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June 14, 2005

BY OVERNIGHT 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 of the Department:

DTE-4-36 DTE-6-1 DTE-9-27

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

Very truly yours,

Patricia M. French

cc: Caroline O'Brien Bulger, Esq., Hearing Officer (1 copy)
A. John Sullivan, DTE (7 copies)
Andreas Thanos, Ass't Director, Gas Division
Alexander Cochis, Assistant Attorney General (4 copies)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

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

Date: June 14, 2005

Responsible: Lawrence R. Kaufmann, Consultant (PBR)

DTE-4-36 Refer to Exhs. BSG/LRK-1, at 12-13 and BSG/LRK-2, at 7-9. Please:
(a) calculate the Output Quantity Index, the Input Quantity Index, and the Total Factor Productivity ("TFP") for Bay State using Bay State-specific data for the period 1993 through 2003 where (i) Output is measured as "Throughput", and (ii) Output is measured as "Number of Customers". Provide all worksheets, formula, etc. showing how the calculations were done, including how the variables were measured;
(b) calculate the arithmetic mean and the average annual growth rate of the Company's TFP index for (i) the period 1993 through 2003, (ii) the period before the rate freeze, and (iii) the period during the rate freeze. Provide all worksheets, formula, etc. showing how the calculations were done;
(c) calculate the arithmetic mean and the average annual growth rate of the Company's input and output quantity indexes for (i) the period 1993 through 2003, (ii) the period before the rate freeze, and (iii) the period during the rate freeze. Provide all worksheets, formula, etc. showing how the calculations were done;
(d) what conclusions or inferences can the Company draw regarding Bay State's total factor productivity performance, and the Company's input and output growth trends before and during the rate freeze period?

Response:

(a) The requested calculations are provided on Attachment DTE-4-36. The methodology used to estimate TFP is identical to that used in the original testimony for Boston Gas in D.T.E. 03-40. To enhance comparability with the Boston Gas results, I have also estimated TFP trends for Bay State Gas using the same weights that were applied to customer numbers and throughput that were used in the D.T.E. 03-40.

(b) Calculations of Bay State's TFP growth for 1993-2003 and the 1993-1998 and 1998-2003 sub-periods are presented in Attachment DTE-4-36.

(c) Calculations of Bay State's output and input quantity growth for 1993-2003 and the 1993-1998 and 1998-2003 sub-periods are presented in Attachment DTE-4-36.

Input Quantity Indexes for Bay State Gas

	Input Quantity Indexes			
Year	Input	Labor	Materials	Capital
1993	1.000	1.35	155.52	1,784.97
1994	0.991	1.38	88.58	1,896.63
1995	1.032	1.31	137.93	1,967.72
1996	1.032	1.37	102.79	2,001.38
1997	1.146	1.33	257.96	2,060.03
1998	1.160	1.32	272.59	2,078.27
1999	1.098	1.15	218.54	2,121.57
2000	1.115	1.28	164.46	2,178.35
2001	1.096	1.08	207.15	2,201.73
2002	1.142	0.98	315.76	2,208.39
2003	1.120	0.98	280.25	2,207.96
Average Annual Growth Rate:				
1993-2003	1.13%	-3.18%	5.89%	2.13%
1993-1998	2.97%	-0.41%	11.22%	3.04%
1998-2003	-0.70%	-5.94%	0.55%	1.21%

Output Quantity Sub-Indexes for Bay State Gas

	Output Quantity Indexes		
Year	Output	Customers	Throughput
1993	1.000	240,955	50,998
1994	1.013	244,519	51,389
1995	1.053	248,463	57,353
1996	1.041	251,939	52,339
1997	1.101	257,805	61,438
1998	1.157	273,196	62,896
1999	1.138	269,864	61,067
2000	1.119	269,487	57,094
2001	1.163	272,979	64,338
2002	1.184	275,392	67,597
2003	1.191	277,815	67,393
Average Annual Growth Rate:			
1993-2003	1.75%	1.42%	2.79%
1993-1998	2.92%	2.51%	4.19%
1998-2003	0.59%	0.34%	1.38%

TFP Results for Bay State Gas

Year	Indexes		
	TFP (76/24 BoGas wts.)	Customer-Only TFP	Throughput-Only TFP
1993	1.000	1.000	1.000
1994	1.023	1.025	1.017
1995	1.021	1.000	1.090
1996	1.009	1.013	0.995
1997	0.961	0.934	1.051
1998	0.997	0.977	1.063
1999	1.037	1.020	1.091
2000	1.003	1.003	1.004
2001	1.060	1.033	1.151
2002	1.037	1.001	1.161
2003	1.064	1.029	1.180
Average Annual Growth Rate:			
1993-2003	0.62%	0.29%	1.65%
1993-1998	-0.05%	-0.46%	1.22%
1998-2003	1.29%	1.03%	2.08%

(d) It can be seen that Bay State's TFP growth accelerated substantially during the "rate freeze" 1998-2003 period compared with the preceding 1993-1998 period. Bay State's TFP in 1998-2003 grew at an average annual rate of 1.29%, compared with an average growth rate of -0.05% in 1993-98. The turnaround in the Company's TFP growth rate was due entirely to slower growth in inputs; indeed, the growth in the Company's output quantity index declined from 2.92% per annum in 1993-1998 to 0.59% annually in 1998-2003, so output trends during the rate freeze tended to reduce TFP growth compared with the earlier period.

The TFP gains were achieved primarily through slower growth in labor and other O&M inputs. Labor declined by an average of 5.94% annually in 1998-2003 compared with an average decline of 0.41% per annum in 1993-1998. Other O&M inputs grew much more slowly in the rate freeze period, with an average growth trend of 0.55% per annum in 1998-2003 compared with 11.3% annually in 1993-1998. Capital inputs also grew somewhat less rapidly in the rate freeze period, with an average annual growth rate of 1.21% compared with 3.04% in 1993-98.

I believe the Company's TFP trends during the rate freeze are consistent with other empirical analyses that have been developed. All show that Bay State responded positively to the stronger incentives created by the freeze. The Company improved its cost performance primarily by reducing O&M inputs, boosting TFP growth in the process.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

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

Date: June 14, 2005

Responsible: Paul R. Moul

DTE-6-1 Please provide electronic files in Microsoft Excel format, with all formulas and links contained in the cells, of the following:
Exh. BSG/JES-1, Schedules JES-1 through JES-17 and corresponding workpapers; Exh. BSG/JES-3, Schedules WC-1 through 15 and corresponding workpapers;
Exh. BSG/JES-3 and corresponding workpapers;
Exh. BSG/JES-4 and corresponding workpapers;
Exh. BSG/JES-5, p. 1;
Exh. BSG/JES-6 and corresponding workpapers; and
Exh. BSG/PRM-2, Schedules 1 through 12, making sure to include source and/or reference information.

Response: An electronic copy of Mr. Moul's Schedules 1 through 12 of Exhibit BSG/PRM-2 will be e-mailed to the Department.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

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

Date: June 14, 2005

Responsible: James L. Harrison, Consultant (Cost Studies)

DTE-9-27 Refer to Exh. BSG/JLH-2, Sch. JLH-2-3, at 23. Please describe with supporting schedules, or cross-reference to documents previously filed, how the following Company total bad debt expenses (Account 904 - Uncollectible Accounts) were determined:
(1) the total amount allocated to all firm rate classes (sum of lines 9 through 19);
(2) Adjustment Bad Debt Gas Sales (line 20);
(3) Adj Uncollectible Prop Rate Increase (line 21).

Response: (1) See the Item (1) of the Company's response to DTE-9-26.

(2) See the Item (2) of the Company's response to DTE-9-26.

(3) See the Item (3) of the Company's response to DTE-9-26.