	1987	1988	1989	1990	1991	1992	1993
1	GDP IPD Index										
2		GDPIPD	0.7370	0.7532	0.7757	0.8022	0.8327	0.8653	0.8966	0.9185	0.9405
3		GDP PI Index 100	73.70	75.32	77.57	80.22	83.27	86.53	89.66	91.85	94.05
4		GDPIPD Ratio to Year 1985	1.00	0.98	0.95	0.92	0.89	0.85	0.82	0.80	0.78
5		Actual Index (1985=1)	1.00	0.96	0.89	0.82	0.75	0.76	0.70	0.67	0.63
6											
7	(850-854)	TOTAL T&D EXPENSE	32,543,220	33,733,764	38,201,283	39,356,916	42,243,100	41,472,710	40,630,928	42,150,623	45,489,787
8											
9	(901-905)	TOTAL CUSTOMER ACCT EXPENSE	24,996,482	25,228,446	25,736,235	25,495,740	26,378,325	26,551,930	30,505,331	29,832,868	28,071,782
10											
11	(911-916)	TOTAL MKG SERVICES EXPENSES	3,282,096	3,653,153	3,513,840	3,282,728	4,111,423	4,158,544	4,039,307	4,564,688	4,713,790
12											
13	(920-932)	TOTAL A&G EXPENSE	27,867,178	28,060,268	27,690,550	31,711,594	32,289,032	27,017,447	28,667,301	29,757,060	31,791,140
14											
15		TOTAL	88,688,976	90,675,630	95,141,908	99,846,977	105,021,879	99,200,632	103,842,868	106,305,240	110,066,499
		(TREND)	88,688,976	90,734,285	92,779,594	94,824,903	96,870,212	98,915,521	100,960,830	103,006,139	105,051,448
		total 85-96	88,688,976	90,675,630	95,141,908	99,846,977	105,021,879	99,200,632	103,842,868	106,305,240	110,066,499
		total 96-02									
		Trend 85-96	90,901,783	93,088,440	95,275,096	97,461,753	99,648,410	101,835,067	104,021,724	106,208,380	108,395,037
		Trend 96-02									
	Margin	Total Margin 86-96		182,451,688	177,318,307	167,066,498	178,228,264	164,540,078	167,002,548	189,870,640	187,418,524

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

DTE Return

Line	Acct	Description	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	(850-854)	TOTAL T&D EXPENSE	57,620,130	54,083,028	57,516,366	52,636,009	48,508,853	55,858,910	66,836,040	63,779,011	60,010,638
2											
3	(901-905)	TOTAL CUSTOMER ACCT EXPENSE	40,571,756	38,418,338	37,240,664	36,797,811	36,447,295	36,081,450	37,331,998	27,784,953	34,539,820
4											
5	(911-916)	TOTAL MKG SERVICES EXPENSES	6,156,169	6,483,512	6,745,397	7,449,445	6,775,425	7,096,080	11,577,813	12,685,953	13,907,825
6											
7	(920-932)	TOTAL A&G EXPENSE	42,916,382	50,272,992	49,372,632	52,302,075	39,088,044	45,241,972	49,879,047	67,318,171	64,199,394
8											
9		TOTAL	147,264,437	149,257,870	150,875,059	149,185,340	130,819,617	144,278,412	165,624,898	171,568,087	172,657,678
		(TREND)	139,568,498	145,221,779	150,875,059	154,505,495	158,135,932	161,766,368	165,396,805	169,027,241	172,657,678
		total 85-96	147,264,437	149,257,870	150,875,059						
		total 96-02			150,875,059	149,185,340	130,819,617	144,278,412	165,624,898	171,568,087	172,657,678
		Trend 85-96	143,882,346	149,942,975	156,003,604						
		Trend 96-02			139,474,302	144,649,968	149,825,633	155,001,299	160,176,964	165,352,630	170,528,295
	Margin	Total Margin 86-96	276,446,000	278,167,000	291,208,000	302,379,000	285,777,000	297,695,000	308,545,000	304,104,826	326,158,071
		Total Margin 96-02			291,208,000	302,379,000	285,777,000	297,695,000	308,545,000	304,104,826	326,158,071
		Trend 85-96	260,196,127	271,946,473	283,696,818						
		Trend 96-02			288,223,500	292,904,566	297,585,633	302,266,700	306,947,766	311,628,833	316,309,899

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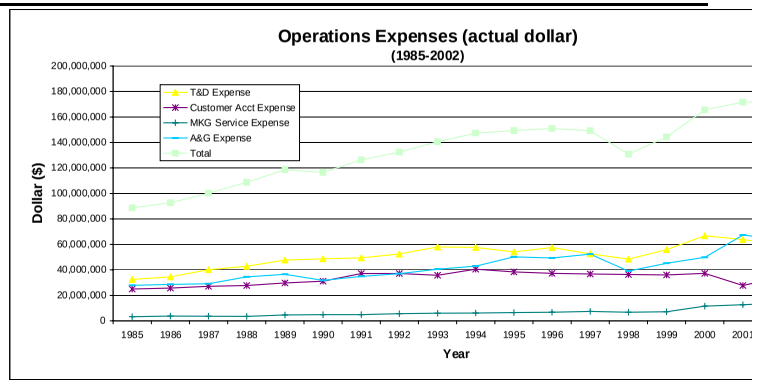
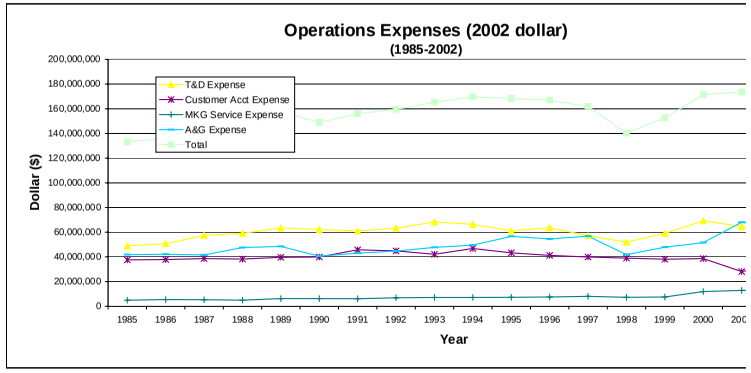
DTE Return in 2002 Dollar

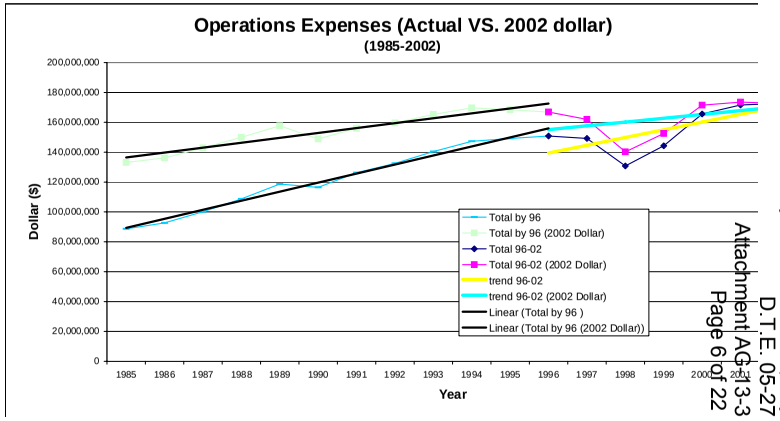
Line	Description	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	GDP IPD Index									
2	GDPIPD	0.9601	0.9810	1.0000	1.0195	1.0320	1.0469	1.0689	1.0942	1.1066
3	GDP PI Index 100	96.01	98.10	100.00	101.95	103.20	104.69	106.89	109.42	110.66
4	GDPIPD Ratio to Year 2002	1.15	1.13	1.11	1.09	1.07	1.06	1.04	1.01	1.00
5	Actual Index (2002=1)	1.17	1.16	1.14	1.16	1.32	1.20	1.04	1.01	1.00
6										
7 (850-854)	TOTAL T&D EXPENSE	66,411,315	61,003,384	63,645,022	57,131,993	52,011,021	59,042,737	69,188,423	64,498,425	60,010,638
8										
9 (901-905)	TOTAL CUSTOMER ACCT EXPENSE	46,761,846	43,334,272	41,208,843	39,940,952	39,078,661	38,138,008	38,645,947	28,098,362	34,539,820
10										
11 (911-916)	TOTAL MKG SERVICES EXPENSES	7,095,424	7,313,129	7,464,153	8,085,751	7,264,587	7,500,540	11,985,310	12,829,048	13,907,825
12										
13 (920-932)	TOTAL A&G EXPENSE	49,464,195	56,705,824	54,633,533	56,769,536	41,910,063	47,820,659	51,634,606	68,077,506	64,199,394
14										
15	TOTAL	169,732,780	168,356,609	166,951,551	161,928,232	140,264,331	152,501,945	171,454,286	173,503,341	172,657,678
	(TREND)	160,809,352	163,880,451	166,951,551	167,902,572	168,853,593	169,804,614	170,755,636	171,706,657	172,657,678
	total 85-96	169,732,780	168,356,609	166,951,551						
	total 96-02			166,951,551	161,928,232	140,264,331	152,501,945	171,454,286	173,503,341	172,657,678
	Trend 85-96	166,042,101	169,325,439	172,608,777						
	Trend 96-02			155,095,350	157,647,441	160,199,532	162,751,623	165,303,715	167,855,806	170,407,897
Margin	Total Margin 86-96	318,623,757	313,760,694	322,237,668	328,207,160	306,409,089	314,662,920	319,404,651	307,535,068	326,158,071
	Total Margin 96-02			322,237,668	328,207,160	306,409,089	314,662,920	319,404,651	307,535,068	326,158,071
	Trend 85-96	298,886,387	305,253,518	311,620,649						
	Trend 96-02			319,579,312	318,986,905	318,394,497	317,802,090	317,209,682	316,617,274	316,024,867

DTE Return in 1985 Dollar

Line	Description	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	GDP IPD Index									
2	GDPIPD	0.9601	0.9810	1.0000	1.0195	1.0320	1.0469	1.0689	1.0942	1.1066
3	GDP PI Index 100	96.01	98.10	100.00	101.95	103.20	104.69	106.89	109.42	110.66
4	GDPIPD Ratio to Year 1985	0.77	0.75	0.74	0.72	0.71	0.70	0.69	0.67	0.67
5	Actual Index (1985=1)	0.60	0.59	0.59	0.59	0.68	0.61	0.54	0.52	0.51
6										
7 (850-854)	TOTAL T&D EXPENSE	44,228,998	40,627,392	42,386,686	38,049,101	34,638,605	39,321,629	46,078,513	42,955,040	39,966,237
8										
9 (901-905)	TOTAL CUSTOMER ACCT EXPENSE	31,142,729	28,860,013	27,444,507	26,600,110	26,025,836	25,399,375	25,737,655	18,713,112	23,003,032
10										
11 (911-916)	TOTAL MKG SERVICES EXPENSES	4,725,452	4,870,441	4,971,020	5,384,996	4,838,112	4,995,254	7,982,047	8,543,965	9,262,415
12										
13 (920-932)	TOTAL A&G EXPENSE	32,942,455	37,765,278	36,385,161	37,807,709	27,911,510	31,847,883	34,387,918	45,338,658	42,755,890
14										
15	TOTAL	113,039,634	112,123,124	111,187,375	107,841,915	93,414,063	101,564,141	114,186,133	115,550,775	114,987,575
	(TREND)	107,096,757	109,142,066	111,187,375	111,820,741	112,454,108	113,087,475	113,720,841	114,354,208	114,987,575
	total 85-96	113,039,634	112,123,124	111,187,375						
	total 96-02			111,187,375	107,841,915	93,414,063	101,564,141	114,186,133	115,550,775	114,987,575
	Trend 85-96	110,581,694	112,768,351	114,955,008						
	Trend 96-02			103,291,312	104,990,969	106,690,626	108,390,282	110,089,939	111,789,596	113,489,253
Margin	Total Margin 86-96	212,198,922	208,960,190	214,605,736	218,581,333	204,064,125	209,561,060	212,718,986	204,814,011	217,216,669







KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

DTE Return

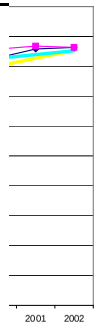
Line	Acct	Description
1	(850-854)	TOTAL T&D EXPENSE
2		
3	(901-905)	TOTAL CUSTOMER ACCT EXPENSE
4		
5	(911-916)	TOTAL MKG SERVICES EXPENSES
6		
7	(920-932)	TOTAL A&G EXPENSE
8		
9		TOTAL
		(TREND)
		total 85-96
		total 96-02
		Trend 85-96
		Trend 96-02
	Margin	Total Margin 86-96
		Total Margin 96-02
		Trend 85-96
		Trend 96-02

DTE Return in 2002 Dollar

Line		Description
1	GDP IPD Index	
2		GDPIPD
3		GDP PI Index 100
4		GDPIPD Ratio to Year 2002
5		Actual Index (2002=1)
6		
7	(850-854)	TOTAL T&D EXPENSE
8		
9	(901-905)	TOTAL CUSTOMER ACCT EXPENSE
10		
11	(911-916)	TOTAL MKG SERVICES EXPENSES
12		
13	(920-932)	TOTAL A&G EXPENSE
14		
15		TOTAL
		(TREND)
		total 85-96
		total 96-02
		Trend 85-96
		Trend 96-02
	Margin	Total Margin 86-96
		Total Margin 96-02
		Trend 85-96
		Trend 96-02

DTE Return in 1985 Dollar

Line		Description
1	GDP IPD Index	
2		GDPIPD
3		GDP PI Index 100
4		GDPIPD Ratio to Year 1985
5		Actual Index (1985=1)
6		
7	(850-854)	TOTAL T&D EXPENSE
8		
9	(901-905)	TOTAL CUSTOMER ACCT EXPENSE
10		
11	(911-916)	TOTAL MKG SERVICES EXPENSES
12		
13	(920-932)	TOTAL A&G EXPENSE
14		
15		TOTAL
		(TREND)
		total 85-96
		total 96-02
		Trend 85-96
		Trend 96-02
	Margin	Total Margin 86-96

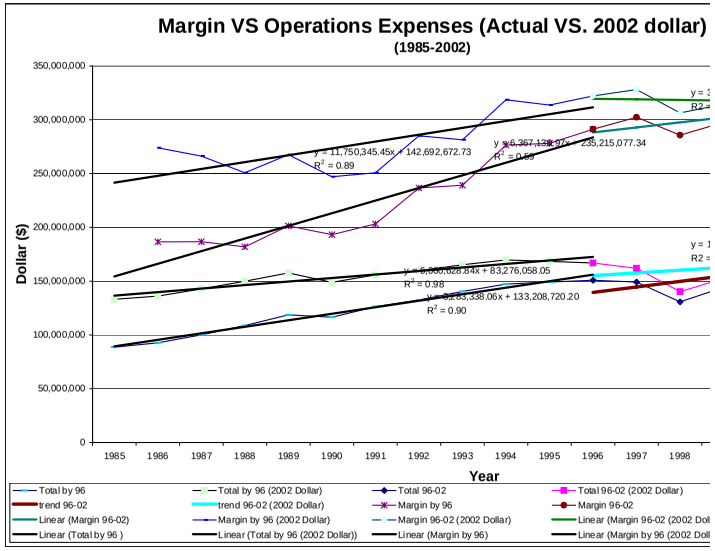


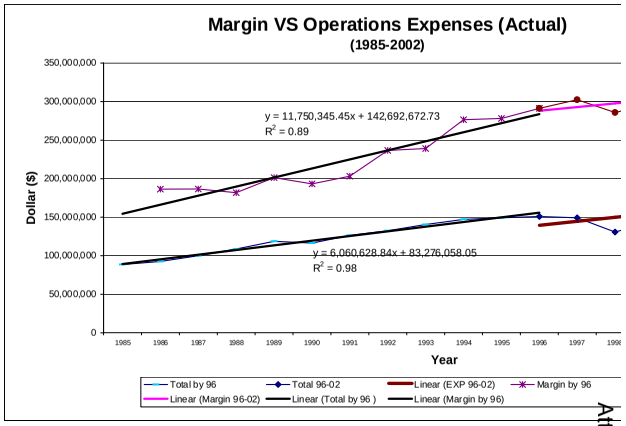
KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

Total Margin 96-02								
Trend 85-96	165,130,757	169,371,177	173,611,596	177,852,015	182,092,435	186,332,854	190,573,273	194,813,693
Trend 96-02								

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

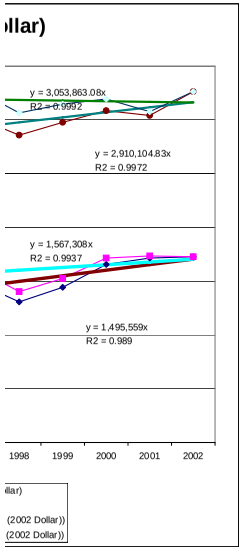
Total Margin 96-02			214,605,736	218,581,333	204,064,125	209,561,060	212,718,986	204,814,011	217,216,669
Trend 85-96	199,054,112	203,294,531	207,534,951						
Trend 96-02			212,835,308	212,440,773	212,046,238	211,651,703	211,257,168	210,862,633	210,468,097

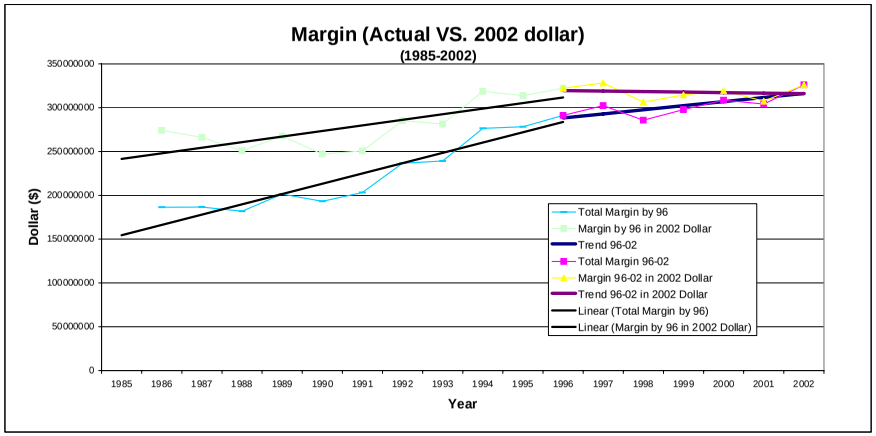


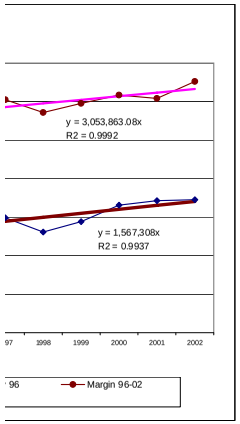


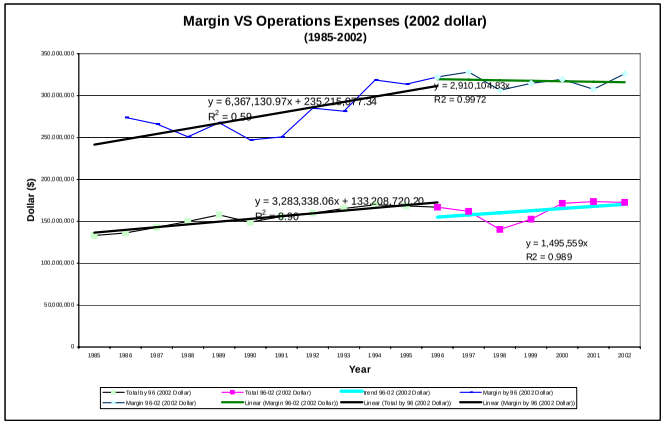
KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

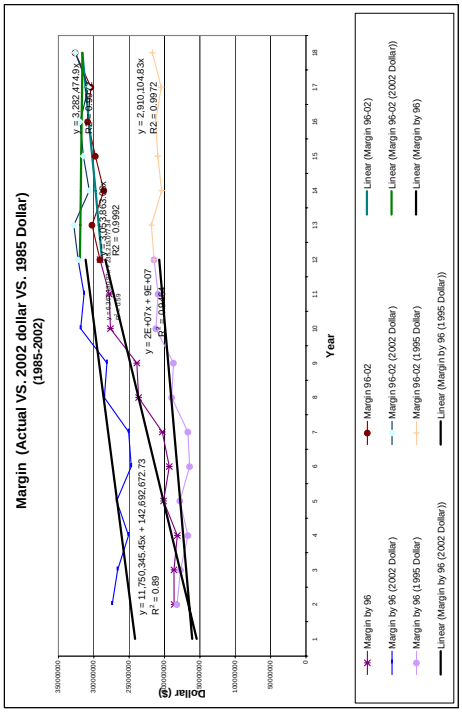
Total Margin 96-02
Trend 85-96
Trend 96-02










Margin (Actual VS. 2002 dollar VS. 1985 Dollar)
(1985-2002)
Dollar ($)
Year
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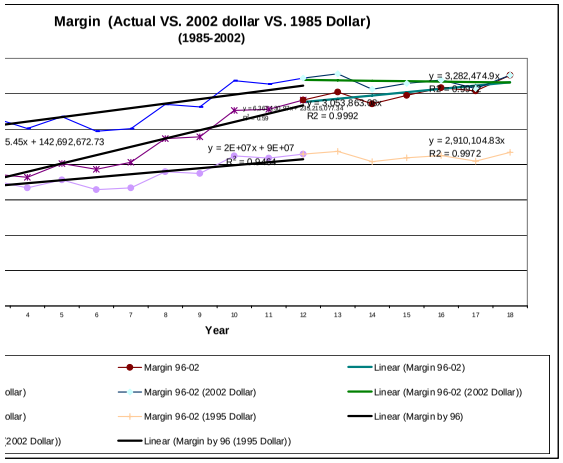
R2 = 0.9992
y = 2,910,104.83x
R2 = 0.9972
y = 11,750,345.45x + 142,692,672.73
R² = 0.69
y = 2E+07x + 9E+07
R² = 0.0464
Margin by 96
Margin by 96 (2002 Dollar)
Margin by 96 (1995 Dollar)
Linear (Margin by 96 (2002 Dollar))
Margin 96-02
Margin 96-02 (2002 Dollar)
Margin 96-02 (1995 Dollar)
Linear (Margin by 96 (1995 Dollar))
Linear (Margin 96-02)
Linear (Margin 96-02 (2002 Dollar))
Linear (Margin by 96)

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

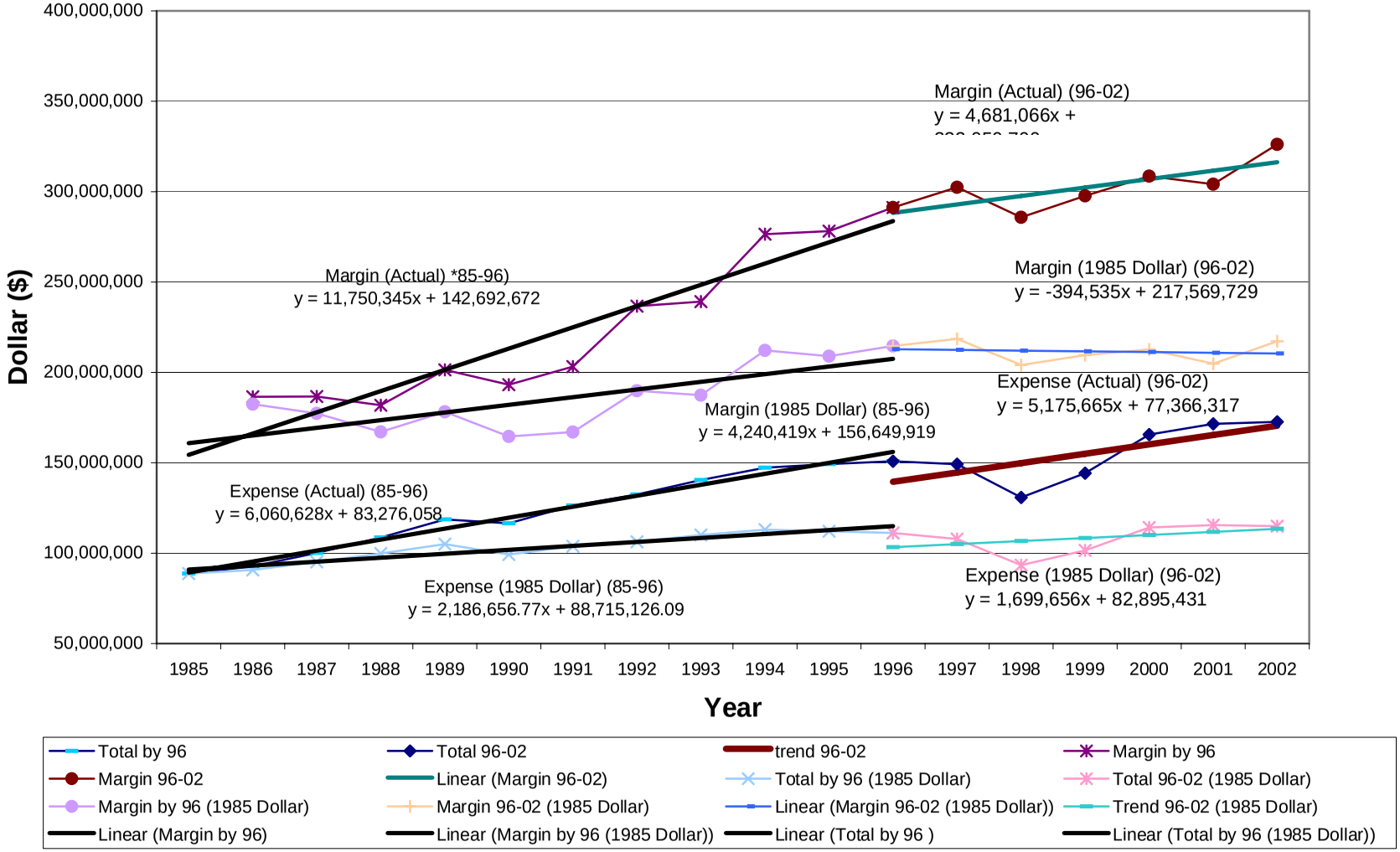


KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - Total

Distribution Revenue vs. Operation & Maintenance Expenses

(Actual vs.. 1985 Dollars)

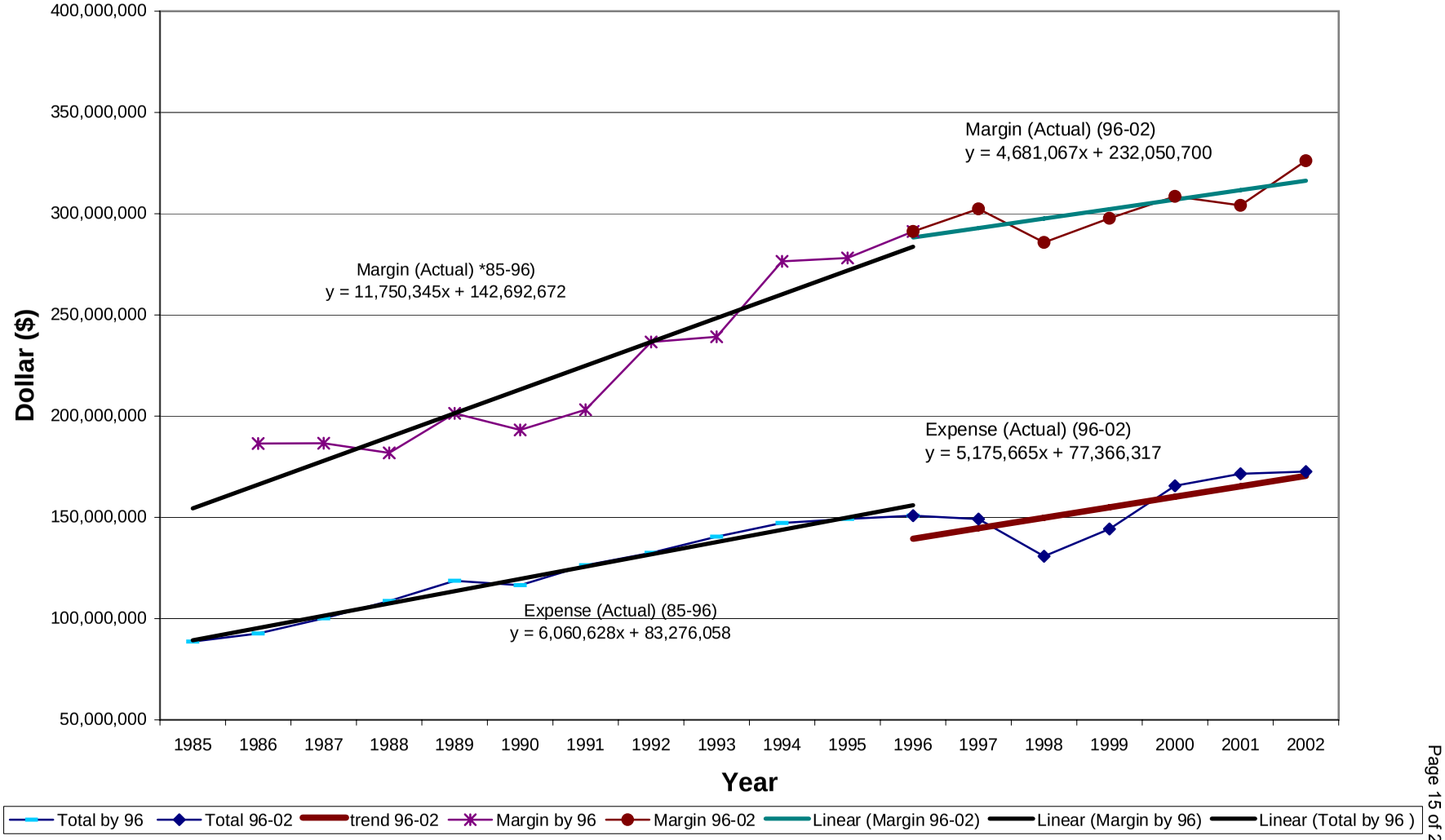
(1985-2002)



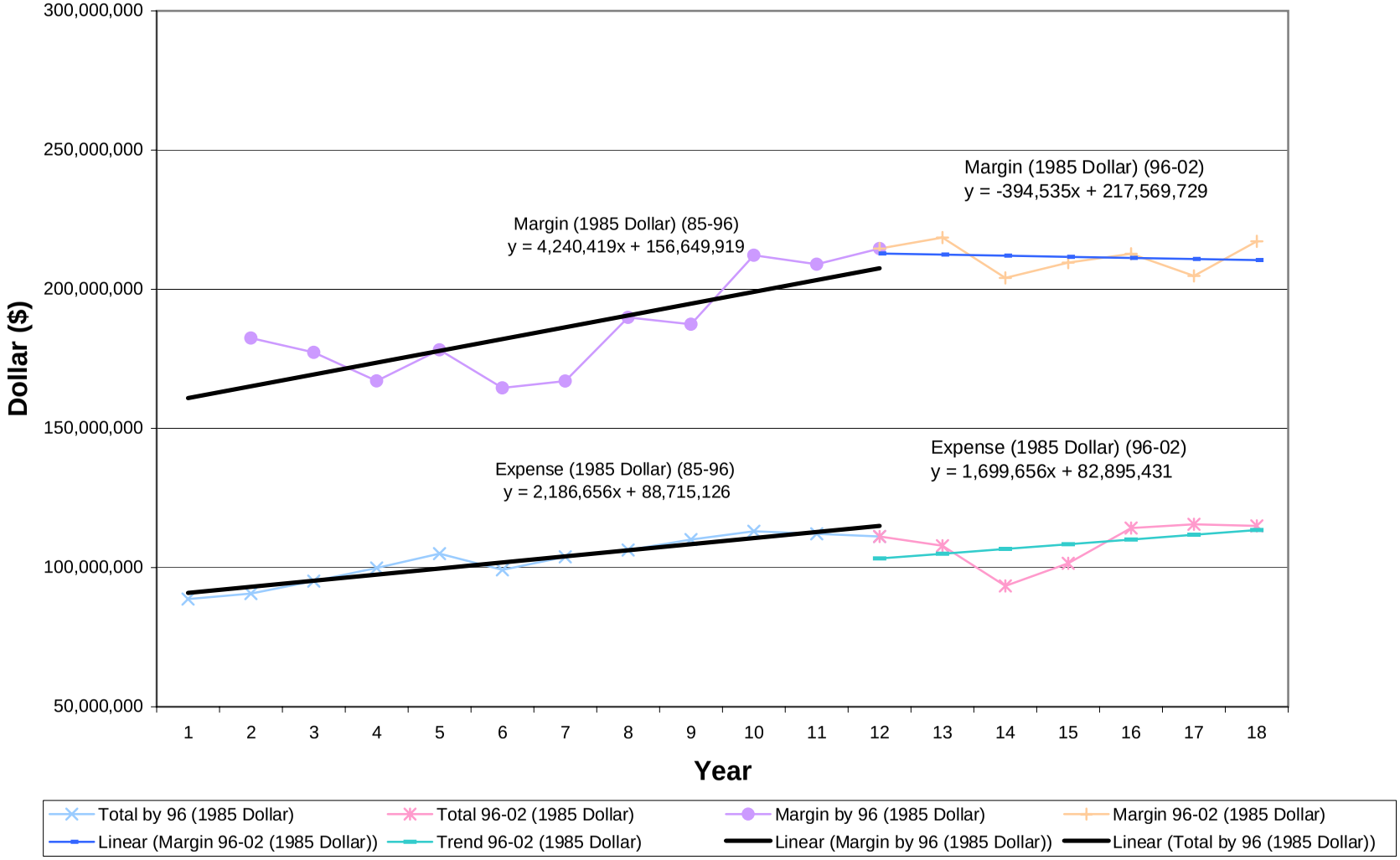
Distribution Revenue vs. Operations & Maintenance Expenses

(Actual Dollars)

(1985-2002)



Distribution Revenue vs. Operations & Maintenance Expenses
(1985 Dollars)
(1985-2002)



KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - T&D

DTE Return

Line	Acct	Description	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
1		DISTRIBUTION EXPENSE																		
2		OPERATION EXPENSE																		
3		850-SUPER & ENGINEERING	620,206	648,550	696,207	793,416	1,138,080	1,373,706	1,460,945	1,439,405	1,621,611	1,678,880	1,851,973	1,954,003	2,170,990	2,366,111	2,481,964	2,790,603	2,915,714	2,839,760
4		851-SYSTEM CONTROL&LOAD DIS	258,562	343,532	357,594	377,956	453,351	455,796	465,874	519,881	555,118	537,934	579,510	648,677	599,988	633,836	666,086	709,087	811,445	851,173
5		852-COMMUNICATIONS EXP	127,549	123,008	223,222	180,701	218,001	213,300	211,262	222,713	241,685	330,615	443,056	537,556	646,034	644,175	757,258	758,027	696,815	771,701
6		853-COMPRESSOR STA LABOR & EXP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		855-FUEL & PWR FOR COMPRES STA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		857-MEAS & REG STA EQUIP	367,768	405,534	412,487	435,807	524,712	681,434	562,706	527,646	561,399	612,347	635,034	649,329	729,715	677,530	732,702	850,514	797,593	1,032,208
9		874-MAINS & SERVICE EXPENSE	1,582,822	1,714,301	1,864,942	1,940,975	2,652,912	2,923,967	3,228,908	3,805,627	4,526,403	4,997,415	6,385,786	6,692,894	6,952,191	7,254,938	7,291,680	8,005,633	7,138,949	9,295,840
10		878-METER & HOUSE REG EXP	2,790,581	3,120,773	3,351,599	3,694,855	3,997,573	3,996,971	4,209,751	4,540,819	4,902,960	5,140,824	5,744,118	5,976,095	6,726,451	6,930,624	6,892,282	7,028,026	6,055,420	7,483,806
11		879-CUSTOMER INSTALL EXP	4,300,237	4,618,045	4,771,096	5,241,002	5,713,538	5,349,851	5,322,569	5,713,114	6,419,914	6,806,316	7,742,154	8,336,058	9,335,166	8,652,614	8,560,701	9,353,791	8,749,534	9,442,668
12		880-OTHER EXPENSES	738,529	920,236	1,307,623	1,634,037	1,748,317	1,740,667	1,834,547	2,261,364	2,509,582	2,701,202	3,055,782	3,351,626	4,483,127	4,333,316	4,676,681	3,718,278	4,202,581	4,586,000
13		881-RENTS	701,563	691,315	708,931	748,198	727,161	698,820	641,573	702,512	790,597	699,908	711,910	722,635	1,041,787	1,243,749	1,289,883	1,447,675	1,311,176	1,394,842
14		TOTAL OPERATION EXP	11,487,817	12,585,294	13,693,701	15,046,947	17,173,645	17,434,512	17,938,135	19,733,081	22,129,269	23,505,441	27,149,323	28,868,873	32,685,449	32,736,893	33,349,237	34,661,634	32,679,227	37,697,998
15		882-transportation expen																		
16		MAINTENANCE																		
17		885-SUPERVISION	690,741	779,855	707,809	675,967	898,801	935,363	961,523	1,053,094	1,110,735	1,110,624	1,166,802	1,313,119	1,495,643	1,558,810	1,542,213	1,743,983	1,391,172	1,517,010
18		886-MAINT STRUCT & IMPROVE	148,877	286,970	9,750	23,129	16,395	8,340	15,324	36,999	68,831	54,708	90,650	22,898	54,995	64,636	121,460	127,745	138,228	145,678
19		887-MAINT OF MAINS	3,020,795	2,979,887	2,976,377	3,174,664	4,944,648	4,195,017	4,434,639	4,634,576	5,230,957	5,512,606	6,971,204	7,452,358	8,165,619	8,781,864	9,049,792	9,820,910	17,856,454	11,406,562
20		888-MAINT OF COMPRES STA EQUIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21		889-MAINT OF MEAS & REG STA EQ	431,257	573,965	601,357	657,710	751,249	798,781	793,271	1,036,366	962,548	1,049,907	1,156,649	1,152,599	1,145,052	1,305,301	1,459,511	1,556,984	1,853,455	1,705,760
22		892-MAINT OF SERVICES	1,559,996	1,623,129	1,809,365	1,996,914	2,232,209	2,119,353	2,113,256	2,268,725	2,532,154	2,735,846	3,107,022	3,425,241	3,492,035	3,575,163	3,525,744	3,997,946	3,614,458	4,465,931
23		893-MAINT METER & HOUSE REG	177,584	175,400	228,778	265,859	364,122	409,490	348,403	358,435	399,137	390,465	490,179	516,590	602,511	569,376	264,818	498,486	413,652	614,800
24		894-MAINT OF OTHER EQUIPT	71,925	76,176	67,088	66,447	81,441	75,911	86,029	96,796	109,589	119,152	79,434	88,588	90,332	103,711	121,659	124,017	109,236	66,391
25		TOTAL MAINTENANCE EXP	6,101,175	6,495,382	6,400,524	6,860,690	9,288,865	8,542,255	8,752,445	9,484,991	10,413,951	10,973,308	13,061,940	13,971,393	15,046,187	15,958,861	16,085,197	17,870,071	25,376,655	19,922,132
26																				
27		TOTAL T&D EXPENSE	17,588,992	19,080,676	20,094,225	21,907,637	26,462,510	25,976,767	26,690,580	29,218,072	32,543,220	34,478,749	40,211,263	42,840,266	47,731,636	48,695,754	49,434,434	52,531,705	58,055,882	57,620,130
28																				

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - T&D

DTE Return

Line	Acct	Description	1995	1996	1997	1998	1999	2000	2001	2002
1		DISTRIBUTION EXPENSE								
2		OPERATION EXPENSE								
3		850-SUPER & ENGINEERING	2,448,208	3,341,119	2,832,834	2,076,971	2,575,233	2,520,008	2,506,599	132,388
4		851-SYSTEM CONTROL&LOAD DIS	823,936	775,225	694,045	728,964	758,034	860,255	962,517	43,705
5		852-COMMUNICATIONS EXP	1,008,725	1,166,534	1,096,879	475,547	1,123,694	1,892,540	488,559	-3,055
6		853-COMPRESSOR STA LABOR & EXP	0	0	0	0	0	0	0	0
7		855-FUEL & PWR FOR COMPRES STA	0	0	0	0	0	0	0	0
8		857-MEAS & REG STA EQUIP	920,097	676,213	739,591	672,829	1,431,535	1,333,265	1,168,103	1,224,292
9		874-MAINS & SERVICE EXPENSE	8,202,542	7,947,687	7,167,559	7,904,985	11,606,957	12,540,760	13,180,922	15,919,632
10		878-METER & HOUSE REG EXP	7,453,280	8,115,066	7,876,485	6,776,501	7,405,292	7,650,042	7,599,152	7,415,530
11		879-CUSTOMER INSTALL EXP	9,041,759	8,782,365	7,589,144	7,096,669	5,619,878	6,035,641	6,461,690	5,686,011
12		880-OTHER EXPENSES	5,835,447	5,310,806	4,471,544	2,981,353	2,282,624	4,784,193	2,751,399	41,492
13		881-RENTS	1,368,827	1,379,370	2,496,156	1,276,629	1,063,811	1,042,101	1,172,436	0
14		TOTAL OPERATION EXP	37,102,821	37,494,385	34,964,237	29,990,448	33,867,058	38,658,805	36,291,376	30,459,994
15		882-transportation expen								
16		MAINTENANCE								
17		885-SUPERVISION	925,781	1,305,280	1,138,660	952,436	891,773	962,937	937,869	475,569
18		886-MAINT STRUCT & IMPROVE	137,105	99,893	98,819	87,325	68,477	102,055	110,388	29,882
19		887-MAINT OF MAINS	9,214,760	10,439,790	8,909,777	9,851,944	12,175,435	14,992,499	14,190,280	15,696,709
20		888-MAINT OF COMPRES STA EQUIP	0	0	0	0	0	0	0	0
21		889-MAINT OF MEAS & REG STA EQ	1,818,877	2,082,155	1,991,388	2,048,657	1,461,847	1,671,930	2,101,051	1,318,219
22		892-MAINT OF SERVICES	4,245,982	5,549,666	4,861,087	4,687,850	6,478,278	9,374,080	9,364,196	11,385,587
23		893-MAINT METER & HOUSE REG	564,556	443,470	583,550	788,612	754,342	925,554	684,322	539,751
24		894-MAINT OF OTHER EQUIPT	73,146	101,727	88,491	101,581	161,700	148,180	99,529	104,927
25		TOTAL MAINTENANCE EXP	16,980,207	20,021,981	17,671,772	18,518,405	21,991,852	28,177,235	27,487,634	29,550,644
26										
27		TOTAL T&D EXPENSE	54,083,028	57,516,366	52,636,009	48,508,853	55,858,910	66,836,040	63,779,011	60,010,638
28										

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - T&D

DTE Return in 2002 Dollar

Line	Description	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
1	GDP IPD Index																		
2	GDPIPD	0.4502	0.4823	0.5224	0.5705	0.6237	0.6626	0.6887	0.7144	0.7370	0.7532	0.7757	0.8022	0.8327	0.8653	0.8966	0.9185	0.9405	0.9601
3	GDP PI Index 100	45.02	48.23	52.24	57.05	62.37	66.26	68.87	71.44	73.70	75.32	77.57	80.22	83.27	86.53	89.66	91.85	94.05	96.01
4	GDPIPD Ratio to Year 2002	2.46	2.29	2.12	1.94	1.77	1.67	1.61	1.55	1.50	1.47	1.43	1.38	1.33	1.28	1.23	1.20	1.18	1.15
5																			
6	DISTRIBUTION EXPENSE																		
7	OPERATION EXPENSE																		
8	850-SUPER & ENGINEERING	1,524,585	1,488,064	1,474,715	1,538,861	2,019,238	2,294,203	2,347,259	2,229,614	2,434,903	2,466,425	2,641,800	2,695,437	2,884,976	3,025,808	3,063,075	3,362,138	3,430,422	3,273,026
9	851-SYSTEM CONTROL&LOAD DIS	635,595	788,216	757,461	733,060	804,358	761,217	748,507	805,287	833,528	790,273	826,659	894,813	797,310	810,556	822,039	854,313	954,689	981,038
10	852-COMMUNICATIONS EXP	313,540	282,235	472,832	350,476	386,788	356,229	339,429	344,979	362,898	485,703	632,010	741,528	858,499	823,778	934,558	913,276	819,823	889,441
11	853-COMPRESSOR STA LABOR & EXP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	855-FUEL & PWR FOR COMPRES STA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	857-MEAS & REG STA EQUIP	904,044	930,477	873,736	845,264	930,970	1,138,051	904,084	817,315	842,959	899,593	905,862	895,713	969,701	866,433	904,252	1,024,705	938,391	1,189,693
14	874-MAINS & SERVICE EXPENSE	3,890,880	3,933,375	3,950,346	3,764,595	4,706,928	4,883,267	5,187,795	5,894,853	6,796,545	7,341,650	9,109,186	9,232,468	9,238,599	9,277,693	8,998,907	9,645,243	8,399,181	10,714,119
15	878-METER & HOUSE REG EXP	6,859,783	7,160,452	7,099,404	7,166,312	7,092,692	6,675,272	6,763,688	7,033,653	7,361,958	7,552,331	8,193,861	8,243,685	8,938,619	8,862,957	8,505,996	8,467,415	7,124,378	8,625,621
16	879-CUSTOMER INSTALL EXP	10,570,807	10,595,865	10,106,202	10,165,123	10,137,241	8,934,693	8,551,621	8,849,519	9,639,715	9,999,088	11,044,016	11,499,120	12,405,278	11,065,056	10,565,048	11,269,513	10,294,081	10,883,349
17	880-OTHER EXPENSES	1,815,446	2,111,434	2,769,825	3,169,277	3,101,950	2,907,058	2,947,515	3,502,815	3,768,221	3,968,308	4,359,007	4,623,378	5,957,520	5,541,491	5,771,649	4,479,807	4,944,459	5,285,693
18	881-RENTS	1,724,576	1,586,186	1,501,668	1,451,159	1,290,165	1,167,087	1,030,797	1,088,179	1,187,108	1,028,228	1,015,524	996,834	1,384,406	1,590,520	1,591,888	1,744,169	1,542,637	1,607,655
19	TOTAL OPERATION EXP	28,239,257	28,876,305	29,006,189	29,184,128	30,470,329	29,117,076	28,820,695	30,566,214	33,227,835	34,531,598	38,727,924	39,822,976	43,434,907	41,864,293	41,157,412	41,760,580	38,448,060	43,449,635
20																			
21	MAINTENANCE																		
22	885-SUPERVISION	1,697,974	1,789,337	1,499,291	1,311,064	1,594,697	1,562,134	1,544,852	1,631,225	1,667,806	1,631,606	1,664,418	1,811,373	1,987,524	1,993,423	1,903,297	2,101,163	1,636,754	1,748,462
23	886-MAINT STRUCT & IMPROVE	365,968	658,438	20,653	44,860	29,089	13,928	24,621	57,311	103,352	80,371	129,310	31,586	73,082	82,657	149,898	153,908	162,629	167,904
24	887-MAINT OF MAINS	7,425,693	6,837,196	6,304,603	6,157,382	8,773,039	7,006,025	7,125,009	7,178,881	7,854,456	8,098,512	9,944,272	10,280,106	10,851,095	11,230,343	11,168,652	11,832,301	21,008,637	13,146,877
25	888-MAINT OF COMPRES STA EQUIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	889-MAINT OF MEAS & REG STA EQ	1,060,112	1,316,933	1,273,803	1,275,654	1,332,903	1,334,030	1,274,526	1,605,314	1,445,298	1,542,407	1,649,935	1,589,945	1,521,632	1,669,233	1,801,232	1,875,865	2,180,644	1,966,010
27	892-MAINT OF SERVICES	3,834,769	3,724,185	3,832,622	3,873,091	3,960,495	3,539,495	3,395,309	3,514,217	3,802,114	4,019,203	4,432,100	4,724,926	4,640,481	4,571,957	4,351,239	4,816,753	4,252,515	5,147,304
28	893-MAINT METER & HOUSE REG	436,536	402,446	484,601	515,644	646,043	683,882	559,769	555,210	599,318	573,628	699,230	712,607	800,662	728,124	326,821	600,579	486,674	708,601
29	894-MAINT OF OTHER EQUIPT	176,805	174,782	142,107	128,876	144,497	126,778	138,220	149,935	164,552	175,045	113,311	122,202	120,040	132,627	150,143	149,417	128,519	76,520
30	TOTAL MAINTENANCE EXP	14,997,858	14,903,317	13,557,680	13,306,570	16,480,763	14,266,272	14,062,306	14,692,093	15,636,895	16,120,772	18,632,576	19,272,746	19,994,516	20,408,364	19,851,281	21,529,987	29,856,372	22,961,680
31																			
32	TOTAL T&D EXPENSE	43,237,114	43,779,622	42,563,869	42,490,698	46,951,093	43,383,347	42,883,001	45,258,308	48,864,730	50,652,371	57,360,500	59,095,722	63,429,423	62,272,657	61,008,694	63,290,567	68,304,433	66,411,315
33																			

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - T&D

DTE Return in 2002 Dollar

Line	Description	1995	1996	1997	1998	1999	2000	2001	2002
1	GDP IPD Index								
2	GDPIPD	0.9810	1.0000	1.0195	1.0320	1.0469	1.0689	1.0942	1.1066
3	GDP PI Index 100	98.10	100.00	101.95	103.20	104.69	106.89	109.42	110.66
4	GDPIPD Ratio to Year 2002	1.13	1.11	1.09	1.07	1.06	1.04	1.01	1.00
5									
6	DISTRIBUTION EXPENSE								
7	OPERATION EXPENSE								
8	850-SUPER & ENGINEERING	2,761,476	3,697,132	3,074,805	2,226,921	2,722,015	2,608,703	2,534,873	132,388
9	851-SYSTEM CONTROL&LOAD DIS	929,365	857,829	753,328	781,593	801,240	890,533	973,374	43,705
10	852-COMMUNICATIONS EXP	1,137,799	1,290,834	1,190,571	509,880	1,187,742	1,959,150	494,070	-3,055
11	853-COMPRESSOR STA LABOR & EXP	0	0	0	0	0	0	0	0
12	855-FUEL & PWR FOR COMPRES STA	0	0	0	0	0	0	0	0
13	857-MEAS & REG STA EQUIP	1,037,831	748,267	802,764	721,405	1,513,129	1,380,191	1,181,279	1,224,292
14	874-MAINS & SERVICE EXPENSE	9,252,123	8,794,553	7,779,787	8,475,697	12,268,526	12,982,149	13,329,600	15,919,632
15	878-METER & HOUSE REG EXP	8,406,987	8,979,767	8,549,267	7,265,740	7,827,376	7,919,295	7,684,869	7,415,530
16	879-CUSTOMER INSTALL EXP	10,198,724	9,718,170	8,237,382	7,609,023	5,940,198	6,248,073	6,534,577	5,686,011
17	880-OTHER EXPENSES	6,582,139	5,876,699	4,853,488	3,196,596	2,412,728	4,952,579	2,782,434	41,492
18	881-RENTS	1,543,979	1,526,349	2,709,369	1,368,797	1,124,446	1,078,779	1,185,661	0
19	TOTAL OPERATION EXP	41,850,424	41,489,599	37,950,760	32,155,652	35,797,401	40,019,453	36,700,736	30,459,994
20									
21	MAINTENANCE								
22	885-SUPERVISION	1,044,242	1,444,364	1,235,920	1,021,199	942,602	996,829	948,448	475,569
23	886-MAINT STRUCT & IMPROVE	154,649	110,537	107,260	93,630	72,380	105,647	111,633	29,882
24	887-MAINT OF MAINS	10,393,862	11,552,202	9,670,819	10,563,220	12,869,406	15,520,180	14,350,343	15,696,709
25	888-MAINT OF COMPRES STA EQUIP	0	0	0	0	0	0	0	0
26	889-MAINT OF MEAS & REG STA EQ	2,051,617	2,304,019	2,161,485	2,196,563	1,545,169	1,730,776	2,124,750	1,318,219
27	892-MAINT OF SERVICES	4,789,289	6,141,011	5,276,304	5,026,296	6,847,525	9,704,013	9,469,822	11,385,587
28	893-MAINT METER & HOUSE REG	636,795	490,724	633,395	845,547	797,338	958,130	692,041	539,751
29	894-MAINT OF OTHER EQUIPT	82,506	112,567	96,050	108,915	170,917	153,395	100,652	104,927
30	TOTAL MAINTENANCE EXP	19,152,960	22,155,423	19,181,233	19,855,368	23,245,336	29,168,970	27,797,689	29,550,644
31									
32	TOTAL T&D EXPENSE	61,003,384	63,645,022	57,131,993	52,011,021	59,042,737	69,188,423	64,498,425	60,010,638
33									

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - A&G etc.

DTE Return

Line	Acct	Description	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	CUSTOMER ACCTS EXPENSE																			
2	901	Supv. & Eng.	1777208	1948827	2098505	2260865	2379523	2317314	2352868	2977563	2940569	2954916	2502015	2,958,056	2,888,133	3,280,480	3,789,500	3,941,293	1,293,602	567,277
3	902	Meter Reading	3181662	3644814	3852470	3698550	3742426	3944381	4087030	4939602	3437503	4140268	4057013	3,408,133	3,364,214	3,275,366	2,580,814	2,658,755	2,694,937	3,095,952
4	903	Cust. Records	13999948	14223528	15223511	16452093	16656493	16649058	16285828	16477485	16048068	17280416	17195875	16,791,753	17,184,500	16,794,643	18,597,868	20,127,819	12,445,800	14,057,374
5	904	Uncollectible Accts.	5709999	5635000	5493000	4952000	6688000	7908335	14071980	12444000	13127000	15830000	14500000	13,947,378	13,221,902	12,950,004	10,975,000	10,448,001	4,257,119	6,290,270
6	905	Miscellaneous	327665	333429	422874	388775	339150	357227	317217	341617	273188	366156	163435	135,344	139,062	146,802	138,268	156,130	147,669	265,948
7		**Total**	24996482	25785598	27090360	27752283	29805592	31176315	37114923	37180267	35826328	40571756	38418338	37,240,664	36,797,811	36,447,295	36,081,450	37,331,998	20,839,128	24,276,820
8																				
9	904 Adjust																			
10		Adjusted 1: Acct 904 / 0.38																	6,945,826	
11		Adjusted 2: Acct 904 +10263000																		10,263,000
12		**Total**	24,996,482	25,785,598	27,090,360	27,752,283	29,805,592	31,176,315	37,114,923	37,180,267	35,826,328	40,571,756	38,418,338	37,240,664	36,797,811	36,447,295	36,081,450	37,331,998	27,784,953	34,539,820
13																				
14	MARKETING SERVICES EXPENSES																			
15	911	Supv. & Eng.	413171	391538	374601	452667	635799	702072	808676	782812	765958	723506	964792	1,024,037	753,404	553,920	1,632,019	1,902,970	2,363,682	267,770
16	912	Salary & Exp.	839322	960212	1006992	1036996	1232392	1206880	1182136	1419054	1829843	1914540	1878904	3,218,261	4,261,384	3,346,285	2,610,503	7,015,195	9,290,752	11,547,007
17	913	Advertising	661700	851780	902536	510458	821404	796173	698068	1286225	1350443	1616774	1833740	1,205,134	975,860	1,256,684	1,026,938	1,211,644	964	2,120,505
18	916	Miscellaneous	1367903	1530300	1414594	1573150	1956014	2177687	2225624	2200813	2069683	1901349	1806076	1,297,965	1,458,797	1,618,536	1,826,620	1,448,004	1,030,555	-27,456
19		Total Mktg. Svcs.	3282096	3733830	3698723	3573271	4645609	4882812	4914504	5688904	6015927	6156169	6483512	6,745,397	7,449,445	6,775,425	7,096,080	11,577,813	12,685,953	13,907,825
20		RCS Expenses in 916	0	0	0	0	0	0	0	0				0	0	0	0			
21		**Total**	3282096	3733830	3698723	3573271	4645609	4882812	4914504	5688904	6015927	6156169	6483512	6,745,397	7,449,445	6,775,425	7,096,080	11,577,813	12,685,953	13,907,825
22																				
23	ADMINISTRATIVE AND GENERAL EXPENSES																			
24	920	Salary	5077789	5412342	5144578	6401285	5768297	6157452	6654930	6165739	8355155	6884192	6906861	7,009,197	6,678,164	5,961,891	6,715,927	7,877,813	4,180,685	21,320,978
25	921	Office Supplies	2487183	2575173	2843626	3037017	3194715	2819713	2890504	2782339	4324782	2989997	3126773	5,297,708	5,042,197	5,291,650	5,802,684	5,676,818	3,072,449	25,922,271
26	922	Admin Exp - Transf (Cr)	-209414	-223262	-240343	-220518	-239104	-260296	-256386	-262551	-258954	-253843	-223617	-118,507	0	0	0	0	-15,324,998	-15,324,998
27	923	Outside Services	1496193	1448456	2177390	1812830	2081860	1139919	1185376	2055432	1761683	2481113	3123242	1,463,108	1,134,355	1,069,395	954,353	1,869,040	1,403,959	860,845
28	924	Property Ins	1202304	2550427	2626053	2188152	2007531	1728854	1854534	1988840	2071250	2248637	2326948	2,361,507	2,272,454	2,253,875	1,968,121	1,982,782	729,513	462,183
29	925	Injury & Damages	1457758	1410876	1452494	1576962	2420408	1421689	1518943	2187464	1562447	2281347	2206434	2,150,497	2,329,175	1,873,881	2,289,792	1,852,431	951,184	1,067
30	926	Pension	11845430	10207774	10102637	12277875	13771524	13250111	14580284	15093817	14912607	18357711	24104847	21,520,036	16,935,606	15,307,206	18,165,471	16,935,840	18,121,756	16,685,838
31	928	Regulatory Exp	544646	459333	253736	647742	774372	385117	1068043	938673	1030762	712650	924989	1,081,129	849,200	1,195,100	1,049,988	1,089,475	1,238,996	932,004
32	929	Duplicate Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
33	930	Misc	2726178	3519385	3403890	4799218	4939003	3499276	3746198	4243258	4774055	4990632	5330458	6,619,566	14,791,231	4,917,144	7,142,528	34,896,957	36,256,547	-2,008,853
34	931	Rents	1239111	1319454	1383441	1997719	1765656	1581073	1636221	1892778	2039334	2223946	2446057	1,988,391	2,269,693	1,217,902	1,153,108	1,145,891	1,363,082	0
35	932	Gen Plt Maint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,846
36		**Total A & G**	27867178	28679958	29147502	34518282	36484262	31722908	34878647	37085789	40573121	42916382	50272992	49,372,632	52,302,075	39,088,044	45,241,972	73,327,047	51,993,173	48,874,396
37																				
38	922 Adjust	Removed Credit from CGA Recoveries																	15,324,998	15,324,998
39	930 Adjust	Misc Adjustment																-23448000		
40		**Total A & G**	27,867,178	28,679,958	29,147,502	34,518,282	36,484,262	31,722,908	34,878,647	37,085,789	40,573,121	42,916,382	50,272,992	49,372,632	52,302,075	39,088,044	45,241,972	49,879,047	67,318,171	64,199,394

KEYSPAN IN NEW ENGLAND -- BOSTON GAS COMPANY
Operations Expense Data - A&G etc.

DTE Return in 2002 Dollar

Line		Description	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	GDP IPD Index																			
2		GDPIPD	0.7370	0.7532	0.7757	0.8022	0.8327	0.8653	0.8966	0.9185	0.9405	0.9601	0.9810	1.0000	1.0195	1.0320	1.0469	1.0689	1.0942	1.1066
3		GDP PI Index 100	73.70	75.32	77.57	80.22	83.27	86.53	89.66	91.85	94.05	96.01	98.10	100.00	101.95	103.20	104.69	106.89	109.42	110.66
4		GDPIPD Ratio to Year 2002	1.50	1.47	1.43	1.38	1.33	1.28	1.23	1.20	1.18	1.15	1.13	1.11	1.09	1.07	1.06	1.04	1.01	1.00
5																				
6	CUSTOMER ACCTS EXPENSE																			
7	901	Supv. & Eng.	2,668,537	2,863,001	2,993,472	3,118,735	3,162,091	2,963,406	2,903,753	3,587,389	3,459,665	3,405,752	2,822,168	3,273,252	3,134,827	3,517,319	4,005,493	4,080,012	1,308,193	567,277
8	902	Meter Reading	4,777,372	5,354,558	5,495,465	5,101,940	4,973,220	5,044,117	5,043,941	5,951,267	4,044,322	4,771,955	4,576,140	3,771,287	3,651,573	3,511,836	2,727,914	2,752,333	2,725,335	3,095,952
9	903	Cust. Records	21,021,389	20,895,637	21,716,010	22,694,731	22,134,413	21,290,995	20,098,887	19,852,189	18,881,018	19,916,913	19,396,225	18,580,998	18,652,340	18,007,157	19,657,903	20,836,244	12,586,187	14,057,374
10	904	Uncollectible Accts.	8,573,754	8,278,320	7,835,646	6,831,004	8,887,522	10,113,264	17,366,703	14,992,618	15,444,297	18,245,205	16,355,391	15,433,541	14,351,271	13,884,949	11,600,549	10,815,732	4,305,138	6,290,270
11	905	Miscellaneous	492,000	489,837	603,221	536,293	450,688	456,826	391,488	411,583	321,414	422,021	184,348	149,766	150,940	157,401	146,149	161,625	149,335	265,948
12		**Total**	37,533,051	37,881,353	38,643,815	38,282,703	39,607,934	39,868,609	45,804,772	44,795,046	42,150,716	46,761,846	43,334,272	41,208,843	39,940,952	39,078,661	38,138,008	38,645,947	21,074,189	24,276,820
13																				
14	904 Adjust																			
15		Adjusted 1: Acct 904 / 0.38																	7,024,173	
16		Adjusted 2: Acct 904 +10263000																		10,263,000
17		**Total**	37,533,051	37,881,353	38,643,815	38,282,703	39,607,934	39,868,609	45,804,772	44,795,046	42,150,716	46,761,846	43,334,272	41,208,843	39,940,952	39,078,661	38,138,008	38,645,947	28,098,362	34,539,820
18																				
19	MARKETING SERVICES EXPENSES																			
20	911	Supv. & Eng.	620,390	575,204	534,360	624,429	844,898	897,817	998,014	943,137	901,172	833,892	1,088,245	1,133,153	817,757	593,911	1,725,040	1,969,948	2,390,344	267,770
21	912	Salary & Exp.	1,260,270	1,410,637	1,436,452	1,430,477	1,637,696	1,543,371	1,458,914	1,709,686	2,152,863	2,206,644	2,119,325	3,561,183	4,625,377	3,587,875	2,759,296	7,262,104	9,395,550	11,547,007
22	913	Advertising	993,565	1,251,341	1,287,448	704,148	1,091,544	1,018,155	861,509	1,549,653	1,588,835	1,863,447	2,068,382	1,333,547	1,059,215	1,347,412	1,085,471	1,254,289	975	2,120,505
23	916	Miscellaneous	2,053,952	2,248,148	2,017,888	2,170,071	2,599,300	2,784,850	2,746,717	2,651,555	2,435,042	2,191,441	2,037,178	1,436,270	1,583,402	1,735,389	1,930,733	1,498,968	1,042,179	-27,456
24		Total Mktg. Svcs.	4928176.592	5485330.752	5276148.673	4929125.056	6173438.053	6244192.803	6065154.299	6854031.429	7077912.976	7095424.407	7313129.249	7,464,153	8,085,751	7,264,587	7,500,540	11,985,310	12,829,048	13,907,825
25		RCS Expenses in 916	0	0	0	0	0	0	0	0				0	0	0	0			
26		**Total**	4928176.592	5485330.752	5276148.673	4929125.056	6173438.053	6244192.803	6065154.299	6854031.429	7077912.976	7095424.407	7313129.249	7,464,153	8,085,751	7,264,587	7,500,540	11,985,310	12,829,048	13,907,825
27																				
28	ADMINISTRATIVE AND GENERAL EXPENSES																			
29	920	Salary	7,624,470	7,951,215	7,338,630	8,830,210	7,665,351	7,874,216	8,213,072	7,428,526	9,830,083	7,934,523	7,790,649	7,756,062	7,248,589	6,392,318	7,098,719	8,155,083	4,227,842	21,320,978
30	921	Office Supplies	3,734,588	3,783,160	4,056,371	4,189,393	4,245,380	3,605,879	3,567,268	3,352,182	5,088,232	3,446,185	3,526,869	5,862,205	5,472,884	5,673,688	6,133,423	5,876,621	3,107,106	25,922,271
31	922	Admin Exp - Transf (Cr)	-314,442	-327,992	-342,844	-304,192	-317,740	-332,869	-316,415	-316,323	-304,667	-292,572	-252,231	-131,135	0	0	0	0	-15,497,861	-15,324,998
32	923	Outside Services	2,246,584	2,127,912	3,106,000	2,500,696	2,766,534	1,457,741	1,462,912	2,476,399	2,072,671	2,859,660	3,522,886	1,619,009	1,231,248	1,146,602	1,008,749	1,934,823	1,419,796	860,845
33	924	Property Ins	1,805,300	3,746,806	3,746,008	3,018,432	2,667,760	2,210,877	2,288,743	2,396,168	2,436,886	2,591,715	2,624,700	2,613,137	2,466,559	2,416,597	2,080,299	2,052,569	737,742	462,183
34	925	Injury & Damages	2,188,872	2,072,703	2,071,951	2,175,330	3,216,422	1,818,071	1,874,579	2,635,472	1,838,264	2,629,415	2,488,765	2,379,643	2,528,125	2,009,169	2,420,305	1,917,630	961,913	1,067
35	926	Pension	17,786,308	14,996,134	14,411,194	16,936,633	18,300,647	16,944,385	17,994,018	18,185,137	17,545,116	21,158,573	27,189,255	23,813,103	18,382,186	16,412,332	19,200,860	17,531,919	18,326,166	16,685,838
36	928	Regulatory Exp	817,804	674,801	361,949	893,523	1,029,044	492,492	1,318,108	1,130,920	1,212,721	821,380	1,043,349	1,196,329	921,736	1,281,382	1,109,835	1,127,821	1,252,972	932,004
37	929	Duplicate Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
38	930	Misc	4,093,447	5,170,292	4,855,576	6,620,250	6,563,322	4,474,912	4,623,309	5,112,307	5,616,814	5,752,060	6,012,533	7,324,914	16,054,646	5,272,144	7,549,635	36,125,202	36,665,514	-2,008,853
39	931	Rents	1,860,566	1,938,396	1,973,449	2,755,740	2,346,338	2,021,893	2,019,315	2,280,432	2,399,336	2,563,257	2,759,050	2,200,264	2,463,562	1,305,830	1,218,832	1,186,222	1,378,457	0
40	932	Gen Plt Maint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,846
41		**Total A & G**	41843497.05	42133427.49	41578283.64	47616015.88	48483058.17	40567597.9	43044908.66	44681218.63	47735456.16	49464195.07	56705823.67	54,633,533	56,769,536	41,910,063	47,820,659	75,907,890	52,579,645	48,874,396
42																				
67	922 Adjust	Removed Credit from CGA Recov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,497,861	15,324,998
68	930 Adjust	Misc Adjustment																-24,273,284		
69		**Total A & G**	41843497.05	42133427.49	41578283.64	47616015.88	48483058.17	40567597.9	43044908.66	44681218.63	47735456.16	49464195.07	56705823.67	54633532.8	56769535.89	41910062.57	47820658.74	51634606.35	68077506.31	64199394.47

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FOURTEENTH SET OF INFORMATION REQUESTS FROM ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Danny G. Cote, General Manager

AG-14-2 Refer to the Company's response to DTE 3-11(d) and (e), page 2 of 2 on each attachment. Explain what leaks are classified under the category "Other" in Part C. Explain the cause of the increasing leak rate, from 683 in 2003 to 917 in 2004, in the "Other" category for Mains.

Response: Leaks classified under the category "Other" in Part C are defined by the Office of Pipeline Safety as: ""Other" would be the result of any other cause, such as equipment operating malfunction, failure of mechanical joints, or connections not attributable to any of the above." Please see the attached OPS instruction document for complete set of instructions.

After reviewing the data in the "other" category for the years 2003, 2004, we found that the increase in leaks from 683 to 917, respectively, are as follows: The data shows we experienced a 28% increase in joint leaks in Springfield, a 50% increase in joint leaks in Lawrence and a 72% increase in fit leaks in Springfield from 2003 to 2004.

INSTRUCTIONS FOR COMPLETING FORM PHMSA F 7100.1-1
ANNUAL REPORT FOR CALENDAR YEAR 2003
GAS DISTRIBUTION SYSTEM

GENERAL INSTRUCTIONS

Each operator of a distribution system, except those exempted in §191.11(b), is required to file an annual report. Definitions are as follows:

1. "Distribution line" means a pipeline other than a gathering or transmission line.

2. "Gathering line" means a pipeline that transports gas from a current production facility to a transmission line or main.

* 3. "Transmission line" means a pipeline other than a gathering line that:
   a. Transports gas from a gathering line or storage facility to a distribution center or storage facility;
   b. Operates at a hoop stress of 20 percent or more of SMYS; or
   c. Transports gas within a storage field.

4. "Operator" means a person who engages in the transportation of gas.

** If the operator determines that he has pipelines that fall under definition 3, he should refer to the instructions for completing Form PHMSA F 7100.2-1 for transmission and gathering systems.*

The reporting requirements are contained in Part 191 of Title 49 of the Code of Federal Regulations, "Transportation of Natural and Other Gas by Pipeline: Annual Reports, Incident Reports and Safety Related Condition Reports." Except as provided in §191.11(b), each operator of a distribution system must submit an annual report Form PHMSA F 7100.1-1 for the preceding calendar year not later than March 15. Be sure to report TOTAL miles of pipeline in the system at the end of the reporting year, including additions to the system during the year. **Please note that Operators operating less than one (1) mile of pipeline are not required to file an annual report.**

Reports should be sent to the: Information Resources Manager (DPS-3), Office of Pipeline Safety, Research and Special Programs Administration, Department of Transportation, 400 Seventh Street, S.W., Washington, DC 20590. However, reports for intrastate pipelines subject to the jurisdiction of a State agency pursuant to certification under 49 U.S.C. 60105 (the pipeline safety laws) may be submitted in duplicate to the Sate agency if the regulations of that agency require the submission of these reports and provide for further transmittal of one copy to the Information Resources Manager (DPS-13), Office of Pipeline Safety. The operator filing this report should ensure that the regulations of the State agency provide for further transmittal of one copy of the report to the Office of Pipeline Safety, as specified to be received by March 15 of each year.

Type or print the operator name and address data in the appropriate location.

The annual reporting period is on a calendar basis, beginning January 1 and ending on December 31 of each year.

It is preferred that each independent subsidiary or affiliate operation be reported separately. Satellite divisions that have independent operations and distribution systems should continue to be reported

as separate distribution systems even though, through mergers and consolidations, they no longer are separate companies and function as a unified operation under a single corporate headquarters.
If you have any questions concerning this report or these instructions, or if you need copies of Form PHMSA F 7100.1-1 or the instructions, please write or call the Information Resources Manager (DPS-3), Office of Pipeline Safety, Research and Special Programs Administration, Department of Transportation, 400 Seventh Street, S.W., Washington, DC 20590, telephone number (202)366-4569.

SPECIFIC INSTRUCTIONS

An entry should be made in each block for which data are available. All figures are to be reported as whole numbers. DO NOT USE DECIMALS OR FRACTIONS. Decimals or fractions should be rounded to the nearest whole number–1/2 or .5 should be rounded up. Be careful to use "miles" of mains and not "feet;" use "number" of services rather than miles. The "number" of services is the number of service lines and not the number of customers served.

Check "Supplemental Report" if this is a follow-up report with additional or corrected information. Do not fill in any previously submitted correct information with the exception of "report date," "operator's name," "address," and "preparer." Submit only amended, revised, or added information.

Avoid "Unknown" entries if possible. Estimated data are preferable to unknown data.

Part A

The address shown should be the address where information regarding this report can be obtained. The operator's five digit identification number will be assigned by the Research and Special Programs Administration. If the identification number is not available to the person completing the report, this information may be omitted. If the pipeline system being reported on is located in more than one state, indicate all states in which this system operates.

Part B

"Coated" means pipe coated with any effective hot or cold applied dielectric coating or wrapper.

"PVC" means polyvinyl chloride plastic.

"PE" means polyethylene plastic.

"ABS" means acrylonitrile-butadiene-styrene plastic.

"Cathodically protected" applies to both "bare" and "coated."

"Other Pipe" means a pipe of any material not specifically designated on the form. An explanation should be included in Part F if "Other Pipe" is marked. If an operator has, in the past, kept records which have consolidated wrought iron pipe with steel pipe, then he may continue to do so.

"Number of services" is the number of service lines and not the number of customers served.

INSTRUCTIONS FOR COMPLETING FORM PHMSA F 7100.1-1
ANNUAL REPORT FOR CALENDAR YEAR 2003
GAS DISTRIBUTION SYSTEM

Part C

This section includes all reportable incidents and nonreportable leaks, not reported in accordance with §191.50, repaired or eliminated during the one calendar year which is indicated by the operator on the "Annual Report" form.

Leaks are defined as follows:

An unintentional escape of gas from the pipeline.

A reportable incident is one which meets the specific criteria of §191.5.

Leaks/incidents are classified as follows:

"Corrosion" is the escape of gas resulting from a hole in the pipeline or component caused by galvanic, bacterial, chemical, stray current, or other corrosive action.

"Third Party" is an outside force damage directly attributed to the striking of gas pipeline facilities by earth moving equipment, other equipment, tools, vehicles, vandalism, etc. Damage is by personnel other than the operator or the contractor working for the operator.

"Outside Force" is damage resulting from earth movement, including earthquakes, washouts, land slides, frost, etc. Also included is damage by lightning, ice, snow, etc., and damage done by operator's personnel or operator's contractor.

A "Construction Defect" is one resulting from failure of original sound material that is due to external force being applied during field construction which caused a dent, gouge, excessive stress, or other defect which resulted in subsequent failure. Also included are faulty wrinkle bends, faulty field welds, and damage sustained in transportation to the construction or fabrication site.

A "Material Defect" is one resulting from a defect within the material of the pipe or component or the longitudinal weld/seam that is due to faulty manufacturing procedures.

"Other" would be the result of any other cause, such as equipment operating malfunction, failure of mechanical joints, or connections not attributable to any of the above.

Indicate all leaks eliminated during the reporting year, including those reported on Form PHMSA 7100.1, "Incident Report, Gas Distribution Systems." Do not include test failures.

Include all leaks eliminated by repair or by replacement of the pipe or other component.

Part D

Federal lands: For the purposes of completing Form PHMSA F 7100.1-1, "Federal lands" means all lands owned by the United States except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf. Indicate only those leaks repaired,

eliminated, or scheduled for repair during the reporting year, including those incidents reported on Form PHMSA F 7100.1.

Part E

"Unaccounted for gas" is gas lost, that is, gas that the operator cannot account for as usage or through appropriate adjustment. Adjustments are appropriately made for such factors as variations in temperature, pressure, meter-reading cycles, or heat content; calculable losses from construction, purging, line breaks, etc., where specific data are available to allow reasonable calculation or estimate; or other similar factors.

State the amount of unaccounted for gas as a percent of total input for the 12 months ending June 30 of the reporting year.

[(Purchased gas + produced gas) minus (customer use + company use + appropriate adjustments)] divided by (purchased gas + produced gas) equals percent unaccounted for.

Do not report "gained" gas. If a net gain of gas in indicated by the calculations, report "0%" here. (Decimal or fractional percentages may be entered.)

Part F

Include any "additional information" which will assist in clarifying or classifying data included in this report.

Part G

"Preparer" is the name of the person most knowledgeable about the information submitted in the report or the person to be contacted for additional information.

"Authorized Signature" may be the "preparer" or an officer or other person the operator has designated to review and sign reports of this nature.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FOURTEENTH SET OF INFORMATION REQUESTS FROM ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Danny G. Cote, General Manager

AG-14-12 Has the Company ever received any oral advice or an oral opinion from a consultant or affiliate employee identified in the responses to AG-14-11? If "yes", explain the advice or opinion in detail and provide any notes from conversations with the consultant or affiliate employee.

Response: Bay State Gas uses outside contractors to do all of its annual leak and corrosion surveys. One of the services the leak and corrosion survey contractors provide is to troubleshoot any problems that may arise. To the best of Bay State's knowledge, having this service provided to it, neither Bay State nor its representatives have received "oral advice or opinion" from other outside consultants in the interest of providing additional expertise regarding Bay State's distribution system. Bay State's surveys exceed both regulatory requirements and typical industry practice and have allowed it to operate an effective and efficient system. Bay State's data related to corrosion and leak survey results is available for review at each of Bay State's operational centers.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FOURTEENTH SET OF INFORMATION REQUESTS FROM ATTORNEY GENERAL
D. T. E. 05-27

Date: June 23, 2005

Responsible: Danny G. Cote, General Manager

AG-14-25 Refer to the Company's response to AG-2-16(a), p. 12 of 34. When did the BSG staff complete its "system review and retrofitted all UPCS pipe in a condition suitable for cathodic protection"? Produce copies of all reports and other documents related to the system review and indicated how many miles of UPCS were retrofitted with cathodic protection, and how many miles were determined not to be good candidates for retrofitting. What were the "other conditions" that prevented effective or cost justified cathodic protection?

Response: Per Attachment AG-14-25

From 1985 through 2004 Springfield has protected 189 miles of coated unprotected pipe and currently has 40 miles left.

From 1985 through 2004 Brockton has protected 268 miles of coated unprotected pipe and currently has 63 miles left.

From 1985 through 2004 Lawrence has protected 6 miles of coated unprotected pipe and currently has 3 miles left.

From 1985 to the present date Bay State Gas Company brought 81 percent, or 463 miles, of all pre 1971 coated steel pipe, under cathodic protection. A review of our maps and records systems has determined that the remaining 19 percent, 106 miles, is made up of pipe segments that fall into other categories, such as: (1) not capable of being protected due to deteriorated (ineffective) coating; (2) not economically feasible to protect because they consist of short segments scattered throughout our territories; (3) they consist of short segments in which the cathodic protection current would cause damage to other nearby utilities.

Based upon the above criteria, Bay State has decided that the remainder of its coated unprotected pipe segments will be replaced rather than cathodically protected when deemed necessary by the Company.

Brockton Division

Historical Data
Mains + Services

Attachment AG-14-25

1985-2004

BR ı source are DOT worksheets

Year	Unprotected Coated Steel	Cathodically Protected Coated Steel
1985	331	980
1986	328	990
1987	327	995
1988	324	1008
1989	303	1038
1990	277	1066
1991	236	1107
1992	201	1145
1993	154	1193
1994	130	1220
1995	86	1267
1996	70	1287
1997	73	1288
1998	80	1285
1999	79	1290
2000	76	1293
2001	74	1294
2002	72	1294
2003	70	1296
2004	63	1306

Springfield Division

Historical Data
Mains + Services

Attachment AG-14-25

1985-2004

SP ı source are DOT worksheets

Year	Unprotected Coated Steel	Cathodically Protected Coated Steel
1985	229	369
1986	229	369
1987	229	368
1988	229	368
1989	229	368
1990	229	368
1991	229	368
1992	229	368
1993	228	369
1994	228	370
1995	228	369
1996	102	497
1997	83	515
1998	54	546
1999	53	546
2000	53	546
2001	53	546
2002	37	563
2003	36	565
2004	40	565

Lawrence Division

Historical Data
Mains + Services

Attachment AG-14-25

1985-2004

LA ı source are DOT worksheets

Year	Unprotected Coated Steel	Cathodically Protected Coated Steel
1985	9	139
1986	9	141
1987	9	146
1988	9	101
1989	4	118
1990	5	124
1991	3	126
1992	10	136
1993	8	142
1994	4	150
1995	5	146
1996	10	141
1997	5	146
1998	9	145
1999	7	149
2000	3	154
2001	3	154
2002	3	154
2003	3	163
2004	3	163