D.T.E. 01-56

January 31, 2002

Investigation by the Department of Telecommunications and Energy on its own motion as to the propriety of the rates and charges set forth in the following tariffs: M.D.T.E. Nos. 280 through 305, filed with the Department on July 17, 2001 by The Berkshire Gas Company.

APPEARANCES: James Avery, Esq.
Rich May
176 Federal Street
Boston, Massachusetts 02110
FOR: THE BERKSHIRE GAS COMPANY
Petitioner

Thomas Reilly, Attorney General
BY: Alexander Cochis, Esq.
Assistant Attorney General
200 Portland Street
Boston, Massachusetts 02114
Intervenor

Carol Wasserman, Esq.
Deputy General Counsel
Division of Energy Resources
70 Franklin Street, 7th Floor
Boston, Massachusetts 02110-1313
FOR: DIVISION OF ENERGY RESOURCES
Intervenor

Jerrold Oppenheim, Esq.
57 Middle Street
Gloucester, Massachusetts 01930-5736
FOR: LOW-INCOME AFFORDABILITY NETWORK, ET. AL.
Intervenor

Robert N. Werlin, Esq.
Cheryl M. Kimball, Esq.
Keegan, Werlin, & Pabian
21 Custom House Street
Boston, Massachusetts 02110-3525
FOR: SOUTHERN UNION COMPANY
Limited Participant

Stephen Klionsky, Esq.
260 Franklin Street, 21st Floor
Boston, Massachusetts
FOR: WESTERN MASSACHUSETTS ELECTRIC COMPANY
Limited Participant

John Cope-Flanagan, Esq.
800 Boylston Street
Boston, Massachusetts 02199
FOR: NSTAR GAS COMPANY
Limited Participant

Scott J. Mueller, Esq.
Patricia M. French, Esq.
LeBoeuf, Lamb, Greene & MacRae
260 Franklin Street
Boston, Massachusetts 02110
FOR: FITCHBURG GAS AND ELECTRIC LIGHT COMPANY
Limited Participant

Robert R. Ruddock, Esq.
222 Berkeley Street
P.O. Box 763
Boston, Massachusetts 02117-0763
FOR: ASSOCIATED INDUSTRIES OF MASSACHUSETTS
Limited Participant

Thomas P. O'Neill, Esq.
One Beacon Street
Boston, Massachusetts 02108
FOR: KEYSPAN ENERGY DELIVERY
Limited Participant

I. INTRODUCTION

On July 17, 2001, pursuant to G. L. c. 164, § 94, The Berkshire Gas Company ("Berkshire" or "Company"), a subsidiary of Energy East Corporation, pursuant to G. L. c. 164, §94, requested approval of a revenue increase of $4,611,627[1] based on a test year ending December 31, 2000. As part of its filing, the Company requested approval of a performance-based ratemaking plan ("Price Cap Mechanism" "PCM" or "Plan"). By Order dated July 19, 2001, the Department of Telecommunications and Energy ("Department") suspended the effective date of the proposed tariffs until February 1, 2002.

Berkshire's last rate case increase was in 1993. In Berkshire Gas Company, D.P.U. 92-210 (1993), the Company requested a revenue increase of $2,426,039, or 5.06 percent; the Department allowed Berkshire an increase of approximately $1,374,452. Berkshire serves approximately 34,000 customers in twenty municipalities in western Massachusetts.

Pursuant to notice duly issued, the Department held a public hearing in Pittsfield on August 20, 2001, and another in Greenfield on August 22, 2001. The Department held 17 days of evidentiary hearings. The Attorney General intervened in this proceeding, as of right, pursuant to G.L. c. 12, §11E. In addition, the Department granted the petitions for leave intervene of the Division of Energy Resources ("DOER") and the low-income weatherization and fuel assistance network, the Massachusetts Community Action Program Directors Association, Inc., and the Low-Income Energy Affordability Network (collectively, "LEAN").

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1 The Company amended this amount to $4,904,462 (Exh. BG-6, Sch. JJK-1Rev.).

The Department also granted petitions for limited participant status to the following: Southern Union Company, Western Massachusetts Electric Company, NSTAR Gas Company, Fitchburg Gas and Electric Light Company, Boston Gas Company d/b/a/ KeySpan Energy Delivery, and Associated Industries of Massachusetts ("AIM").

In support of its filing, the Company presented nine witnesses: Robert M. Allessio, president and chief executive officer of the Company; Karen L. Zink, the Company's vice president of marketing and resource planning; John J. Kruszyna, the Company's manager of internal audit and taxes; Jennifer M. Boucher, the Company's rates and planning administrator; Dr. Kenneth Gordon, special consultant of National Economic Research Associates, Inc.; Paul R. Moul, managing consultant of P. Moul and Associates; James H. Aikman, vice president of Management Resources International, Inc.; Paul M. Normand, management consultant and president of Management Applications Consulting, Inc. ("MAC"); and James L. Harrison, management consultant and vice president of MAC. As rebuttal to the Company's proposed use of a market-based allocator ("MBA"), the Attorney General presented the testimony of Paul Chernick, president of Resource Insight, Inc.

On October 1, 2001, the Attorney General filed a motion to dismiss Berkshire's petition for failure to submit a service quality plan pursuant to G.L. c. 164, §1 E. On October 3, 2001, DOER endorsed the Attorney General's motion to dismiss. On October 9, 2001, the Company filed its opposition to the Attorney General's motion to dismiss.[2]

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[2] The Department notes that in September 2001, the Company submitted its service quality plan (Exh. DOER 1-4). The Department will investigate the Company's service (continued...)

On October 11, 2001, DOER filed a Motion to Strike the Testimony of Dr. Kenneth Gordon. On October 12, 2001, a hearing officer in this case denied DOER's motion. On October 13, 2001, DOER filed an Appeal of the Decision of the Presiding Officer. On October 24, 2001, the Company filed its opposition to DOER's appeal.

The Attorney General, DOER, and LEAN filed initial briefs on November 14, 2001, and Berkshire filed its initial brief on November 21, 2001. The Attorney General and DOER filed a reply brief on November 30, 2001, and Berkshire filed its reply brief on December 7, 2001. AIM filed comments on November 14, 2001.

On January 11, 2002, the Attorney General filed a Motion to Strike Sections of Berkshire's Reply Brief. Specifically, the Attorney General challenges (1) statements that Berkshire and the Attorney General engaged in 'good faith' negotiations; (2) references that the Company maintained legal invoices that detail work performed in six minute increments; (3) discussions concerning the recovery of acquisition-related costs; and (4) updates concerning the Company's medical expense insurance payments. On January 17, 2002, the Company filed its opposition to the Attorney General's motion. On January 23, 2002, the Attorney General replied to the Company's opposition.[3]

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[2](...continued)
quality plan in Investigation of the Department of Telecommunications and Energy on its own motion to Establish Guidelines for Service Quality, D.T.E. 99-84 (2001). Hence, the Attorney General's Motion to Dismiss is moot.

[3] The Department will make no findings regarding the Attorney General's argument that there is no record evidence to support the Company's statement that he engaged in 'good faith' settlement negotiations with Berkshire. In an effort to reduce rate case
(continued...)

II. MOTION

A. Motion to Strike the Testimony of Dr. Kenneth Gordon

1. Introduction

On October 11, 2001, pursuant to 220 C.M.R. §§ 1.04 and 1.10(1), the Division of Energy Resources ("DOER") submitted a Motion to Strike the Testimony of Dr. Kenneth Gordon ("Motion").[4] DOER stated that while Dr. Gordon is an "expert generally" on issues concerning performance based ratemaking and incentive regulation, he had little familiarity with the specifics of the Company's proposed PCM (Motion at 1 and 6). Therefore, DOER contends that Dr. Gordon's testimony should be stricken from the record.

On October 12, 2001, a hearing officer designated by the Department pursuant to G.L. c. 25, § 4 to preside over this proceeding denied DOER's Motion. Specifically, the Hearing Officer ruled that the credibility of Dr. Gordon's testimony on the PCM would be considered by the Department in the context of our review of the entire record in this proceeding, including DOER's position on brief (Tr. at 552-553).

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[3](...continued)
expenses and to conserve the resources of the Department, we always encourage parties to, and presume that parties will negotiate actively and in good faith to settle issues between them. The Department will address the Attorney General's arguments about references to legal expenses, the recovery of acquisition-related costs, and updates to medical insurance costs in those sections of this Order that pertain to rate case expenses, PCM, and health care expenses, respectively.

[4] Dr. Gordon is an expert witness sponsored by The Berkshire Gas Company to testify on the Company's proposed price cap mechanism ("PCM") that was submitted as part of Berkshire's § 94 rate case.

On October 15, 2001, DOER filed its Appeal of the Decision of the Presiding Officer ("Appeal"). On October 24, 2001, the Company submitted its opposition to DOER's Appeal.

2. Positions of the Parties

a. DOER

In its Appeal, DOER argues that in his ruling denying the Motion, the Hearing Officer erred when he failed to apply the rules of evidence observed by courts (Appeal at 2). DOER contends that by looking at the case "as a whole" the Hearing Officer failed to consider the foundation necessary to support the admission of an expert opinion, as is required by the rules of evidence (id. at 3). DOER claims that to admit an expert opinion without that foundation ubiquitously devalues the meaning of expert testimony (id.).

b. Company

The Company argues that the Hearing Officer's ruling was directly supported by judicial precedent and was consistent with the Department's evidentiary standards. The Company states that the Supreme Judicial Court has held that in Department proceedings, a witness' qualifications as an expert are factors to be considered in weighing the total evidence presented in the proceedings (id. at 3-4, citing Sudbury v. Department of Public Utilities, 351 Mass. 214 (1966)). Therefore, the Company argues that the Hearing Officer did not abuse his discretion by ruling that the Department would consider the credibility of Dr. Gordon's testimony in the context of the entire proceeding (id. at 4).

In addition to the Court's decision concerning striking evidence in a Department proceeding, the Company states that the Hearing Officer's ruling is consistent with Department precedent (id. at 3). The Company notes that in Verizon New England, D.T.E. 01-20, Interlocutory Order (June 12, 2001), the Department held that the hearing officers did not abuse their discretion when they determined not to strike testimony (id.). The Company argues that the Hearing Officer in Berkshire did not abuse his discretion by ruling that the Department will weigh the credibility of Dr. Gordon's testimony when it considers the case in whole (id. at 7).

3. Analysis and Findings

______The Department has held that where there is no evidence that the presiding officer abused his discretion in ruling on a motion, the decision of the presiding officer must be affirmed. Verizon New England, D.T.E. 01-20, Interlocutory Order (June 12, 2001). DOER states that the Hearing Officer abused his discretion when he did not apply the rules of evidence in his consideration of the Motion. However, by selectively excerpting the wording of 220 C.M.R. § 1.10(1), DOER's claim flatly contradicts a well established principle of administrative law found in statute. Pursuant to G.L. c. 30A, § 11(2), agencies need not adhere to the rules of evidence observed by courts, but may admit evidence and give testimony probative effect if it is the kind of evidence on which reasonable persons are accustomed to rely on in the conduct of serious affairs. See also, 220 C.M.R. §1.10(1). In response to DOER's Motion, the Hearing Officer stated that the Department would consider the credibility of Dr. Gordon's testimony as part of the Company's presentation of its case (Tr. at 552-553). Further, the Hearing Officer reminded the parties of their opportunity to argue on brief that the Company failed to present substantial evidence that would warrant the Department's approval of the Company's PCM (id.). The Hearing Officer stated that the Department's decision on the Company's PCM would be made after our analysis of the Company's presentation on the PCM and the positions of the parties concerning Berkshire's proposal (id.). The Department notes that the Hearing Officer's decision is within the parameters of G.L. c. 30A and 220 C.M.R. § 1.00 et seq. Accordingly, the Department finds that in performing the duties delegated to him pursuant to G.L. c. 25, §4, the Hearing Officer did not abuse his discretion in denying DOER's Motion. The testimony was admissible and will be considered.

III. PRICE CAP MECHANISM

A. Introduction

The Company proposed a term of ten years for its price cap mechanism ("PCM" or "Plan"), commencing on February 1, 2002 and terminating on January 31, 2012 (Exh. BG-23, exh. KLZ-1). As described in more detail below, Berkshire proposed that the Plan would: (1) calculate cast-off rates based on the Company's cost to serve, not including any merger-related costs;[5] (2) implement a rate freeze for the initial 31-month period; (3) adjust rates annually after the rate freeze period based on a price cap formula; and (4) conduct a mid-period review to determine whether the plan will continue.

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[5] Contrary to the Attorney General's argument in his Motion to Strike Sections of the Company's Reply Brief, the Department notes that the Company has not specifically requested approval to recover acquisition premium and merger-related costs. Therefore, the Department denies that portion of the Attorney General's Motion to Strike that pertains to the PCM.

B. Term of the Plan

1. The Company's Proposal

The Company proposed to establish the revenue requirement, which it used to set the base rates in effect at the start of its PCM ("cast-off rates"), based on a traditional cost of service analysis (Exh. BG-1, at 17). Berkshire proposed to freeze base rates at the cast-off rate level, subject only to adjustments for certain exogenous costs, through August 31, 2004, a period of 31 months (Exh. BG-22, at 9). After the rate freeze period, the Company proposed to adjust rates annually based on a price cap formula (Exh. BG-22, at 10).

Berkshire proposed a mid-period review after the fifth year of the Plan to give the Department the option of whether to allow the Plan continue for the remaining five years (Exh. BG-22, at 14). The Company proposed to file the mid-period review on April 1, 2007 (Exh. BG-23, exh. KLZ-1, at 4). If the Department finds that the Plan should continue, then the Company's PCM would remain in effect until January 31, 2012, with the last annual rate adjustment to occur on September 1, 2011 (Exh. BG-23, exh. KLZ-1, at 1). Conversely, if the Department finds that the Plan should not remain in effect, then the Company proposed to terminate the Plan on January 31, 2009, and the last rate adjustment would take effect on September 1, 2008 (Exh. BG-23, exh. KLZ-1, at 1).

2. Positions of the Parties

a. Attorney General

The Attorney General states that the Company seeks a variety of protections for the PCM, particularly the mid-period review, that are inconsistent with the law and Department precedent (Attorney General Reply Brief at 15). According to the Attorney General, Berkshire seeks to raise the quantum of proof required during the PCM mid-period review to "clearly" or "clearly and substantially" from the "preponderance" standard imposed by statute (Attorney General Reply Brief at 15, citing G.L. c. 30A, § 14(7)(e)). Also, the Attorney General asserts that the Company seeks that the PCM be reviewed under the "no net harm" standard rather than the "just and reasonable" standard for a rate review (id. at 16). The Attorney General argues that the PCM should be reviewed under the just and reasonable standard (id.).

b. The Company

The Company has proposed that the standard for an early termination of the Plan be higher that the standard for a general rate case (Company Brief at 29). Specifically, Berkshire proposes that the PCM be ended in 2009 if the Department determines in the mid-period review that: (1) customers would be clearly and substantially harmed by the continuation of the Plan; and (2) Berkshire's rates, in aggregate for the duration of the Plan, are clearly not just and reasonable (id.).

The Company asserts that the Attorney General misapplies G.L. c. 30A, § 14(7)(e), which the Company contends is the standard of evidence for appeals and not the standard for the adjudicatory proceedings themselves (id. at 17). Also, Berkshire states that its PCM is based on a test year approach and does not seek to replace a just and reasonable standard for rate review (id. at 16-17).

c. Analysis and Findings

The Department has stated that one potential benefit of incentive regulation is a reduction in regulatory and administrative costs. Incentive Regulation, D.P.U. 94-158, at 64 (1995) ("Incentive Regulation"). Additionally, the Department has found that a well-designed price cap plan should be of sufficient duration to give the plan enough time to achieve its goals, and to provide utilities with the appropriate economic incentives and certainty to follow through with medium- and long-term strategic business decisions. Incentive Regulation, at 66; Boston Gas Company, D.P.U. 96-50 (Phase 1) at 320 (1996).

With respect to the Company's proposed 31-month base rate freeze, since the rate freeze does not include rate adjustments for inflation, the Department finds that Berkshire's ratepayers are likely to be better off under the proposed rate freeze than they would be under performance based regulation ("PBR") or cost-of-service regulation.[6] Therefore, the Department finds that the Company's proposed 31-month base rate freeze will result in just and reasonable rates.

The Department finds that the Company's proposed ten-year term with a mid-period review after five years will provide a sufficient period to evaluate administrative efficiencies and to allow Berkshire the level of certainty required to enter into business decision making. Further, the possibility of terminating the Plan after a mid-period review provides Berkshire's ratepayers with added protection. Accordingly, the Department finds that the initial annual

6 This finding of likely benefits is made under the assumptions that the Company's actual costs will not decline in absolute terms and that the productivity offset in a PBR is less than the rate of inflation, on average.

adjustment of the Company's PCM will take effect on September 1, 2004, with successive annual adjustments through 2006. No later than April 1, 2007, Berkshire shall file a mid-period review. Depending on our decision, the Plan may be continued without modification with successive annual adjustment through 2012, continued with modifications, or terminated, in accordance with Department directives, as outlined below.

The Department will next address the issue of whether the PCM should remain in effect until January 31, 2009, even if the Department directs that, based on the mid-period review, the Plan should be terminated. Typically, rate base decisions are effective immediately following the issuance of the Department's order. The Company has provided no evidence that would persuade us to deviate from this policy. Therefore, if the Department directs the Company after the mid-period review to terminate the Plan, then the Plan will be terminated effective on the date of our decision. Similarly, the Company has not persuaded the Department to conduct the mid-period review based on a higher standard of review than accorded other rate-setting matters. Therefore, the Department will evaluate the Company's PCM pursuant to the traditional standard of "just and reasonable" rates based on substantial evidence of record.

C. Price Cap Formula

1. The Company's Proposal

a. Introduction

Starting on September 1, 2004, Berkshire proposed to adjust base rates annually using the following price cap formula:

$P_{(t)} = P_{(t-1)} * (1+I_{(t)}-X+Z)$, where

$P_{(t)}$ is the Company's weighted average price in year (t);

$P_{(t-1)}$ is the Company's weighted average price in year (t-1);

$I_{(t)}$ is a price inflation index for year (t);

X is a productivity offset that would remain constant throughout the term of Plan; and

$Z_{(t)}$ is an adjustment for exogenous costs that might occur in year (t)

(Exh. BG-3, at 6). The Department describes each of the components below.

b. Price Inflation Index

The Company proposed to base the price inflation index included in the price cap formula on the Gross Domestic Product chain weighted Price Index ("GDP-PI") developed by the U.S. Commerce Department (Exh. BG-22, at 11). The inflation index, which would be adjusted annually, would be calculated as the percentage change between the current year's fourth quarter GDP-PI and the prior year's fourth quarter GDP-PI (Exh. BG-23, exh. KLZ-1, at 2).

c. Productivity Offset

The Company proposed a productivity offset which included two components: (1) a base productivity component, which indicates the productivity growth potential of Berkshire over the forward looking term of the Plan, and (2) a consumer dividend component, in order to provide the Company's customers additional assurance that they will benefit from the Plan (Exh. BG-3, at 22). The Company stated that the base productivity component must be developed from an accurate measure of the productivity growth for the gas industry. Berkshire stated that the costs for it to estimate the base productivity factor were likely to outweigh the benefits of doing so. Therefore, the Company proposed to use a zero percent base productivity factor, as approved by the Department in Boston Gas Company, D.P.U. 96-50 (Phase I), at 282 (1996) (Exh. BG-3, at 22). The Company proposed 1.0 percent for the consumer dividend component (id. at 24). The productivity offset proposed by the Company would remain constant over the term of the PCM (Exh. BG-23, exh. KLZ-1, at 4).

d. Exogenous Cost Factor

The Company proposes to recover or return exogenous costs, which it defines as positive or negative cost changes that (1) are beyond the Company's control, (2) are not reflected in the GDP-PI, and (3) "have at least a disproportionate effect on the Company or the natural gas distribution utility industry" (Exh. BG-22, at 13). The Company stated that this would include: (1) accounting, legislative, regulatory, or tax changes; and (2) an "Act of God" (Exh. BG-23, exh. KLZ-1, at 3). Berkshire stated that changes in laws or regulation, that would be eligible for exogenous cost recovery would include but are not limited to lost base revenues ("LBR") not recovered pursuant to the local distribution adjustment clause ("LDAC") that exceed the threshold described below and result from changes in demand-side management ("DSM") policy (id.). The Company proposed an exogenous cost adjustment for the amount such lost base revenues exceed the threshold (id.).

The Company proposed that the exogenous costs be eligible for recovery if they total $50,000 in the aggregate, or $10,000 for an individual exogenous cost item considered cumulatively each year (Exh. BG-3, at 25). Berkshire proposed that it be able to ask for recovery of exogenous costs during the rate freeze and price cap periods of the Plan (id.). In addition, Berkshire proposed that it be able to request deferred accounting treatment for exogenous cost items until the Company's next annual base rate change (id.). Last, the Company proposed that an exogenous cost approved for recovery be converted into a percentage by dividing by the prior year's distribution revenues (Exh. BG-23, exh. KLZ-1, at 4).

2. Positions of the Parties

a. Attorney General

The Attorney General argues that the Department should reject the Company's proposed price cap formula because Berkshire has provided no evidence to support its proposed productivity factor and because Berkshire has proposed an expanded definition of allowable exogenous costs contrary to Department precedent (Attorney General Brief at 12). The Attorney General maintains that Berkshire determined its productivity offset based on the studies and analyses contained in Boston Gas Company's ("Boston Gas") price cap plan proceeding (id., citing Boston Gas Company, D.P.U. 96-50 (Phase I)). According to the Attorney General, in relying on Boston Gas' study, the Company failed to: (1) perform any quantitative analyses regarding its productivity; (2) show that its productivity is comparable to that of Boston Gas or the gas distribution companies in the northeast United States; and (3) update Boston Gas' analyses for the most recent information available (id. at 14-15).

Accordingly, the Attorney General asserts that the record does not support using the same productivity offset for Berkshire that the Department approved for Boston Gas (id. at 15).

With respect to the exogenous cost factor, the Attorney General maintains that the Company's proposed definition of exogenous cost exceeds the definition adopted by the Department (id. at 16, citing NYNEX, D.P.U. 94-50, at 172 (1995); Boston Gas Company, D.P.U. 96-50 (Phase I), at 292; Bay State Gas Company, D.T.E. 98-31, at 17 (1998); Essex Gas Company, D.T.E. 98-27, at 19 (1998); and Colonial Gas Company, D.T.E. 98-128, at 55 (1999)). The Attorney General maintains that the Company has not provided any new arguments or evidence that should cause the Department to define exogenous differently in this proceeding than we have in the past (id. at 17).

b. DOER

DOER argues that the Company's proposed exogenous cost factor should be rejected because (1) the $50,000 threshold is disproportionately low, (2) the $10,000 individual item and cumulative cost approach for meeting the annual $50,000 threshold is inconsistent with Department precedent, (3) the proposed definition of exogenous costs is too broad and includes costs that the Department previously has found to be inappropriate, and (4) exogenous cost adjustments would be made at the Company's discretion (DOER Brief at 21).

Regarding the $50,000 exogenous cost threshold, DOER states that this amount is equivalent to 0.103 percent of the Company's average annual operating revenues over the last two years (id.). According to DOER, since 1997 the Department has established a range of exogenous cost thresholds that are equivalent to between 0.128 percent and 0.139 percent of average operating revenues (id. at 22-23). Therefore, DOER argues that based on threshold levels approved by the Department, Berkshire's exogenous cost threshold level is too low (id.). DOER asserts that to be consistent with Department precedent the exogenous cost threshold for Berkshire should be $75,000 (id.).

DOER argues that the Company's proposal to create a cumulative exogenous cost threshold should be rejected because it is arbitrary and is not consistent with Department precedent (id.). DOER states that the Department rejected the concept of cumulative thresholds in Boston Gas' price cap proceeding (id., citing Boston Gas Company, D.P.U. 96-50 (Phase I), at 291-292). DOER asserts that the Company has not provided any evidence that would be used by the Department to make a different determination on the cumulative thresholds than directed previously (id., citing Tr. at 113-114). Therefore, DOER argues that the Department should reject any definition of exogenous costs that includes within it a cumulative threshold (id.).

DOER asserts that the Company's proposed definition of exogenous costs is too broad because it includes (1) costs that affect the entire natural gas utility industry, rather than costs that are unique to the local gas distribution industry, (2) costs resulting from an "Act of God," and (3) costs based on recovery of LBR (id. at 24-27). DOER argues that the Department should limit the definition of exogenous costs to the language approved in Boston Gas Company, D.P.U. 96-50 (Phase I) at 292 (id. at 27). Further, DOER argues that the inclusion of exogenous cost adjustments for LBR is inconsistent with Department precedent and undercuts the incentives and efficiencies provided by the rolling period method (id. at 28-35).

Also, DOER states that the Company's proposal impermissibly expands the definition of an exogenous cost to include known and measurable effects of regulatory policy (id.).

c. The Company

The Company states that its use of the productivity component approved in Boston Gas Company, D.P.U. 96-50 (Phase I), to determine Berkshire's productivity offset is reasonable (Company Brief at 21). Berkshire asserts that given the high cost to conduct a base productivity offset study (approximately $500,000), as compared with the likely results of such a study, the costs would outweigh any potential benefits (Company Brief at 21, citing Exhs. DTE 2-4; DTE 1-58; BG-3, at 22-23; BG-22, at 12-13).

The Company states that its decision based on a cost/benefit determination is consistent with the Department policy requiring that utilities strike some balance between accuracy and cost with respect to decisions to undertake quantitative studies (id., citing Boston Gas Company, D.P.U. 94-14 (1995). Also, Berkshire maintains that the decision to use Boston Gas' factor is consistent with the Department's finding in Eastern Enterprises/Colonial Gas Company, D.P.U. 98-128, where the Department found that "because productivity offsets are not company-specific, it is appropriate to use a productivity offset developed for another LDC" (id. at 21-22, citing Eastern Enterprises/Colonial Gas Company D.P.U. 98-128, at 63-65 (1999).

With respect to the Company's proposed consumer dividend factor of 1.0 percent, Berkshire contends that its proposed factor is consistent with Department precedent and sound economic policy (id. at 22-25, citing Boston Gas Company, D.P.U. 96-50-C at 58 (1997);

Boston Gas Company, D.T.E. 96-50-D at 13 (2001)). In fact, the Company states that the evidence established that 1.0 percent was an aggressive factor given that Berkshire has not increased its base rates for more than eight years (id. at 23-24, citing Exh. BG-3, at 24; Tr. at 130-131).

With regard to DOER's argument that the $50,000 exogenous cost threshold limit is too low, the Company maintains that relative to operating revenues, its proposed $50,000 threshold is in between the cost thresholds allowed by the Department in Boston Gas Company, D.P.U. 96-50 (Phase I) and Eastern Enterprise/Colonial Gas ("Colonial"), D.T.E. 98-128 (Company Brief at 28; Company Reply Brief at 16). Berkshire asserts that even if the Department calculates a threshold for exogenous costs recovery in the same manner as in Colonial, the $75,000 threshold proposed by DOER is too high (Company Reply Brief at 16, citing Exh. DOER 1-8).

In regard to DOER's argument that the Company's proposal to create a cumulative exogenous cost threshold should be rejected, Berkshire argues that its proposal is justified given that it is proposing a ten-year Plan. The Company notes that its Plan is much longer than the five-year plan approved by the Department in Boston Gas Company, D.P.U. 96-50 (Phase I), in which the Department rejected cumulative thresholds. (id.)

Berkshire asserts that its proposal with respect to exogenous cost treatment for LBR is consistent with Department precedent (Company Brief at 27, 48-49; Company Reply Brief at 13-16). The Company states that the Department found that, after approving the rolling period method for LBR, local distribution companies ("LDCs") seeking to recover LBR not recouped through the application of the rolling period method must submit an exogenous cost calculation with appropriate supporting documentation for the Department's review (Company Brief at 48-49; Company Reply Brief at 13, citing Bay State Gas Company, D.T.E. 00-106 (2001)).

Berkshire asserts that a significant factor in deciding to file this rate case was its need to recover LBR (Company Brief at 49, citing Exh. BG-1, at 13-17; Tr. at 270-271; Company Reply Brief at 13). The Company maintains that in 2001, the application of the rolling period method reduced its revenues by approximately $500,000 (Company Brief at 50, citing Exh. BG-1, at 16-17; Company Reply Brief at 13). The Company contends that if its inclusion of LBR in the definition of exogenous costs is not allowed then it would be forced to re-examine its commitment to implementing DSM programs (Company Brief at 51; Company Reply Brief at 13).

3. Analysis and Findings

a. Introduction

As an initial matter, the Department addresses the issue of whether the Plan should be rejected in whole, as advocated by the Attorney General. The Department has stated previously that a well-designed price cap plan should be consistent with the standard of review established in Incentive Ratemaking. May 1, 1996 Explanatory Statement in Boston Gas Company, D.P.U. 96-100, at 71-76 (1996). While the Department has identified a number of concerns with the components and provisions of the proposed Plan, we find that the

Company's customers would be better served by modification to the proposed Plan rather than outright rejection of the Plan.

b. Price Inflation Index

The Department has stated that the GDP-PI is (1) the most accurate and relevant measure of the output price changes for the bundle of goods and services whose total factor productivity growth is measured by the Bureau of Labor Statistics, (2) readily available, (3) more stable than other inflation measures, and (4) maintained on a timely basis. Boston Gas Company, D.P.U. 96-50 (Phase 1), at 273; NYNEX, D.P.U. 94-50, at 141 (1995). In this proceeding, no party disputes that the GDP-PI is an appropriate measure for inflation in a price cap formula. Therefore, the Department approves the use of the GDP-PI in the Company's price cap formula as consistent with precedent.

In Boston Gas Company, D.P.U. 96-50 (Phase I), the Department directed that the inflation index be calculated as the percentage change between the average for the current year's and prior year's four quarterly measures of the GDP-PI as of the second quarter of the year. Boston Gas Company, D.P.U. 96-50 (Phase I), at 262, 273. In this proceeding, the Company proposed to calculate the inflation index as the percentage change between just the current year's and prior year's fourth quarter measure of the GDP-PI. The Department finds that taking the average of a year's four quarterly measures of the GDP-PI, as we approved for Boston Gas, provides a more accurate representation of a year's inflation than using just the fourth quarter from the year. Therefore, consistent with Department precedent, we find that Berkshire shall calculate its inflation index as the percentage change between the average for the current year's and prior year's four quarterly measures of the GDP-PI as of the first quarter of the year.

c. Productivity Offset

In deciding if it was reasonable for Berkshire to adopt, in its price cap formula, the same base productivity component that was approved for Boston Gas, the Department must weigh the cost to Berkshire for implementing its own productivity study against the accuracy such a study would provide. In Eastern Enterprise/Colonial Gas, D.T.E. 98-128 (1999), we found that "[t]he productivity offset approved for Boston Gas is not necessarily unique to Boston Gas or any specific gas company since the productivity and input-price-growth indices were derived from a sample of many LDCs." Eastern Enterprise/Colonial Gas, D.T.E. 98-128, at 63. Further, the evidence indicates that if Berkshire were to undertake an independent productivity study, the likely result would be similar to what the Company already proposes (Exh. BG-3, at 23). Therefore, the cost to conduct the study would likely outweigh any benefits of the study. Therefore, the Department approves the Company's proposal to use zero percent for the base productivity component in its PCM.

The Company's proposed consumer dividend factor of 1.0 percent is consistent with Department precedent and therefore reasonable. See Boston Gas Company, D.T.E. 96-50-D, at 3-7 (2001). Therefore, the Department approves the Company's proposal to use 1.0 percent as the consumer dividend component, which, when combined with the base productivity component of zero, percent sums to a productivity offset of 1.0 percent.

d. Exogenous Cost Factor

The Department has established a threshold level for recovery of exogenous costs based on a percentage of a company's operating revenues in Eastern Enterprise/Colonial Gas, D.P.U. 98-128, at 53-54 (1999). In setting a threshold for exogenous costs, the Department notes the importance of considering the longevity of the Company's PCM and the effect that inflation will have on the threshold in the later years of the PCM. Like Berkshire's PCM, Colonial's rate plan had a term of ten years. Eastern Enterprise/Colonial Gas, D.P.U. 98-128, at 57. Accordingly, the Department will determine the threshold level for Berkshire using an analysis similar to that used in Colonial. Based on that analysis, the Department finds that the appropriate threshold for the opportunity to recover exogenous costs in Berkshire's PCM is $65,000.[7]

With respect to the Company's proposal that exogenous costs exceeding an individual threshold of $10,000 be considered on a cumulative basis, the Department has held that there should be a threshold for qualification as an exogenous cost in order to avoid regulatory battles about minimal dollars. NYNEX, D.P.U. 94-50, at 173. The Department's intent was that any individual exogenous cost must exceed the threshold in order to qualify for recovery. Boston Gas Company, D.P.U.96-50 (Phase I). In the instant proceeding, the Department finds that this precedent is appropriately applied to Berkshire's Plan. The Department finds that, in

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[7] The ratio of Colonial's exogenous cost threshold to its operating revenues, as reported in its year 2000 annual return to the Department is 0.001253 ($250,000/$199,556,855). The product of this ratio and Berkshire's operation revenues, as reported in its year 2000 annual return to the Department ($51,384,812) equates to approximately $65,000.

addition to creating opportunities for regulatory battles about minimal dollars, using a cumulative threshold would be inconsistent with the Department's directives in Incentive Regulation that PBR proposals not focus excessively on cost recovery issues. See Boston Gas Company, D.P.U. 96-50 (Phase I), at 292-293 (1996).

The Company contends that because its Plan is longer than Boston Gas' price cap plan, its cumulative threshold proposal is justified. We see no relevance between the length of the term of a price cap plan and our reasons for not allowing the cost of individual items to be considered on a cumulative basis. Accordingly, consistent with Department precedent, we reject the Company's proposal that exogenous costs in a particular year be considered on a cumulative basis when determining whether the threshold was exceeded. Thus, the Department finds that the effect of any individual exogenous cost must exceed $65,000 in a particular year in order for the Petitioners to request recovery of that particular exogenous cost increase.

With respect to the Company's proposal to include LBR not recovered through the LDAC as a cost eligible for exogenous cost recovery, we adopted in Colonial Gas Company, D.T.E. 97-112 (1999) the Rolling Period Method in calculating LDCs' LBR. Under this method, LBR associated with a specific year of DSM implementation are recovered for a period equal to the average length of time between a company's last four rate cases, or until new rates take effect subsequent to a new base rate proceeding. Colonial Gas Company, D.T.E. 97-112, at 32.

The Company asserts that unrecovered LBR is one of the significant factors that contributed to Berkshire's request for rate relief. The Department has stated that once a utility completes a rate case, that utility's LBR is reduced to zero. As time between rate cases increases, the LBR portion of a utility's total DSM budget increases. Id. at 10. Therefore, with the completion of this rate case, the Company's LBR will be reduced to zero. This is because Berkshire's proposed rates are calculated based on billing units that include the effect of the Company's DSM programs.

During the term of the PCM, Berkshire proposes to recover LBR not recovered pursuant to the rolling period method as an exogenous cost. The Company asserts that this proposal is supported by Department precedent and cites Bay State Gas Company, D.T.E. 00-106 (2001) ("D.T.E. 00-106"). We disagree. In D.T.E. 00-106, Bay State requested the Department to approve a seven-year time period for recovery of LBR rather than applying the rolling period method, which would have resulted in a recovery period of four years. Bay State argued that a strict application of the rolling period method would ignore the unique circumstances of its situation, namely that the Department in Bay State-NIPSCO Acquisition D.T.E. 98-31 (1998) approved a five-year rate freeze which precluded Bay State from filing a rate case until 2004.

In rejecting Bay State's proposal, the Department allowed Bay State and any other LDCs that were affected by the change in policy to submit exogenous cost calculation filings for Department review. Implicitly in D.T.E. 00-106, the Department's allowance related to companies who otherwise were precluded from filing a rate case. In contradistinction to the facts in this case, Bay State's rate freeze was approved prior to the Department's change in policy with regard to LBR and Bay State could not file a rate case to recoup its LBR.

The Department's policy with respect to LBR is known to all local distribution companies LDCs. The policy has not changed since 1999. Therefore, it would be inappropriate to expand the definition of exogenous costs to include changes in policy that are known in advance of the implementation of Berkshire's PCM. We note that in the event the Department changes its current policy with regard to LBR during the term of the PCM and the change in the Company's costs resulting from such regulatory change meets the exogenous cost threshold limit established in this proceeding, then the Company may petition the Department for recovery as an exogenous cost.

Finally, with respect to the Company's definition of exogenous costs, we agree with the Attorney General and DOER that it should be consistent with the definition we have approved in other rate plans. See Boston Gas Company, D.P.U. 96-50 (Phase I), at 292; Bay State Gas Company, D.T.E. 98-31, at 17 (1998); Essex Gas Company, D.T.E. 98-27, at 19 (1998); and Colonial Gas Company, D.T.E. 98-128, at 54-55 (1999). The Company has provided no evidence or persuasive argument that supports a change to our definition of exogenous costs. Therefore, consistent with D.P.U. 96-50 (Phase I) at 292, the Department finds that for the purposes of Berkshire's PCM, exogenous costs shall be defined as "positive or negative cost changes actually beyond the Company's control and not reflected in the GDP-PI, including, but not limited to, cost changes resulting from:

- changes in tax laws that uniquely affect the local gas distribution industry;
- accounting changes unique to the local gas distribution industry; and
- regulatory, judicial or legislative changes uniquely affecting the local gas distribution industry.

D. Pricing and Rate Design Flexibility

1. The Company's Proposal

The Company proposed to apply the overall price change percentage to each core rate class to determine the total revenue change for each core rate class (Exh. BG-24, exh. KLZ-1, at 4). In addition, Berkshire requested that it retain discretion in allocating each rate class' price cap change to the individual rate components within the class, so long as no rate component increases by more than the rate of inflation (id.). However, if the overall price change is greater than the rate of inflation because of recovery of exogenous costs, then the Company requests that it be given the discretion to increase each rate component at no more than the rate provided by the price cap formula (id.). Lastly, Berkshire requested to have the option to offer negotiated pricing and service offerings for large, non-residential customers using over 60,000 therms annually, effective on filing such contract with the Department, so long as it is for a term that does not extend beyond the term of this Plan and its price exceeds the relevant marginal cost floor price (id.).

2. Analysis and Findings

With respect to the Company's proposal to retain some discretion in allocating each rate class' price cap change to the individual rate components within the class, its proposal is identical to the rate design flexibility approved for Boston Gas. See Boston Gas Company, D.P.U. 96-50 (Phase I), at 333-334. Allowing Berkshire to set the rate component changes within a class should help to reduce intraclass subsidies and high bill impacts for individual customers. No party opposes the Company's proposed rate design flexibility. Therefore, because it is consistent with D.P.U. 96-50 (Phase I) and, further, because no evidence suggests any reason to depart from that relevant precedent, the Department approves the rate design flexibility proposed by the Company.

With respect to Berkshire's request to have the option to offer special contracts to large commercial and industrial customers, the Department notes that, as the Company is under a price cap, any revenues lost from such contracts will be born by the Company. Accordingly, during the term of the PCM there is no risk on the Company's non-contract retail customers that they will incur higher rates as a result of such contracts. Furthermore, statute seems to countenance such contracts. G.L. c. 164, § 94. Therefore, the Department allows the Company's request to have the option to offer negotiated pricing and service offerings for large, non-residential customers using over 60,000 therms annually, effective on filing with the Department, so long as such contract is for a term that does not extend beyond the term of this Plan and the contract price exceeds the relevant marginal cost floor price.

E. Annual Compliance Filings

1. The Company's Proposal

The Company proposed that price changes under its PCM would be based on a filing made each May 15th, beginning in 2004 and continuing for the term of the PCM (Exh. BG-23, exh. KLZ-1, at 1). The Company requested that the Department approve the base rate adjustments by August 1st for each year for effect September 1st (id.). The Company proposed that the rate adjustments be made each year in accordance with the Plan's approved price cap formula (id.). No party commented on the Company's proposal for submitting annual compliance filings

2. Analysis and Findings

In Boston Gas Company, D.P.U. 96-50 (Phase I), the Department directed that each year Boston Gas must submit documentation supporting the base rate adjustments, including: (1) the determination of normal billing determinants and revenues to determine the weighted average price to which the price cap will be applied; (2) a calculation of the new price cap, including documentation of the exogenous factors and capital cost changes; (3) development of new rates consistent with the annual price cap calculation; and (4) class-by-class bill impacts, including gas costs, comparing the proposed rates to the then-current rates. Also, the Department found in D.P.U. 96-50 (Phase I), that Boston Gas' weighted average price for the previous year would be calculated using revenues and billing determinants normalized for weather. Id. at 338. Lastly, the Department emphasized that "to the extent the Company submits the annual filings in a clear and comprehensive manner, with supporting data, this will facilitate the review of such filings by the Department and other parties." Id. at 339. The Department directs Berkshire to submit in its annual compliance filings the same supporting documentation that we required for Boston Gas and to submit its weighted average price for the previous year calculated using revenues and billing determinants normalized for weather. The Company is directed to submit its annual compliance filings each May 15th commencing in 2004 and continuing for the term of the PCM.

IV. REVENUE ADJUSTMENTS

A. Reclassification of Demand Rates

1. Introduction

The Company proposes to reduce test year revenues by $54,344 in anticipation of terminating demand-based rates effective February 1, 2002 (Exhs. BG-6, Sch. JJK-22; BG-25, at 7; BG-26, Sch. JMB-5). The Company is proposing to reclassify those customers who currently receive service under the demand-based rates Q-42, Q-43, Q-52, and Q-53, which are currently closed to new customers, and to assign those customers to other comparable rates (id.).

2. Positions of the Parties

a The Attorney General

The Attorney General maintains that the anticipated changes to the rate design do not negate the fact that the Company collected those revenues during the test year (Attorney General Brief at 17). The Attorney General argues that the Company's proposal are more appropriately addressed in the Company's cost allocation study regarding the affected classes' bill determinants and not in the revenue requirement determination (id. at 18). The Attorney General also contends that the Department's precedent regarding rate reclassification is limited to circumstances where customers no longer receive services by the Company (id. at 17).

b. The Company

The Company contends that it properly adjusted its test year revenues to account for the termination of its demand-based rates (Company Brief at 75). The Company notes that the Department approved the closing of the Q-42, Q-43, Q-52, and Q-53 rates in Berkshire Gas Company, D.T.E. 98-65 (1998).

The Company argues that the Department should allow the revenue adjustment because the rate design change is known and measurable. In support of its argument, the Company cites Fitchburg Gas and Electric Light Company, D.T.E. 99-118 (2001) ("D.T.E. 99-118"). The Company states that in D.T.E. 99-118, the Department instructed Fitchburg to adjust its test year sales to account for the loss of a customer (Company Brief at 76). The Company contends the same analysis applies here in order to address adequately the termination of demand rates (Company Reply Brief at 38).

3. Analysis and Findings

The Department must decide whether a rate design change warrants an adjustment to the Company's test year revenues. The Department allows adjustments to the test year revenues when such adjustments are likely to be more representative of the level of revenues upon which to set just and reasonable rates for the future. See Commonwealth Electric Company, D.P.U. 89-114/90-331/91-80 (Phase I), at 228 (1991). The closing of Rates Q-42, Q-43, Q-52, and Q-53 will result in a change in the way customers currently on these rates will be billed in the future, (i.e., from demand based to volumetric based). Consequently, the revenues in the test year, which were collected from demand-based rates, are not representative of the level of revenues on which to set rates in this proceeding. Accordingly, an adjustment to reflect the change from demand-based to volumetric-based billing is reasonable. Therefore, the Department finds that Berkshire shall be allowed to reduce its test-year revenues by $54,344 to account for the closing of Rates Q-42, Q-43, Q-52, and Q

B. Unbilled Revenues

1. Introduction

The Company proposed to reduce test year revenues by $609,173 in order to remove estimated unbilled revenues for gas service provided by the Company in December 1999, but not billed until January 2000 (Exh. BG-6, Sch. JJK-35). As a result of Berkshire modifying its fiscal year to conform with the fiscal year of its parent company, Berkshire's test year revenues include more than one year's billing cycles and are therefore, overstated (Exh. BG-5, at 27). Thus, the Company proposed a one-time decrease of $609,173 to January 2000 revenues in order to produce test-year revenues representative of one year's billing cycle (Exhs. BG-5 at 27-28; DTE 1-23).[8]

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[8] The Company's test year revenues included an increase of $701,000 to account for January 2001 unbilled revenues (Exh. DTE-1-23)

2. Positions of the Parties

a. The Attorney General

The Attorney General contends that the Department should reject the Company's proposed accounting of unbilled revenues (Attorney General Brief at 18-19). Instead, the Attorney General requests that the Department direct the Company to calculate the amount of unbilled revenues based on actual sales (id., citing DTE-RR-37).

b. The Company

The Company states that the estimate of unbilled revenues is based on variables such as weather and billing adjustments and cannot be based on actual sales (Company Brief at 77). According to Berkshire, for ratemaking purposes, revenues are calculated by using the test year actual sales and normalizing the amounts due to weather fluctuations (id.). Therefore, the Company requests that the Department accept its proposed unbilled revenue adjustment (id. at 78; Company Reply Brief at 39).

3. Analysis and Findings

The Department notes that the Company's proposed adjustments to test year revenues of $609,173 and $701,000 for December 1999 and December 2000, respectively, are inaccurate as both estimates were developed using an unbilled revenue factor based on January 2000 sales (Exh. DTE 1-23). Although the Department understands in principle the Company's proposal to estimate the presence of unbilled revenues within a given month by examining a prior month's sales, the Department rejects the Company's proposal to estimate the monthly unbilled revenues based on year-old sales data. By using stale data, the Company failed to accurately calculate these unbilled revenues. Therefore, the Department rejects the Company's proposed unbilled revenue adjustments to test year revenues.

Instead, the Company recalculated unbilled revenues for December 1999 and December 2000 using actual billing data (DTE-RR-37). The Company also weather-normalized both of these months to present accurate figures consistent with test revenue adjustments for ratemaking purposes (id.). The Department finds that the revised adjustments of $737,432 and $1,008,437 for December 1999 and December 2000, respectively, are reasonable because they are based on actual sales data. The use of actual sales eliminates the uncertainty associated with the Company's proposed estimation process. Further, the Department finds that weather-normalizing the revenues for both months allows for more consistent rate-making treatment. Fall River Gas Company, D.P.U. 750, at 7 (1981). Accordingly, the Department directs the Company to increase its unbilled revenue adjustment as it appears on line 25 of Schedule JJK-1 by $128,259 to a total of $737,432. The Department further directs the Company to increase the Company's per book operating revenues listed on line 20 of Schedule JJK-1 by $307,437 in order to account for the increase of the December 2000 adjustment from $701,000 to $1,008,437.

C. Deferred Farm Discount

1. Introduction

The Company stated that it has provided a Farm Discount to customers pursuant to the Electric Restructuring Act, St. 1997, c. 164, § 315, which requires all Massachusetts electric and gas distribution companies to reduce rates by an additional ten percent to customers who meet eligibility requirements (Exh. BG-25, at 5-6). The Company proposes to recover $69,236 representing Farm Discount credits that have accumulated since the implementation of the Electric Restructuring Act in 1998 (Exhs. BG-6, Sch. JJK-22; BG-25, at 5-6). The Company proposed to recover this amount over a four-year amortization period based on the average time between the Company's last four rate cases (Exh. BG-25, at 6). The Company indicated that the total amount of $69,236 consists of a $48,264 cumulative balance as of December 31, 2000 and an annual credit estimated for 2001 in the amount of $20,972 (Exhs. BG-6, Sch. JJK-22; BG-25, at 6).[9]

2. Positions of the Parties

a. The Attorney General

The Attorney General opposes the Company's proposal to recover the accumulated Farm Discount credit on procedural grounds (Attorney General Reply Brief at 36). Specifically, the Attorney General claims that to defer an expense, the Company must first receive Department approval to do so (id. at 37, citing North Attleboro Company, D.P.U. 93-229, at 7 (1994)).[10] The Attorney General claims that contrary to the Department's directives in North Attleboro, the Company failed to demonstrate that: (1) the expense was

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9 The Company indicated that the $48,264 cumulative amount through 2000 consists of $2,613 in 1998, $24,771 in 1999, and $20,878 in 2000 (Exh. BG-25, at 6).

10 The Attorney General claims that, although the Department (in Farm Discount, D.T.E. 98-47, at 5-6 (1998)) did allow gas distribution companies the opportunity to defer costs associated with the implementation of the Farm Discount, the Department did not give companies blanket authority to defer costs, did not authorize the recovery of deferred costs through rates in subsequent rate cases, and did not "narrowly address the discount itself as being a cost that may be deferred" (Attorney General Reply Brief at 37, n. 34). The Attorney General asserts that instead, the Department looked to a broader level of the costs of implementation "which for some companies could have been of such significance that they would qualify for deferral" (id. at 37, n. 34, citing North Attleboro Gas Company, D.P.U. 93-229, at 7 (1994)).

incurred during a test year; (2) denying the request for deferral of the farm discount would significantly harm the overall financial condition of the company; and (3) denying the request for deferral would likely cause the Company to file a rate case that would include in its test year the expense for which deferral is sought (Attorney General Reply Brief at 37, citing North Attleboro Gas Company, D.P.U. 93-229, at 7). Moreover, the Attorney General notes that the four-year proposed amortization period should be based on the period of the Company's price cap mechanism plan (i.e., 10 years) rather than four years.

b. The Company

The Company states that it did not need to petition the Department for approval to defer recovery of the Farm Discount. Instead, the Company claims that the Department has stated that it would allow recovery of Farm Discount (Company Reply Brief at 37, citing Farm Discounts, D.T.E. 98-47, at 5-6 (1998)).

Regarding the amortization period, the Company states that because its rates were developed on a stand-alone basis, the Department should treat the amortization as it would have had Berkshire been a stand-alone company (Company Reply Brief at 37). Because the average period between rate cases was four years, the amortization period to recover the Farm Discount should be four years (id.).

3. Analysis and Findings

Contrary to the Attorney General's position, in Farm Discount, D.T.E. 98-47, at 6 (1998), the Department stated that we would give all gas distribution companies the opportunity to recover Farm Discount expenses in a general rate case. The Attorney General misconstrues the plain meaning of the Farm Discount Order. Thus, the Department allows the Company to recover the accumulated Farm Discount of $69,236.

However, the Department notes that allowing the Company a four year amortization period would result in an over-recovery of the Company's costs because the Company would recover one-fourth of the total credit every year over the life of the PCM. In order to match the annual recovery to the term of the PCM, the Department directs the Company to amortize recovery of the Farm Discount over the life of the Plan.

D. Large Industrial Customer Revenue Adjustment

In its reply brief, the Company proposed for the first time an adjustment of $87,948 to test year revenues in order to account for the loss of revenues associated with a reduction in annual usage by a large industrial customer (Company Reply Brief, Att. A). The Department routinely permits the record to remain open after the close of hearings for receipt of updated information on certain cost of service schedules such as rate case expense and health care expense. These customarily are routine matters, subject both to change and ready verification, even after the record has closed. See Blackstone Gas Company, D.T.E. 01-50, at 21-22; Berkshire Gas Company, D.P.U. 92-210, at 43. In this instance, however, the Company is not simply providing updated cost of service schedules, but rather proposing adjustments to test year revenues after the close of hearings. The request comes too late and lies outside the scope of recognized exceptions. Unless previous approval is sought and allowed by the Department, we do not consider adjustments proposed by utilities after the close of the evidentiary record. See NYNEX Price Cap, D.P.U. 94-50, at 62 (1995). The Company did not seek prior approval to present this claim and, moreover, did not provide any evidence supporting its proposed adjustment of $87,948, nor has the Company demonstrated that the proposal is reasonable. The Department, therefore, rejects the Company's proposed adjustment.

V. RATE BASE

A. Whately Liquid Natural Gas Plant

1. Introduction

The Company proposes to recover $5,934,467 in costs for its new liquified natural gas facility constructed in Whately, Massachusetts ("Whately Plant" or "Facility") (Exh. BG-1, at 11). The Whately Plant was placed in service at the beginning of the test year (id.). The Company proposes to recover 83 percent of the Facility's costs through base rates, and the remaining 17 percent through the cost of gas adjustment clause ("CGAC") (Exh. BG-15, at 20). The proposed allocation is based upon the Whately Plant's storage capacity and gas mixing (vaporization) capacity (Exh. BG-15, at 20; Tr. 7, at 857-858).

2. Positions of the Parties

a. The Attorney General

The Attorney General contends that the Company has failed to establish that the Whately Plant is used and useful and, therefore, the Department should deny recovery of the costs associated with the Facility (Attorney General Brief at 21). Specifically, the Attorney General maintains that the Company did not demonstrate that it needs the incremental capacity provided by the Whately Plant for pressure reliability on its system (Attorney General Brief at 21; Attorney General Reply Brief at 19).

Moreover, the Attorney General states that the Company failed to prove that the Whately Plant was necessary to meet growth in demand during the test year (id.). Rather, the Attorney General maintains that the capacity available on the Company's system as a result of the Whately Plant substantially exceeds its current needs and that this surplus must be considered by the Department in determining whether to allow recovery of the Facility's costs (Attorney General Brief at 21).

b. The Company

The Company states that, in accordance with Department precedent, its Whately Plant is used and useful (Company Brief at 62). With regard to the argument that the Whately Plant produces supply in excess of the Company's needs, the Company notes that in its last forecast and supply plan case, the Department found that the Facility was a necessary resource to contribute towards least-cost gas supply for Berkshire's ratepayers (Company Brief at 62, citing Berkshire Gas Company, D.T.E. 98-99 (1999)). Similarly, the Company asserts that the Energy Facility Siting Board ("Siting Board") found that the Whately Plant was immediately necessary to maintain pressure reliability on Berkshire's system (Company Brief at 62-63, citing Berkshire Gas Company, 9 DOMSB 1/D.T.E. 99-17 (1999)).

3. Analysis and Findings

To determine if a utility's plant should be recovered in rate base, the Department evaluates whether the utility's plant is used and useful. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 9 (1998); Boston Gas Company, D.P.U. 96-50 (Phase I) at 15 (1996). The Department considers plant to be "used and useful" if the plant is in service at the end of the test year and provides benefits to customers. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 9 (1998); Boston Gas Company, D.P.U. 96-50 (Phase I) at 15.

The Department notes that the Whately Plant has been the subject of prior Department review and approval. The Department first considered the need for the LNG facility in the Company's most recent forecast and supply plan. Berkshire Gas Company, D.T.E. 98-99 (1999). The Department found that the Company properly evaluated the need for the Whately Plant and that Berkshire had developed a planning process that resulted in the "identification of a resource that would contribute to a least-cost supply plan." Berkshire Gas Company, D.T.E. 98-99, at 45. In addition the Siting Board reviewed the construction and operation of the Whately Plant and found that an additional energy resource was necessary to maintain reliability in the 1999/2000 split year, that the Whately Plant was preferable to a distribution pipeline facility, and that the Company's preferred site resulted in a project that would provide "a necessary energy supply for the Commonwealth . . . at the lowest possible cost." Berkshire Gas Company, 9 DOMSB 1, at 93.

______In this proceeding, the evidence indicates that the Whately Plant was entered into service during the test year (Exh. BG-15, at 8). Moreover, as evidenced by Department and Siting Board decisions and confirmed by the record, the Whately Plant is primarily used to maintain adequate pressure on Berkshire's system, and also contributes to meeting Berkshire's peak and design day requirements. Thus, the Department finds that Berkshire's customers benefit as a result of the Whately Plant. As the Whately Plant is in service and provides the benefits to Berkshire's customers envisioned in earlier Department and Siting Board decisions, the Department finds that the Whately Plant is used and useful.

The Department is not persuaded by the Attorney General's argument that there is a surplus of capacity available on the Company's system beyond its current needs. The Attorney General mischaracterizes what is principally an operational requirement, as a gas portfolio or supply question. The evidentiary record in this proceeding, and the previous findings of the Department and the Siting Board, demonstrate that the Whately Plant was primarily constructed for pressure and reliability purposes and not to meet design-day portfolio requirements. Berkshire Gas Company, D.T.E.98-99 (1999); Berkshire Gas Company, 9 DOMSB 1/D.T.E. 99-17 (1999). In fact, the evidence shows that 83 percent of the facility is classified as distribution-related, meaning that it is dedicated to maintaining reliable operating pressure. The Department notes that the Attorney General does not challenge this allocation.

The Department will next address the Company's proposal to allocate 83 percent of the Whately Plant costs in base rates and 17 percent in the CGAC. As the Whately Plant has not been operational for a full year, the Company proposed to use an allocation factor based on the use of the Whately Plant on a daily basis for storage and vaporization capacity. The Department finds that the Company's proposed method to allocate the Whately Plant's costs based on how the facility is used on a daily basis to be reasonable. Accordingly, the Department approves the recovery of the $5,934,467 associated with the Whately Plant. In accordance with the Company's proposal, the Company shall recover 83 percent of this amount in base rates and 17 percent in the CGAC.

B. Greenfield Portable LNG Facility

1. Introduction

In the late 1980s, the Company acquired a portable LNG plant in Greenfield, Massachusetts, which was used to ensure that there was adequate pressure to support Berkshire's distribution system (Exh. BG-13). As a result of the construction of the Company's LNG facility in Whately, Massachusetts, Berkshire has decided to sell the portable LNG plant (Exh. BG-13). Nonetheless, the Company proposes to retain in rate base $273,231[11] representing the portable LNG plant (Exh. BG-13, Schedule of Indicated Remaining Life Accrual Rates at 1).

2. Positions of the Parties

a. The Attorney General

The Attorney General claims that the Department should reject Berkshire's request to include in rate base its portable LNG plant (Attorney General Brief at 25; Attorney General Reply Brief at 20-21). The Attorney General states that because the Company is prepared to sell the plant, it is not "used and useful" (id.). Additionally, the Attorney General contends that the Company's portable LNG plant should not be considered an inactive service because the plant represents a redundant asset and can be sold to other businesses (Attorney General Reply Brief at 21).

b. The Company

The Company asserts that the portable Greenfield LNG plant is used and useful because the Company maintains the plant in the event of a failure with Whately Plant (Company Brief

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11 Consisting of gross plant of $703,516 less accumulated depreciation of $430,285 (Exh. BG-14).

at 68). Moreover, the Company states that until completion of any sale, the portable LNG plant could be reactivated if necessary (Company Brief at 68, citing Berkshire Gas Company, D.P.U. 92-210, at 25-26 (1993); Company Reply Brief at 32). In support of its argument to include in rate base the costs of the vaporizer, the Company cites Berkshire Gas Company, D.P.U. 92-210 (1993), wherein the Department found that inactive plant need not be removed from rate base, provided the plant can be reactivated (Company Brief at 68)

3. Analysis and Findings

To determine if a utility's plant should be recovered in rate base, the Department evaluates whether the utility's plant is used and useful. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 9 (1998); Boston Gas Company, D.P.U. 96-50 (Phase I) at 15 (1996). The Department considers plant to be "used and useful" if the plant is in service and provides benefits to customers. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 9; Boston Gas Company, D.P.U. 96-50 (Phase I) at 15. In the absence of extraordinary circumstances, the Department does not normally allow the relitigation of the used or usefulness of an investment once it has been included in rates. Boston Gas Company, D.P.U. 93-60, at 43 (1993); Berkshire Gas Company, D.P.U. 92-210-B at 14 (1993).

The evidence demonstrates that the Company expects imminently to sell the Greenfield portable LNG plant (Exh. BG-13). The Department considers the Company's decision to sell the portable LNG plant an extraordinary circumstance, thereby necessitating the Department's determination on whether the plant continues to be used and useful.

The evidence indicates that the portable LNG plant is not in service. Despite the Company's assertion that the plant could be reactivated, the plant is not currently in use. The

Company has admitted a firm intention to sell this plant, but proposes, in effect, to continue collecting on a redundant, even an unused asset. This is an unpersuasive claim. Unused plant does not benefit ratepayers. Accordingly, the Department finds that because the portable LNG plant is not in service and does not provide benefits to ratepayers, the facility is not used and useful. Moreover, the Department notes that the adjusted test year is a representative level of expenses that the Department uses to establish just and reasonable rates for the next ten years. To include the portable LNG plant in the calculation of Berkshire's rates is inappropriate because the unit is expected to be sold within one year. See Western Massachusetts Electric Company, D.P.U. 85-270, at 140-141 (1986). Accordingly, the Department will reduce the Company's plant investment by $703,516, and reduce the Company's depreciation reserve of $430,285 and its associated accumulated deferred income taxes by $30,783.[12]

Regarding the Company's claim that the Department allowed the inclusion in rate base of inactive plant in Berkshire's last rate case, the Department notes that our ruling in that case was specific to plant that was determined to be economically unsalvageable and unable to be sold. Berkshire Gas Company, D.P.U. 92-210, at 25-26. Moreover, the Department found that the plant was not a redundant asset. Id. Here, the evidence demonstrates that as a result of the Whately Plant, the Company expects to sell the portable LNG plant within one year. Thus, the Department notes that the portable LNG plant is economically salvageable and readily saleable. Moreover, the portable LNG plant is a redundant asset in that it would serve (if used and not slated for sale) the same purpose as does the new Whately Plant.

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12 Accumulated deferred income taxes associated with the LNG Facility were calculated by dividing the net book value of that plant by the total net utility plant in service determined by the Company and multiplying the resulting percentage times the reserve for Deferred Federal Income and Corporate Franchise taxes.

C. Allocation of Propane Plant

1. Introduction

______The Company owns and operates propane storage and injection facilities (Exh. BG-5, at 14). The Company uses propane tanks to store liquid propane ("LP") to serve its customers' peak load (id.). The Company's unregulated affiliate, Berkshire Propane, Inc. ("Berkshire Propane"), also uses the tanks as part of its propane retail sales business (id.). The Company proposes to allocate 95 percent of the costs associated with these facilities to Berkshire Propane (id.).

2. Position of the Parties

a. The Attorney General

The Attorney General claims that the Company's allocation calculation conflicts with Department precedent (Attorney General Brief at 26). Specifically, the Attorney General claims that for affiliate transactions, the Company must allocate the higher of book value or market value (id., citing 220 C.M.R. §§ 12.00 et seq.). The Attorney General asserts that in this case the Company proposed to allocate an amount representing the historical net book value of the propane storage tanks (Attorney General Brief at 26). The Attorney General states that the proper allocation should be based on the market value of the tanks, which the Attorney General contends is $856,859[13] (id. at 27).

[13] The Attorney General claims that, based upon the market to book ratio associated with the acquisition of the Company by Energy East, the market value of the tanks is 287 percent of book value, or $856,859 (i.e., $298,557 x 2.87) (Attorney General Brief at 27).

b. The Company

______The Company contends that because the propane tanks are substantially depreciated, it is not practical to calculate the allocation based on the market value (Company Brief at 69-70; Company Reply Brief at 33). Hence, the Company believes that it is more reasonable to allocate the costs of the tanks based on a calculation using the book value of the plant (id.). The Company also contends that allocating 95 percent of the costs of the tanks to Berkshire Propane is reasonable because the tanks are used for utility business only on peak or design days (Company Brief at 69; Company Reply Brief at 33).

The Company disagrees with the Attorney General's assertion that the allocation of the propane tanks must be calculated on the higher of either the market value or book value of the plant (id.). Specifically, the Company claims that 220 C.M.R. § 12.04(1) applies to sales or transfers of assets to affiliates, and that because the Company has neither sold nor transferred these propane storage tanks to Berkshire Propane, the regulation is not applicable (id.). Moreover, the Company asserts that the Attorney General's argument that the propane tanks have a market value of 287 percent of book value is without merit and is not based on any engineering studies or asset-specific appraisals (Company Brief at 70).

____________3. Analysis and Findings

Pursuant to 220 C.M.R. § 12.04(1), a distribution company may sell, lease, or transfer to an affiliate an asset which has been included in a company's rates, provided that the affiliate is charged the higher of either the net book value or the market value of the asset. Pursuant to 220 C.M.R. § 12.04(2), a distribution company is permitted to sell, lease, or transfer to an affiliate assets (other than those included in 220 C.M.R. § 12.04(1)), provided that the price charged for the asset is equal to or greater than the distribution company's fully allocated cost to provide the asset.

The evidence indicates that even though Berkshire Propane uses the propane storage and injection facilities, the Company maintains ownership of the plant. As no sale, transfer or lease of the facilities has occurred, the Department finds that the allocation of the costs associated with the plant is not subject to 220 C.M.R. §12.00 et seq. In addition, the evidence established that the Company provides storage tank services to Berkshire Propane at a price equal to the Company's fully allocated cost. Accordingly, the Department finds that the Company's proposal is consistent with 220 C.M.R. §12.04(2).

Next, the Department will address the Company's proposal to allocate 95 percent of the facilities' costs to Berkshire Propane. The record shows that for design purposes, the Company requires a minimum of three days and a normal range of three to five days of storage for the LP gas plant to meet the peak shaving needs of utility ratepayers (Exh. BG-15, at 7-8). The Department notes that for the 90-day winter period, this range of three to five days translates to a utilization of propane storage capacity of approximately 3.3 percent to 5.6 percent. Thus, the Department finds that allocating five percent of the plant's costs to the Company is reasonable and therefore the Department accepts the Company's proposed allocation.

D. Working Capital Allowance

1. Introduction

In its day-to-day operation, the Company requires working capital to pay for its O&M and purchased gas expenses because of the time lag between the Company's payment for such expenses and the customer's payment for services. Working capital is provided from funds internally generated by the Company (i.e., retained earnings) or from short-term borrowings. Department precedent entitles the Company to be reimbursed for the costs associated with the use of its internal funds and for the interest expense it incurs for borrowing through working capital allowances. Western Massachusetts Electric Company, D.P.U. 87-260, at 22-23 (1988).

a. O&M Working Capital Allowance

The Company proposed an O&M working capital allowance of $1,762,260 (Exh. BG-6, Sch. JJK-4). The Company calculated the allowance for O&M expenses using the 45-day convention by multiplying its proposed pro forma O&M expense by 12.33 percent (45 days/365 days) (id.).

Pursuant to Department directives in Fitchburg Gas and Electric Light Company, D.T.E. 99-118, at 29 (2001), the Company solicited and received bids from several consultants to prepare a lead-lag study and found that the preparation of a full study would cost between $30,000 and $40,000 (Exh. BG-5, at 7). In light of the cost, the Company performed a limited analysis to determine the likely results of a lead/lag study (id.). As a result of the Company's analysis, Berkshire estimates that the lead/lag time between the Company's payment for expenses and the receipt of a customer's payment for services was 43.6 days (id. at 7-8). The Company states that this translates into a reduction of $6,000 in working capital (id.). As this amount is significantly less than the cost to perform a full lead/lag study, the Company decided to forgo conducting the study and instead based its proposal on the generally accepted "45-day convention"[14] (id.).

b. Purchased Gas Working Capital Allowance

Although the Company collects its purchased gas working capital costs through the CGAC rather than through base rates, the Company must present an updated calculation of purchased gas working capital costs as part of a base rate proceeding. See Berkshire Gas Company, D.P.U. 90-121, at 234-237 (1990). The Company calculated the lead days (i.e., the number of days between Berkshire's payment to its gas supplier and the customer's payment to Berkshire for that gas) for each supplier separately based on four factors: (1) average payment date; (2) weighted cost; (3) days lag; and (4) weighted days lag (Exh. BG-26, Sch. JMB-4). When added together, these factors yield a weighted average lead-day figure of 37.64 days (id.).

The Company identified separate lag days for firm and interruptible customers (id.). The lag factor is based upon the number of days between the customer's receipt of gas service and the Company's collection of the monies for that gas (id.). The Company calculated the lead/lag time for firm customers at 68.45 days and for interruptible customers at 45.15 days (id.). The Company calculated an overall weighted average lag of 66.74 for all customers (id.). To calculate the net lag, the Company subtracted the overall weighted lead-day figure (37.64 days) from the overall lag-day figure (66.74), producing an overall net lag of 29.10 days (id.).

14 The 45-day convention accepts that the typical lag in customer payment for a utility's O&M expenses is 45 days. Boston Gas Company, D.P.U. 88-67, at 35 (1988).

2. Positions of the Parties

a. The Attorney General

The Attorney General argues that the Department should remove Berkshire's billing lag from the determination of the cash working capital allowance for both base rates and purchased gas (Attorney General Brief at 29). Further, the Attorney General contends that Berkshire inflated its revenue lag by "double counting" its billing lag (id.). The Attorney General maintains the record shows that data from the daily meter read are immediately entered into the Company's billing and accounting systems (id. at 28). Thus, the Attorney General notes that because Berkshire's billing and accounting systems are integrated, the 4.25 day "billing lag" as measured by the Company should not exist (id.; Attorney General Reply Brief at 22).

The Attorney General refutes the Company's assertion that eliminating the billing lag days will deprive the Company of compensation for a legitimate delay in cash receipts (Attorney General Reply Brief at 23). The Attorney General argues that the Company is already compensated because the method that the Company used to determine payment lag, based on accounts receivable, allows for accounts receivable to be recorded well before the bill is mailed (id.). Thus, the Attorney General contends that when using the accounts receivable method, the Company "double counts" the billing lag by adding on the time to have the billing information sent to the vendor and to have bills printed and mailed (id.).

b. The Company

The Company contends that its use of the "45-day convention" to calculate the O&M working capital allowance was approved by the Department in its last rate case (Company Brief at 71, citing Berkshire Gas Company, D.P.U. 92-210, at 58). The Company argues that using the "45-day convention" is appropriate in this case based on the Company's determination that it would cost a significant amount to conduct a full lead/lag study (Company Brief at 73). Accordingly, the Company requests that the Department accept its O&M working capital allowance of $1,762,260 (id.).

Refuting the Attorney General's argument regarding the billing lag, the Company argues that while bills are calculated and reviewed at headquarters, printing and mailing are performed by a vendor, and that its 4.25 day billing lag includes weekends and holidays (id.; Company Reply Brief at 35). Further, Berkshire contends that in suggesting a reduced lead/lag period, the Attorney General does not allow for the Company's review of bills to ensure validity or accuracy (e.g., high, low, or missed reads) (Company Brief at 73; Company Reply Brief at 35).

3. Analysis and Findings

The Department notes that the Attorney General erroneously assumes that the Company conducted a lead/lag study for both the O&M working capital calculation and the purchased gas cost working capital calculation. The record shows that the Company used the "45-day convention" to determine its O&M working capital and conducted a lead lag study only to determine the working capital allowance for its purchased gas costs. Although the Company did investigate the possibility of conducting a lead/lag study and performed a limited analysis to estimate the likely results a complete lead/lag study, the Company did not conduct a separate lead/lag study for O&M costs.

In accordance with Department precedent, the Company evaluated the cost-effectiveness of a lead-lag study. See Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 15 (1998). However, the Department is concerned with the accuracy of the Company's cost-effectiveness study, as it was based primarily on a limited analysis that did not include all of the factors considered in a full lead/lag study. In fact, the Company admits that its limited lead/lag analysis was inappropriate to use in calculating the number of lead/lag days for the O&M working capital allowance (Exh. BG-5, at 8). In the absence of a complete lead/lag study for O&M, the Department will accept the Company's proposal to use the 45-day convention. The Department approves the O&M working capital calculation and allowance as set forth in Schedule JJK-4 of Exhibit BG-6. However, the Department directs the Company in its next rate case filing, to conduct a comprehensive cost-effectiveness analysis of a lead/lag study for its O&M working capital calculation.

Turning to the purchased gas lead/lag study, the evidence established that the Company conducted its study in accordance with Department precedent. As the study was appropriately conducted, the Department finds that the Company's purchased gas cost lead/lag study and proposed purchased gas working capital calculation to be acceptable.

The Department will next address the Attorney General's argument that Berkshire inflated its revenue lag by double-counting its billing lag period. The Attorney General's conclusion, that the automated meter reading system eliminates the need for the 4.25 "billing lag," does not appreciate the realities of running a business. The Department notes that although the installation of the automated meter reading system reduces the time requirement for the conversion of raw meter data into the Company's accounting system, it is not the sole component to the bill processing operation. The various procedures identified on the record that are necessary to process a bill (i.e., checking the data for validity, accuracy and consistency, transferring the data to the bill printing vendor, and bill printing (Exh. BG-26, Sch. JMB-4, at 3)) are not external to the billing lag period, but instead are central to it. Hence, the Department rejects the Attorney General's argument with regard to Berkshire's calculation of its billing-lag period.

VI. COST OF SERVICE

A. Executive Compensation

1. Recovery of Executive Compensation Package

a. Introduction

Berkshire's total payroll expense for the test year was $7,683,613 (Exh. DTE-1-1). The Company proposes a total adjustment for its employee compensation packages of $441,593 (Exh. BG-6, Sch. JJK-7). Specifically, the Company seeks adjustments of $154,331 for union pay increases, $181,061 for non-union pay increases, and $106,201 for executive pay annualizations and increases (Exh. BG-6, Sch. JJK-8).

b. Positions of the Parties

i. The Attorney General

The Attorney General opposes the Company's request for a post test-year adjustment for executive compensation. The Attorney General notes that for the Department to allow a post test-year adjustment for executive compensation, the Company must demonstrate that:

(1) there is an express commitment by management to grant the increase; (2) there is an historical correlation between union and non-union raises; and (3) the amount of the wage increase is reasonable (Attorney General Brief at 30). The Attorney General states that the Company has not demonstrated that there is an historical correlation between union and non-union raises, or that the proposed 11.7 percent increase in executive compensation for 2001 is reasonable (id.).

Also, the Attorney General argues that the study relied on by the Company to support its contention that the executive compensation levels are reasonable is flawed. The Attorney General argues that the study compared Berkshire with companies that have higher annual revenues and a disproportionate ratio between utility and non-utility compensation levels (Attorney General Reply Brief at 24).

Additionally, the Attorney General requests that the Department deny Berkshire's proposal to include and annualize in its cost of service the salaries of two officers no longer employed by the Company (Attorney General Brief at 31).[15] According to the Attorney General, both officers left the Company's employ by September 2000 (id.). The Attorney General contends that annualizing the salaries of those two officers is unreasonable and that customers should not be required to pay the salaries for individuals no longer employed by the Company (id. at 31-32).

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15 The Attorney General defines "salary" as the officers' total compensation package (i.e., base pay, bonuses, health and welfare benefits, 401(k) Plan, and FICA costs) for a total of $258,903 (Attorney General Brief at 32-33).

ii. The Company

The Company states that its proposed post test-year adjustment for executive compensation is reasonable (Company Brief at 84). To demonstrate the reasonableness of its executive compensation package, Berkshire provided a study conducted in 1999 which yielded information that the Company's executive pay was below those wages paid to executives of similarly-situated utility companies (id.). In fact, the Company argues that even with the 2001 salary increase, the Company's current officers do not earn the midpoint of the salary range paid to utility company executives in 1999 (id. at 83-84). Thus, the Company argues that, based on the results of its study, the Company's proposal to increase executive compensation wages by 11.7 percent for 2001 and 2.75 percent for 2002 is reasonable (id. at 84).

Moreover, the Company argues that there is an historical correlation between executive increases and union increases. The Company states that, using the Attorney General's calculations, executive salaries have increased an average of 9.10 percent annually during the last nine years, while union wages increased by an average of 2.92 percent annually for the same period (id. at 86). The Company argues that increases for executive compensation have generally been greater than those for union wages, and thus, an historical correlation exists between the two (id. at 87).

Similarly, the Company argues that including in its cost of service the annualized test year compensation for two former executives is reasonable. The Company states that to present the Company accurately on a pre-merger, stand-alone basis, merger-related costs must be removed from the Company's cost of service (id. at 79). Moreover, the Company argues that costs no longer incurred as a result of the merger must be restored for purposes of deriving Berkshire's stand-alone cast-off rates (id.). The Company explains that, had the merger not occurred, the two officers would have continued their employment with the Company through the test year. Accordingly, the officers' compensation should be annualized through the end of the test year (id.).

iii. Analysis and Findings

At issue is the salary increases paid to non-union employees (including executives). To recover an increase in non-union wages, a company must demonstrate that: (1) there is an express commitment by management to grant the increase; (2) there is an historical correlation between union and non-union raises; and (3) the non-union increase is reasonable. Boston Gas Company, D.P.U. 96-50 (Phase I), at 42 (1996). To determine the reasonableness of non-union base wages and increases, the Department considers how a company's proposed non-union base payroll and increases compares with the wages paid to employees at similarly-situated companies that compete for skilled employees. Massachusetts Electric Company, D.P.U. 92-78, at 25-26; Bay State Gas Company, D.P.U. 92-111, at 102-103.

Regarding the requirement to demonstrate management's commitment to grant the executive increases, the Department notes that the non-union payroll increases were effective on January 1, 2001 and January 1, 2002 (Exhs. BG-5, at 10-11; BG-6, Sch. JJK-8). The Department finds that, given the effective dates of the increases, the Company has satisfied the first requirement of the Department's standard.

To support its argument that there is an historical correlation between union and non-union wage increases, the Company submitted evidence detailing the annual payroll increases provided to its non-union and union employees (Exh. BG-7, Supp. Sch. D). The

Attorney General argues that the evidence does not demonstrate that a correlation between union and executive compensation increases exists. The Department recognizes that year-to-year fluctuations in executive compensation increases can be attributed to many factors, including a company's financial performance. Moreover, we note that Berkshire retains only four executive employees and 52 other non-union employees (Exhs. AG 1-44; AG 5-4). Consequently, comparing executive increases to union increases would create an inherent bias against correlations. Instead, the Department relies on the correlation between union and non-union wages. Boston Gas Company, D.P.U. 96-50 (Phase I), at 42 (1996). An evaluation of the evidence reveals that annual union wage increases granted between 1993 and 2000 have ranged between 0.05 percent and 4 percent (Exh. BG-7, Supp. Sch. D). Concomitantly, annual non-union salary increases have ranged between 1.74 and 9.49 percent (id.). For 2001 and 2002, the union wages increased by 2.75 percent each year. The non-union wages increased by 4.5 percent in 2001 and 2.75 in 2002. Based on the evidence, the Department finds that a sufficient correlation exists between union and non-union wage increases to meet the second part of our standard.

To enable the Department to determine the reasonableness of a company's total employee compensation expenses, companies are required to provide comparative analyses of their employee compensation expenses. Boston Gas Company, D.P.U. 96-50 (Phase I), at 47. Both current total compensation expense levels and proposed increases should be examined in relation to other New England investor-owned utilities and to companies in a utility's service territory that compete for similarly-skilled employees. Id. The evidence on whether the executive salary increases are reasonable consists of a study conducted by the Company in

1999 (DTE RR-34). The Attorney General argues that the study is flawed because Berkshire is compared with companies that, among other things, have higher revenues. The Department notes that given the nature of the Massachusetts gas distribution industry, the number of companies directly comparable to Berkshire is limited. The evidence indicates that, in compliance with Department precedent, the Company compared its wage levels to New England investor-owned utilities and to companies in Berkshire's service territory that compete for similarly-skilled employees. Accordingly, the Department finds the study to be acceptable and will consider the results gleaned from the study in determining the reasonableness of the Company's executive wage increase.

The Department has found that utilities must offer employee compensation packages that are competitive with other regulated and non-regulated companies to attract and retain skilled employees. PhoneTel Technologies, Inc., D.P.U. 92-50, at 55 (1992). Pursuant to the results of the Company's study, the wage increases promised to Berkshire's executives in 2001 and 2002 are below the midpoints of the average salaries paid to executives at similarly-situated companies. The Department finds that by offering executives the mid-point of a salary range paid to employees at regulated and non-regulated companies within Berkshire's service territory would enable the Company to remain competitive in attracting and retaining these employees. Therefore, the Department finds the executive wage increase to be reasonable. Having found that the Company provided executive wage increases effective January 1, 2001 and January 1, 2002, that there is a correlation between the union and non-union wages, and that the compensation increase is reasonable, the Department will allow the Company to adjust its cost of service for the executive compensation increases.

The Department will next address the ratemaking treatment of the salaries of the two former officers who left the Company as a result of the merger (Exh. BG-5, at 11). The evidence demonstrates that the job duties of the former employees are now done by other employees. Thus, the positions at Berkshire have been eliminated (Exh. BG-5, at 11).[16] The Department has recognized that a company's employee levels routinely fluctuate due to retirements, resignations, and the hiring of new employees. Fitchburg Gas and Electric Light Company, D.P.U. 1270/1414, at 16-17 (1983). Generally, the Department has found that, given the routine fluctuations, it is appropriate to determine wage and salary expenses on the basis of employee levels during the test year. Id. In this case, however, we find that the acquisition of Berkshire by Energy East has resulted in a permanent change in the Company's structure and organization. Consequently, the Company no longer requires the same level of personnel that was necessary during the test year. As the Company will not incur any compensation costs for these two employees, there is no need for the Department to establish rates based on their past employment with the Company. Massachusetts-American Water Company. D.P.U. 88-172, at 12 (1989). The change is evidently permanent. It is known and measurable. Accordingly, the Department will remove $239,769 of wages from the Company's proposed cost of service. Further, the Department will remove $19,135 from the cost of service for associated expenses for these former employees for health and welfare costs.

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[16] See also, Company Brief at 79, n. 52

B. Health Care Expense

The Company's medical costs attributable to Berkshire's O&M was $920,104 (Exh. BG-6, Sch. JJK-32 Rev). The Company seeks post-test year adjustments for health care expenses in 2001 and 2002 totaling $159,887 and $92,992, respectively (id.).

1. Positions of the Parties

a. The Attorney General

The Attorney General argues that the Company's forecast post-test year costs for health care expenses are inflated (Attorney General Brief at 34). The Attorney General notes that for the 12-month period ended on June 30, 2001, the Company projected that health care costs would increase by 9.8 percent (id. at 34-35; Exh. BG-7, Supp. Sch. H). However, the Attorney General states that between June 2000 and June 2001, the Company's actual health care costs increased by only 4.73 percent (Attorney General Brief at 35). Thus, the Attorney General argues that if the Department were to adjust the Company's health care costs, it should adjust them by 4.73 percent for 2001 (id.).

b. The Company

The Company argues that its health care expenses are reasonable (Company Reply Brief at 42). The Company states that to contain health care costs, the Company switched to a managed care health plan to take advantage of vendor discounts, raised employee co-pays, and instituted deductibles for its dental plan (Company Brief at 89-90).

With regard to the issue of whether the health care costs are known and measurable, the Company states that it updated its filing to include the actual health costs that were incurred between January 1 and October 31, 2001 (Company Reply Brief, Sch. JJK-32 Rev.). Based on those costs, the Company estimated its monthly expenses for November and December 2001 (id.).

2. Analysis and Findings

The Department requires that test year health care expenses and post-test year adjustments be (1) known and measurable and (2) reasonable in amount. Boston Gas Company, D.P.U. 96-50 (Phase I), at 45-46 (1996); North Attleboro Gas Company, D.P.U. 86-86, at 8 (1986). In addition, the Department requires utilities to contain their health care costs. Boston Gas Company, D.P.U. 96-50, at 46 (1996); Massachusetts Electric Company, D.P.U. 92-78, at 29 (1992); Nantucket Electric Company, D.P.U. 91-106/138, at 53 (1991).

The evidence demonstrates that the Company's health care expenses for calendar year 2000 and for the months January through October 2001 are known and measurable (Exh. BG-6, Sch. JJK-32 Rev.).[17] However, as the Company did not provide the Department with its actual health care expenses for November and December 2001, the Department finds that the Company's costs for those months are not known and measurable. Instead of using the Company's estimated health care expenses to determine the costs for November and December 2001, the Department will rely on the actual costs incurred by the Company in November and December 2000 (Exh. AG 5-22). Adding those amounts to the Company's actual costs for

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[17] Contrary to the Attorney General's arguments in his "Motion to Strike Sections of the Company's Reply Brief", the updated health care expenses detailed in Berkshire's reply brief were the actual costs incurred for medical insurance. The Department permits companies to update health care expenses as a matter of routine since these costs are subject to change. See Blackstone Gas Company, D.T.E. 01-50 (2001). Thus, the portion of the Attorney General's Motion to Strike pertaining to updated medical insurance expenses is denied.

January through October 2001, results in $1,026,209. The Department finds that Berkshire's known and measurable adjustment to test year for health care expenses is $106,105. Because the Company's health care expenses for calendar year 2002 are not known and measurable, the Department denies Berkshire's request to adjust health care expenses for 2002.

Concerning the reasonableness of the Company's health care expenses, the Department notes that Berkshire has taken measures to contain its health care costs. Specifically, the record demonstrates that, among other things, Berkshire uses a managed care plan, encourages employees to use the lower-cost HMO alternative, and supports employee wellness and preventive measures. Accordingly, based on the evidence that the Company has taken appropriate measures to contain health care costs, the Department finds that Berkshire's health care expenses, as restated here, are reasonable.

As the Department has found that, as modified here, the Company's health care expenses for calendar years 2000 and 2001 are: (1) known and measurable and (2) reasonable, the Company shall be allowed to recover the amount of $1,026,209 representing health care costs. As detailed above, no adjustment shall be permitted for calendar year 2002.

C. 401(k) Costs

1. Introduction

The Company incurred $233,903 in expenses during the test year associated with its 401(k) benefit plan (Exh. AG 1-34). Accordingly, the entire $233,903 of expenses had been included in the cost of service. On brief, the Company proposed to reduce the expenses for the 401(k) plan by $46,663 after agreeing to allocate the costs to capital and non-utility expenses (Company Brief at 95-96).

2. Positions of the Parties

a. The Attorney General

The Attorney General argues that the 401(k) expense should be reduced by $68,497 (Attorney General Brief at 36). According to the Attorney General, the percentage of wages and salaries that the Company capitalized during the test year was 11.5 percent (id., citing Exh. AG 1-40). Consistent with this capitalization rate, the Attorney General maintains that 11.5 percent of 401(k) expenses (i.e., $26,899) should be capitalized as part of the cost of construction (Attorney General Brief at 36). Further, the Attorney General argues that an additional $41,598 of these costs should be allocated to non-utility operations (id. at 37). The Attorney General derived his proposed adjustment by dividing non-utility payroll by the Company's total payroll and multiplying the resulting percentage by the Company's test year 401(k) expenses (id.). The Attorney General's method allocates 401(k) plan expenses to conservation and load management, energy conservation services, and clearing accounts (Attorney General Reply Brief at 28).

b. The Company

The Company argues that because 11 percent of its total payroll was capitalized, 11 percent of its 401(k) costs (i.e., $25,729) should be capitalized as well (Company Brief at 95-96). To derive the allocation to non-utility operations, the Company divided the compensation paid for non-utility operations (e.g., costs for rentals, merchandising and jobbing, propane, service, and Berkshire Energy Resources) by its total compensation and multiplied the resulting percent by the 401(k) (id.). As calculated, the Company allocated $20,934 to non-utility operations (id.) Therefore, the Company argues that the total reduction to the cost of service is $46,663 (id.). In response to the Attorney General's claim that the Company failed to allocate any 401(k) expenses to conservation and load management, energy conservation services, and clearing accounts, the Company argues that its total payroll costs already provide for monies allocated to these areas (Company Reply Brief at 46, citing Exh. BG-9, Supp. Sch. NU-F, line 32).

3. Analysis and Findings

The evidence indicates that Berkshire's 401(k) expenses represent a component of its overall payroll expense, a portion of which has been charged to utility construction costs and allocated to non-utility operations. Consistent with this treatment, the Department finds it appropriate to both capitalize and allocate a portion of the 401(k) costs in a similar manner. Therefore, the Department directs that 401(k) costs be capitalized as a construction cost of utility plant and that the expense portion be allocated to non-utility operations.

Both the Attorney General and the Company agree that 401(k) costs should be capitalized by the same percentage as the Company's total payroll was capitalized as part of the cost of utility construction during the test year. That amount was 11.02 percent ($847,221 divided by $7,683,613) (Exh. BG-9, Supp. Sch. NU-F). Accordingly, the Department finds that 11.02 percent of the $233,903 of 401(k) costs should be capitalized and therefore adjusts the cost of service by $25,791.

With respect to the allocation of 401(k) expenses to non-utility operations, the evidence demonstrates that $1,366,477, or 17.78 percent, of compensation paid during the test year was for non-utility operations.[18] The Department finds that an adjustment is necessary to ensure

[18] Total payroll of $7,683,613, minus utility payroll expense of $5,469,915 minus utility (continued...)

that the Company's customers pay only the utility expense portion of these costs. Berkshire Gas Company, D.P.U. 90-121, citing Essex County Gas Company, D.P.U. 87-59, at 34-35 (1987). Accordingly, the Department finds that 17.78 percent of the 401(k) costs should be allocated to non-utility operations, and thus adjusts the cost of service by $41,588.

Based on the foregoing, the total reduction to 401(k) expense is $67,379. Accordingly, the Department will reduce the Company's proposed cost of service for 401(k) expenses by that amount.

D. Strike Contingency Expense

1. Introduction

The Company proposes to normalize $162,436 over a three-year period for a strike contingency expense that it incurred during the test year (Exhs. BG-5, at 18-19; BG-6, Sch. JJK-21). The Company's proposed normalization period represents the period between union contract negotiations (id.). The strike contingency expense includes costs to: (1) train non-union staff on the use of crucial equipment necessary to ensure the continuation of safe operations; (2) develop a customer information program; and (3) implement security measures (e.g., changing locks to secure Company assets, fencing installation, communications equipment, and hiring security personnel) (Tr. 14, at 1013-1015).

2. Positions of the Parties

a. The Attorney General

The Attorney General states that the strike contingency expense is unnecessary because the Company has not experienced a strike since 1982 (Attorney General Brief at 40; Attorney

[18](...continued)
payroll capitalized of $847,221 (Exh. BG-9, Supp. Sch. NU-F).

General Reply Brief at 28-29). Alternatively, the Attorney General comments that if the recovery of strike contingency expenses is allowed, the Department should direct that the amount be amortized over 19 years, which represents the actual period between strikes (id.).

b. The Company

The Company argues that costs for the development of strike contingency plans are necessary to ensure that Berkshire is able to continue to operate in the event of a strike[19] (Tr. at 1013-1015; Company Brief at 94). Moreover, the Company maintains that developing strike contingency plans strengthens its negotiating position with the union (Company Brief at 95).

With regard to the Company's proposal to normalize the strike contingency expense over three years, Berkshire states that this time period is reasonable because it coincides not only with the term of the current union contract, but also with the average terms of the Company's prior union contracts (Company Brief at 94; Company Reply Brief at 44).

3. Analysis and Findings

The Department has not allowed companies to recover expenses incurred as a result of strikes on the grounds that they are non-recurring in nature. Boston Gas Company, D.P.U. 93-60, at 136-138 (1993); Boston Edison Company, D.P.U. 1350, at 90 (1983) Cambridge Electric Light Company, D.P.U. 1015, at 21 (1982).

The Department acknowledges that preparation for a potential labor strike is essential to ensure that the Company continues to operate in the event of a strike. Moreover, the Company

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19 The Company notes that in 2000, the union did vote to strike and engaged in a one-day work stoppage during which the non-union employees operated the business (Company Brief at 95).

will need to update or develop new strike contingency plans each time it negotiates a labor contract. Therefore, the Department finds those strike contingency expenses to be recurring. As the Company's strike contingency expenses are recurring, the Department will allow its inclusion in the Company's cost of service.

Concerning the period of time that the Company should normalize these expenses, the evidence demonstrates that since 1982, the Company has negotiated a labor contract every three years (Exh. BG-6, Sch. JJK-21). The observation that 1982 was the last strike is belied by the one-day work stoppage in 2000. In any event, the observation adds little to assessing whether the contingency planning was a reasonable expense. It was. Therefore, the Department will normalize the strike contingency expense over three years.

E. Incentive Payments

1. Introduction

The Company proposed to include $325,433 for costs incurred as a result of Berkshire's customer incentive program (Exh. BG-5, at 26). During the test year, Berkshire added 365 residential customers by offering those consumers incentives such as rebates and free equipment (e.g., water heaters, conversion burners, boilers, etc.) (Exhs. BG-5, at 26; BG-7, Supp. Sch. J). Berkshire projected that by adding the 365 residential customers, the Company's revenues would increase by $180,389 (Exh. BG-5, at 26).

2. Position of the Parties

a. The Attorney General

The Attorney General argues that the Department should deny the Company's proposal to recover costs incurred to attract new customers (Attorney General Brief at 37). The

Attorney General argues that existing customers have received no benefit as a result of the Company's incentive program (id.). Specifically, the Attorney General contends that allowing the Company to include the incentive payments, as well as the marginal costs incurred to obtain the new customers, would cause the rates of existing customers to increase (id.).

No other party addressed this issue on brief.

3. Analysis and Findings

The Department has allowed recovery of costs associated with marketing programs if the evidence demonstrates that the programs provide net benefits to ratepayers. See Berkshire Gas Company, D.P.U. 92-210, at 103 (1993); Bay State Gas Company, D.P.U. 92-111, at 191-193, 201-202 (1993). The Department notes that the Company did not perform a cost-effectiveness analysis to support recovery of the incentive program costs. Instead, Berkshire provided the total costs of the program and the subsequent expected margins. The record indicates that the costs associated with the Company's incentive program exceed the benefit derived from the program. Specifically, the evidence indicates that the cost of the program in the test year was $325,433 (i.e., $892 per customer acquired) (Exh. BG-7; Supp. Sch. J) The record further shows that the annual net margin in the test year for the Company was $180,389 (i.e., $494 per customer) (id.). Based on this evidence, the Department finds that the Company's marketing program does not provide net benefits to ratepayers (id.).[20] Accordingly, the Department rejects Berkshire's request to recover $325,433 for incentive payments.

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20 The Department notes that a more comprehensive analysis would include not only the cost of the rebates and free equipment, but the cost of adding customers on the system, i.e., the Company's marginal customer cost.

F. Consultant Fees Expense

1. Introduction

The Company seeks to include $25,000 in cost of service for consulting services provided by Joseph Kelley, Berkshire's former chairman and president (Exh. BG-6, Sch. JJK-20). Berkshire retains Mr. Kelley to consult on issues relating to the Company's utility operations (Company Brief at 97).

2. Positions of the Parties

a. The Attorney General

The Attorney General states that the Department should deny the Company's request to recover Mr. Kelley's consulting fees (Attorney General Brief at 39). The Attorney General argues that the Company could not provide a contract under which the services are rendered or document any direct benefit to customers for the costs incurred (id.).

b. The Company

The Company notes that the Department has accepted as reasonable, consulting fees paid to Mr. Kelley (Company Brief at 97, citing Berkshire Gas Company, D.P.U. 92-210, at 51-52). The Company argues that, as in 1992, Berkshire's customers continue to benefit from Mr. Kelley's gas utility experience and familiarity with the Company (Company Brief at 97; Company Reply Brief at 47). The Company states that as a result of the Department's directives in Berkshire Gas Company, D.P.U. 92-210, a portion of Mr. Kelley's consulting fees have been allocated to non-utility operations (Company Brief at 97).

3. Analysis and Findings

The Department has allowed the Company to recover expenses incurred for consultation services rendered by Mr. Kelley if the expenses are "reasonable and valuable." Berkshire Gas Company, D.P.U. 92-210, at 51-52. The evidence presented by the Company demonstrates that Mr. Kelley provides regular consultation on utility operations matters. Moreover, Berkshire states that Mr. Kelley's advice is valuable, especially given his considerable gas utility experience and familiarity with the Company. Finally, the Company stated and demonstrated that Mr. Kelley's fees for these services are reasonable (Tr. 14, at 1555-1556; AG-RR-41). Therefore, the Department finds that Mr. Kelley's consulting services rendered to the Company are reasonable and valuable (Tr. 14, at 1555-1556; AG-RR-41).

In compliance with the Department's directive in Berkshire Gas Company, D.P.U. 92-210, at 52, the Company proposes to allocate a portion of Mr. Kelley's fees to the Company's non-utility operations (Exh. BG-6, Sch. JJK-9). The Department finds this allocation to be reasonable.

G. Inflation Adjustment

1. Introduction

The Company proposed an inflation adjustment of $81,705 (Exhs. BG-5, at 28; BG-6, Sch. JJK-7, Sch. JJK-36). Berkshire used the Gross Domestic Product Implicit Deflator ("GDPID") derived by the U.S. Bureau of Economic Analysis and the Energy Information Administration/Short-Term Energy Outlook–April 2001, to calculate the inflation allowance (Exh. BG-5, at 28).

The Company calculated an inflation factor of 3.52 percent for the period between the midpoint of the test year (June 2000) to the midpoint of the rate year (July 2002) (Exh. BG-6, Sch. JJK-7, Sch. JJK-36). The Company calculated the inflation adjustment by multiplying the inflation factor by the Company's residual O&M (id.).

2. Position of the Parties

a. The Attorney General

The Attorney General states that the Department should deny the Company's request for an inflation adjustment because the Company has not shown that it has contained costs (Attorney General Brief at 41-41, citing Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 100-101 (1998); Boston Gas Company, D.P.U. 96-50 (Phase I) at 113 (1996); Massachusetts Electric Company, D.P.U.95-40, at 64 (1995); and Cambridge Electric Light Company, D.P.U. 92-250, at 97 (1993)).

b. The Company

The Company states that it calculated the inflation allowance consistent with the Department's directives in Boston Gas Company, D.P.U. 96-50 (Phase I) at 111-113. Moreover, the Company contends that it has contained costs as evidenced by the fact that Berkshire has not filed a rate case for more than nine years while investing in substantial plant (Company Brief at 111-112, citing Exh. BG-1, at 11). The Company notes that its cost containment efforts include: load management; contract restructuring; DSM and facility development; commodity cost reductions; asset management and innovative alliance structures; reducing staff size through cross-training and strategic investments; addressing reductions to health care costs; etc. (id., citing Exh. BG-1, at 9-11). Therefore, Berkshire concludes that it has met the Department's requirements for an inflation allowance (id.).

3. Analysis and Findings

The inflation allowance is designed to recognize that known inflationary pressures tend to affect a company's expenses in a manner that can be measured reasonably. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 100 (1999), Boston Gas Company, D.T.E. 96-50 (Phase I) at 112; Massachusetts Electric Company, D.P.U. 95-40, at 64 (1995). The adjustment reflects the likely cost of providing the same level of service in the future as was provided in the test year. The Department permits utilities to increase their test year residual O&M by the projected GDPID from the midpoint of the test year to the midpoint of the rate year. Massachusetts Electric Company, D.P.U. 95-40, at 64; Cambridge Electric Light Company, D.P.U. 92-250, at 97 (1993); Massachusetts Electric Company, D.P.U. 92-78, at 60 (1992). In order for the Department to allow a utility to recover an inflation adjustment, the utility must demonstrate that it has implemented cost containment measures. Boston Gas Company, D.P.U. 96-50 (Phase I) at 113; Boston-Cambridge Trolley Tours, D.P.U. 92-120, at 78 (1992).

The Department notes that Berkshire's total payroll expense associated with utility operations increased from \$5,075,419 to \$5,469,914, or approximately 7.7 percent between 1992 and 2000 (Compare Exh. BG-9, Supp. Sch. NU-F with Berkshire Gas Company, D.P.U. 92-210, at 79). The corresponding increase in the GDPID for the same period was 15.2 percent (Exh. DOER 1-28). The fact that the Company's payroll expenses have increased at a lesser level than payroll expenses on a national level indicates that the Company has managed to control its payroll expenses.

In addition, the Company has demonstrated its efforts to control its health care costs, as evidenced by, among other things, the institution of an HMO/managed care program, the requirement that employees pay higher co-pays and contribution requirements, and the adoption of employee policies and benefits intended to promote employee health (Exh. AG 1-53).

In the same way, the fact that the Company has not sought a base rate increase in nine years is further evidence that it has contained costs. See Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 101 (1998). Therefore, the Department finds that the Company has demonstrated that it has effectively implemented cost containment measures. Accordingly, the Department finds that Berkshire is entitled to the inflation adjustment requested.

H. Rate Case Expense

1. Introduction

In its initial filing, the Company proposed to recover $561,000 in rate case expense (Exh. BG-6, Sch. JJK-37). On January 16, 2002, pursuant to a Department supplemental record request, the Company updated its rate case expenses incurred through December 31, 2001, to be $983,958 (DTE-RR-1 Supp.). In addition, the Company requested to recover $12,000 that would be incurred to prepare compliance rates (Exh. AG 3-9 Supp.). The Company proposes to normalize the cost of its rate case filing over four years (Exhs. BG-5, at 29; BG-6, Sch. 37; Company Brief at 110).

2. Positions of the Parties

a. The Attorney General

The Attorney General argues that the Company failed to submit attorneys fees that are known and measurable (Attorney General Brief at 45-46; Attorney General Reply Brief at 30-31). The Attorney General notes that in contrast with the Department's order to Berkshire in its last rate case, the Company failed to submit detailed invoices for legal expenses (Attorney General Reply Brief at 30, citing Berkshire Gas Company, D.P.U. 92-210, at 84).

Also, the Attorney General argues that Berkshire should have solicited competitive bids for legal services (Attorney General Brief at 45-46; Attorney General Reply Brief at 30-31). The Attorney General contends that the failure to seek bids for legal services has resulted in unreasonably inflated fees (id.).

Similarly, the Attorney General contends that the Department should reject the inclusion of fees for consultant services that are greater than the Company's original estimates (id.). The Attorney General argues that the Company failed to explain why additional fees were incurred or what efforts the Company took to limit any excessive work performed by its consultants (id.).

b. The Company

With respect to legal fees, the Company requests that the Department find these fees to be known and measurable and, therefore, consistent with Department precedent (Company Brief at 101). The Company argues that Berkshire's legal rates were discounted significantly (id. at 106). Moreover, the Company argues that the law firm's familiarity with the

Company's filing and corporate structure made it appropriate for the Company to retain its counsel for this rate case and not seek a request for proposals for legal services (Company Brief at 103-104; Company Reply Brief at 51, citing Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 60).

Responding to the Attorney General's criticism that the Company has not contained its legal expenses, the Company argues that costs were consistent with its original estimates, despite having to respond to the extensive discovery issued in this proceeding, the need for additional hearings, and the need to address substantial procedural matters (e.g., Motion to Strike Testimony of Dr. Kenneth Gordon; Motion to Dismiss) (Company Brief at 105; Company Reply Brief at 102).

Concerning the Attorney General's statement about excessive consulting fees, the Company notes that as a result of several discovery questions and record requests, additional studies not originally contemplated in the fee estimate were performed (Company Brief at 109). Finally, the Company notes that although consultants were originally scheduled to testify for five days, their presence was required at ten days of hearings (id.).

Last, the Company requests that the Department approve its proposal to normalize rate case expense over a 4-year period (Company Brief at 110). The Company notes that because it has been nine years since its last rate case, it is more reasonable to normalize the rate case expense based on the average interval between its last five rate cases, rather than four, to determine a realistic time period (Company Brief at 110).

3. Analysis and Findings

The Department allows recovery for rate case expenses if the expenses are known and measurable. Dedham Water Company, D.P.U. 84-32, at 17 (1984). A known and measurable expense is a quantified expense that has been incurred by the Company. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 62 (1998). Proposed adjustments based on projections or estimates are not known and measurable and recovery of those expenses is not allowed. See Berkshire Gas Company, D.P.U. 92-210, at 83 (1993); Dedham Water Company, D.P.U. 849, at 32-34 (1982). The Department has directed companies to provide all invoices for outside services that document the number of hours billed, the billing rate, and the nature of the services provided. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 61 (1998); Boston Gas Company, D.P.U. 96-50 (Phase I) at 79 (1996).[21]

With the exception of a $12,000 estimate to prepare the Company's compliance filing, the invoices presented by Berkshire for legal services provide sufficient documentation to support the Company's legal fees for its rate case and are for a known and measurable amount (Exhs. AG-3-9; AG-3-9, Supp.; DTE-RR-1 Supp.). As the $12,000 is an estimated amount, it is not known and measurable. Blackstone Gas Company, D.T.E. 01-50, at 22 (2001). Thus, the Department finds that Berkshire's known and measurable rate case expenses total $983,958. The Department will allow recovery of that amount.

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21 In his Motion to Strike Sections of the Company's Reply Brief, the Attorney General argues that references to Company- maintained legal invoices that detail (in six-minute intervals) work performed are not supported by evidence. We agree with the Attorney General that such information was not submitted to the Department in support of the Company's position to recover rate case expenses. Therefore, the Department will not consider the Company's references to these documents in our determination of the recovery of rate case expenses.

The Department has ruled that if a company elects to secure outside legal and consulting services, it must engage in a competitive bidding process; however, if a company decides to forgo the competitive bidding process, the company must provide an adequate justification for its decision to do so. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 59-60; Boston Gas Company, D.P.U. 96-50 (Phase I) at 79. With respect to legal services, Berkshire decided to forgo seeking competitive bids due to its law firm's institutional knowledge of the Company and its operations, and the fact that the same firm has performed all of Berkshire's regulatory work for a significant period of time (Exh. BG-22, at 17; Tr. 16, at 1880). The Department finds that Berkshire has adequately justified its decision to forgo the bidding process and retain Rich May P.C. for its base rate proceeding.

Likewise, the Company stated that it did not seek competitive bids for outside consulting services regarding rate design, depreciation, and performance-based rates because those consultants have had a substantial working relationship with the Company (BG-22, at 16; Tr. 16, at 1860-1863, 1879-1880). The evidence demonstrates that the Company's depreciation expert has participated in Berkshire's last six rate cases and is thus, intimately familiar with the Company's plant and operations (Tr. 16, at 1862). Moreover, the Company's rate design experts have participated in the Company's last five rate cases and have extensive knowledge of the Company (AG-RR-55; Tr. 16, at 1861). The Company's performance-based rates consultant has broad experience in Massachusetts utility regulations (Tr. 16, at 1863). Therefore, the Department finds that the Company has provided adequate justification for its decision not to request bids for those services (Exh. BG-22, at 16).

The Department's practice is to normalize rate case expenses so that a representative annual amount is included in the cost of service. Fitchburg Gas and Electric Light Company, D.T.E. 98-51, at 54; Boston Gas Company, D.P.U. 96-50 (Phase I) at 77; Berkshire Gas Company, D.P.U. 1490, at 33-34 (1983). Normalization is not intended to ensure dollar-for-dollar recovery of a particular expense; rather, it is intended to include a representative annual level of rate case expense. Boston Gas Company, D.P.U. 96-50 (Phase I) at 77; Nantucket Electric Company, D.P.U. 91-106/138, at 20 (1992).

Regarding the Company's proposal to normalize the rate case expenses over four years,[22] the Department notes that the Company's proposed PCM Plan would constrain Berkshire from filing a rate case for ten years. Where Berkshire has proposed a PCM Plan of ten years, normalization of the Company's rate case expenses over the term of the Plan provides a more representative basis for establishing an amount to be included in the cost of service See Boston Gas Company, D.P.U. 96-50 (Phase I) at 78. Accordingly, the Department finds that the appropriate period for normalization of rate case expenses in this proceeding is ten years.

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22 Berkshire's last four rate cases were: D.T.E. 01-56 (filed July 17, 2001); D.P.U. 92-210 (1993) (filed September 16, 1992); D.P.U. 90-121 (1990) (filed May 17, 1990); and D.P.U. 89-112 (1989) (filed May 17, 1989). The differences (8.8 years + 2.3 years + 1.0 year) divided by three and rounded to the nearest whole number results in an normalization period of four years.

I. Severance Payments

1. Introduction

The Company proposed to include as a test year expense $18,140,[23] representing the cost of two Company vehicles that were provided to the Company's former chief executive officer and vice president as part of their severance packages (Exh. BG-6, Sch. JJK-16 Rev.).

2. Positions of the Parties

a. The Attorney General

The Attorney General contends that the Department should reduce the Company's test year cost of service by $18,140, and consider the vehicles to have been a gift to the former employees (Attorney General Brief at 41-42; Attorney General Reply Brief at 29).

b. The Company

The Company states that in connection with the retirement of two Company officers, it sold each officer a vehicle (Company Brief at 96-97; Company Reply Brief at 46). The value of Vehicle One ($14,890) was charged to the Company as a corporate liability that resulted from the merger (id.). As the liability related to the change of control was not included in the cost of service, the Company argues that no further adjustments are necessary (id.). Vehicle Two was sold for a negotiated price ($10,269) and represents a loss to the Company of $3,250, which is not included in the Company's revised cost of service figure (Company Brief at 97).

3. Analysis and Findings

With regard to Vehicle One, the evidence demonstrates that the Company booked the costs associated with the transaction to account 242 2730, a balance sheet entry. Similarly,

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[23] The Company revised this figure to $14,890 (Exh. BG-6, Sch. JJK-16 Rev.).

with regard to Vehicle Two, the evidence shows that the Company has removed the loss of $3,250 from the Company's cost of service (Exh. BG-6, Sch. JJK-16 Rev.). Accordingly, no further adjustments regarding the two vehicles are necessary.

J. Computer Lease Expense

1. Introduction

Berkshire formed a holding company structure effective January 1, 1999, with Berkshire Energy Resources[24] as the parent corporation and The Berkshire Gas Company, Berkshire Propane, Inc., and Berkshire Service Solutions, Inc., as subsidiaries (Exh. BG-8, at 1). In prior rate filings, Berkshire had maintained propane and merchandising/jobbing/rental divisions to generate non-utility revenues (id.). The propane and jobbing functions are now provided by separate corporations (id.).

Berkshire's Information Systems Department ("ISD") provides hardware, software, and other computer support services for the Company (Exh. BG-9, Supp. Sch. NU-B at 2). The costs of these services are then allocated based on the resources that are provided (id.). The Company incurred $939,065 in computer lease expenses for the test year (Exh. BG-9, Supp. Sch. NU-B at 2). All equipment and software that is purchased for Berkshire Services Solutions or Berkshire Propane is charged directly to their division (id.).

2. Positions of the Parties

a. The Attorney General

The Attorney General states that the Company failed to allocate any of the $939,065 of computer lease costs to its non-utility business (Attorney General Brief at 42). According to

[24] Berkshire Energy Resources was acquired by Energy East on September 1, 2000.

the Attorney General, the non-utility companies (i.e., merchandising/jobbing/rental divisions) do not have any computers, and instead rely exclusively on the Company's systems (id.). The Attorney General argues that because the Company has allocated ISD personnel and asset costs to its non-utility businesses, it would be appropriate to also allocate the costs of the computers (id.). The Attorney General states that an allocation of the computer lease to non-utility businesses should be based on the allocation factor for other costs (id.). Therefore, according to the Attorney General, 2.82 percent of the cost of the Company's computer lease should be allocated to non-utility businesses (id.).

b. The Company

The Company requests that the Department approve Berkshire's treatment of computer lease expense (Company Brief at 121-122). The Company contends that its allocation of computer lease expense is based on actual usage (Exh. BG-9, Supp. Sch. NU-B at 2). The Company argues that its parent company and other subsidiaries maintain their own computer systems and pay for them separately (Company Brief at 122). Therefore, the Company asserts that no allocation of the cost is necessary (id.). With respect to the Attorney General's argument concerning the allocation of computer costs associated with the Company's former merchandising/jobbing/rental divisions, Berkshire contends that these divisions are being phased out by the Company (Company Brief at 122, citing Tr. 14, at 1626-1627). Hence, any allocation of computer lease costs to those non-utility functions would not be representative of costs expected be incurred during the rate year (Company Brief at 122).

3. Analysis and Findings

The record shows that all computer equipment and software purchased for Berkshire Energy Resources, Berkshire Service Solutions, and Berkshire Propane is charged directly to their corporate divisions (Exh. BG-9, Supp. Sch. NU-B at 2). Therefore, the Department finds that the Company has allocated its computer lease expense regarding those entities.

With regard to the merchandising/jobbing divisions and rental activities, the evidence shows that those divisions did exist during the test year and will continue to exist to some extent during the implementation of the PCM Plan (Tr. 14, at 1626-1627). In fact, the Company has allocated test year salaries and other expenses associated with its ISD systems to merchandising/jobbing divisions (Exh. BG-9, Supp. Sch. NU-B at 5). As those divisions rely on Berkshire's computers, the Department finds that costs associated with the computer lease should also be allocated to those divisions. Therefore, the Department finds that the computer lease expense for the non-utility businesses of merchandising, jobbing and rentals is supported by the personnel and computer systems at the gas distribution company. Accordingly, the Department will reduce the Company's cost of service by $19,017.[25]

K. Flowback of Excess Deferred Income Taxes

1. Introduction

When the Tax Reform Act of 1986 reduced the corporate tax rate from 46 percent to 34 percent, Tax Reform Act, D.P.U. 87-21, at 1-2 (1987), this change produced a surplus in the Company's accumulated deferred income tax reserve. In 1990, the Department directed

25 This amount is based on an allocation of 2.0 percent. It is derived by relating salary and other expenses for merchandising/jobbing/rentals to the total salary and other expenses for its ISD system (Exh. BG-9, Supp. Sch. NU-B at 1).

the Company to flow back the excess deferred income taxes to customers over the average remaining book life of its depreciable assets. Berkshire Gas Company, D.P.U. 90-121, at 140. The Company included a flow back of $39,158 of excess deferred income taxes as part of its income tax allowance in this proceeding (Exh. BG-6, Sch. JJK-5, line 8).

2. Position of the Parties

a. The Attorney General

The Attorney General maintains that the excess deferred income tax balance is understated because the Company based its calculation on a 46 percent tax rate (Exh. BG-6, Sch. JJK-31, at 1, line 29). Instead, the Attorney General notes that the Company should calculate its excess deferred income tax balance based upon the tax rates that were in effect from time to time as the taxes were accrued (Attorney General Brief at 47).[26] When the actual tax rates are used, the Attorney General contends that the amount of excess deferred income taxes increases from $252,109 to $ 292,095 (Attorney General Initial Brief at 47). Therefore, the Attorney General concludes that the flow back of excess deferred income taxes should be based on the $292,095 amount, the surplus calculated using actual historical tax rates (id.)

b. The Company

The Company did not address this issue on brief.

3. Analysis and Findings

The calculation of excess deferred income taxes should appropriately be based upon actual tax rates in effect during the time that the taxes were accrued. Berkshire Gas Company,

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[26] The Company's witness testified that the Federal income tax rate varied from 52.8 percent to 46 percent prior to the enactment of the Tax Reform Act of 1986 (Tr. 4, at 521-523).

DPU 90-210, at 139-140. Calculating the Company's excess deferred income taxes based upon these actual tax rates yields a surplus amount of $292,095 (DTE-RR-11). The Department directs the Company to flow back $292,095 over the remaining amortization period of 6.44 years. This produces a flow back of $45,356 (DTE-RR-11). Accordingly, the Department will adjust the income tax allowance proposed by the Company by $6,198 to incorporate the higher deferred income tax flow back.

L. Environmental Costs

1. Introduction

The Company proposes to include in its cost of service $103,719 representing environmental remediation costs incurred after the Company had to remove coal gas waste from its property (Exh. AG-2-4; Tr. 12, at 1334). Although the Company anticipated that it would derive tax benefits as a result of the remediation project, the Company was unable to do so because the property was polluted with coal waste prior to purchase (AG-RR-30). According to Berkshire, in order to receive a current tax benefit for environmental clean-up costs, the Company itself had to be responsible for the pollution (id.).

2. Positions of the Parties

a. The Attorney General

The Attorney General maintains that although the Company included approximately $104,000 of unrecovered environmental remediation costs in its cost of service, Berkshire has not petitioned the Department for the recovery of such costs through base rates, or proposed any change to the current recovery method of the clean-up costs (Attorney General Brief at 48-49; Attorney General Reply Brief at 32-33). The Attorney General states that Berkshire cannot recover a portion of remediation costs as a deferred tax benefit because the Company did not propose ratemaking treatment of the cost (id.).

b. The Company

The Company argues that it should be permitted to recover the $103,719 in environmental remediation costs (Company Brief at 99; Company Reply Brief at 49-50). Specifically, the Company maintains that, pursuant to Manufactured Gas Plants, D.P.U. 89-161 (1990), Berkshire may recover remediation costs less the amount of deferred tax benefit allowed for environmental clean-up, and amortize the costs over seven years (id.). However, the Company asserts that tax regulations prohibited the Company from realizing a deferred tax benefit (id.).

3. Analysis and Findings

The Department does not consider environmental clean-up costs to determine a Company's base rates. Manufactured Gas Plants, D.P.U. 89-161, at 36 (1990). In contrast with the Department's order, the Company seeks to include $103,719 for environmental remediation costs in the test year cost of service.[27] Consistent with D.P.U. 89-161, the Department finds that the Company's environmental clean-up costs should be excluded from our determination of the Company's base rates, and we reject the Company's attempt to include $103,719 in its test year cost of service. There is a decade-old means for recovery of gas waste clean-up costs, which the Company itself proposed to the Department as one of the moving parties to the settlement approved in D.P.U. 89-111. Requesting recovery here risks

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27 The Department notes that in Berkshire's filing, the Company merely included this amount in its revenue requirement, without an explanatory statement or supporting documentation as to its recovery or rate treatment (Exh. BG-18, at 50).

double-recovery. See Fitchburg Gas and Electric Light Company, D.T.E. 99-118, at 14 (2001). In accordance with D.P.U.89-161, the Company may petition the Department for approval to recover the environmental remediation costs through its LDAC.

M. Supplemental Executive Retirement Plan

1. Introduction

In 1996, the Company established a Supplemental Executive Retirement Plan ("SERP") designed to attract and maintain qualified executives (Exh.BG-5, at 22). Funding for the SERP is made through the purchase of officers' life insurance (Exh. DTE-1-7). The annual premium for officers' life insurance was $82,203 during the test year (Exh. DTE-1-15). When the Company was acquired by Energy East in 2000, the Company was required to make an irrevocable contribution to the SERP of $2,171,021 (Exh. BG-5, at 22-23; Tr. 8, at 1002). According to the Company, the payment was required pursuant to a change in control provision contained in Berkshire's employment agreements with certain executive employees (id.). For accounting purposes, Berkshire recorded the entire amount as an expense (Exh. BG-6, Sch. JJK-16). For ratemaking purposes, Berkshire first proposed to allocate $651,306 to non-utility operations and then amortize the remaining utility portion (i.e., $1,519,715) over a 5.5 year period, producing a normalized expense of $285,153 (Exh. BG-6, Sch. JJK-28). The Company maintains that, even if the merger had not occurred, it would still have funded the plan over 5.5 years, based upon the recommendation of its actuaries (Exh. BG-9, at 22-23). Thus, according to the Company, the cost of service would have included a charge of $285,153 for the SERP funding with or without the merger (id.).

2. Positions of the Parties

a. The Attorney General

The Attorney General argues that the accelerated SERP payments would never have been made were it not for the acquisition of the Company by Energy East (Attorney General Brief at 50). Consistent with the Company's approach to calculating its revenue requirement on a pre-merger basis, the Attorney General maintains that the $285,153 test year amortization of those accelerated payments should be excluded from the cost of service (id.).

b. The Company

The Company argues that the $285,153 expense included in the cost of service represents the normalized payment level for the SERP (Company Brief at 98). The Company contends that this is the same payment level that would have been required had Berkshire continued on a stand-alone basis (id.). Accordingly, the Company concludes that no adjustment to the cost of service is warranted (id. at 98-99).

3. Analysis and Findings

The level of officers' life insurance premiums needed to fund the SERP prior to the merger had remained steady and, in fact, declined slightly since 1997 (Exh. DTE 1-15). By way of comparison, the $407,361 test year amortization of the accelerated payment to the SERP, before allocation to non-utility operations, is almost five times the premium payments made in 1999, the year prior to the test year (id.). This adjustment was recommended by the Company's actuaries as a result of the retirement of certain executive employees earlier than anticipated (Exh. DTE 1-15). Therefore, the Department finds that the acceleration of payments to the SERP recommended by the Company's actuaries was based upon conditions that arose after the merger, rather than upon conditions which would have been likely to prevail without the merger. Accordingly, the Company's proposed SERP expense of $285,153 will be excluded from the cost of service as a merger-related expense. We will allow recovery of costs based upon the same actuarial assumptions and methods used prior to the merger to determine the appropriate level of expense to be included in rates (id.).

N. Officers' Life Accrual Adjustment

1. Introduction

During the test year, Berkshire paid officers' life insurance premiums of $82,203 (Exh. DTE-1-15). However, the per book expense was a negative $188,293 because of accrual adjustments the Company had made during the test year (Exh. BG-5, at 25-26). Because Berkshire considered the appropriate expense for ratemaking purposes to be equal to the actual test year premiums, the Company first reduced its test year premiums by $24,661, representing the portion allocated to non-utility operations (Exh. BG-6, Sch. JJK-33). After Berkshire compared the utility-related balance of $57,542 to the test year booked expense, the Company concluded that the test year cost of service should be increased by $245,835 (id.).

2. Position of the Parties

None of the parties addressed this issue on brief.

3. Analysis and Findings

The Company's calculations rely on adding a utility-allocated life insurance premium payment level to an unallocated test year negative expense. This creates a mismatch between utility- and non-utility-related premium levels. In order to derive the appropriate basis for comparing the test year premiums with test year booked expense, the test year booked expense must include only the portion of the expense that is allocated to utility operations. Thus, the test year booked expense of a negative $188,293 must be multiplied by 70 percent[28] to derive a utility-allocated negative expense of $131,805. A comparison of the $57,542 premium level allocated to utility operations and the utility-allocated test year booked negative expense of $131,805 expense demonstrates that the appropriate adjustment to test year cost of service is $189,347, instead of the Company's proposed adjustment of $245,835. Accordingly, the Department shall reduce the Company's proposed cost of service by $56,488.

O. Depreciation Expense

1. Introduction

During the test year, Berkshire booked $4,092,668 in depreciation expense (Exh. BG-6, Sch. JJK-1). The Company proposed to decrease its test year depreciation expense by $65,987 (Exh. BG-6, Sch. JJK-12). The Company computed the adjustment by applying a 3.47 percent composite accrual rate to the test year-end depreciable plant (Exh. BG-13, Report at 15-16).

In support of its proposed accrual rates, the Company presented a depreciation study based on plant data as of March 31, 2000, and used the remaining life method to estimate the proposed depreciation accrual rates (Exh. BG-13, at 4, Report at 16). Among those proposed accrual rates are: (1) an overall 2.28 percent for Account 305 (Manufactured Gas Production Plant Structures and Improvements), consisting of 2.51 percent for the Whately LNG Plant and 1.82 percent for non-Whately LNG Plant equipment; (2) an overall 5.95 percent for Account 319.10 (Gas Mixing Equipment - Whately LNG Facility), consisting of 4.18 percent for the

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28 The 70 percent utility allocator appears in Exhibit BG-6, Schedule JJK-33.

Whately LNG Plant and 8.84 percent for the non-Whately LNG Plant equipment; and (3) 5.83 percent for Account 380 (Services) (Exh. BG-13, schedule of indicated remaining life accrual rates at 1).

2. Position of the Parties

a. The Attorney General

The Attorney General suggests that the average service life analyses of three of the plant accounts performed by the Company in this filing are flawed and should be rejected by the Department (Attorney General Brief at 82). The Attorney General notes that while the Company used a 40-year life estimate for most property booked in Account 305 (Manufactured Gas Production Plant Structures and Improvements), Berkshire used a 34-year useful life for the new Whately LNG facility (which includes equipment that is also booked to Account 305) (id., citing Exhs. BG-13, BG-14). The Attorney General argues that the Department should order the Company to use a 40-year service life to be consistent with the non-Whately facilities in Account 305 (Attorney General Brief at 83).

For Account 319.10 (Gas Mixing Equipment), the Attorney General notes that although Berkshire used a 24-year life estimate for the gas mixing equipment associated with its Whately LNG facility, the Company relied on a 25-year overall actuarial life analysis for all of the units of property associated with non-Whately LNG plant (Attorney General Brief at 83; Attorney General Reply Brief at 43). The Attorney General argues that the Company should have used the same useful life (i.e., 25 years) for consistency on all property booked in Account 319.10 (id.).

In Account 380 (Services), the Attorney General states that Berkshire used a 38-year average service life (Attorney General Brief at 85, citing Exh. BG-13, schedule of indicated remaining life accrual rates at 1). The Attorney General claims that the plant within Account 380 was affected by the Company's use of defective materials to manufacture the services (Attorney General Brief at 84).[29] According to the Attorney General, the Company failed to recover or limit the replacement cost of these defective products (Attorney General Brief at 85, citing Exh.AG-14-3, AG-RR-43). The Attorney General states that the Company acted imprudently by failing to limit its replacement costs (Attorney General Brief at 85). Therefore, the Attorney General suggests that the Department should use a 45-year average service life proxy for account 380 in order to ensure that customers are not paying for the costs of these defective products (Attorney General Brief at 86, citing D.P.U. 98-51, at 87; Attorney General Reply Brief at 46).

Moreover, the Attorney General requests that the Department order the Company, as well as other gas distribution companies in the Commonwealth, to analyze their mains and services by material type (e.g., uncoated steel, coated steel, and plastic) so the Department may better analyze the estimated life span for each material and the effect on the overall

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[29] Starting in the late 1940s, the Company used a black tar coating to protect its service lines, ceasing its use once polyethelene services were introduced around 1960 (Exh. AG 1-3; AG-RR-43). Starting in the late 1970s, the Company began to experience "debonding" (i.e., separation of the coating from the service line) with the tar-coated service lines (Exh. AG-RR-43). Once the Company became aware of the problem, it instituted a replacement program whereby all pre-1960 service lines would be eventually replaced (Exh. AG 14-3; Tr. 14, at 1590). In view of the length of time that had elapsed between the installation of tar-coated service lines and identification of the defective materials, Berkshire did not file any warranty claims with their manufacturer (AG-RR-43; Tr. 14, at 1592-1593).

weighted average service life of the Companies' mains and services accounts (Attorney General Brief at 84). The Attorney General reasons that this type of analysis would also improve the average service life estimates of mains and services used in the future depreciation studies (Attorney General Brief at 82-86).

b. The Company

______The Company maintains that the Attorney General has failed to support his contention that the Department should increase the average service life estimates for Accounts 305, 319.10, and 380 (Company Brief at 120). The Company argues that there is no requirement to base life estimates for one plant item on the service life developed for other property within the same account (Company Brief at 119-120; Company Reply Brief at 54). Moreover, the Company argues that because the Whately LNG Plant is new, no actuarial analysis could be performed for this facility (Company Reply Brief at 55). In the absence of actuarial experience, Berkshire contends that its reliance on a unit analysis for the Whately LNG plant is appropriate (Company Reply Brief at 56).

Regarding Account 380 (Services), the Company argues that these services have been included in the Company's rate base for years, and the argument that they should be depreciated differently as imprudent investments is contrary to Department precedent (Company Brief at 121, citing D.P.U. 92-210, at 22). The Company added that there is nothing in the record to support the Attorney General's claim that the Company acted imprudently with respect to these services (Company Brief at 121). Finally, the Company submits that the notion of an average service life developed for another utility's property pursuant to an unrelated depreciation study should be used as a "proxy" for Berkshire "flies squarely in the face of logic" (Company Brief at 121).

3. Analysis and Finding

Depreciation studies rely not only on statistical analysis but also on the judgment and expertise of the preparer. Cambridge Electric Light Company, D.P.U. 92-250, at 64 (1993); Commonwealth Electric Company, D.P.U. 89-114/90-331/91-80 Phase One at 54-55 (1991); Commonwealth Electric Company, D.P.U. 88-135/151, at 37 (1990). It is also necessary to go beyond the numbers presented in a depreciation study and consider the underlying physical assets at issue. Berkshire Gas Company, D.P.U. 905, at 13-15 (1982); Massachusetts Electric Company, D.P.U. 200, at 21 (1980).

Regarding those plant items at the Whately LNG facility that are booked to Accounts 305 and 319.10, the Department has long recognized the distinction between unit property and mass property. See, e.g., Berkshire Gas Company, D.P.U. 905, at 13-15 (1982); Massachusetts Electric Company, D.P.U. 200, at 21 (1980). Unit property, also referred to as location property, represents distinct equipment groups at a specified geographic location that will experience irregular interim additions or retirements before being retired in its entirety at one point in time, such as an electric generating station. Id. Conversely, mass property represents differing property units with no specific location or directly-connected functional relationships, where tracking individual plant item lives is infeasible (i.e., such as electric distribution poles and meters). Cambridge Electric Light Company, D.P.U. 92-250, at 57 n.25 (1993). According to the evidence, the Whately LNG plant is location-specific, includes assorted equipment that would exhibit irregular interim additions and retirements, and represents a type of investment that is customarily retired in its entirety at some future date (Exh. BG-14; Tr. 10, at 1099-1100). See also Boston Gas Company, D.P.U. 93-60, at 41 (1993). Therefore, the Department finds that the Whately LNG Plant has been appropriately treated by the Company as unit property.

In the absence of an actuarial date for the Whately LNG Plant, the Company conducted a unit analysis of the service lives of each component of the facility (Exhs. BG-13, at 7; BG-14, Tab 2; Tr. 10, at 1099-1100, 1107-1108). The Department has reviewed the Company's proposed service life for the Whately LNG Plant in light of the types of plant at the facility and finds that Berkshire has exercised reasoned engineering judgment in its estimate of the expected lives of the component equipment at the Whately LNG Plant that was used to develop the composite 24-year service life. Accordingly, the Department accepts the proposed accrual rates for Accounts 305 and 319.10.

With respect to Account 380, the Company's proposed service life of 38 years was influenced extensively by its decision to replace any service that is older than 45 years (Exh. BG-13, at 10). While it is indisputable that the failure of the black tar coating adversely affected the Company's replacement policy decisions and subsequent retirement experience for this account, there is nothing in the record questioning or challenging the results of Berkshire's statistical analysis or the Company's inference from that analysis. Accepting the Attorney General's proposed remedy to adopt a 45-year service life would require us to substitute an accrual rate used by another company that is unsupported by the evidence in this proceeding. In the absence of evidence to the contrary, the Department declines to accept the Attorney General's proposed service life of 45 years.

The Department has reviewed the Company's proposed accrual rate for Account 380, including the data and statistics and the Company's interpretation of those data and statistics (Exh. BG-13, at 10; BG-14, Tab 4, at 2). We find that Berkshire properly interpreted the results of its analysis and exercised reasoned engineering judgment in determining that an average service life of 38 years was appropriate. Accordingly, the Department accepts the proposed accrual rate for Account 380.

Based on the foregoing analysis, the Department has accepted the Company's proposed accrual rates. However, the Department has excluded the Greenfield Portable LNG facility from Berkshire's proposed rate base. Section III.B, above. The annual depreciation expense associated with the Greenfield Portable LNG Plant is $62,176 (Exh. BG-13, schedule of indicated remaining life accrual rates at 1). Consistent with our ratemaking treatment of the Greenfield Portable LNG Plant, a corresponding reduction to depreciation expense is necessary. Boston Gas Company, D.P.U. 88-67 (Phase I) at 160-161 (1988). The annual depreciation expense for the Greenfield LNG Plant was determined through the Company's depreciation study. The net plant balance for the Greenfield Portable LNG Plant was determined through the Company's depreciation study. The net plant balance for the Greenfield Portable LNG Plant was $273,531, with an estimated remaining life of one year and a positive net salvage amount of $211,055 (Exh. BG-13, schedule of indicated remaining life accrual rates at 1). This produces an annual depreciation expense of $62,176 (id.). Because the Department has accepted the results of the depreciation study (see Section VI.O, above), we find it appropriate to base the pro forma depreciation expense associated with the

Greenfield Portable LNG Plant on the depreciation expense derived in the study. Accordingly, the Company's proposed cost of service shall be reduced by $62,176.

Concerning the Attorney General's proposal that gas companies conduct more detailed reviews of the composition of their mains and services, the Department finds that the Company would benefit by further analyzing mains and service by material type, because the additional analysis would assist in determining a more accurate average life for mains and services. Therefore, the Department directs the Company to commence the collection of this data for use in its next depreciation study.

P. Uncollectible Expense

1. Introduction

During the test year the Company booked $948,235 to uncollectible expenses (Exh. BG-6, JJK-10 Rev.). Berkshire proposes to decrease the booked amount by $328,766 (id.). Therefore, the Company proposes to recover $619,469 of uncollectible expense in base rates (id.). To determine its uncollectible expense adjustment, the Company first calculated an uncollectible ratio factor by dividing the average net write-offs from 1998 through 2000 by the three-year average revenue net write-offs from 1998 through 2000 (id.). The Company then multiplied that uncollectible ratio by the Company's normalized test year firm revenues to determine the amount of uncollectible expense (id.). To account for the gas portion of write-offs collected via the CGAC, the Company adjusted its uncollectible expenses based on a ratio between gas costs revenues and total sales and transportation revenues (id.).

2. Positions of the Parties

No party addressed this issue on brief.

3. Analysis and Findings

The Department permits companies to include for ratemaking purposes a representative level of uncollectible revenues as an expense in cost of service. Boston Gas Company, D.P.U. 96-50 (Phase I) at 70-71; Commonwealth Electric Company, D.P.U. 89-114/90-331/91-80 (Phase I) at 137-140 (1991). The Department has found that the use of the most recent three years of data available is appropriate to use in the calculation of uncollectible expense. Boston Gas Company, D.P.U. 96-50 (Phase I) at 71. The method used by the Company for calculating the uncollectible adjustment ratio comports with Department precedent. As the calculations were made in compliance with Department directives, the Department finds that the mathematical result based on the calculation is reasonable. Therefore, the Department uses the net writeoff and firm revenues from 1998 through 2000 as provided in Exhibit BG-6, Schedule JJK-10, and determines that an uncollectible ratio of 2.55 percent is reasonable. Accordingly, the Department accepts the Company's uncollectible ratio. Applying the 2.55 percent uncollectible ratio to the total cost of service approved in this Order of $53,035,391 results in an uncollectible expense level of $1,352,402.

The Department has found that allocating uncollectible expense between base rates and the CGAC is necessary to reflect customer migration from firm service to transportation service. See Boston Gas Company, D.P.U. 93-60, at 412-413. While the Company did allocate uncollectible expense between base rates and the CGAC, the Company's proposed allocation factor is based on 1992 test year data. The Department finds that reliance on 10-year old data is not representative of Berkshire's recent experience regarding customer migration. To calculate an allocation factor more representative of the Company's current expense, the Department uses the Company's test year normalized base and gas revenues. This results in an allocation of uncollectible expense between base rates and the CGAC of 48.72 percent and 51.28 percent, respectively.[30]

The Department has found an allowable bad debt expense level of $658,890. Accordingly, the Department finds that the Company's proposed cost of service shall be increased by $39,419.

VII. CAPITAL STRUCTURE AND RATE OF RETURN

A. Capital Structure

At the end of its test year, Berkshire's capital structure consisted of 57.78 percent long-term debt, 0.33 percent preferred stock, and 41.89 percent common equity (Exh. BG-6, Sch. JJK-14). Accordingly, this capital structure shall be used to determine the Company's revenue requirement.

B. Cost of Long-Term Debt and Preferred Stock

1. Introduction

In determining its cost of long-term debt, Berkshire first established a coupon or dividend rate (Exh. BG-12, Sch. 6, at 1). The Company calculated the weighted effective cost rate of each long-term debt series based on the proportion of each series' outstanding balance to its total outstanding debt (id.). The sum of the weighted effective cost rates for all debt series represents the Company's cost of long-term debt (id.).

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30 The Company's test year normalized total revenues is $50,097,359 consisting of $25,688,294 in gas-related revenues and $24,409,065 in base distribution revenues (Exh. BG-16).

The cost rate of preferred stock was calculated in a similar manner. Using the Company's method, the effective cost rate for long-term debt is 8.49 percent and its effective cost rate for preferred stock is 4.98 percent (id.).

2. Positions of the Parties

a. The Attorney General

Although the Attorney General has not contested the Company's calculation of its effective cost of preferred stock, he disagrees with its calculation of its effective cost rate for long-term debt (Attorney General Brief at 68). The Attorney General asserts that, in contravention of Department precedent, Berkshire proposes to determine the effective cost rate associated with its 6.78 Percent Medium Term Note and 7.8 Percent Senior Note using the average amount outstanding over the term of each issue, as opposed to calculating it based on the amount outstanding at the end of the test year (id. at 67). The Attorney General contends that had the Company calculated its long term debt in accordance with Department precedent, the weighted cost of debt for Berkshire's 78 Percent Senior Note with a coupon rate of 7.8 percent maturing on November 15, 2021 would be 8.33 percent rather than the 8.49 percent as calculated by the Company (id. at 67-68, citing RR-AG-37).[31]

b. The Company

The Company argues that it has correctly calculated the cost of debt (Company Brief at 135). According to the Company, the Attorney General's calculation fails to account for the fact that Berkshire will make sinking fund payments going forward, by reducing the available debt that the utility can invest in rate base (id.). According to the Company, the Department

[31] The Attorney General did not offer an alternative effective rate for Berkshire's 6.78 Percent Medium Term Note.

has allowed the inclusion of sinking fund payments in calculating the total cost of long term debt (id., citing Berkshire Gas Company, D.P.U. 92-210, at 112-116).

3. Analysis and Findings

The Company is correct that the Department allows the inclusion of sinking fund payments in the calculation of long-term debt. Berkshire Gas Company, D.P.U. 90-121, at 157 (1990). In accordance with Department precedent, companies are allowed to make test year long-term debt adjustments related to sinking fund payments, redemptions and retirement of debt, and issuance of new debt, provided that the proposed adjustments take place by the date of the Order (and are thus known and measurable). Id. The Company calculated an effective cost rate of 7.33 percent for the Medium Term Note issued August 31, 2000 bearing a coupon rate of 6.78 percent (Exh. BG-12, Sch. JJK-6, at 2). Berkshire's calculations include sinking fund payments actually made through December 31, 2001. Therefore, the Department finds that the sinking fund payments for this note are known and measurable, and thus accepts the proposed effective rate for this debt instrument.

With respect to Berkshire's 7.8 Percent Series Senior Term Note issued on November 15, 1996, the Company calculated an effective cost rate of 8.49 percent. The Company's calculations have incorporated annual payments of sinking funds that would start on November 15, 2011 (Exh. AG-5-15). This means that annual sinking fund payments for the 7.8 percent Senior Note would take place well beyond the date of issuance of the order (id.). The Department considers these sinking fund payments to be too remote in time for recognition in this proceeding. Therefore, these annual sinking fund payments shall be excluded from the calculation of the effective cost rate for the Senior Term Note.

The Department has recalculated the effective cost rate for the 7.8 Percent Series Senior Term Note, and finds it to be 8.33 percent. Therefore, the Department shall apply an effective cost of long-term debt of 8.56 percent.

C. Rate of Return on Equity

1. Introduction

Berkshire proposed a 12.50 rate of return on common equity (Exh. BG-10, at 51). To determine its proposed cost of equity, the Company performed a discounted cash flow ("DCF") analysis, a risk premium analysis, a capital asset pricing model ("CAPM"), and a comparable earnings approach (id. at 3). The spread of equity calculations ranged between 12.85 percent using a DCF model and 15.50 percent using a comparable earnings approach, with the average of all four approaches being 13.30 percent (id. at 4).

Because Berkshire is a wholly-owned subsidiary of Energy East Corporation, there is no market data for the Company's common stock and consequently no means to assess directly investors's expectations of the Company's required return. Thus, the Company provided an analysis of eleven companies ("barometer group") which it considered to be of generally comparable risk to Berkshire[32] (Exh. BG-12, Sch. 3, at 2). The barometer group includes AGL Resources, Inc., Chesapeake Utilities Corporation, Energen Corporation, Keyspan Energy Corporation, New Jersey Resource Corporation, NICOR, Inc., Peoples Energy,

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32 The selection criteria included: (1) companies reported in Edition 3 "Natural Gas Distribution Industry" of the basic or expanded service of the Value Line Investment Survey; (2) common stock traded on the New York Stock Exchange;(3) operations in the Northeast, Great Lakes, or Southeastern regions; (4) no reduction or elimination of dividends; and (6) not currently the target of a merger or acquisition (Exhs. BG-10, at 16; BG-12, Sch. 3, at 2).

Piedmont Natural Gas Company, SEMCO Energy, South Jersey Industries, Inc., and WGL Holdings (id.).

In addition to the use of a barometer group, the Company provided an analysis of the fundamental risk of Berkshire in comparison to the barometer group and in comparison to Standard and Poor's ("S&P") Utility Index (Exh. BG-10, at 16). Berkshire maintained that its investment risk was generally comparable to that of the barometer group, but that the Company also experienced higher risk traits, including: (1) its smaller size; (2) low common equity ratio; (3) higher variability of returns; (4) weaker interest coverage; and (5) lower cash flow (id. at 23).

The four alternative methods used by the Company to measure its requested return on equity are addressed individually.

2. DCF Analysis

a. Introduction

A DCF postulates that the value of an asset is equal to the present value of future expected cash flow discounted at the appropriate risk-adjusted rate of return (id. at 28). The DCF theory considers two components: (1) the anticipated cash dividend yield; and (2) the future growth appreciation of the investment (id.). The Company used the following equation to model its DCF analysis:

Expected Return on Common Equity $K = (D1/Po) + g + lev.$

where "K" is the investor's required cost of capital, "D1" is the anticipated dividend, "Po" is the stock price, "g" is the expected growth rate, and "lev." represents a leverage modification designed to recognize that the book value equity ratio is used in the rate setting process rather than the market value equity ratio related to the price of the stock (id. at 37).

To determine the dividend yield component of the DCF model, Berkshire compared historical dividend yields for the barometer group based on the then-current stock prices and chose an average six-month yield of 4.72 percent, in the belief that this yield represents current capital costs and avoids spot yields (id. at 30). After adjusting the dividend yield to take into consideration investor expectations that dividends would increase in the future, the Company derived a 4.90 percent adjusted dividend yield component for its barometer group (id.).

To derive the growth rate for its comparison group, the Company analyzed two indicators for the barometer group: (1) the five-year and ten-year historical growth rates in earnings per share, dividends per share, book value per share, and cash flow per share; and (2) the analysts's five-year projected growth rates in earnings per share, dividends per share, book value per share, and cash flow per share (Exhs. BG-10, at 31-32; BG-12, Sch. 8, Rev., Sch.9, Rev.). Berkshire has eliminated negative historical growth rates reasoning that negative growth rates provide no reliable guide to gauge investor expected growth for the future (Exh.BG-10, at 31). Based on these Company-specific historical and prospective growth rates, the Company concluded that a 7.0 percent prospective growth rate is a reasonable expectation for the barometer group (id. at 33). Berkshire then added the dividend yield and dividend growth rate estimates, plus a leverage adjustment of 0.95 percent, producing a 12.85 percent rate of return on equity for the barometer group of companies (id. at 37).

b. Positions of the Parties

i. Attorney General

The Attorney General claims that Berkshire's dividend rate does not adequately consider historic data (Attorney General Brief at 72). First, the Attorney General argues that by dividing the indicated dividend by the current market price, the resulting dividend yield is highly susceptible to the impact of "one day" events that may affect the market (id. at 71). To compensate for any abnormalities resulting from the use of "one day" information, the Attorney General advocates the use of the average of several months of dividend yields (id.). Based on the most recent average twelve and six-month dividend yields, and the assumption of future dividend increases, the Attorney General proposes a dividend yield rate of 4.84 (id. at 71-72, citing RR-AG-10).

Second, the Attorney General asserts that there is no factual basis for the Company's proposed growth rate (Attorney General Brief at 72). The Attorney General points out that Berkshire's selected growth rate estimate of seven percent is 375 basis points above the historical dividend growth rate and 422 basis points above any projected dividend growth rate of the comparison group (id.). Furthermore, according to the Attorney General, Berkshire's short-term earnings per share forecast is inflated, and should be rejected by the Department (id. at 73). The Attorney General argues that the appropriate growth rate should be 5.0 percent, which is more in line with the 5.5 percent long-run growth rate forecast for the economy (id.). Based on his proposed DCF dividend yield rate of 4.84 percent and a growth rate of 5.0 percent, the Attorney General concludes that 9.84 percent represents a reasonable estimate of the cost of equity for the Company under the DCF analysis (id. at 74).

ii. The Company

The Company asserts that the Attorney General's recommended cost of equity of 9.84 percent would not compensate the Company for its equity risk (Company Brief at 138). Specifically, the Company asserts that "A" rated public utility bonds provided a yield of 7.75 percent in September 2001; the three-month average yield was 7.71; the six-month average yield was 7.82 percent; and the twelve-month average yield was 7.85 percent (id.). Using the high and low of these yields, the Company estimated that the Attorney General's proposed ROE of 9.84 percent carries an implied equity risk premium of 1.99 percent to 2.13 percent, which Berkshire characterizes as inadequate, given the higher risk characteristics of Berkshire and the risk associated with the ten-year term of the Company's PCM proposal (id.).

c. Analysis and Findings

In the past, the Department has addressed the DCF analysis as a basis for determining an appropriate rate of return on equity. See Massachusetts Electric Company, D.P.U. 95-40, at 96-97; Boston Gas Company, D.P.U. 93-60, at 250-251. As indicated above, the Company-proposed DCF model postulates that the value of an asset is equal to the present value of future expected cash flows discounted at the appropriate risk-adjusted rate of return. Because the dividend yield and growth rate components of this risk-adjusted rate of return are variables that reflect investors's expectations of future performance of stock investment, there always will be potential problems and limitations in estimating the appropriate values of these two variables.

Regarding the growth component of the DCF, the Department has rejected those adjustments that overstate either the dividend yield or the growth component and, consequently, the DCF-based cost of equity. More specifically, the Department has rejected financing and market adjustments that could double-count the effect of the growth rate factor because investors already incorporate a premium into their expected return to reflect market risks and financing costs. Massachusetts Electric Company, D.P.U. 95-40, at 97; Boston Gas Company, D.P.U. 93-60, at 250; Berkshire Gas Company, D.P.U. 90-121, at 178-180. In this case, Berkshire added an adjustment of 0.95 percent to the DCF method to recognize that the book value equity ratio is used in the rate setting process rather than the market value equity ratio related to the price of the stock (Exh. BG-10, at 37). The Department notes that the Company's proposed leverage adjustment relies on a comparison between book and market capitalization, and therefore has similar elements to the price-book ratio method of determining a utility's cost of equity. The Department has frequently rejected the price-book analysis because it fails to recognize variables such as a company's geographic location, load factors, and customer make-up, which can affect price-book ratios. Boston Edison Company, D.P.U. 906, at 100-101. Additionally, the price-book analysis has been found to rely excessively on investor perceptions of the relationship between market and book prices in their investment decisions. Eastern Edison Company, D.P.U. 837, at 49 (1982). These weaknesses of the price-book ratio analysis are also present in Berkshire's leverage adjustment. The Company asserts that investors require a higher return because the book value of their investment is exceeded by its market value (Exh. BG-10, at 35). Considering the multiplicity of factors that affect investor decisions on the valuation of a utility's common stock, the Department considers the Company's market/book analysis as an implicit attempt to automatically ensure a price-book ratio of 1:1. This automatic assurance would serve to remove an inherent aspect of utility management, that is, to "bear the brunt of inefficient decisions and reap the rewards of efficiency." Boston Edison Company, D.P.U. 906, at 100 (1982). The Department is not obligated to ensure that market-to-book ratios remain on a one-to-one basis. Therefore, the Department places no weight on the Company's proposed leverage adjustment.

Based on the above considerations, the Department finds that the Company's DCF analysis overstates the required return on common equity for Berkshire. Therefore, the Department shall take this into consideration in its determination of the appropriate ROE for Berkshire.

3. Risk Premium Analysis

a. Introduction

The risk premium analysis postulates that the cost of equity capital is equal to the interest on long-term corporate debt, defined as the interest rate on A-rated public utility bonds, plus an equity risk premium (Exhs. BG-10 at 37-38; BG-11, App. G).

The Company used the following equation to model its risk premium analysis:

Expected Return on Common Equity $K = I + RP$

where "K" is the investor's required return, "I" is the prospective return for long-term public utility debt, and "RP" is the equity risk premium (Exh. BG-10, at 42).

Berkshire relied on A-rated public utility bond yields as its starting point in its risk premium analysis (Exh. BG-12, Sch. 10 at 1). As the interest component of its risk premium approach, the Company proposed a 7.50 percent yield based on data from Moody's Investors

Services, Inc. ("Moody's") 12-months ending March 2000, historical rates and Blue Chip Financial Forecasts ("Blue Chip") yields on A-rated public utility long-term debt adjusted for current changes in Fed policy (Exh. BG-10, at 38-39). According to the Company, in early 1999, Blue Chip stopped publishing forecasts of yields on A-rated public utility bonds because the Federal Reserve Board deleted these yields from its Statistical Release H.15. Therefore, in order to independently project a forecast of the yields on A-rated public utility bonds, the Company combined the forecast yields on 30-year Treasury bonds published on April 1, 2001 ranging between 5.2 and 5.5 percent and the yield spread on A-rated utility bonds of 2.25 percent (id., App. F at 6-8).

To determine the appropriate equity risk premium, the Company used a 1928-2000 data series and assumed four alternative holding periods.[33] Based on this information, the Company determined that a risk premium of 5.50 percent represents a reasonable reflection of the relative riskiness of Berkshire and the companies in the barometer group as compared with the S&P Public Utilities (id. at 42). Accordingly, the Company's risk premium analysis results in a cost of equity of 13.00 percent, which is the sum of the 5.50 percent risk premium plus the 7.50 percent rate which is based on historical and prospective long-term debt rates (id.).

b. Positions of the Parties

i. Attorney General

The Attorney General contends that Berkshire's risk premium analysis is virtually identical to that rejected by the Department in Boston Gas Company, D.P.U. 96-50 (Phase I) (Attorney General Brief at 79-80). According to the Attorney General, the Department has

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33 Based on Ibbotson & Associates and S&P Public Utility Index and Public Utility Bonds (Exh. BG-12, Sch. 11 at 1-2).

rejected the risk premium analysis because it overstates the amount of company-specific risk and, therefore, overstates the cost of equity (id. at 80). The Attorney General maintains that the Company has presented no argument that addresses the Department's concerns with the risk premium analysis (id.).

ii. The Company

The Company contends that its risk premium analysis does not overstate the company-specific risk (Company Brief at 153). The Company claims that to avoid overstating the company-specific risk, the Company used parameters objectively measured and informed judgment was limited to tailoring the results to the risk of the Barometer Group (id., citing Exh. BG-10, at 41-42).

c. Analysis and Findings

The Department has rejected the use of the risk premium analysis, finding that such an approach overstates the amount of company-specific risk and, therefore, overstates the cost of equity. Boston Gas Company, D.P.U. 93-60, at 261 (1993); Berkshire Gas Company, D.P.U. 90-121, at 171 (1990); Boston Gas Company, D.P.U. 88-67, Phase I at 182-184 (1989). In addition, the Department has rejected specific aspects of the risk premium analysis, particularly the use of more than 60 years of annual data, which show a large statistical variance making the result of the analysis of little practical value. Massachusetts Electric Company, D.P.U. 95-40, at 97; Boston Gas Company, D.P.U. 93-60, at 262; Bay State Gas Company, D.P.U. 92-111, at 265-266. While the Company did use shorter time periods in its analysis, the Department still places little weight on risk premiums developed from data covering unreasonably long periods of time. See Boston Gas Company, D.P.U. 96-50

(Phase I) at 128 (1996). Thus, the Department finds that the Company's risk premium analysis overstates the required ROE for Berkshire. Accordingly, we will place limited weight on the results of the risk premium analysis in determining the appropriate ROE for the Company.

4. CAPM Analysis

a. Introduction

Berkshire noted that the CAPM, unlike the risk premium approach, which considers industry and company-specific factors, reflects only the systematic risk as measured by a stock's beta[34] (Exh. BG-10, at 43). The CAPM postulates that the cost of equity for a particular stock is equal to the rate of return of a risk-free investment plus a risk premium which recognizes the riskiness of the particular stock relative to the market (id.). To compute the cost of equity using the CAPM, three components are necessary: (1) the risk-free rate of return; (2) the beta, which measures the risk that cannot be eliminated from a portfolio of assets through diversification, also known as systematic risk; and (3) the market risk premium (Exh. BG-11, App. H).

The Company used the following equation to model its CAPM analysis:

Expected Return on Common Equity $$K = Rf + \beta\ (Rm - Rf)$$

where K is the investor's required return, Rf is the return on risk-free investments, β is the beta for the security being analyzed, and Rm is the return in the market (Exhs. BG-10, at 46; BG-11, App. H).

34 Beta is a measurement of the sensitivity of a stock's rate of return to the rate of return of the market portfolio (Exh. BG-10, App. H at 2).

To measure the risk-free rate of return, Berkshire used the historical yield on 30-year Treasury bonds for the twelve months ending in March 2001, as well as forecast data on these bonds from the Blue Chip Financial Forecasts[35] dated April 1, 2001 (Exh. BG-12, Sch. 12, at 2-6). The Company stated that, based on historical and forecast data, the most representative risk-free rate for use in the CAPM was 5.25 percent (Exh. BG-10 at 45). To derive the beta for the barometer group, the Company relied on data from Value Line Investment Survey to determine that the median beta for the barometer group was 0.59 (Exh. BG-12, Sch. 12, at 1). The Company adjusted this beta to 0.72 percent, reasoning that applying market values to book values underestimates the Company's required ROE (Exh. BG-10, at 46). In determining the market risk premium, the Company used two sets of data: (1) the Value Line forecast of capital appreciation and dividend yield on 1,700 stocks; and (2) the total returns from common stocks and long-term government bonds published by Ibbotson Associates in Stocks, Bonds, Bills and Inflation–2000 Yearbook ("SBBI") (Exh. BG-12, Sch. 12, at 5-6). The Company used the average of these two market risk premiums, or 10.34 percent, as its proposed market risk premium for its CAPM analysis (Exhs. BG-10, at 45; BG-11, App. H at 5). The sum of the risk-free rate of 5.25 percent and the beta-adjusted premium of 7.44 percent was 12.69 percent (Exh. BG-10, at 46). The Company then added 0.58 percent to this total in order to compensate for what it considered to be the discrepancy that exists between the actual returns of mid-capitalization sized companies included in the

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35 This consists of a forecast of Treasury yields per the consensus of nearly 50 economists.

barometer group and their expected lower returns based on CAPM results[36] (id. at 46-47). Therefore, using the risk-free rate of 5.25 percent, a risk premium of 7.44 with an adjusted "leverage" beta of 0.72, and a size premium of 0.58 percent, Berkshire concluded that the appropriate return on equity using the CAPM model is 13.27 percent (id.).

b. Positions of the Parties

i. Attorney General

The Attorney General states that the Department has found deficiencies in the following underlying assumptions used in CAPM analyses: (1) investors can borrow and lend an unlimited amount of funds at risk-free rates; (2) investors evaluate equity/security portfolios according to the means and standard deviation of portfolio returns; (3) there are no income taxes included in the calculation; and (4) a 100 percent liquidating dividend is paid at the end of the period (Attorney General Brief at 77, citing Commonwealth Electric Company, D.P.U. 956, at 54 (1982)).

Further, the Attorney General argues that the Company's application of CAPM in this case is flawed (Attorney General Brief at 77). First, the Attorney General argues that the Company's use of 30-year Treasury Bonds in its CAPM formula assumes that all investors have a 30-year investment horizon (id.). According to the Attorney General, for any investors who have less than a 30-year investment horizon, such as those with a five-year or 90-day investment horizon, the Company's required return would be less than the 12.69 percent return

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36 In support of his mid-cap size capitalization adjustment for the barometer group, the Company cited articles by Eugene F. Fama and Kenneth R. Frech, The Cross Section of Expected Stock Returns (Journal of Finance, June 1992); Michael Annin, Equity and the Small-Stock Effect (Public Utility Fortnightly, October 15, 1995) (BG-10, at 46).

proposed by Berkshire (id. at 77-78). In addition, the Attorney General argues that given the recent announcement by the Federal Reserve that it will no longer be issuing the 30-year U.S. Treasury Bonds, the Company's whole CAPM analysis based on those bonds should be rejected by the Department (id. at 77). Therefore, for all of the above reasons, the Attorney General submits that the Department should reject the Company's CAPM analysis (id. at 78-79).

ii. The Company

The Company claims that the CAPM method was used solely to corroborate the results of the DCF and risk premium analyses and should be viewed by the Department in that context (Company Brief at 157). With respect to the Attorney General's argument that the CAPM method employs unrealistic assumptions, Berkshire argues that the same can be said of all measures of the cost of equity, each of which contains restrictive assumptions that may not conform to real-world situations (id., citing Exh. BG-10, at 27). According to the Company, the use of restrictive assumptions on the model makes it imperative to corroborate and verify results through the use of a robust number of models (Company Brief at 157). Finally, the Company disagrees with the Attorney General's opposition to the use of the yield on 30-year Treasury bonds as the measure of the risk-free rate of return (id., citing Attorney General Brief at 77-78). The Company asserts that the Attorney General's emphasis on shorter-term debt instruments should be avoided for the following reasons: (1) rates should be set on the basis of financial conditions that will exist during the effective period of the proposed rates; (2) 91-day Treasury bill yields are more volatile than longer-term yields and are greatly influenced by the Federal government's monetary policy, as well as political and economic situations; (3)

Treasury bill yields have been shown to be empirically inadequate for the CAPM; and (4) some advocates of CAPM argue that the risk-free rate of return in the CAPM should be derived from quality long-term corporate bonds (Exh. BG-11, App. F at 9; Company Brief at 157, citing Exh. BG-11, App. F at 9).

c. Analysis and Findings

The Department has rejected the use of the CAPM as a basis for determining a utility's cost of equity. See Massachusetts Electric Company, D.P.U. 92-78, at 113 (1992); Boston Gas Company, D.P.U. 88-67, Phase I at 184 (1988); Colonial Gas Company, D.P.U. 84-94, at 63-64 (1984).

The Department has noted a number of limitations in the application of CAPM, including the definition and data used to estimate the risk-free rate, and the coefficient of determination of beta. Boston Gas Company, D.P.U. 93-60, at 257(1993). The Department finds that the same deficiencies in CAPM identified in prior cases are present here (e.g., there are no income taxes included in the calculation; a 100 percent liquidating dividend is paid at the end of the period). Therefore, the Department finds that the CAPM analysis overstates the required ROE for Berkshire. Accordingly, we will place limited weight on the results of the CAPM analysis as a means of corroborating the results of Berkshire's DCF and risk premium analyses.

5. Comparable Earnings

a. Introduction

The Company presented the comparable earnings approach as an additional method to supplement its DCF and risk premium analyses (Exh. BG-10, at 3). The comparable earnings approach uses a set of parameters which identifies similar risk characteristics of a utility and a group of companies with comparable risk that are not public utilities (id., at 47; Exh. BG-11, App. I).

To implement the comparable earnings approach, the Company used both historical realized returns and forecasted returns for non-utility companies taken from the Value Screen Data Base, published by Value Line, as a measure of a fair rate of return on common equity[37] (Exhs. BG-10 at 49; BG-12, Sch. 13 at 2). By applying these selection criteria, the Company identified a group of 37 non-utility companies deemed to have comparable risks to Berkshire (Exh. BG-12, Sch. 13, at 2).

Berkshire stated that based on this analysis, the ROE for non-utility companies comparable to Berkshire is 15.0 percent (id.). The Company stated that the comparable earnings approach is consistent with the Company's proposal to move from cost of service regulation to incentive-based regulation. According to the Company, Berkshire's risk will increase in the future and, as a result, the ratesetting process should emulate the returns achieved by non-regulated firms operating in a competitive market (Exh. BG-10, at 47-49).

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[37] The Company used six criteria covered in the Value Screen Data Base: (1) timeliness ranks of 2 and 4 (from a high of 1 to a low of 5); (2) safety ranks of 1 and 3 (from a high of 1 to a low of 5); (3) financial strength ratings of B+, B++ and A+ (from a high of A++ to a low of C); (4) price stability 85 and higher (based upon a high of 100 to a low of 5); (5) a range of Value Line betas between 0.45 to 0.75 (above 1.0 there is more risk involved); and (6) technical rank of 2, 3 and 4 (based upon a high of 1 to a low of 5) (Exh. BG-12, Sch. 13, at 1).

b. Positions of the Parties

i. Attorney General

The Attorney General argues that the Department repeatedly has found the comparable earnings analysis unreliable, and urges the Department to reject Berkshire's comparable earnings approach in this case as well (Attorney General Brief at 79, citing Boston Gas Company, D.P.U. 96-50 (Phase I) at 131-132 (1996); Cambridge Electric Light Company, D.P.U. 92-250, at 160-161 (1993); Berkshire Gas Company, D.P.U. 905, at 48-49 (1982). The Attorney General asserts that the Department has found that the results of a comparable earnings approach are unreliable because the earned return on common equity does not necessarily equal the companies' cost of capital (Attorney General Brief at 79, citing Berkshire Gas Company, D.P.U. 905, at 48-49 (1982)).

ii. The Company

The Company contends that the comparable earnings approach was not intended to be used to calculate the ROE, but was submitted to establish that the proposed 12.5 percent rate of return on common equity for the Company is conservative (Company Brief at 160). Berkshire maintains that the comparable earnings approach has become a more relevant measurement of the Company's cost of equity, because the returns realized by non-regulated firms have become increasingly relevant with the trend toward increased risk throughout the public utility business (Exh. BG-10, at 49). Further, the Company asserts that the rate of return for a regulated public utility must be competitive with returns available on investments in other enterprises having corresponding risks, especially in a more global economy (Company Brief at 158-159, citing Exh. BG-10, at 49).

c. Analysis and Findings

While the comparison group of companies used in the comparable earnings approach consists of non-regulated firms, the Company has not demonstrated that the 37 companies included in the comparison group have risk comparable to that of Berkshire. In order to meet the comparability criteria enunciated by the Supreme Court in Bluefield Water Works and Improvement Company v. Public Service Commission of West Virginia, 262 U.S. 679 (1923) ("Bluefield") and Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591 (1942) ("Hope"), other risk criteria, including the nature of the business, must be evaluated carefully as the basis for selecting an appropriate comparable group of companies. The Department notes that the companies used in the comparable earnings analysis include representatives of such industries as food processing, financial services, property and casualty insurance, machine production, and petroleum (Exh. BG-10, Sch. 13, at 2). While these companies may fall within the six investment risk criteria used in the analysis, the Department notes that the use of beta as a criterion in selecting the comparable group of companies is not a reliable investment risk indicator given its statistical measurement limitations. Boston Gas Company, D.P.U. 96-50 (Phase I) at 132. Accordingly, the Department rejects the Company's comparable earnings approach as a basis for determining the Company's cost of equity in this case.

6. Conclusion

The standard for determining the allowed return on equity is set forth in Bluefield and Hope. In Bluefield and Hope, the Supreme Court held that the return on common equity should preserve the Company's financial integrity, allow it to attract capital on reasonable terms, and be comparable to earnings on investments of comparable risk. Bluefield, 262 U.S. 679, 692-693; Hope, 320 U.S. 591, 603, 605. The Company has presented various financial methods, such as the DCF, CAPM, risk premium and comparable earnings, in support of its calculation of an appropriate return on equity. These methods include the use of historical and projected growth rates, the use of historical, current and projected interest rates, and capitalization and financial statistics for Berkshire and the barometer group of eleven gas distribution companies. However, the use of these empirical analyses in this context is not an exact science. A number of judgments are required in conducting a model-based ROE analysis. One looks for substantial, reliable evidence on which one may reasonably base a judgment.

The first layer of judgment involves the appropriate economic theory underlying each model. Next, we must choose which of several competing models offered by the parties to a proceeding best represents market conditions. In addition, there is significant qualitative judgment involved in the selection of appropriate data to apply to the chosen model. Cape Cod Gas Company, D.P.U. 637/638, at 50 (1981). Finally, we must apply to the record evidence and argument considerable judgment and agency expertise to determine the appropriate use of the empirical results. Each level of judgment to be made contains possibility of inherent bias and other limitations. Western Massachusetts Electric Company, D.P.U. 18731, at 59 (1977). Therefore, while the results of analytical models are useful, the Department must ultimately apply its own judgment to the evidence to determine an appropriate rate of return.

In addition to the financial models mentioned above, the Department has considered various factors in setting an appropriate return on equity, including the Company's most recent long-term bond offering rates, the growth rates on a number of economic indicators, and the range of returns on equity granted in recent Department rate cases. Our task is not a mechanical or model-driven exercise. Western Massachusetts Electrc Company, D.P.U. 160, at 59 (1980); D.P.U. 18731, at 59 (1977); see also Boston Edison Company v. Department of Public Utilities, 375 Mass. 1, 15 (1978).

While the Department has rejected the Company's comparable earnings approach and has placed limited value on both the risk premium and CAPM methods, we have found more value in the use of the DCF model for determining an appropriate ROE. Fitchburg Gas and Electric Light Company, D.T.E. 99-118, at 89 (2001). Using the DCF method, the Attorney General calculated a ROE of 9.84 percent while Berkshire calculated a ROE of 12.85 percent. Elimination of the Company's proposed leverage adjustment of 0.95 percent, for the reasons explained above, produces a revised ROE using the Company's analysis of 11.9 percent. Based on the results of the DCF analysis, the Department finds that an allowed ROE of 10.50 percent is within a reasonable range of rates determined in this proceeding that satisfies the standards set forth by the Supreme Court in Bluefield and Hope. In making this finding, the Department has considered both qualitative and quantitative aspects of the Company's alternative methods for determining its proposed ROE, as well as the arguments of the Attorney General. In light of the Company's most recent debt issuance approved in Berkshire Gas Company, D.T.E. 00-36 (2000) with a current interest rate of 6.78 percent,[38] the Department considers that a 10.50 percent ROE provides for an adequate risk spread over the

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38 This note is a variable rate instrument based on either the London Inter-bank Offered Rate plus 215 basis points, or the lender's prime rate plus 50 basis points, as elected by the Company (Exh. BG-12, at 12). See also Berkshire Gas Company, D.T.E. 00-36, at 1 (2000).

Company's current prevailing cost of long-term debt. See Massachusetts Electric Company, D.P.U. 89-194/195, at 199 (1990). Furthermore, our findings of a 10.50 percent ROE is consistent with the mid-range of the results of the DCF analyses as presented by both the Attorney General and the Company, and is based on our reasoned judgment that such an ROE preserves the Company's financial integrity and allows it to compete for capital in the financial market with firms of comparable risk, thereby satisfying the standards set forth by the Supreme Court in Bluefield and Hope.

VIII. RATE DESIGN

A. Marginal Cost Study

The Company filed a marginal cost of service study ("MCS") which included analyses of the estimated increased costs that the Company would incur if it added customers, increased gas sales, or added capacity (Exh. BG-19, at 16). In the MCS, the Company calculated: (1) marginal commodity costs; (2) marginal production capacity costs; (3) marginal distribution costs; and (4) marginal customer costs (id.).

1. Marginal Commodity Costs

Marginal commodity costs are the short run variable costs that would be necessary to increase the Company's level of gas sendout by one unit, assuming the Company's production capacity is held constant (id.). The Company determined its marginal commodity costs by forecasting calendar year 2002 gas costs, based on output calculated in the Company's dispatch model (id. at 17). The dispatch model used the anticipated future gas prices as reported by the New York Mercantile Exchange ("NYMEX"), as well as anticipated sources of supply for calendar year 2002, to develop the expected marginal commodity costs (id. at 25).

The Company calculated the marginal commodity costs associated with production operations and maintenance expenses by comparing the results of running the dispatch model at the anticipated load for calendar year 2002 to the results of running the dispatch model at a load one percent higher than the anticipated load for that year (id. at 26). The Company then calculated the incremental cost and load for each month of calendar year 2002 (id.). The peak and off-peak season marginal commodity costs were then determined by calculating the average monthly system incremental cost weighted by sales for each season (id.). The Company derived a peak period marginal commodity cost of $7.254 per million cubic feet ("Mcf"), and an off-peak period marginal commodity cost of $5.457 per Mcf (Exh. BG-20, at 40).

2. Marginal Production Capacity Costs

Marginal production capacity costs are the unitized costs of expanding the Company's production capability to meet a long-run increase in customers' requirements for gas service (Exh. BG-19, at 21). The Company employed the modified peaker approach to calculate marginal production capacity costs (id. at 17). The peaker method identifies the least capital intensive capacity source that can be added to the Company's resources to meet peaks of short duration (id. at 21). Berkshire recently added the Whately LNG facility to provide for added pressure regulation and thereby to serve peak load growth in the Greenfield division, and therefore, used the costs of this facility to compute marginal production capacity costs (id.; Tr. 15, at 1684). The Company computed the marginal production capacity cost of the gas supply related portion of the LNG facility to be $304.54 per Mcf per day (Exh. BG-20, at 1).

3. Marginal Distribution Capacity Costs

According to the Company, the marginal distribution capacity costs are the unitized costs, based on historical data and recent trends, to expand the local distribution network to accommodate growth in customers' requirements (Exh. BG-19, at 16). Berkshire computed its marginal distribution capacity costs by determining the long-run costs of expanding the existing gas distribution system and the long-run marginal costs of adding main extensions (id. at 22).

Berkshire used three approaches to determine the marginal cost of expanding the existing gas distribution system (id.). The Company's first method employed an analysis based on 5 years of historical main extension footage, load, and cost (id.). Berkshire's second and third methods were based on historical investments and statistical regression techniques, respectively (id. at 23). The Company proposed to use the first method because it is based on the engineering principles used by the Company in its planning decisions, and determined a total marginal distribution cost of $843.27 per design day per Mcf (id. at 24; BG-20, at 7).

4. Marginal Customer Costs

The long-run marginal costs of serving an additional customer are a function of the size of the customer and the class of service. The Company's marginal customer costs consist of: (1) plant investment in services and meters; (2) related operations and maintenance expenses; and (3) billing costs, such as customer accounting and customer information expenses (Exh. BG-19, at 27).

Berkshire computed the customer-related plant investment by using current engineering estimates and billing records to compute the average replacement costs for each customer class

(Exh. BG-20, at 27). Through the use of the long-run average cost, the Company computed the customer-related operations and maintenance incremental expense (id. at 21). The customer classes were then weighted based on the services and meters investments (id. at 22).

The Company computed the marginal customer accounting and marketing expense by averaging the costs from the last three years (id. at 23). Similarly, these costs are also weighted for class structure (Exh. BG-19, at 29).

5. Analysis and Findings

The evidence demonstrates and the Department finds that the Company calculated its proposed MCS consistent with Department precedent. See Boston Gas Company, D.P.U. 96-50 (Phase 1) at 150-152 (1996); Boston Gas Company, D.P.U. 93-30 at 368-376 (1993). Moreover, as the Company's MCS was appropriately calculated, the Department finds the resultant marginal costs to be accurate.

B. The Market Based Allocator

1. The Company's Proposals

The Company proposed to: (1) replace the existing Proportional Responsibility ("PR") allocator with the MBA to allocate the Company's gas production costs in its accounting cost of service study ("COSS") (Exh. BG-15, at 12; Exh. BG-19, at 3-5, 6-7); and (2) to use the MBA to calculate seasonal gas costs by load factor in the Company's CGAC (Exh. BG-19, at 12-13; Exh. BG-25, at 8). In addition, the Company proposed to file seasonal cost of gas adjustment ("CGA") reconciliations, to replace the existing annual reconciliation, together with its current seasonal CGA filings (Exh. BG-24, M.D.T.E. 303, at 14; Tr. 6, at 761-763). The following sections describe these Company proposals.

b. MBA as a Production Cost Allocator

The Company stated that the MBA method identifies two portions of a utility's load duration curve: (1) "base use," and (2) "remaining load" and assigns costs to each portion of the load curve (Exh. BG-19, at 10). Under this method,"base use" is the level of system firm customer load that remains constant throughout the year and the "remaining load" is the system load less the base use (id.).[39]

The MBA method identifies the capacity and commodity costs for both supply and transportation contracts to meet the requirement of base use and assigns those costs, on average, to the loads of the individual customer classes (id.). The remaining load is served by a combination of supplies, including pipeline supplies not serving the base use portion of the load, winter service contracts, storage supplies, peaking supplies and manufactured gas including both propane and LNG facilities (id.). Under the MBA method, the commodity costs of the remaining load are allocated to customer classes in proportion to their remaining use (id. at 11). Moreover, the capacity costs of the remaining load are allocated to rate classes on the basis of their design day demand less that portion of their load served by base use supplies (id.).

The Company added that although the PR method is still valuable as a distribution capacity cost allocator, it has a limited value as a production capacity cost allocator because of the unbunbling of the gas supply function under an increasingly competitive gas market (id. at 6). The Company notes that its MBA method was approved by the Department in Fitchburg Gas and Electric Light Company, D.T.E. 98-51 (id. at 5-6).

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39 The Company used the average daily normal year firm sendout for July and August to measure base use (Exh. 19, at 10, Schedule JLH-3, at 3).

c. Seasonal Load Factor GAFs Using the MBA Allocator

The Company proposed to replace the existing seasonal Company average gas adjustment factor ("GAF") applicable to all customers with two seasonal GAFs: (1) applicable to low load factor rate classes (i.e., R-1, R-2, R-3, R-4, G-41, G-42, G-43); and (2) applicable to high load factor rate classes (i.e., R-1, R-2, L, G-51, G-52, and G-53) using the MBA (Exh. BG-15, at 12; Exh. BG-19, at 3-5, 6-7). As part of its proposal, the Company requests that the Department not only approve the use of seasonal GAFs for low and high load factor rate classes but also the fixed seasonal gas costs ratios (referred to as "MBA ratios")[40] applicable to low and high load factor rate classes at levels established in this proceeding (Exh. BG-24, M.D.T.E. 303, at 4). The MBA ratios being fixed in the CGAC tariff will not require calculations using the MBA each time Berkshire submits its CGAC filing (id.;Tr. at 757, 777).[41] The Company proposed to use a correction factor ("CF")[42] to ensure accurate gas cost recovery in the CGA (id.).

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40 That is, the MBA ratios are specified in the CGAC tariff and therefore will not change until the Company's next rate case (Exh. BG-24, M.D.T.E. 303, at 4).

41 In its proposed CGAC tariff, the Company specified four fixed MBA ratios based on test year costs: (1) winter ratio for low load factor ("RATIOwl"); (2) winter ratio for high load factor ("RATIOwh"); (3) summer ratio for low load factor ("RATIOsl"); and (4) summer ratio for high load factor ("RATIOsh") (Exh. BG-24, M.D.T.E. 303, at 4, Schedule KLZ-5, Schedule KLZ-5-Revised). The Company, however, added that in compliance to the Order in this docket, it will revise the MBA ratios for direct gas costs based on forecasts consistent with the CGAC requirement (Tr. 15, at 1739; Tr. 11, at 1258).

42 The CF, calculated for each season, is equal to the sum of the total of the low load factor and total high load factor sales volume for the season divided by the sum of: (1) the season's fixed ratio for low load factor cost of gas to the average cost of gas multiplied by the season's total low load factor sales volume, and (2) the seasons' fixed ratio for high load factor cost of gas to the average cost of gas multiplied by the season's high load factor sales volume (Exh. BG-24, M.D.T.E. 303, at 5).

2. Positions of the Parties

a. The Attorney General

The Attorney General did not comment on the Company's proposal to use the MBA method in allocating production costs in its COSS. However, the Attorney General opposes the Company's proposal to modify its CGAC using load factor GAFs based on the MBA method (Attorney General Brief at 58). The Attorney General recommends that the Department refrain from accepting the MBA and instead open a generic proceeding to determine the most appropriate way for all LDCs to set default service gas prices during the transition to a fully competitive gas market (id.). Should the Department adopt the load factor CGAC for Berkshire in this docket, the Attorney General recommends that the Department reserve the implementation of a load factor CGAC and open a second phase of this docket to provide opportunities to explore alternatives or modifications to the CGAC (id.).

In opposing the Company's proposed load factor CGAC, the Attorney General rejects the Company's claims that competition in the gas market may not prosper under the existing method that relies on the PR method and average seasonal CGA (Attorney General Brief at 54).[43] The Attorney General asserts that there is no relationship between the MBA and competition because the MBA is not based on market prices and does not reflect utility cost incurrence (id. at 54-55, citing Exh. AG-7, at 3). The Attorney General claims that the characterization of the Company's proposed allocator as "market based allocator" is a

[43] The Attorney General disputes the Company's claim that continued reliance on the PR method and the seasonal CGA will provide unfair advantage to marketers who compete for high load factor loads thereby leading to migration based on "cherry picking" (Attorney General Brief at 54, citing Exh. BG-19, at 7). The Attorney General asserts that this claim is negated by migration data showing that recent high prices appear to have "spurred migration even under the average, seasonal CGA" (id.).

misnomer because the MBA does not reflect competitive market pricing (Attorney General Reply Brief at 35, citing Exh. AG-7, at 13-14, Tr. 17, at 1951).

The Attorney General claims that the MBA relies on a method that incorporates many subjective judgments that could permit the Company to assign and price resources arbitrarily to undersell marketers (Attorney General Brief at 56-57; Attorney General Reply Brief at 35).

Finally, the Attorney General states that the Department has never explicitly approved the use of the MBA in approving class or load differentiated rate (Attorney General Brief at 53; Attorney General Rely Brief at 34). The Attorney General contends that in Fitchburg Gas and Electric Light Company, D.T.E. 98-51 (1998), the Department stated a preference for load factor based CGAs in general -- not for a specific allocation method (id.).

b. Associated Industries of Massachusetts

The Associated Industries of Massachusetts expressed its concern about a fair and equitable rate structure claiming that the Company's proposed MBA unfairly impacts commercial and industrial customers (AIM Brief at 2). Moreover, AIM stated that the MBA could be used by the Company to cross subsidize between customer classes (id.).

c. The Company

The Company maintains that its proposed MBA method is a logical and consistent method for assigning fixed and variable production costs to customer classes (Company Brief at 178, citing Exh. BG-19, at 4). The Company states that due to the unbundling of gas rates and competition in the natural gas market, marketers will continue to compete by pricing sales that reflect customers' load shape (id. at 179). The Company, however, notes that since its existing seasonal CGAs use one price for all customers, load factor or cost causation is not recognized and therefore accurate price signals are not established (id. at 179).

The Company asserts that, as it is currently used by the Company, its single CGA gas price assigned to all customers could allow marketers to "cherry pick" customers by offering more attractive rates to the customers with the lowest cost to serve (id., citing Exh. BG-19, at 7; Company Reply Brief at 69). The Company claims that this process results in captive customers eventually bearing higher costs, given that the CGAC is a pass through mechanism where the Company reconciles and fully recovers its gas costs (Company Brief at 179).

The Company states that neither the MBA nor the PR method precisely represent market pricing because they are cost recovery mechanisms (id. at 182). The Company reasons that under competitive pricing, marketers will only participate if they expect to generate margins, in addition to recovering costs, while LDCs are not allowed to recover margins on top of gas costs (id.). The Company asserts that the MBA method is a better allocator than the PR method because the MBA method more accurately assigns costs, based on customers load factor, and better recognizes the mix of supplies needed to serve low and high load factor customer groups (id., citing Exh. BG-19, at 9). The Company claims that the MBA method provides a more accurate and more appropriate price signal, unlike the PR method that may result in prices below marginal commodity costs for the lowest load factor customers (id. at 183-184, citing BG-RR-4).

The Company claims that in Maine, where an MBA method had been implemented, the patterns of low and high load factor customer migration are similar thereby contradicting the Attorney General's assertion that the MBA method "underprices" supplies for high load factor customers (id. at 183, citing AG-RR-51; Exh. BG-1-6).

3. Analysis and Findings

Regarding the Company's proposal to use the MBA to allocate production costs, the Department has accepted this method before. See, e.g., Fitchburg Gas and Electric Light Company, D.T.E. 98-51; Essex County Gas Company, D.P.U. 96-70; Bay State Gas Company, D.P.U. 95-52 (1995). We note that none of the parties opposed the Company's proposal. Based on a review of the record in this case, the Department finds the Company's proposal to allocated production costs using the MBA reasonable and consistent with Department precedent. Accordingly, the Department approves the Company's proposal.

Regarding the use of seasonal GAFs by load factor, the Department has accepted this before (See Fitchburg Gas and Electric Light Company, D.T.E. 98-51; Essex County Gas

Company, D.P.U. 96-70; Bay State Gas Company, D.P.U. 95-52 (1995)). Specifically, in approving seasonal load factor based GAFs in D.T.E. 98-51, the Department noted that such an approach represents costs more accurately than a single seasonal GAF that is applicable to all rate classes, and therefore avoids interclass subsidization. Id. at 153. In addition, the Department noted that such load factor based GAF is likely to lead to more effective competition by reducing “cherry picking” and “may encourage customers to improve their load factors through improvements in efficiency or through load shifting” (id.).

In this case, by proposing to fix the MBA ratios in its CGAC tariff, the Company would have fixed the relative cost of gas for each season between the low and high load factor customer groups at the level approved by the Department in the Company’s compliance filing. The record in this proceeding does not support a finding that the relative costs of gas established in the Company’s compliance filing would remain unchanged in future years. LDCs in response to the dynamics of a changing natural gas market may continually alter their gas supply portfolios thereby changing those relative costs of gas between low and high load factor customers. The relative costs of gas captured by the fixed MBA ratios, may not be accurate representations of future years’ costs of gas. Although the application of the correction factor would allow the Company to recover total CGA projected gas costs, it would not likely change the relative costs of gas established in the fixed MBA ratios. Therefore, the resulting seasonal GAFs would not provide an accurate representation of the costs of gas for low and high load factor groups customers.

During the proceeding, the Company addressed the above-described limitations of the fixed MBA ratios and suggested that those ratios should “be established for some period of time, until the Department deems it necessary to update them or until the correction factor appears to be getting large" (Tr. at 1259, 1270). Subsequently, the Company suggested to calculate the seasonal GAFs by load factor using the MBA if and when the absolute value of the correction factor exceeds one percent (DTE-RR-44).

The Department notes that the expected cost of applying the MBA method to calculate the load factor based GAFs each time the Company makes a CGA filing may not justify the added accuracy. See Boston Gas Company, D.P.U. 96-50 (Phase I) at 38 (1996). The Department must balance the need for developing accurate price signals and administrative efficiency and simplicity. Boston Gas Company, D.P.U. 96-50 (Phase I) at 133 (1996); Boston Gas Company, D.P.U. 93-60, at 331-332 (1993); Berkshire Gas Company, D.P.U. 92-210 at 201 (1993). Based on its review of the record in this case, the Department finds that to run the MBA if and when the absolute value of the correction factor exceeds one percent, is reasonable. The Department directs the Company in its compliance filing to revise its proposed CGAC tariff consistent with this Order.

Finally, the Department notes that by using seasonal CGA reconciliations, instead of annual reconciliations, the Company would be able to more accurately capture and assign costs by season consistent with the use of seasonal GAFs. In the past, the Department has allowed the use of seasonal CGA reconciliations in place of annual reconciliations. The Department finds that the Company's proposal to file seasonal CGA reconciliations instead of annual reconciliation is consistent with Department precedent and approves the Company's proposal.

C. Low-income Customers

1. Introduction

In designing its cast off rates, the Company proposed to increase the test year level of low-income customers in rates R-2 and R-4 to represent the increase of residential customers who migrated to low-income rates after the test year (Exhs. BG-22, at 36; BG-15, at 28; BG-16, Sch. PMN-6). The Company stated that as of June 30, 2001, there were 3,482 residential customers participating in the low-income rates compared to the test year average of 2,954 residential customers (Exh. BG-22, at 36). The Company stated that it expects this current participation to remain level due to economic conditions and because of the length of time it would take customers to recover from the high gas costs incurred in winter 2001 (id. at 36). The Company notes that it is not seeking to reduce test year billing determinants in total, but rather requesting that the test year sales for these migrating customers be represented in their proper rate class (Company Brief at 175-176).

2. Positions of the Parties

a. The Attorney General

The Attorney General claims that the Department has not allowed post-test year adjustments to account for a change in the number of customers for a specific rate class and that the adjustment should be denied in this case as well (Attorney General Brief at 66, citing Fitchburg Gas and Electric Light Company, D.T.E. 99-118, at 16-17 (2001)). The Attorney General argues that although there appears to be an increase in the number of low-income customers since the end of the test year, such increase may only represent the normal ebb and flow of participation of customers in low-income programs (id. at 66, citing DTE-RR-50).

The Attorney General claims that his observation on the ebb and flow of the number of customers is supported by the Company's explanation that of the 104 new R-4 customers added since the test year, 24 are no longer being served (id. at 66). The Attorney General adds that should the Department allow the proposed adjustment, it must also increase the Company's test year revenues to account for the number of new customers added since the end of the test year (id.).

b. The Company

The Company argues that if rates were designed based on low-income participation levels that are below current levels, it would cause the Company to generate revenues less than that allowed by the Department (Company Brief at 175-176). To support its position, the Company provided documents that participation in low-income rates increased by 14 percent between September 2000 and September 2001, and that this trend continued through year end (id. at 175, citing, DTE-RR-50).

Contrary to the Attorney General's belief, the Company claims that its proposed adjustment is not based on ebb and flow of customers who participate in low-income rates. Instead, the change is based on consistent migration of residential customers to low-income rates (id. at 176).

Finally, the Company claims that the Attorney General misconstrues D.T.E. 99-118 in stating that the Department has rejected similar post-test year adjustment proposals (id. at 176, citing D.T.E. 99-118, at 22). The Company states that Fitchburg does not apply to the Company's proposal to increase the number of low-income ratepayers as a post-test year adjustment because the Company's level of service to residential customers is the same in total, and that no adjustment to costs is made (id. at 176).

3. Analysis and Findings

The record shows that in proposing to increase the test year level of billing units for the low income rate class R-2, the Company correspondingly reduced the test year billing units for rate R-1, keeping the total billing units for R1 and R-2 equal to the test year level (Exh. PMN-6, at 1-2). Similarly, in proposing to increase the test year level of billing units for the low income rate class R-4, the Company correspondingly reduced the test year billing units for rate R-3, keeping the total billing units for R3 and R-4 equal to the test year level (id.). Therefore, the Company proposed only to increase the customer participation levels on the low-income rates, keeping the total residential rate classes billing units equal to the test year levels.

The Department notes that the Company has made efforts to promote participation of eligible customers in its low-income rates since the Company's last rate case (Exh. BG-22, at 36; Tr. at 278). In fact, the record shows that the monthly number of R-2 and R-4 customers increased in 2001 compared to the corresponding monthly numbers in 2000 (DTE-RR-50).[44] These are known and measurable changes of such magnitude that, contrary to the Attorney General's argument, these changes are not part of the expected ebb and flow in

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[44] The monthly percentage changes in the number of R-2 customers from January through September 2000 to the corresponding months in 2001 are, respectively: -4.4%, -5.0%, 9.0%, 15.6%, 18.0%, 20.7%, 26.2%, 29.2%, and 32.0% (DTE-RR-50). The corresponding monthly percentage changes in the number of R-4 customers are, respectively: -1.4%, 1.5%, 1.5%, 2.9%, 7.5%, 12.1%, 13.7%, 13.6%, and 13.8% (id.).

participation levels on the low-income rates. In view of these changes, the Department finds that the adjustment is warranted.

The Attorney General proposed to increase the Company's test year revenues because the Company proposed to increase the test year billing units for Rates R-2 and R-4. However, the Department notes that if the Company designed its rates for the residential rate classes based on its test year billing units, the Company would under-collect its approved revenues. This is because the test year non-subsidized residential customers who moved to the discounted low-income rates after the test year would generate less revenues for the Company. Thus, the Department rejects the Attorney General's request to increase test year revenues to account for the adjustment in the number of low income customers in the test year.

D. Rate Structure

1. Introduction

Rate structure is the level and pattern of prices charged to customers for their use of utility service. The rate structure for each rate class is a function of the cost of serving that rate class and the design of the rates such that the cost to serve that rate class is recovered.

The Department has determined that utility rate structures must be efficient, simple, and ensure continuity of rates, fairness between rate classes, and corporate earnings stability. Boston Gas Company, D.P.U. 96-50 (Phase I), at 133 (1996); Boston Gas Company, D.P.U. 93-60, at 331-332 (1993); Berkshire Gas Company, D.P.U. 92-210, at 201 (1993). Efficiency means that the rate structure should ensure recovery of the cost of providing the service and should provide an accurate basis for consumers' decisions about how to best fulfill their needs. The lowest-cost method of fulfilling consumers' needs should also be the lowest-cost means for society as a whole. Thus, efficiency in rate structure means that it is cost-based, and recovers the cost to society of the consumption of resources to produce the utility service. The Department has determined that a rate structure achieves the goal of simplicity if it is easily understood by consumers. Rate continuity means that changes to rate structure should be gradual to allow consumers to adjust their consumption patterns in response to a change in structure. Fairness means that no class of consumers should pay more than the costs to serve that class. Earnings stability means that the amount a company earns from its rates should not vary significantly over a period of one or two years.

There are two steps in determining rate structure: cost allocation and rate design. The cost allocation step allocates a portion of a company's total costs to each rate class in a cost of service study ("COSS"). The COSS represents the cost of serving each class given a company's level of total costs. Boston Gas Company, D.P.U. 96-50 (Phase I), at 133 (1996); Boston Gas Company, D.P.U. 93-60, at 331-332 (1993); Berkshire Gas Company, D.P.U. 92-210, at 201 (1993).

The results of the COSS are compared to the revenues collected in the test year. If these amounts are close, then the revenue increase or decrease may be allocated among the rate classes so as to equalize the rates of return and ensure that each rate class pays the cost of serving it. If, however, the differences between the allocated costs and the test-year revenues are great, then, for reasons of continuity, the revenue increase or decrease may be allocated so as to reduce the difference in rates of return, but not to equalize them in a single step. See Boston Gas Company, D.P.U. 96-50 (Phase I), at 134 (1996); Bay State Gas Company, D.P.U. 92-111, at 317 (1992).

In order to permit the development of a rate structure that meets the Department's objectives, the allocation process should determine an overall revenue requirement for each class that reflects the costs a company incurs to serve that class. Cost allocation comprises five tasks. The first task is to functionalize costs. In this step, costs are defined as being associated with the production, storage, or transmission and distribution function of providing service. The second task is to classify expenses in each functional category according to the factors underlying their causation. Thus, the expenses are classified as demand-, energy-, or customer-related. The third task is to identify an allocator that is most appropriate for costs in each classification within each function. Boston Gas Company, D.P.U. 96-50 (Phase I), at 133-134; D.P.U. 90-121, at 185-187; D.P.U. 1720, at 112-120. The fourth task is to allocate all of a company's costs to each rate class based upon the cost groupings and allocators chosen, and to sum these allocations in order to determine the total costs of serving each rate class. The fifth and final task is to compare the cost of serving each rate class to revenues produced by that rate class using the rate design in effect during the test year. The results of the COSS are compared to the revenues the company collected in the test year. If these amounts are close, then the revenue increase or decrease may be allocated among the rate classes so as to equalize the rates of return and ensure that each rate class pays the cost of serving it. If the differences between the allocated costs and the test-year revenues are great, however, then for reasons of continuity the revenue increase or decrease may be allocated so as to reduce the difference in rates of return, but not equalize them in a single step. See D.P.U. 96-50 (Phase I) at 134; Blackstone Gas Company, D.T.E. 01-50, at 29; Bay State Gas Company, D.P.U. 92-111, at 317 (1992).

As the previous discussion indicates, the Department does not determine rates based solely on costs, but also explicitly considers the impact of its rate structure decisions on customers' bills. For instance, the pace at which fully cost-based rates are implemented depends in part on the effect of the changes on customers. The Department has ordered the establishment of special subsidized rate classes for certain low-income customers. In moving toward our goal of efficiency, the Department also considers the impact of such rates on low-income customers.

In order to reach fair decisions that encourage efficient utility and consumer actions, the Department's rate structure goals must balance the oftentimes divergent interests of various customer classes and prevent any class from subsidizing another unless a clear record exists to support such subsidies. For all these reasons, the Department reaffirms its rate structure goals: pursuing those goals promotes rates that are fair and cost-based and enable customers to adjust to changes.

The second step in determining the rate structure is rate design. The level of the revenues to be generated by a given rate structure is governed by the cost allocated to each rate class in the cost allocation process. The pattern of prices in the rate structure, which produces the given level of revenues, is a function of the rate design. The rate design for a given rate class is constrained by the requirement that it should produces sufficient revenues to cover the cost of serving the given rate class.

2. Cost Allocation

The Company filed proposed allocated COSS as a basis to assign or allocate costs to customer rate classes (Exhs. BG-15, at 8-10; BG-16; BG-17). The Company filed three allocated COSS. One determined the actual rate of return for each rate class based on present rates. A second COSS allocated costs to provide a uniform rate of return for each rate class equal to the rate of return proposed by the Company; and a third COSS that unbundled costs to serve each function and cost component at the present rates and at equalized rates of return (Exh. BG-15, at 9-10, 17-18). In addition, the Company filed allocated cost of service studies for base distribution costs and gas costs at an equalized rate of return (Exhs. AG-2-2; AG-2-3). The Department finds the Company's proposed COSS to be consistent with Department precedent for cost allocation. The Department directs the Company in its compliance filing to re-run its COSS to allocate costs and expenses consistent with this Order. In addition, the Department directs the Company to file allocated cost of services studies following the structure and method used in Exhibits AG-2-2 and AG-2-3.

3. Interclass Revenue Requirement Allocation

a. The Company's Proposal

Based on the Company's COSS, with the exception of Rate G-54, at equalized rates of return, all of the commercial and industrial ("C&I") rate classes would receive, on average, a rate change significantly below the Company-average rate increase (Exh.BG-15, at 25). At equalized rates of return, Rates T-54 and R-3 would receive, on average, rate increases slightly above the Company-average rate increase.[45] However, at equalized rates of return, Rates R-1, R-2, and R-4 would receive, on average, rates increases that were significantly above the Company-average rate increase (id.). To address this interclass subsidization, the

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[45] In the case of T-54, however, the Company proposed further to cap the increase in revenue requirement to $40,000 resulting in an increase of 3.9 percent (Exh. BG-16, Sch. PMN-6).

Company proposed to develop class revenue requirements to ensure that no class received an increase greater than 125 percent of the overall average increase requested by the Company (i.e. 125 percent of the Company's request for a 9.0 percent rate increase equals 11.2 percent) (Exh. BG-15, at 25). The remaining revenue increase requested by the Company would then be allocated to those classes whose revenue requirement was below the cap, such that each rate class would receive the same percentage increase to its current revenue requirement. This computes to a uniform increase of 5.0 percent based on the overall increase requested by the Company (id.).

b. Analysis and Findings

The Department's long-standing policy regarding the allocation of class revenue requirements is that a company's total distribution costs should be allocated on the basis of equalized rates of return. See The Berkshire Gas Company, D.P.U. 92-210, at 214 (1993); Cambridge Electric Light Company, D.P.U. 92-250, at 194 (1993); Western Massachusetts Electric Company, D.P.U. 89-255, at 103 1990). A company's compliance with this policy satisfies the Department's goal of ensuring that rates are fair. However, we must balance our goal of fair rates with our goal to ensure continuity of rates. To do this, we have reviewed the changes in total revenue requirements by rate class and the annual and seasonal bill impacts by consumption level within rate classes. The Department finds that continuity considerations do not allow us to move to fully equalized rates of return without substantial rate increases to Rates R-1, R-2, and R-4. The Department has approved adjustments to class revenue requirements similar to what Berkshire has proposed when confronted with like situations. See Fitchburg Gas and Electric Company, D.T.E. 98-51, at 136-138 (1998); Nantucket Electric

Company, D.P.U. 91-106, at 129-130 (1991). Therefore, we find that the Company's proposal to set limits on the rate increase to individual rate classes provides an appropriate balance between our goals of rate continuity and rate fairness and is consistent with Department precedent. Accordingly, we direct Berkshire to cap the revenue requirement increase for any class, including Rate T-54, at 125 percent of the overall average increase requested by the Company. The Company is directed to collect its remaining revenue requirement in such a way that the average rate increase to all rate classes whose revenue requirement is below the cap is uniform.

4. Rate-by-Rate Analysis

a. Introduction

To determine the revenue requirement for each rate class, the Company compared the results of its marginal and embedded cost studies with its current rates as well as the revenue requirement it proposed to collect (Exh. BG-15, at 27). Because the marginal and embedded customer charges were higher than the current customer charge for each rate class, the Company proposed to increase each rate class' customer charge more accurately to reflect the Company's marginal and embedded cost with the constraint that the bill impact on individual customers satisfied the Department's goal of rate continuity (id.).

The Company then determined the size of the headblock for each rate class based on the principle that the size of the headblock should allow at least half of all bills, excluding zero usage bills, to have consumption in the tailblock (id.). To promote efficiency , the Company set the tailblock rate for each rate class at approximately its marginal cost (id.). Similarly, the Company set the headblock rate for each rate class to collect its remaining revenue requirement (id. at 28). For Rates G-43 and G-53 the Company proposed to set a single volumetric charge because the headblock and tailblock rates established by following the above steps were close and because it would make the rates simpler for customers to understand and easier for the Company to administer (id.). For Rates G-42 and G-52 the Company proposed to set a single volumetric charge similar to the current rate structure (id.). Lastly, the Company proposed to change the billing of its volumetric delivery rates from hundred cubic feet ("Ccf") to therms (Exh. BG-23, at 26-27). Therefore, all Company proposed volumetric delivery rates in this filing are in therms (id.).

A discussion of the Department's findings on the design of each of the Company's rates, and how the design satisfies the Department's various rate design goals, is set forth below. The following rate-by-rate analysis evaluates the specific rates proposed by the Company and provides the Company with directions for setting its rates in the compliance filing. This section includes Department findings for customer charges and delivery rates.

b. Change from Seasonal to Annual Rate Structure

The Company proposed to eliminate the existing seasonal rates for all residential (R-1, R-2, R-3, R-4) and small commercial and industrial (G-41 and G-51) rate classes (Exh. BG-22, at 25-26). The Company stated that when it unbundled its rates in D.T.E. 98-65, it removed all gas cost-related items from its distribution rates (id. at 26). The Company claimed that the majority of the seasonality in its costs was due to gas cost-related items and that the results of the Company's accounting and marginal costs studies indicated that the majority of the costs to serve customers with low usage are customer-related and fixed in nature (id. at 26). For these reasons, the Company proposed annual rates to replace the existing seasonal rates for those customer classes with low usage (i.e. R-1, R-2, R-3, R-4, G-41, and G-51) (id.). For those customer classes with high usage (i.e. G-42, G-43, G-52, G-53, and T-54), the Company proposed to retain the existing seasonal rate structure because its accounting and marginal costs studies indicated that the cost to serve these classes are less customer related or fixed in nature (id. at 27). No party commented on the Company's proposal.

The Department notes that although seasonality in rates could be represented in gas related costs and that customer costs are fixed on an annual basis, the Company has not demonstrated the absence of seasonality in other distribution related costs. Therefore, the Department denies the Company's proposal to change the structure of the above rates from seasonal to annual.

The record, however, shows that in designing its proposed rates for R-1, R-2, R-3, R-4, G-41, and G-51, the Company was unable to set the customer charges at the levels established in the COSS and the marginal cost study for reasons of rate continuity (Exh. BG-16, Sch. PMN-6; DTE-RR-15). Therefore, these unrecovered customer costs, which are fixed in nature, are recovered in the delivery charge component of the rates, thereby reducing the necessity for seasonal differentiation in rates.

In the past, the Department has allowed gas companies to design rates that are seasonal in structure but with charges that are equal for both seasons.[46] Therefore, for reasons of rate simplicity, the Department allows the Company to design seasonal rates for the above-listed rate classes with charges that are equal for both winter and summer seasons.

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[46] See, i.e., Boston Gas Company's M.D.T.E. Nos. 1158 (Rate R-1); 1175 (Rate R-2); 1160 (Rate R-3); 1176 (Rate R-4); 1185 (Rate G-51); and 1167 (Rate G-52).

c. Rate R-1 and Rate R-3: Residential Non-Heating and Heating

i. The Company's Proposal

Rate R-1 is available for all residential non-heating purposes such as water heating, cooking, and clothes drying in individual private dwellings, apartments or condominiums. Rate R-3 is available to all residential customers who have gas space heating equipment in individual private dwellings, apartment, or condominiums (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No. 280-281; Exh. BG-22, at 37). The availability of Rates R-1 and R-3 is limited to residential customers taking service in buildings containing no more than four dwelling units with gas supplied through one meter (Exh. BG-24, Sch. KLZ-2, D.T.E. No. 280-281; Exh. BG-22, at 37). The Company proposed to increase the monthly customer charge by \$1.00, from \$9.50 to \$10.50 for both Rates R-1 and Rate R-3 (Exh. BG-22, at 37).

The current Rate R-1 delivery charge during the peak season is \$0.8155 per Ccf for the first 15 Ccfs consumed and \$0.7020 for each additional Ccf. The current Rate R-1 delivery charge during the off-peak season is \$0.6715 per Ccf for the first 15 Ccfs consumed and \$0.5399 for each additional Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 246, at 1). The proposed Rate R-1 delivery charge during the peak season and off-peak season is \$0.9842 per therm for the first 15 therms consumed and \$0.8366 for each additional therm (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No. 280).

The current Rate R-3 delivery charge during the peak season is \$0.4438 per Ccf for the first 125 Ccfs consumed and \$0.3737 for each additional Ccf. The current Rate R-3 delivery charge during the off-peak season is \$0.4506 per Ccf for the first 30 Ccfs consumed and \$0.0969 for each additional Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No.247, at 1). The proposed Rate R-3 delivery charge during the peak season and off-peak season is $0.5744 per therm for the first 60 therms consumed and $0.4320 for each additional therm (Exh.BG-24, M.D.T.E. No. 281).

ii. Analysis and Findings

According to the Company's MCS, the marginal customer charge for Rates R-1 and R-3 are $40.32 and $41.07 per month, respectively (Exh. BG-20, Sch. JLH-4, at 46). Because of the need to balance rate efficiency and rate continuity and the fact that the current customer charge is significantly below marginal cost, it is inappropriate to set the customer charge at the marginal customer charge level. Instead, based on Rates R-1 and R-3 marginal costs and the annual impacts on customers' bills, the Department finds that a R-1 and R-3 rate designed with a $10.50 monthly customer charge for the peak and off-peak seasons, satisfies the Department's goal of continuity in rates while establishing a customer charge closer to the marginal cost to serve that class of customers.

According to the Company's MCS, the peak season marginal delivery rates for Rate R-1 and R-3 are $0.1044 per Ccf and $0.1874 per Ccf, respectively. The off-peak season marginal delivery rates for Rate R-1 and R-3 are $0.0547 per Ccf and $0.1124 per Ccf, respectively (Exh. BG-20, Sch. JLH-4, at 46). Based on the R-1 and R-3 marginal delivery rates and seasonal and annual bill impacts on customers, the Department finds that an R-1 rate designed with a $0.7000 per therm tailblock rate for both the peak and off-peak seasons and an R-3 rate designed with a $0.3000 per therm tailblock rate for both the peak and off-peak seasons, satisfies the continuity goal and produces bill impacts that are moderate and reasonable.

Therefore, for Rate R-1, the Department directs the Company to set the breakpoint between headblock and tailblock at 15 therms for both the peak and off-peak seasons, and to set the seasonal headblock rate at the same charge for each season to collect the remaining class revenue responsibility as specified on Schedule 10. For Rate R-3, the Department directs the Company to set the breakpoint between headblock and tailblock at 60 therms for both the peak and off-peak seasons, and to set the seasonal headblock rate at the same charge for each season and to collect the remaining class revenue responsibility as specified on Schedule 10.

d. Rate R-2 and Rate R-4: Residential Non-Heating and Heating Low Income Rates

i. The Company's Proposal

Subsidized rates are available to residential customers who are recipients of any means-tested public benefit programs, the low-income home energy assistance program, or its successor program, for which eligibility does not exceed 175 percent of the federal poverty level based on a household's gross income or other criteria approved by the Department (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No. 282-283; Exh. BG-22, at 38). The Company proposed that customers on Rates R-2 and R-4 continue to receive a 20 percent discount off of the customer charge of rates R-1 and R-3, respectively, and a 40 percent discount off of the delivery charge of rates R-1 and R-3, respectively (Exh. BG-22, at 38). The Company proposed to allocate the low-income shortfall to the other rate classes using a rate-base allocator (Exh. BG-22, at 38).

ii. Analysis and Findings

The Company proposed to maintain the low-income discount rate at its current level. The Department finds maintaining the low-income discount rate at its current level is appropriate because it will continue to provide rate relief to low-income customers, while having a minimal effect on the rates of non-subsidize customers (Exh. BG -15, at 24). Accordingly, the Department directs the Company to set the discount for Rates R-2 and R-4 at 20 percent off of the customer charge, and 40 percent off of the delivery charge of Rates R-1 and R-3, respectively (Exh. BG-15, at 25).

Regarding the allocation of the low-income subsidy to the other classes, the Department allows the recovery of a revenue shortfall associated with subsidized rates from the utility's remaining customers by allocating the shortfall to the respective rate classes based on a rate base allocator. Blackstone Gas Company, D.T.E. 01-50, at 35; D.P.U. 96-50 (Phase I), at 158; Essex County Gas Company, D.P.U. 91-107/110/111, at 24 (1991). Accordingly, the Department directs the Company, in its compliance filing, to collect the low-income shortfall from the other classes using a rate base allocator.

e. Gas Light Rate L

i. The Company's Proposal

Rate L is available to all existing gas lighting customers for non-metered gas lighting purposes (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No.284). The Company proposed to change the general service and distribution charge for Rate L from $6.23 per light each month to $7.00 per light each month. The design of the rate is based on average usage of 18 therms per light, which was the level approved in the Company's last rate case (Exh. BG-22, at 39).

ii. Analysis and Findings

Because this service is not metered, and based upon the principle of simplicity in rate design, the Department finds the Company's proposed method for determining the charge for

Rate L to be acceptable. Therefore, the Department directs the Company in its compliance filing to set a monthly fixed charge per light to recover the class revenue responsibility as specified on Schedule 10.

f. Rate G-41 and G-51: Commercial and Industrial ("C&I") Low Use

i. The Company's Proposal

Rate G-41 and G-51 is available to commercial, industrial, and institutional customers who use less than 10,000 therms annually[47] (Exhs. BG-24, Sch. KLZ-2, M.D.T.E. No. 285, at 1, and M.D.T.E. No. 288, at 1; BG-22, at 39-40). The Company proposed to increase the monthly customer charge from $10.50 to $11.50 for both Rates G-41 and G-51 (Exhs. BG-24, Sch. KLZ-2, M.D.T.E. No. 285, and M.D.T.E. No. 288, at 1; BG-22, at 39-40). The current Rate G-41 delivery charge during the peak season is $0.5008 per Ccf for the first 200 Ccfs consumed and $0.3910 for each additional Ccf. The current Rate G-41 delivery charge during the off-peak season is $0.3399 per Ccf for the first 25 Ccfs consumed and $0.0931 for each additional Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No.251, at 1). The proposed Rate G-41 delivery charge during the peak season and off-peak season is $0.5888 per therm for the first 90 therms consumed and $0.4318 for each additional therm (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No. 285, at 1). The current Rate G-51 delivery charge during the peak season is $0.5008 per Ccf for the first 100 Ccfs consumed and $0.3910 for each additional Ccf. The

[47] Low load factor is defined as those rate classes whose summer usage (i.e. May through October) is less than 30 percent of the class' annual usage. Rates G-41, G-42, and G-43 are the Company's low load factor rate classes. High load factor is defined as those rate classes whose summer usage is greater than or equal to 30 percent of the class' annual usage. Rates G-51, G-52, and G-53 are the Company's high load factor rate classes.

current Rate G-51 delivery charge during the off-peak season is $0.3399 per Ccf for the first 100 Ccfs consumed and $0.0931 for each additional Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 254, at 1). The proposed Rate G-51 delivery charge during the peak season and off-peak season is $0.5708 per therm for the first 100 therms consumed and $0.4183 for each additional therm (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No. 288, at 1).

ii. Analysis and Findings

According to the Company's MCS, the marginal customer charge for Rates G-41 and G-51 are $47.48 and $49.90 per month, respectively (Exh. BG-20, Sch. JLH-4, at 46). Because of the need to balance the efficiency and continuity of the rates it is inappropriate to set the customer charge at the marginal customer charge level. Instead, based on the G-41 and G-51 marginal costs and our analysis of the annual impact on customers' bills, the Department finds that a G-41 and G-51 rate designed with a $11.50 monthly customer charge for the peak and off-peak seasons, satisfies our rate continuity goal while establishing a customer charge closer to the marginal cost to serve that class of customers.

According to the Company's MCS, the peak season marginal delivery rates for Rates G-41 and G-51 are $0.1997 per Ccf and $0.1013 per Ccf, respectively. The off-peak season marginal delivery rates for Rate G-41 and G-51 are $0.1228 per Ccf and $0.0526 per Ccf, respectively (Exh. BG-20, Sch. JLH-4, at 46). Based on the G-41 and G-51 marginal delivery rates and our analysis of the seasonal and annual impacts on customers' bills, the Department finds that a G-41 rate designed with a $0.3600 per therm tailblock rate for both the peak and off-peak seasons and a G-51 rate designed with a $0.3500 per therm tailblock rate for both the peak and off-peak seasons, satisfies the Department's goal of continuity in rates and produces bill impacts that are moderate and reasonable.

Therefore, the Department directs the Company to set the Rates G-41 and G-51 delivery charges as follows. For Rate G-41, the Department directs the Company to set the breakpoint between headblock and tailblock at 90 therms for both the peak and off-peak seasons, and to set the seasonal headblock rates at the same charge for each season to collect the remaining class revenue responsibility as specified on Schedule 10. For Rate G-51, the Department directs the Company to set the breakpoint between headblock and tailblock at 100 therms for both the peak and off-peak seasons, and to set the seasonal headblock rates at the same charge for each season to collect the remaining class revenue responsibility as specified on Schedule 10.

g. Rate G-42 and G-52: C&I Medium Use

i. The Company's Proposal

Rates G-42 and G-52 is available to commercial, industrial and institutional customers who have annual usage between 10,001 therms and 60,000 therms (Exh. BG-22, at 39-40). The Company proposed to increase the monthly customer charge from $25 to $30 for both Rates G-42 and G-52, respectively (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 252, at 1, and M.D.T.E. No. 255, at 1). The current Rate G-42 delivery charge during the peak season is $0.3327 per Ccf. The current Rate G-42 delivery charge during the off-peak season is $0.0762 per Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 252, at 1). The proposed Rate G-42 delivery charge during the peak season and off-peak season is $0.3724 per therm and $0.1781 per therm (Exh. BG-24, Sch. KLZ-2, M.D.T.E. No. 286, at 1).

The current Rate G-52 delivery charge during the peak season is $0.3331 per Ccf. The current Rate G-52 delivery charge during the off-peak season is \$0.0760 per Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 255, at 1; Exh. BG-22, at 39-40). The proposed Rate G-52 delivery charge during the peak season is \$0.3579per therm and \$0.1682 per therm during the off-peak season (Exh. BG-24, M.D.T.E. No. 289, at 1).

ii. Analysis and Findings

According to the Company's MCS, the marginal customer charge for Rates G-42 and G-52 are \$112.25 and \$106.07 per month, respectively. The peak season marginal delivery rates for Rate G-42 and G-52 are \$0.1898 per Ccf and \$0.1060 per Ccf, respectively. The off-peak season marginal delivery rates for Rate G-42 and G-52 are \$0.1155 per Ccf and \$0.0559 per Ccf, respectively (Exh. BG-20, Sch. JLH-4, at 46). Because of the need to balance rate efficiency and rate continuity, it is inappropriate to set the customer charge at the marginal customer charge level. Instead, based on the G-42 and G-52 marginal costs and our analysis of the annual impact on customers' bills, the Department finds that a G-42 and G-52 rate designed with a \$30.00 monthly customer charge for the peak and off-peak seasons, satisfies the Department's goal of continuity in rates while establishing a customer charge closer to the marginal cost to serve that class of customers. Based on the G-42 and G-52 marginal delivery rates and our analysis of the seasonal and annual impacts on customers' bills, the Department finds that a G-42 rate designed with a \$0.1400 per therm off-peak season delivery rate and a G-52 rate designed with a \$0.1300 per therm off-peak season delivery rate satisfies the Department's goal of continuity in rates and produces bill impacts that are moderate and reasonable. The Department directs the Company to set the peak season delivery rates for G-42 and G-52 to collect their remaining class revenue responsibility as specified on

Schedule 10.

h. Rate G-43 and G-53: C&I High Use

i. The Company's Proposal

Rates G-43 and G-53 are available to commercial, industrial, and institutional customers with annual usage greater than 60,000 therms (Exh. BG-22, at 40-41). The Company proposed to increase the monthly customer charge for Rate G-43 from $75 to $150 (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 253, at 1; Exh.BG-24, Sch. KLZ-2, M.D.T.E. No. 287, at 1). The current Rate G-43 delivery charge during the peak season is $0.2991 per Ccf for the first 15,000 Ccfs consumed and $0.2619 for each additional Ccf. The current Rate G-43 delivery charge during the off-peak season is $0.0718 per Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 253, at 1). The proposed Rate G-43 headblock and tailblock charge for the peak season is $0.2941 per therm. The proposed headblock and tail-block charge for off- peak season is $0.1188 per therm (Exh.BG-24, Sch. KLZ-2, M.D.T.E. No. 287, at 1).

The Company proposed to increase the monthly customer charge for Rate G-53 from $100 to $150 (Exhs. BG-23, Sch. KLZ-1, M.D.T.E. No. 253, at 1; BG-24, Sch. KLZ-2, M.D.T.E. No. 290, at 1). The current Rate G-53 delivery charge during the peak season is $0.2716 per Ccf for the first 10,000 Ccfs consumed and $0.2246 for each additional Ccf. The current Rate G-53 delivery charge during the off-peak season is $0.0705 per Ccf (Exh. BG-23, Sch. KLZ-1, M.D.T.E. No. 256, at 1). The proposed Rate G-53 headblock charge and tailblock charge for the peak season is $0.2795 per therm and for off-peak season is $0.1088 per therm. (Exh.BG-24, Sch. KLZ-2, M.D.T.E. No. 290, at 1).

ii. Analysis and Findings

According to the Company's MCS, the marginal customer charge for Rates G-43 and G-53 are \$197.23 and \$170.71 per month, respectively. The peak season marginal delivery rates for Rates G-43 and G-53 are \$0.1823 per Ccf and \$0.1015 per Ccf, respectively. The off-peak season marginal delivery rates for Rates G-43 and G-53 are \$0.1099 per Ccf and \$0.0520 per Ccf, respectively (Exh. BG-20, Sch. JLH-4, at 46). Because of the need to balance rate efficiency and rate continuity, it is inappropriate to set the customer charge at the marginal customer charge level. Instead, based on the G-43 and G-53 marginal costs and our analysis of the annual impact on customers' bills, the Department finds that a G-43 and G-53 rate designed with a \$150 monthly customer charge for the peak and off-peak seasons, satisfies the Department's goal of continuity in rates while establishing a customer charge closer to the marginal cost to serve that class of customers. Based on the G-43 and G-53 marginal delivery rates and our analysis of the seasonal and annual impacts on customers' bills, the Department finds that a G-43 rate designed with a \$0.1200 per therm off-peak season delivery rate and a G-53 rate designed with a \$0.0800 per therm off-peak season delivery rate satisfies the Department's goal of continuity in rates and produces bill impacts that are moderate and reasonable. The Department directs the Company to set the peak season delivery rates for G-43 and G-53 to collect their remaining class revenue responsibility as specified on Schedule 10.

i. Rate G-54: C&I, Extra-Large Use, High Load Factor

i The Company's Proposal

Rate T-54 is available to commercial and industrial customers whose minimum throughput is 1,000 therms per day, and who must have annual usage of greater than 1,000,000 therms and summer usage greater than or equal to 30 percent of annual usage (Exh. BG-24, M.D.T.E. No. 291). The proposed structure of Rate T-54 consist of: (1) a monthly customer charge of $300[48]; (2) a winter demand charge of $4.07 per maximum daily quantity ("MDQ") therms per month and a summer demand charge of $2.14 per MDQ therms per month; and (3) a volumetric charge of $0.027 per therm (id.). The Company noted that its proposed tariff for Rate T-54 provides that the MDQ is determined by the Company based on the customer's billing history for the winter and summer seasons (DTE-RR-48). The Company added that it "would not be averse to including [in the T-54 tariff] a statement that the MDQ will be updated annually based on the prior year's winter and summer usage" (id.).

The Company noted that under the current quasi-firm transportation service Rate Q-54, the customer establishes a monthly contract demand and all of the Q-54 revenue requirement is collected through the demand charge exclusive of a small amount of customer-related costs (Exh. BG-15, at 31).[49] In designing the proposed rates, the Company used the percentage of the class' O&M to total class revenue requirement to determine the amount to be recovered through the volumetric charge and the remaining amount, less the customer charge revenues, are recovered from the demand charges (id.). The demand revenue requirement was allocated

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48 The monthly customer costs based on the Company's allocated cost of service study and marginal cost study for Rate T-54 are $482.92 and $292.54, respectively (Exh. DTE 5-15).

49 For Rate Q-54, the maximum daily transportation volume ("MDTV") is "redetermined annually based on the highest actual daily usage experienced in each month over the previous year recorded with telemetering equipment . . . ." (Ex. BG-23, M.D.T.E. 263, at 3). The customer charge for the existing Rate Q-54 is $50 per month (id., M.D.T.E. 263, at 2).

between seasons using the proportional responsibility allocation factor and the resulting seasonal demand revenue requirement was divided by the sum of the monthly contract demand in each of the seasons to determine the proposed seasonal demand charges (id.).

ii. Analysis and Findings

The Company stated that presently there are two customers taking service under Rate Q-54 (Exh. BG-15, at 6).[50] The Company stated that in the case of these customers, there exists no separate and equivalently-sized delivery service rate that has similar embedded costs (id.). Thus, the Company proposed to continue to maintain this class of customers under a separate Rate T-54. The Company provided bill impact analyses for each of these two customers (Exh. AG-13-9). No other party commented on the Company's proposal.

The Company proposed to increase the monthly customer charge to $300 per month, a level that we find consistent with the results shown in the Company's allocated cost of service study and marginal costs study taking into consideration rate continuity. In addition, the Company provided a reasonable method of designing the seasonal demand charges and the volumetric charge. Accordingly, the Department finds the Company's proposed rates to be consistent with the Department's rate design precedent. Therefore, the Department approves

50 For the other quasi-firm transportation service Rates Q-42, Q-43, Q-52 and Q-53, the Company proposed to combine the customers under those rates with, and to be served under, the similarly-sized delivery service Rates G-42, G-43, G-52, G-53, respectively (Exh. BG-15, at 6). In proposing to terminate services under the demand-based Rates Q-42, Q-43, Q-52 and Q-53, the Company claimed that at the time of the unbundling of its rates in D.T.E. 98-65 (1998), these rates were "grandfathered" to maintain revenue neutrality by rate class (Exh. BG-22, at 28). The Company added that there was a stipulation that if a customer chose to leave the demand-based rate and convert to volumetric rate, service under the demand-based rate would be terminated (id.). In addition, if a customer did not leave the rate, "service would be terminated at the Company's next rate design case" (id.).

the $300 monthly customer charge and the method used to determine the demand and volumetric charges.

The Department notes that under the existing Rate Q-54, the maximum daily transportation volume of the customer is "redetermined annually based on the highest actual daily usage experienced in each month over the previous year . . . ." (Ex. BG-23, M.D.T.E. 263, at 3). The Department notes that the Company's proposed Rate T-54 tariff states that the customer's MDQ will based on the "customer's billing history for the winter and summer seasons" but does not state whether the billing history covers the previous year. Accordingly, the Department directs the Company to modify its proposed Rate T-54 tariff to state that the customer's MDQ will be updated annually based on the prior year's winter and summer usage.

IX. SCHEDULES

X. ORDER

Accordingly, after due notice, hearing and consideration, it is hereby

ORDERED: That the tariffs M.D.T.E. Nos. 280 through 305, filed by The Berkshire Gas Company on July 17, 2001, to become effective August 1, 2001, be and hereby are DISALLOWED; and it is

FURTHER ORDERED: That The Berkshire Gas Company shall file new schedules of rates and charges designed to increase annual base rate revenues by $2,267,972; and it is

FURTHER ORDERED: That The Berkshire Gas Company shall file all rates and charges required by the Order and shall design all rates in compliance with this Order; and it is

FURTHER ORDERED: That The Berkshire Gas Company shall comply with all other orders and directives contained herein; and it is

FURTHER ORDERED: That the new rates shall apply to gas consumed on or after the date of this Order, but unless otherwise ordered by the Department, shall not become effective earlier than seven (7) days after they are filed with supporting data demonstrating that such rates comply with this Order.

By Order of the Department,

James Connelly, Chairman

W. Robert Keating, Commissioner

Paul B. Vasington, Commissioner

Eugene J. Sullivan, Jr., Commissioner

Deirdre K. Manning, Commissioner

Appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part.

Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. (Sec. 5, Chapter 25, G.L. Ter. Ed., as most recently amended by Chapter 485 of the Acts of 1971).