Local Distribution Adjustment Clause

Section

1.0 Purpose

The purpose of the Local Distribution Adjustment Clause (“LDAC”) is to establish a procedure that allows Boston Gas Company d/b/a National Grid (the “Company”), subject to the jurisdiction of the Department of Public Utilities (the “Department”) to adjust, on an annual basis, its rates to recover costs associated with (1) Energy Efficiency (“EE”) programs and related working capital, (2) Environmental Response Costs associated with manufactured gas plants, (3) Attorney General Consultant Expenses and related working capital, (4) Pension and Post-Retirement Benefits Other than Pensions costs, (5) Residential Assistance costs, (6) the Gas System Enhancement Program, (7) the Gas Business Enablement Program, (8) the Geothermal District Energy Demonstration Program, (9) costs associated with the Company’s Fee Free Credit Card and Debit Card Payment Option, (10) qualifying Exogenous Events, and to credit all firm customers with (1) the Economic Benefit associated with interruptible transportation service that is not included in the base distribution rates as determined in the Company’s last base distribution rate case and related working capital, (2) Service Quality Penalties assessed in accordance with a Department approved service quality plan, (3) balancing penalty revenues to all firm customers, and (4) customers’ share of excess earnings in accordance with the Earnings Sharing Mechanism pursuant to the Company’s Performance-Based Ratemaking Tariff, M.D.P.U. No. 93, as may be amended from time to time.

2.0 Applicability

The LDAC applies to all tariff throughput volumes on the Company's system, except as otherwise designated herein. See Section 17, "Other Rules".

For purposes of applying all components of the LDAC, except for the Energy Efficiency Surcharge ("EES") set out in Section 3.0 below, the Company's tariffs are combined into Rate Class Groupings as follows:

Residential	R-1, R-2, R-3B, R-3C, R-4B, R-4C
Small Commercial and Industrial	G-41B, G-41C, G-41E, G-51B, G-51C, G-51E
Medium Commerical and Insdustrial	G-42B, G-42C, G-42E, G-52B, G-52C, G-52E
Large Commervial and Industrial	G-43B, G-43C, G-43E, G-53B, G-53C, G-53E
Extra Large Commercial and Industrial	G-44B, G-54B

Local Distribution Adjustment Factor Formulae

The Annual LDAF shall be comprised of an annual Sector Specific Energy Efficiency Factor (EEF), an annual Sector Specific Energy Efficiency Working Capital Factor (EEWCF), a Low Income Energy Efficiency Factor (LIEEF), a Low Income Energy Efficiency Working Capital Factor (LIEEWCF), a Non-Firm Transportation Capacity Credit (NFTF), a Working Capital Factor for Non-Firm Transportation Capacity Credit and Attorney General Consultant Expenses (WCFNMU), a Balancing Penalty Credit Factor (BPCF), an Attorney General Consultant Expenses Factor (AGCEF), a Remediation Adjustment Factor (RAF), a Pension and Pension Benefits Other than Pensions Adjustment Factor (PAF), a credit for Service Quality Penalties (SQPF), a Residential Assistance Adjustment Factor (RAAF), an annual Gas System Enhancement Adjustment Factor (GSEAF), an annual Gas System Enhancement Reconciliation Adjustment Factor (GSERAF), Gas Business Enablement Factor (GBEF), an Earnings Sharing Mechanism Factor (ESMF), a Geothermal Energy Provision Factor (GEPF), an Electronic Payment Recovery Factor (EPRF), and an Exogenous Cost Adjustment Factor (ECAF) as in effect from time to time, calculated according to the following formulae:

LDAF Formula Applicable to Residential Rate Tariffs:

LDAFis = EEFr + EEWCFr + LIEEFr-c + LIEEWCFr-c + NFTFs + WCFNMUs + BPCFs + AGCEFs + RAFis+ PAFs + SQPFis + RAAFs + GSEAFis + GSERAFis + GBEFs + GEPFs + ESMFs + EPRFr + ECAFs

LDAF Formula Applicable to Commercial and Industrial Rate Tariffs:

LDAFis = EEFc + EEWCFc + LIEEFr-c + LIEEWCFr-c + NFTFs + WCFNMUs + BPCFs + AGCEFs + RAFs + PAFs + SQPFis + RAAFs + GSEAFis + GSERAFis + GBEFs + GEPFs + ESMFs + ECAFs

Where:

i Designates a separate factor for each division, Boston and the former Colonial.

s Designates a separate factor for each Rate Class Grouping.

r-c: Designates a separate factor for the residential and commercial sectors.

A Base Distribution Revenue Allocator will be applied to the revenues the Company is allowed to recover through the following LDAC components:

1) Remediation Adjustment Factor
2) Residential Assistance Adjustment Factor
3) Balancing Penalty Credit Factor
4) Non-Firm Transportation Capacity Credit Factor
5) Service Quality Penalty Factor
6) Attorney General Consultant Expense Factor
7) Gas Business Enablement Factor
8) Pension and PBOP Factor
9) Service Quality Penalty Factor
10) Earnings Sharing Mechanism Factor
11) Geothermal Energy Provision Factor
12) Electronic Payment Recovery Factor
13) Exogenous Cost Adjustment Factor

The Distribution Revenue Allocator is derived from the most recent base distribution rate case as approved by the Department and shall be as follows by Rate Class Grouping:

	Boston	Colonial	Combined Company
Residential	65.8%	74.7%	67.5%
Small C&I	6.2%	13.8%	7.6%
Medium C&I	6.5%	6.9%	6.6%
Large C&I	13.6%	4.6%	11.9%
Extra Large C&I	7.9%	0.0%	6.4%
Total	100.0%	100.0%	100.0%

Combined	
Residential	67.5%
Commercial & Industrial	32.5%
Total	100.0%

If recoverable costs require an allocator other than the Distribution Revenue Allocator, such allocator shall be specified in the section pertaining to the appropriate LDAC component.

3.0 Energy Efficiency Program

3.1 Purpose

The purpose of this provision is to establish a procedure that allows the Company, subject to the jurisdiction of the Department, to recover annual EE Program Costs and associated expenditures, as approved in the Company's Energy Efficiency Three-Year Plan, and the annual reconciliation of any under- or over-recovery of costs.

3.2 Applicability

The EES shall be applicable to the Company's firm sales and firm transportation throughput subject to the jurisdiction of the Department as determined in accordance with the provisions of this section. Each annual EES shall be determined separately for each Sector, as defined below, and is subject to approval by the Department.

For purposes of applying the respective EES, the Company's tariff rate schedules are combined into two Sectors as follows:

Residential Rates	R-1, R-2, R-3B, R-3C, R-4B, R-4B
Commercial/Industrial ("C&I") Rates	G-41B, G-41C, G-41E, G-42B, G-42-C, G-42-E, G-43B, G-43C, G-43E, G44B, G-51B, G-51C, G-51E, G-52B, G-52C, G-52E, G-53B, G-53C, G-53E, G-54B

3.3 Energy Efficiency Costs Allowable for LDAC

Energy Efficiency Costs eligible for recovery will include all costs as defined and approved by the Department for a twelve month period as contained in the Company's Energy Efficiency budgets, including: (1) Energy Efficiency Program and Market Transformation Costs; (2) Energy Efficiency Incentives; (3) Energy Efficiency-related pension and post retirement benefits other than pension costs; and (4) Working Capital allowances for EE costs. At the end of each twelve month period, the Company will include the Reconciliation Adjustment associated with over or under recoveries of allowable EE costs billed over the prior twelve month period.

3.4 Definitions

1) Combined Tax Rate is the combined state and federal income tax rate.

2) EE Incentive Costs are incentives earned by the Company and approved by the Department.

3) EE Program Costs are Energy Efficiency program costs as approved by the Department.

4) Energy Efficiency Costs Allowable Per Annual Residential EE Formula shall be:
   i. Charges associated with Residential EE programs designed to reduce annual load for each sector (EE), including Energy Efficiency-related pension and post retirement benefits other than pension costs.
   ii. Incentives associated with Residential EE programs (EEIN).
   iii. Account 175.22 - Annual Residential EE interest charges.

5) Energy Efficiency Costs Allowable Per Annual Commercial and Industrial EE Formula shall be:
   i. Charges associated with C&I EE programs designed to reduce annual load for each sector (EE), including Energy Efficiency-related pension and post retirement benefits other than pension charges.
   ii. Incentives associated with C&I EE programs (EEIN).
   iii. Account 175.26 – Annual C&I EE interest charges.

6) Energy Efficiency Costs Allowable Per Annual Low Income EE Formula shall be:
   i. Charges associated with Low Income EE programs designed to reduce annual load (LIEE), including Energy Efficiency-related pension and post retirement benefits other than pension costs.
   ii. Incentives associated with Low Income EE programs (LIEEIN).
   iii. Account 175.31 - Annual Low Income EE interest charges.

7) Number of Days Lag is the number of days lag to calculate the working capital requirements for LDAC allowable expenses for the Company as approved by the Department.

8) Weighted Cost of Capital is the weighted cost of capital as set in the Company's most recent base distribution rate case

9) Weighted Cost of Debt is the weighted cost of debt as set in the Company's most recent base distribution rate case.

10) Weighted Cost of Equity is the weighted cost of equity as set in the Company's most recent base distribution rate case.

11) The following definitions pertain to reconciliation adjustment calculations:

   (a) Working Capital Gas Costs Allowable Per Annual Residential EE Formula shall be:
      i. Charges associated with residential EE programs designed to reduce annual load (EE).
      ii. Account 142.22 interest charges.

   (b) Working Capital Gas Costs Allowable Per Annual Commercial and Industrial EE Formula shall be:
      i. Charges associated with commercial and industrial EE programs designed to reduce annual load (EE).
      ii. Account 142.26 interest charges.

   (c) Working Capital Gas Costs Allowable Per Annual Low Income EE Formula shall be:
      i. Charges associated with residential EE programs designed to reduce annual load (LIEE).
      ii. Account 142.31 interest charges.

3.5 Calculation of Energy Efficiency Surcharges

Residential Energy Efficiency Factor (EEFr) Formulae:

$$EEFr = \frac{EEr}{A{:}TPvolr} + \frac{EERAr + EEINr}{A{:}TPvolr}$$

Where:

r:	The residential sector.
EEr:	Energy Efficiency programs designed to conserve load annually in the residential sector, including Energy Efficiency-related pension and post retirement benefits other than pension costs.
EERAr:	Residential EE Reconciliation Adjustment to be included for recovery in the subsequent EEFr - Account 175.22 balances, inclusive of the associated interest, as outlined in Section 3.6.
EEINr:	Energy Efficiency incentives for the residential sector.
A:Tpvolr:	Annual Throughput volumes for residential sector.

Commercial/Industrial Energy Efficiency Factor (EEFc) Formulae:

$$\text{EEFc} = \frac{\text{EEc}}{\text{A:TPvolc}} + \frac{\text{EERAc} + \text{EEINc}}{\text{A:TPvolc}}$$

Where:

c:	The commercial/industrial sector.
EEc:	Energy Efficiency programs designed to conserve load annually in the commercial/industrial sector, including Energy Efficiency-related pension and post retirement benefits other than pension costs.
EERAc:	Commercial and Industrial EE Reconciliation Adjustment to be included for recovery in the subsequent EEFc- Account 175.26 balances, inclusive of the associated interest, as outlined in Section 3.6.
EEINc:	Energy Efficiency incentives for the commercial/industrial sector.
A:TPvolc:	Annual Throughput volumes for commercial/industrial sector.

Low Income Energy Efficiency Factor (LIEEF) Formulae:

$$\text{LIEEFr-c} = \frac{(\text{LIEE}) \times \text{DRAr-c}}{\text{A:TPvolr-c}} + \frac{(\text{LIEERA} + \text{LIEEIN}) \times \text{DRAr-c}}{\text{A:TPvolr-c}}$$

Where:

LIEE:	Energy Efficiency programs designed to conserve load annually available to qualifying Low Income Residential Customers, including Energy Efficiency-related pension and post retirement benefits other than pension costs.
LIEERA:	LIEE Reconciliation Adjustment - Account 175.31 balance to be included for recovery in the subsequent LIEEF, inclusive of the associated interest, as outlined in Section 3.6.
LIEEIN:	Energy Efficiency incentives for the low income sector.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput for each sector.

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DRA Distribution Revenue Allocator as defined in Section 2.0.

r-c: Designates a separate factor for the residential and commercial sectors as part of the Company's EE programs.

EE Working Capital Formulas

The Residential EE, Commercial and Industrial EE, and Low Income EE working capital requirements shall be calculated by applying the days lag divided by 365 days to the working capital costs allowable per each formula defined below.

The Residential EE, Commercial and Industrial EE, and Low Income EE working capital allowances shall each be calculated by applying the Company's weighted cost of capital to each working capital requirement (2) to calculate the respective returns on working capital. The interest portion of each working capital allowance is calculated by multiplying each working capital requirement (2) by the weighted cost of debt. This portion is tax deductible. The return on each working capital less the interest portion of each working capital is then divided by one minus the tax rate. This figure plus the interest calculated above equals the working capital allowance for each.

Residential Energy Efficiency Working Capital Factor:

$$\text{EEWCFr} = \frac{\dfrac{(\text{EEWCAr x CC}) - (\text{EEWCAr x CD})}{(1 - \text{TR})} + (\text{EEWCAr x CD}) + \text{EEWCRr}}{\text{A:TPvolr}}$$

And:

$$\text{EEWCAr} = (\text{EEr}) \text{ x } (\text{DL} \div 365)$$

And:

$$\text{EEr} = \text{EEr x } (\text{A:TPvolr} \div \text{A:TPvolr})$$

Where:

EEWCFr: Working Capital allowed per billed annual throughput volumes associated with EE Charges allocated annually as defined in Section 3.4.

EEWCAr: Charges allowable for working capital allocation as defined in Section 3.4.

EEWCRr: Working Capital Reconciliation Adjustment associated with annual residential EE charges - Account 142.22 as outlined in Section 3.6.

EEr:	Energy Efficiency programs designed to conserve load annually in the residential sector, including Energy Efficiency-related pension and post retirement benefits other than pension costs effective.
CC:	Weighted Cost of Capital as defined in Section 3.4.
CD:	Weighted Cost of Debt as defined in Section 3.4.
TR:	Combined Tax Rate as defined in Section 3.4.
DL:	Number of Days Lag from the purchase of gas from suppliers to the payment by customers.
A:TPvolr:	Annual Throughput volumes for residential sector.

Commercial/Industrial Energy Efficiency Working Capital Factor:

$$\text{EEWCFc} = \frac{\dfrac{(\text{EEWCAc x CC}) - (\text{EEWCAc x CD})}{(1 - \text{TR})} + (\text{EEWCAc x CD}) + \text{EEWCRc}}{\text{A:TPvolc}}$$

And:

EEWCAc = (EEc) x (DL ÷ 365)

And:

EEc = EEc x (A:TPvolc ÷ A:TPvolc)

Where:

EEWCFc:	Working Capital allowed per billed annual throughput volumes associated with EE Charges allocated annually as defined in Section 3.4.
EEWCAc:	Charges allowable for working capital allocation as defined in Section 3.4.
EEWCRc:	Working Capital Reconciliation Adjustment associated with annual Commercial and Industrial EE charges - Account 142.26 as outlined in Section 3.6.
EEc:	Energy Efficiency programs designed to conserve load annually in the commercial/industrial sector, including Energy Efficiency-related pensions and post retirement benefits other than pensions.
CC:	Weighted Cost of Capital as defined in Section 3.4.
CD:	Weighted Cost of Debt as defined in Section 3.4.
TR:	Combined Tax Rate as defined in Section 3.4.
DL:	Number of Days Lag from the purchase of gas from suppliers to the payment by customers.
A:TPvolc:	Annual Throughput volumes for commercial/industrial sector.

Low Income Energy Efficiency Factor Working Capital (LIEEWCF) Formula:

LIEEWCFr-c = ((((LIEEWCA x CC) -(LIEEWCA x CD)) ÷ (1 - TR) + (LIEEWCA x CD)+ LIEEWCR) x DRAr-c) ÷ A:TPvolr-c

And:

LIEEWCA = (LIEE) x (DL ÷ 365)

Where:

LIEE:	Energy Efficiency programs designed to conserve load annually available to qualifying Low Income Residential Customers, including Energy Efficiency-related pension and post retirement benefits other than pension costs.
LIEEWCF:	Working Capital allowed per billed annual throughput volumes associated with LIEE Charges allocated annually as defined in Section 3.4.
LIEEWCA:	Charges allowable for working capital allocation as defined in Section 3.4.
LIEEWCR:	Working Capital Reconciliation Adjustment associated with annual LIEE charges - Account 142.31 balance as outlined in Section 3.6.
A:TPvol:	Annual forecasted throughput volumes inclusive of all sales and transportation throughput for low income residential sector.
CC:	Weighted Cost of Capital as defined in Section 3.4.
CD:	Weighted Cost of Debt as defined in Section 3.4.
TR:	Combined Tax Rate as defined in Section 3.4.
DL:	Number of Days Lag from the purchase of gas from suppliers to the payment by customers.
DRA:	Distribution Revenue Allocator as defined in Section 2.0.
r-c:	Designates a separate factor for the residential and commercial sectors as part of the Company’s EE programs.

3.6 Reconciliation Adjustments

1) Calculation of Reconciliation Adjustments

Account 175.22 shall contain the accumulated difference between revenues toward residential EE costs as calculated by multiplying the annual residential EE factor times monthly residential throughput volumes.

Account 175.26 shall contain the accumulated difference between revenues toward commercial and industrial EE costs as calculated by multiplying the annual commercial and industrial EE factor times monthly commercial and industrial throughput volumes each month.

Account 175.31 shall contain the accumulated difference between revenues toward Low Income EE costs as calculated by multiplying the annual Low Income EE factor times total monthly throughput volumes.

In accordance with Department Approved EE Guidelines, the residential EE Reconciliation Adjustment (EERAr - as defined in Section 3.5) shall be calculated every year and will be included for recovery in the subsequent residential LDAF calculation. This reconciliation will incorporate the residential EE account (175.22) balance at the end of the twelve month approval period.

In accordance with Department Approved EE Guidelines, the commercial and industrial EE Reconciliation Adjustment (EERAc - as defined in Section 3.5) shall be calculated every year and will be included for recovery in the subsequent commercial and industrial LDAF calculation. This reconciliation will incorporate the commercial and industrial EE account (175.26) balance at the end of the twelve month approval period.

In accordance with Department Approved EE Guidelines the LIEE Reconciliation Adjustment (LIEERA - as defined in Section 3.5) shall be calculated every year and will be included for recovery in the subsequent residential and commercial/industrial LDAF calculations. This reconciliation will incorporate the Low Income EE account (175.31) balance as the end of the twelve month approval period.

2) Calculation of Reconciliation Adjustments – Working Capital

Accounts 142.22, 142.26, and 142.31 contain the accumulated difference between working capital allowance revenues and the actual monthly working capital allowance costs as calculated from actual monthly costs. Each Account 142 shall contain the accumulated difference between revenues toward the working capital allowance and the working capital allowance.

An annual Residential EE Working Capital Reconciliation Adjustment (EEWCRr - as defined in Section 3.5) shall be determined for use in the annual Residential EE factor calculations incorporating the annual Residential EE working capital account (142.22) balance as of the annual reconciliation date designated by the Company.

An annual Commercial and Industrial EE Working Capital Reconciliation Adjustment (EEWCRc - as defined in Section 3.5) shall be determined for use in the annual Commercial and Industrial EE factor calculations incorporating the annual Commercial and Industrial EE working capital account (142.26) balance as of the annual reconciliation date designated by the Company.

An annual LIEE Working Capital Reconciliation Adjustment (LIEEWCR - as defined in Section 3.5) shall be determined for use in the annual Residential EE factor calculations incorporating the annual Low Income EE working capital account (142.31) balance as of the annual reconciliation date designated by the Company.

3.7 Amendments to Uniform System of Accounts for Gas Companies

175.22 Residential EE Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between residential EE revenues and residential EE costs. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

175.26 Commercial and Industrial EE Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between commercial and industrial EE revenues and commercial and industrial EE costs. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

175.31 Low Income EE Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between Low Income EE revenues and Low Income EE costs. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

142.22 Annual Residential EE Working Capital Reconciliation Adjustment for LDAC.
This account shall be used to record the cumulative difference between annual residential EE working capital allowance revenues and annual residential EE working capital allowance. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

142.26 Annual Commercial and Industrial EE Working Capital Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between annual commercial and industrial EE working capital allowance revenues and annual commercial and industrial EE working capital allowance. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

142.31 Annual LIEE Working Capital Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between annual Low Income EE working capital allowance revenues and annual Low Income EE working capital allowance. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

4.0 Environmental Response Costs

4.1 Purpose

The purpose of this provision is to establish a procedure that allows the Company, subject to the jurisdiction of the Department, to recover environmental response costs associated with manufactured gas plants.

4.2 Applicability

The Remediation Adjustment Factor ("RAF") shall be applicable to the Company's firm sales and firm transportation throughput subject to the jurisdiction of the Department as determined in accordance with the provisions of this section. Each RAF shall be determined annually by the Company as defined below, subject to review and approval by the Department.

4.3 Environmental Response Costs Allowable for LDAC

All Environmental Response Costs associated with manufactured gas plants, adjusted for deferred tax benefits, and one-half of the expenses incurred by the Company in pursuing insurance and third party claims, less one half of the recoveries received by the Company and as a result of such claims may be included in the LDAC.

4.4 Definitions

1) Combined Tax Rate is the combined state and federal income tax rate.

2) Deferred Tax Benefit is the unamortized portion of actual Environmental Response Costs for the Company multiplied by the effective statutory federal and state income tax rate and by the Company's tax adjusted Weighted Cost of Capital.

3) Environmental Response Costs includes all costs of investigation, testing, remediation, litigation expenses, and other liabilities relating to manufactured gas plant sites, disposal sites, or other sites onto which material may have migrated, as a result of the operating or decommissioning of Massachusetts manufactured gas facilities for the Company.

4) Expenses and recoveries associated with insurance and third-party claims shall include fifty percent (50%) of the expenses incurred and fifty percent (50%) of any recoveries or other benefits received by the Company as a result of such claims.

5) Number of Days Lag is the number of days lag to calculate the working capital requirements for LDAC allowable expenses for the Company as approved by the Department.

6) Weighted Cost of Capital is the weighted cost of capital as set in the Company's most recent base distribution rate case.

7) Weighted Cost of Debt is the weighted cost of debt as set in the Company's most recent base distribution rate case.

8) Weighted Cost of Equity is the weighted cost of equity as set in the Company's most recent base distribution rate case.

9) Remediation Adjustment Clause Expenses Allowable shall be: One seventh of each calendar year's Environmental Response Costs (ERC) as defined in Section 4.5, less the deferred tax benefit (DTB) as defined in Section 4.5. One-half of insurance and third-party expenses, less one-half of insurance and third-party recoveries.

4.5 Calculation of Remediation Adjustment Factors

The RAF consists of one-seventh of the actual Environmental Response Costs incurred by the Company, in any calendar year for each year until fully amortized, less a deferred tax benefit, plus one-half of insurance and third-party expenses for the calendar year, less one-half of insurance and third party recoveries for the calendar year, plus the prior year's RAF reconciliation adjustment. This amount is then divided by the Company's respective forecast of total firm throughput volumes for the upcoming year.

The deferred tax benefit is calculated by (1) applying the combined state and federal tax rates to the Company's unamortized Environmental Response Costs to arrive at the deferred tax. (2) The deferred tax is then multiplied by the tax adjusted cost of capital, calculated by dividing the Weighted Cost of Equity by one minus the tax rate and adding it to the weighted cost of debt, to arrive at the deferred tax benefit.

Remediation Adjustment Factor (RAF) Formula:

$$RAFs = \frac{(sum(ERC \div 7) - DTB + ((IE - IR) \times .5) + Rrac) \times DRAs}{A{:}TPvols}$$

And:

$$DTB = UERC \times TR \times (CD + (CE \div (1 - TR)))$$

Where:

RAF:	Remediation Adjustment Factor.
ERC:	Environmental Response Costs as defined in Section 4.4.
UERC:	Unamortized Environmental Response Costs.
DTB:	Deferred tax benefit associated with Environmental Response Costs as defined in Section 4.4.
IE:	Expenses associated with pursuit of insurance carriers and third-parties as defined in Section 4.4.
IR:	Insurance carrier and third-party recoveries as defined in Section 4.4.
Rrac:	Remediation Adjustment Clause Reconciliation Adjustment - Account 175.90 balance as outlined in Section 4.6.
A:TPvol:	Annual forecasted billed throughput volumes inclusive of sales and transportation.
CE:	Weighted Cost of Equity as defined in Section 4.4.
CD:	Weighted Cost of Debt as defined in Section 4.4.
TR:	Combined Tax Rate as defined in Section 4.4.
DRA:	Distribution Revenue Allocator as defined in Section 2.0.
s:	Designates a separate factor for each Rate Class Grouping.

4.6 Reconciliation Adjustments

Account 175.90 shall contain the accumulated difference between revenues toward Environmental Response Costs as calculated by multiplying the RAF times monthly firm throughput volumes and Environmental Response Costs allowable per formula.

A Remediation Adjustment Clause Reconciliation Adjustment (Rrac - as defined in Section 4.5) shall be determined for use in the RAC calculations incorporating the RAC account (175.9) balance as of the annual RAC reconciliation date.

4.7 Amendments to Uniform System of Accounts for Gas Companies

175.90 Remediation Adjustment Clause Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between RAC revenues and RAC costs. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

5.0 Attorney General Consultant Expense Recovery

5.1 Purpose

The purpose of this provision is to establish a procedure that allows the Company, subject to the jurisdiction of the Department, to recover expenses associated with the consultants retained by the Attorney General, as allowed pursuant to M.G.L. Chapter 12, Section 11E(b) and Section 4 of Chapter 169 of the Acts of 2008 ("Green Communities Act") enacted and signed into law on July 2, 2008.

5.2 Applicability

The Attorney General Consultant Expenses ("AGCE") factor shall be applicable to the Company's firm sales and firm transportation throughput subject to the jurisdiction of the Department as determined in accordance with the provisions of this section.

5.3 Attorney General Consultant Expenses Allowable for LDAC

All Attorney General Consultant Expenses associated with the Attorney General's retention of consultants to assist with cases before the Department pursuant to M.G.L. Chapter 12, Section 11E(b) and Section 4 of Chapter 169 of the Acts of 2008 ("Green Communities Act") enacted and signed into law on July 2, 2008. Such Department-approved expenses are recognized as proper business expenses recoverable through the LDAC.

5.4 Definitions

1) Attorney General Consultant Expenses ("AGCE") are all reasonable costs and expenses associated with the Attorney General's retention of a consultant to assist with a proceeding before the Department. After allowing the full parties to the proceeding to comment regarding the necessity or the desirability of the consultants services and absent a showing that the costs of such services are unnecessary or not responsible or proper, the Department shall approve the costs. The costs for a consultant shall not exceed $150,000 per proceeding, unless approved by the Department based upon exigent circumstances, including the complexity of the proceeding. Once the costs have been approved by the Department, these costs shall be recognized by the Department for all purposes as proper business expenses of the Company, and are recoverable through rates without further approval by the Department.

2) Weighted Cost of Capital is the weighted cost of capital as set in the Company's most recent base distribution rate case.

3) Weighted Cost of Debt is the weighted cost of debt as set in the Company's most recent base distribution rate case.

4) Combined Tax Rate is the combined state and federal income tax rate.

5) The following definitions pertain to reconciliation adjustment calculations:

   (a) Attorney General Consultant Expenses Allowable shall be:

      (i) The cumulative difference between the recovery and actual amount of expenses associated with the Attorney General Consultant Expenses.

      (ii) Account 175.86 - Annual Attorney General Consultant Expenses interest charges.

   (b) Working Capital Gas Costs Allowable Per Attorney General Consultant Expenses Formula shall be:

      (i) Costs associated with the Attorney General Consultant Expenses.

      (ii) Account 142.42 interest charges.

5.5 Calculation of Attorney General Consultant Expense Factors

Attorney General Consultant Expenses Factor (AGCEF) Formula:

$$AGCEFs = \frac{(AGCE + RA_{AGCE}) \times DRAs}{A{:}TPvols}$$

Where:

AGCE: Attorney General Consultant Expenses as defined in Section 5.4.

RA_{AGCE} Attorney General Consultant Expenses Reconciliation Adjustment – Account 175.86 balance, inclusive of the associated Account 175.86 interest, as outlined in Section 5.6.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class Grouping.

Attorney General Consultant Expense Working Capital Formulas

The annual Attorney General Consultant working capital requirements shall be calculated by applying the days lag divided by 365 days to the working capital costs allowable per each formula defined above.

The Attorney General Consultant Expense working capital allowances shall each be calculated by applying the Company's weighted cost of capital to each working capital requirement (2) to calculate the respective returns on working capital. The interest portion of each working capital allowance is calculated by multiplying each working capital requirement (2) by the weighted cost of debt. This portion is tax deductible. The return on each working capital less the interest portion of each working capital is then divided by one minus the tax rate. This figure plus the interest calculated above equals the working capital allowance for each.

Working Capital Factor for Attorney General Consultant Expenses (WCFNMU Formulae):

WCFNMUs = ((((WCANMU x CC) – (WCANMU x CD)) ÷ (1 – TR) + (WCANMU x CD) + WCRNMU) x DRAs) ÷ A:TPvols

And:

WCANMU = (AGCE) x (DL ÷ 365)

Where:

AGCE: Attorney General Consultant Expenses as defined in Section 5.4.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

WCFNMU: Per unit working capital allowable per billed annual throughput volume.

WCANMU: Attorney General Consultant Expenses allowable for working capital.

WCRNMU: Working Capital Reconciliation Adjustment associated with Attorney General Consultant Expenses charges - Account 142.42 balance as outlined in Section 5.6.

CC: Weighted Cost of Capital as defined in section 5.4.

CD: Weighted Cost of Debt as defined in Section 5.4.

TR: Combined Tax Rate as defined in Section 5.4.

DL: Number of Days Lag from the purchase of gas from suppliers to the payment by customers.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class Grouping.

5.6 Reconciliation Adjustments

1) Calculation of Reconciliation Adjustments

Account 175.86 shall contain the accumulated difference between revenues toward Attorney General Consultant Expenses as calculated by multiplying the Attorney General Consultant Expenses factor times monthly firm throughput volumes and Attorney General Consultant Expenses allowed.

The Attorney General Consultant Expenses Reconciliation Adjustment (RA_{AGCE} - as defined in Section 5.7) shall be determined for use in the annual LDAF calculations incorporating the Attorney General Consultant Expenses account (175.86) balance as of the annual reconciliation date as designated by the Company.

2) Calculation of Reconciliation Adjustments – Working Capital

Account 142.42 contains the accumulated difference between working capital allowance revenues and the actual monthly working capital allowance costs as calculated from actual monthly costs. Each Account 142 shall contain the accumulated difference between revenues toward the working capital allowance and the working capital allowance.

An Attorney General Consultant Expenses Working Capital Reconciliation adjustment (WCFNMU - as defined in Section 5.5) shall incorporate Attorney General Consultant Expenses Working Capital Account (142.42) balance as of the annual reconciliation date designated by the Company.

5.7 Amendments to Uniform System of Accounts for Gas Companies

142.42 Attorney General Consultant Expenses Working Capital Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between annual Attorney General Consultant Expenses working capital allowance revenue and annual Attorney General Consultant Expenses working capital allowance. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

175.86 Attorney General Consultant Expenses Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between Attorney General Consultant Expenses revenues and Attorney General Consultant Expenses. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

6.0 Pension and Post-Retirement Benefits Other Than Pensions Costs

6.1 Purpose

The purpose of this provision is to establish a procedure that allows the Company, subject to the jurisdiction of the Department, to recover annual Pension and Postretirement Benefits Other than Pensions ("PBOP") expense as recorded on the Company's books including prepaid amounts.

6.2 Applicability

The Pension and PBOP Factors ("PAF") shall be applicable to the Company's firm sales and firm transportation throughput subject to the jurisdiction of the Department as determined in accordance with the provisions in this section. Each PRAF shall be determined annually by the Company as defined below, subject to review and approval by the Department.

6.3 Pension and PBOP Costs Allowable for LDAC

All non-capitalized costs associated with pensions and post-retirement benefits other than pensions ("PBOPs"), excluding Energy Efficiency-related pension and PBOP costs, and the reconciliation of each year's actuarial forecast of pension and PBOP expense amounts included in the Company's LDAC with the total expense amounts booked by the Company pursuant to FASB Accounting Standards Codification Topic 715 – Compensation – Retirement Benefits ("ASC 715") may be included in the LDAC as approved by the Department.

6.4 Definitions

1) ERISA is the Employee Information Retirement Income Security Act of 1974, as amended from time to time.

2) Labor Allocator is derived from the most recent base distribution rate case as approved by the Department and shall be as follows by Rate Class Grouping:

Residential	71.7%
Small C&I	8.1%
Medium C&I	6.2%
Large C&I	9.3%
Extra Large C&I	4.7%
Total	100.0%

3) Pension Costs are all costs associated with the Company's Pension Plans as determined by ASC 715 each year, and as approved by the Department in the Company's most recent annual LDAC filing, excluding Energy Efficiency-related pension costs.

4) Pension Plan is a Qualified Pension Plan, as defined by ERISA, and non-qualified pension benefits earned by employees pursuant to the Qualified Pension Plan benefit formula that exceed the limitiations of the Qualified Pension Plan.

5) Post Retirement Benefits Other Than Pensions are the costs associated with PBOP as determined by ASC 715 each year, and as approved by the Department in the Company's most recent annual LDAC filing, excluding Energy Efficiency-related PBOP costs.

6) Post Retirement Benefits Plan Other Than Pension Plan is a Qualified PBOP, as defined by ERISA.

7) Pre-Paid/Unfunded Pension and PBOP Amount is the difference between: (1) the actual cash contributions to the Pension Plan and the PBOP Plan and (2) the expense amounts recognized in accordance with ASC 715. Prepaid amounts excludes unamortized non-cash balances in the prepaid accounts related to FAS 158 and unamortized merger-related fair value adjustments.

8) Prior Year is the calendar year previous to the effective date of a proposed Pension and PBOP Adjustment Factor.

9) Reconciliation Deferral is the difference between: (1) the total pension and PBOP expense based on the actuarial forecast of pension and PBOP expense approved by the Department in the Company's applicable LDAC filing; and (2) the total expense amounts booked by the Company in accordance with the requirements of ASC 715 for the same year.

10) Weighted Cost of Capital is the weighted cost of capital as set in the Company's most recent base distribution rate case

11) The following definitions pertain to reconciliation adjustment calculations:

    a) Pension Adjustment Clause Expenses Allowable shall be:
        i. Costs associated with the Company's Pension Plans, excluding Energy Efficiency-related pension costs.
        ii. Costs associated with the Company's Post-Retirement Plan Other Than Pension Plans , but excluding Energy Efficiency-related post retirement benefits other than pension costs.
        iii. Account 175.35 annual pension interest costs.
        iv. The Pension and PBOP Reconciliation Adjustment (PPRAc - as defined in Section 6.5) shall be determined for use in the annual LDAF calculations incorporating the Pension and PBOP account (175.35) balance as of the annual reconciliation date as designated by the Company.

6.5 Calculation of Pension and PBOP Factors

Pension and Post-Retirement Benefits Other than Pensions Adjustment Factor ("PAF") Formula:

$$PAFs = (((PEXP + PBOPEXP + RA_c + CC\,(URD_c + APPA_c - DTA_c) + PPRA_c) - MTB) \times LABs) \div A{:}TPvols$$

Where:

PAF: The annual Pension/PBOP Adjustment Factor.

PEXP: The actuarial forecast of Pension Expense for the current year.

PBOPEXP: The actuarial forecast of PBOP Expense for the current year.

RA_c : The Reconciliation Adjustment for $Year_c$ shall equal one-third of each year's Reconciliation Deferral, as defined in Section 6.14 recorded during the prior three years.

CC: The Cost of Capital is the tax-effected weighted-average cost of capital as defined in Section 6.4.

URD_c : The Unamortized Reconciliation Deferral is the amount of the Reconciliation Deferral not yet included for recovery in the PAF. At the beginning of $Year_c$ the Unamortized Reconciliation Deferral is the sum of: (1) the Unamortized Reconciliation Deferral at the beginning of the Prior Year; plus (2) the Reconciliation Deferral for the Prior Year; minus (3) the Reconciliation Adjustment for the Prior Year.

$APPA_c$: The Average Pre-Paid/Unfunded Pension and PBOP Amount for $Year_c$ is one half of the sum of: (1) the Pre-Paid/Unfunded Pension and PBOP Amount recorded on the Company's books as of the beginning of the Prior Year; and (2) the Pre-Paid/Unfunded Pension and PBOP Amount recorded on the Company's books as of the end of the Prior Year.

DTA_c : The Deferred Tax Amount is the deferred taxes associated with the Pre-Paid/Unfunded Pension and PBOP Amount and the URD at the end of the Prior Year.

$PPRA_c$: Pension and PBOP Reconciliation Adjustment – Account 175.35 balance, inclusive of the associated Account 175.35 interest, as outlined in Section 6.6.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

c : The current year.

p : The prior year.

LAB: Labor Allocator as defined in Section 6.4.

s: Designates a separate factor for each Rate Class.

6.6 Reconciliation Adjustments

Account 175.35 shall be the cumulative difference between (1) the revenue toward the pension and PBOP costs approved to be recovered through the LDAC, calculated by multiplying the Pension and PBOP Adjustment Factor times monthly firm throughput volumes and (2) the same year's total Pension and PBOP expense amounts associated with the current year as approved for recovery through the LDAC, which includes the actuarial estimate of pension and PBOP expense determined in accordance with ASC 715 plus the carrying charges on the Unamortized Reconciliation Deferral and Average Pre-Paid/Unfunded Pension and PBOP Amount, net of Deferreed Tax, and excludes the Pension and PBOP Reconciliation Adjustment.

6.7 Amendments to Uniform System of Accounts for Gas Companies

175.35 Pension/PBOP Cost Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between Pension/PBOP revenues and Pension/PBOP costs. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

7.0 Service Quality Penalty

7.1 Purpose

The purpose of this provision is to establish a mechanism for Boston Gas Company and the former Colonial Gas Company, subject to the jurisdiction of the Department, to reflect a reduction in its revenues for failure to meet certain quality of service targets. This revenue reduction provision is pursuant to the companies' Service Quality Plans established in compliance with generic guidelines set forth by the Department in D.T.E. 04-116, as amended from time to time.

7.2 Applicability

The Service Quality Revenue Adjustment ("SQRA") shall be applicable to each company's firm sales and firm transportation throughput subject to the jurisdiction of the Department as determined in accordance with the provisions of this section. Each SQRA shall be determined annually by the Company, and is subject to review and approval by the Department.

7.3 Service Quality Penalty Allowable for LDAC

Any service quality penalties assessed to Boston Gas Company or the former Colonial Gas Company pursuant to each company's service quality plan approved by the Department will be included in the LDAC as a credit to the customers located in each of the respective areas served by Boston Gas Company and the former Colonial Gas Company prior to their merger.

7.4 Definitions

1) Service Quality Penalty ("SQP") shall include any SQP assessed to Boston Gas Company or the former Colonial Gas Company in accordance with a Department approved Service Quality Plan.
2) Service Quality Penalties Allowable shall be:
    i. SQP assessed in accordance with a Department-approved Service Quality Plan.
    ii. Account 175.38 - Annual SQP interest costs.

7.5 Calculation of Service Quality Penalty Factors

Annual Service Quality Penalty Factor ("SQPF") Formula:

$$SQPFis = \frac{(SQPi + SQPRAi) \times DRAis}{A{:}TPvolis}$$

Where:

SQP: Service Quality Penalty as defined in Section 7.4.

i: Designates a separate factor for each division, Boston and the former Colonial.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

SQPRA: Annual Service Quality Penalty Reconciliation Adjustment - Account 175.38, inclusive of the associated interest, as outlined in Section 7.6.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class.

7.6 Calculation of Reconciliation Adjustment

Account 175.38 shall contain the accumulated difference between revenues toward Service Quality Penalties as calculated by multiplying the annual Service Quality Penalty factor times monthly throughput volumes.

The annual Service Quality Penalty Reconciliation Adjustment (SQPRA - as defined in Section 7.5) shall be determined for use in the annual LDAF calculations incorporating the Service Quality Penalty account (175.38) balance as of the annual reconciliation date as designated by the Company.

7.7 Amendments to Uniform System of Accounts for Gas Companies

175.38 Service Quality Penalty Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between Service Quality Penalty refunds and annual penalties allowable. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

8.0 Residential Assistance Adjustment Recovery

8.1 Purpose

The purpose of this provision is to provide the Company recovery for: (1) the bill discount provided to customers receiving service on the Company's low-income tariffs (Residential Rate R-2 and Residential Rate R-4), and (2) the recovery of expenses, net of benefits, resulting from the Company's Residential Arrearage Management Program ("AMP"), as approved by the Department's Order dated February 28, 2006 in Docket D.T.E. 05-86.

8.2 Applicability

The Residential Assistance Adjustment Factors shall be applicable to the Company's firm sales and firm transportation throughput subject to the jurisdiction of the Department as determined in accordance with the provisions in this section. Each RAAF shall be determined annually by the Company as defined below, subject to review and approval by the Department.

8.3 Residential Assistance Adjustment Cost Allowable for LDAC

The amount of incremental costs related to the Company's approved Arrearage Residential Management Program ("AMP") as approved by the Department and the low income discount will be included in the LDAC and recovered through the Residential Assistance Adjustment Factors ("RAAF"). The level of discount and associated reduced or discounted revenue is set at a fixed percentage of total bill. The total bill discount percentages are as follows:

- Residential Assistance Non-Heating, R-2, 25%
- Residential Assistance Heating, R-4, 25%

The associated reduced or discounted revenue shall be equal to the fixed percentage applied to the calculated total bill of all customers taking service under the low-income tariff rates (R-2 and R-4).

8.4 Definitions

1) Residential Assistance Adjustment ("RAA") shall include the amount of bill discounts provided to customers receiving service on Residential Rate R-2 and Residential Rate R-4.
2) Residential Assistance Adjustment costs Allowable shall be:

   i. Low income discounted revenues resulting from application of a 25% discount to customers receiving service on the Company's Residential Assistance Rates (R-2 and R-4).
   ii. Incremental costs associated with the Arrearage Management Program, as approved by the Department.
   iii. Account 175.39 annual Residential Assistance interest costs.

8.5 Calculation of Residential Assistance Adjustment Factors

Residential Assistance Adjustment Factor (RAAF) Formula:

RAAFs = ((Cust x Cust$ x Di%) + (Cust x AvgUse x Use$ x D%) + RAMP + (RA)) x DRAs ÷ A:TPvols

Where:

RAAF: Residential Assistance Adjustment Factor for the forecasted period.

Cust: The projected number of customers for the forecasted period on the Company's Residential Assistance Rate (R-2 and R-4).

Cust$: The monthly customer charge for the rate classes.

D%: The applicable fixed discount percentage applied to the total billing calculated at the applicable rates of customers under the Company's low income tariffs (Rate R-2 and Rate R-4) set out in Section 6.08.

AvgUse: The projected therm usage per customer for the forecast period under the Company's Rate R-2 and Rate R-4.

Use$: The volumetric charges, including base rate volumetric charges, GAF, LDAF, and any other volumetric charges for the applicable rate classes.

RAMP: Incremental expense associated with the Arrearage Management Program, as approved by the Department.

RA: Residential Assistance Adjustment Clause Reconciliation Adjustment - Account 175.39 balance as outlined in Section 8.6.

A:TPvol: Annual forecasted billed through-put volumes inclusive of sales and transportation.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class.

8.6 Reconciliation Adjustments

Account 175.39 shall contain the accumulated difference between revenues toward Residential Assistance Costs as calculated by multiplying the annual Residential Assistance Adjustment factor times monthly throughput volumes. The reconciliation shall also reflect as a credit the recovery of accounts receivable allowed to be recovered through the Company's distribution rates for hardship protected customer accounts having amounts due the Company at December 31, 2016 and March 31, 2020 that were older than 360 days past due.

The Residential Assistance Reconciliation Adjustment (RA - as defined in Section 8.5) shall be determined for use in the annual LDAF calculations incorporating the Residential Assistance account (175.39) balance as of the annual reconciliation date as designated by the Company.

8.7 Amendments to Uniform System of Accounts for Gas Companies

175.39 Residential Assistance Adjustment for LDAC
This account shall be used to record the cumulative difference between Residential Assistance revenues and Residential Assistance costs. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

9.0 Gas System Enhancement Program Costs

9.1 Purpose

The purpose of this provision is to establish a procedure that implements the provisions of G.L. c. 164, § 145, allowing Boston Gas Company and the former Colonial Gas Company, subject to the jurisdiction of the Department, to recover eligible costs associated with the replacement or improvement of existing natural gas distribution infrastructure to improve public safety or infrastructure reliability.

9.2 Applicability

The GSEAF and the GSERAF shall be applicable to each company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each GSEAF and GSERAF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

9.3 Gas System Enhancement Program Costs Allowable for LDAC

The annual recovery of the annual Revenue Requirements associated with the replacement or improvement of existing natural gas distribution infrastructure to improve public safety or infrastructure reliability subject to the review and approval of the Department, will be included in the LDAC. In accordance with G.L. c. 164, § 145(b), all costs associated with the GSEP are incurred to address aging or leaking natural gas infrastructure within the Commonwealth in the interest of public safety and reducing lost and unaccounted for natural gas through a reduction in natural gas system leaks. Consistent with St. 2016. c. 188, Section 13, cost recovery for expenses incurred for the repair of G3SEI leaks shall be allowable through the GSEP. In accordance with G.L. c. 164, §§ 145 (a), (d), (e), the annual GSEAF associated with each GSEP Investment Year beginning on and after January

1, 2017, shall be effective on May 1 of the respective GSEP Investment Year, based on the GSEP Revenue Requirement calculated in the annual GSEP Plan filed with the Department on October 31 in the year prior to the GSEP Investment Year. The annual GSERAF shall be effective on the November 1 following each GSEP Investment Year.

Limitations on Annual GSEAF and GSERAF Charges:

Unless modified by the Department, annual changes in the GSEP recovery that may be billed in any year shall be limited by a cap ("GSEP Cap"), which is an amount equal to 3 percent of the Company's annual total firm revenues, including gas revenues attributable to sales customers and including imputed cost of gas revenues for transportation customers at the time of the October plan filing. G.L. c. 164, § 145 (f). For purposes of determining the GSEP Cap, total firm revenues will equal actual firm delivery revenues associated with the most recent calendar year plus average annual cost of gas revenues, which shall be calculated as (1) the average cost of gas per therm from 2013 through the most recent calendar year that actual data is available; and multiplied by (2) the average weather normalized sales and transportation volumes from 2013 through the most recent calendar year that actual data is available.

In addition, in the instance where the GSERAF is a surcharge to customers, the recovery of the annual GSERAF that may be billed in any year beginning in November 1 will be limited by the difference between the GSEP Cap and the annual change in the GSEP recovery.

In accordance with G.L. c. 164, § 145 (f), the Department may increase the GSEP Cap to a percentage of total firm revenues, including gas revenues attributable to sales customers and including imputed cost of gas revenues for the Company's transportation customers, greater than 1.5 percent. The Department has approved an increase to the Company's GSEP Cap percentage to 3 percent as defined above.

Application of the GSEP Cap shall not affect the calculation of GSEP recovery, including GSEP Revenue Requirement, in subsequent periods. However, any GSEP recovery approved by the Department in excess of the GSEP Cap may be deferred for recovery in the following year.

Consistent with St. 2016. c. 188, Section 13, the Company shall exclude Eligible G3SEI Expense from the operation of the GSEP Cap and shall add the annual Eligible G3SEI Expense to the GSEP Revenue Requirement determined to be recoverable pursuant to the GSEP Cap for purposes of calculating the GSEAFs.

In the event the Company incurs capital cost to replace Existing Infrastructure having a G3SEI leak, the Company shall include the replacement cost in each company's GSEP Revenue Requirement that is subject to the GSEP Cap. In the event the Company incurs capital cost to replace infrastructure having a G3SEI leak that does not constitute Existing Infrastructure, the resulting capital cost shall be excluded from Eligible GSEP Investment and each company's GSEP Revenue Requirement, and shall be eligible for recovery in the Company's next general rate case.

Overhead and Burdens Adjustments

For purposes of GSEP calculations, the actual overheads and burdens shall be reduced to the extent that actual operation and maintenance ("O&M") overheads and burdens in a given year including the Pension/PBOP Adjustment Factor ("PAF") are less than the amount included in base distribution rates as determined in the Company's last base distribution rate case and the PAF. Such reduction shall be the difference between the actual O&M overheads and burdens and PAF and the amount included in base distribution rates and PAF. In addition, the percentage of capitalized overheads and burdens assigned to GSEP projects shall be set equal to the ratio of GSEP to non-GSEP direct costs in any given year

9.4 Definitions

1) Accumulated Deferred Income Taxes are the net reduction in Federal income and State franchise taxes associated with the use of accelerated depreciation allowed for income tax purposes.
2) Accumulated Reserve for Depreciation is the cumulative net credit balance arising from the provision for Depreciation Expense.
3) Annual Period Reconciliation Date for the Company will be coincident to the next annual period LDAF filing, 90 days prior to the next annual period effective date or as directed by the Department.
4) Combined Tax Rate is the combined state and federal income tax rate.
5) Depreciation Expense is the return of the Company's investment in Rate Base at established depreciation rates as approved by the Department in the Company's most recent base distribution rate case.
6) Eligible G3SEI Expense is the O&M expense incurred by the Company to repair G3SEI during the GSEP Investment Year.
7) Eligible GSEP Investment is the cost of Eligible Infrastructure Replacement Projects planned for the current GSEP Investment Year, plus the cumulative actual and planned cost of Eligible Infrastructure Replacement Projects completed through the end of the year prior to the current GSEP Investment Year, as summarized in the annual GSEP Plan. Costs included in the GSEP Revenue Requirement associated with Eligible GSEP Investment are depreciation expense, property taxes, and the return on investment utilizing the after-tax rate of return approved by the Department in the Company's most recent base distribution rate case, adjusted to a pre-tax basis by using the current federal and state income tax rates applicable to the GSEP Investment Year. Project costs shall be Eligible GSEP Investment in the year completed and placed into service. Eligible GSEP Investment includes costs recorded in the following MDPU/FERC plant accounts

	Account No. 367/367 Mains – Transmission
Account No. 367/376	Mains – Distribution
Account No. 380/380	Services – Distribution
Account No. 381/381	Meters – Distribution
Account No. 382/382	Meter Installations – Distribution
Account No. 383/383	House Regulators – Distribution

The costs booked to the above accounts shall be determined in accordance with the Company's application of the Uniform System of Accounts for Gas Companies, 220 C.M.R. § 50.00, Gas Plant Accounts, in use during the test year of its previous base rate case filed pursuant to G.L. c. 164, § 94.

8) Eligible GSEP Savings are the cumulative reduction in operating and maintenance leak repair expense achieved with the replacement of leak-prone main. Eligible GSEP Savings shall be equal to the most recent three-year average of leak repair cost per mile for non-cathodically protected steel mains, cast iron mains, wrought iron mains and pre-1985 Aldyl-A mains, updated annually in the GSEP Plan filed on October 31 of each year for the subsequent construction year. The costs associated with leak repair expense shall be determined in accordance with the Uniform System of Accounts for Gas Companies, 220 C.M.R. § 50.00, Operations and Maintenance Expense Accounts, in use during the test year of its previous base distribution rate case filed pursuant to G.L. c. 164, § 94.

9) Eligible Infrastructure Replacement Project is a project to replace or improve the Company's existing infrastructure that: (i) is made on or after January 1, 2015; (ii) is designed to improve public safety or infrastructure reliability; (iii) does not increase the Company's revenue by connecting an improvement for a principal purpose of serving new customers; (iv) reduces, or has the potential to reduce, lost and unaccounted for natural gas through a reduction in natural gas system leaks; (v) is not included in the Company's current rate base as determined in the gas company's most recent base distribution rate case; (vi) may include use of advanced leak repair technology approved by the Department to repair an existing leak-prone gas pipe to extend the useful life of such gas pipe by no less than 10 years; and (vii) may include replacing gas infrastructure with utility-scale non-emitting renewable thermal energy infrastructure. [G.L. c. 164, § 145(a); St. 2016, c. 188, § 13; St. 2022, c. 179, § 58].

10) Existing Infrastructure is mains, services, meter sets, and other ancillary facilities composed of non-cathodically protected steel, cast iron, wrought iron, copper, and pre-1985 Aldyl-A. G.L. c. 164, § 145(c).

11) G3SEI shall mean Grade 3 gas leaks that have been determined to have a significant environmental impact, defined, consistent with 220 CMR 114.07, as a leak if during the initial identification or the most recent annual survey:
(1) the highest barhole reading shows a gas-in-air reading of 50% or higher or
(2) the area of 2,000 square feet or greater in which the Company has detected either:
    (a) a positive reading on Flame Ionization Unit ("FIU"), which detects flammable gas concentrations, or
    (b) a positive Combustible Gas Indicator ("CGI"), which detects flammable gas-in-air concentrations, surrounded by an area of either negative FIU readings or CGI readings.

12) Gross Plant Investments are the capitalized costs of GSEP plant investments including costs of removal recorded on the Company's books for Eligible Infrastructure Replacement Projects. Gross Plant Investment for a GSEP Investment Year shall be the cumulative actual and planned cost of Eligible Infrastructure Replacement Projects completed through the end of the year prior to the current GSEP Investment Year and the planned capitalized investment for the current GSEP Investment Year associated with the GSEP Plan filed with the Department on October 31 of the year prior to the GSEP Investment Year. Actual capitalized cost of GSEP Investments shall include allowance for funds used during construction and applicable overhead and burden costs subject to the test provided in Section 9.3.

    For GSEP projects where Incidental Infrastructure constitutes up to 25 percent of the total project footage, the costs related to these projects will be considered eligible infrastructure for GSEP recovery. For GSEP projects where Incidental Infrastructure constitutes more than 25 percent and less than 50 percent of the total project footage, the Company must provide contemporaneous documentation demonstrating that the replacement or retirement of Incidental Infrastructure was operationally necessary or cost effective. For GSEP projects where Incidental Infrastructure constitutes 50 percent or more of the total project footage, the project will not be considered eligible infrastructure for GSEP recovery.

13) GSEAF is the Gas System Enhancement Adjustment Factor that recovers the aggregate GSEP Revenue Requirement approved by the Department for actual and planned Eligible GSEP Investment made beginning January 1, 2017, and in annual periods January 1 through December 31 of each GSEP Investment Year, with the annual recovery period beginning May 1 of each GSEP Investment Year for the cumulative spending on planned or completed projects anticipated to be placed in service through the end of the GSEP Investment Year.

14) GSERAF is the Gas System Enhancement Reconciliation Adjustment Factor that recovers the GSEP Reconciliation Adjustment. The GSERAF shall be effective November 1 following each GSEP Investment Year and shall be submitted to the Department 90 days before the LDAF effective date of November 1.

15) GSEP Investment Year is the annual period beginning on January 1 and ending on December 31, during which the Company anticipates placing GSEP Eligible Infrastructure Replacement Projects in service.

16) GSEP Offsets represent the reduced operating and maintenance expense associated with the elimination of natural gas leaks through Eligible Infrastructure Replacement Projects. GSEP Offsets are determined by multiplying Eligible GSEP Savings by the total miles of non-cathodically protected steel mains, cast iron mains, wrought iron mains, pre-1985 Aldyl-A mains, and Incidental Infrastructure replaced or abandoned by the Company in the period January 1 through December 31 of the respective GSEP Investment Year. For the purposes of calculating the GSEP Offsets, the Company shall identify, by material type, all miles of mains replaced or abandoned in connection with GSEP projects.

17) GSEP Plan is the Company's plan to replace or improve existing distribution infrastructure in accordance with G.L. c. 164, § 145, as filed with the Department on October 31 of each year, including information pertaining to eligible infrastructure replacement undertaken to eliminate natural gas system leaks in the subsequent construction year and over a future timeline allowing for the removal of all leak-prone infrastructure on an accelerated basis. G.L. c. 164, § 145 (a), (c) and (d).

18) GSEP Reconciliation Adjustment is the difference between the GSEP Revenue Requirement on cumulative Eligible GSEP Investment for a GSEP Investment Year and the billed revenue from the GSEAF associated with the same GSEP Investment Year. The GSEP Revenue Requirement, for this purpose, shall reflect actual cumulative Eligible GSEP Investment. The GSEP Reconciliation Adjustment shall include interest on any balance, accrued at the prime rate as reported by Bank of America. The GSEP Reconciliation Adjustment shall be recovered through the GSERAF.

19) GSEP Revenue Requirement is the accumulated revenue requirements through December 31 of each GSEP Investment Year based on the Eligible GSEP Investment to be completed during the GSEP Investment Year and inclusive of the actual and planned Eligible GSEP Investment incurred through the end of the year prior to the current GSEP Investment Year. The revenue requirement for each GSEP Investment Year will be calculated on a monthly basis, and shall shall represent the sum of the revenue requirement for each of the twelve months of the respective year. The annual revenue requirement on Eligible GSEP Investment for subsequent years will be calculated based upon average calendar year-end balances.

20) Incidental Infrastructure is any connected facilities such as services, meters, regulators, or pre-existing pipe segments, including but not limited to, plastic and cathodically protected steel pipe segments, that must be installed, replaced, or retired to enable a GSEP replacement project to become operational or to manage the costs of the GSEP replacement project, and where such segments are not more than 50 percent of the total replacement project footage.

21) Non-Emitting Renewable Thermal Infrastructure Project is a utility-scale project that replaces natural gas distribution infrastructure with distribution infrastructure that supplies heating, or heating and cooling, from fuel sources whose combustion does not emit greenhouse gases, as defined by section 1 of chapter 21N; provided, however, that a "non-emitting renewable thermal infrastructure project" may include, but shall not be limited to, a networked geothermal system".

22) Property Tax Rate is the Company's composite property tax rate determined in the Company's most recent general base distribution rate case calculated as the ratio of total annual property taxes paid to total taxable net plant in service in the test year.

23) Rate Base is the investment value upon which the Company is permitted to earn its authorized rate of return.

24) Rate Base Allocator is derived from the most recent base distribution rate case as approved by the Department and shall be as follows by Rate Class Grouping:

	Boston	Colonial
Residential	59.0%	69.2%
Small C&I	6.8%	16.3%
Medium C&I	7.4%	9.2%
Large C&I	16.8%	5.3%
Extra Large C&I	10.0%	0.0%
Total	100.0%	100.0%

25) Weighted Cost of Capital is the weighted cost of capital as set in the Company's most recent base distribution rate case

26) Weighted Cost of Debt is the weighted cost of debt as set in the Company's most recent base distribution rate case.

27) Weighted Cost of Equity is the weighted cost of equity as set in the Company's most recent base distribution rate case.

28) The following definition pertains to the reconciliation adjustment calculations:

(a) Gas System Enhancement Program Costs Allowable shall be:
   i. The approved revenue requirement associated with the Gas System Enhancement Program.
   ii. Account 175.96 annual GSEP interest costs.

9.5 Calculation of Gas System Enhancement Adjustment Factors and Gas System Enhancement Reconciliation Adjustment Factors

Gas System Enhancement Adjustment Factor (GSEAF) Formula:

$CAPi = 3\% \times TOT\_REVi$

And:

$GSEP\_RECi_c = (RBi_{GSEP} \times PTRRi) + DEPRi_{GSEP} + PTMSi_{GSEP} - OFFi_{GSEP}$

And:

$RBi_{GSA} = ((GPi_{GSEPp} - ARDi_{GSEPp} + ADITi_{GSEPp}) + (GPi_{GSEPc} - ARDi_{GSEPc} + ADITi_{GSEPc})) \div 2$

If

$CAPi < (GSEP\_RECi_c - GSEAF\_RECi_{p)}$

Then

$$GSEAFis = \frac{(GSEP\_RECi_c - ((GSEP\_RECi_c - GSEAF\_RECi_p) - CAPi) + G3SEI) \times RBAis}{A{:}TPvolis}$$

Else

$$GSEAFis = \frac{((GSEP\_RECi_c + DEF\_RECi + G3SEI) \times RBAis}{A{:}TPvolis}$$

And

$$DEF\_RECi = \text{Lesser of } (DEFi_r \text{ or } (CAPi - (GSEP\_RECi_c - GSEAF\_RECi_p)))$$

Where:

GSEAFs:	The Gas System Enhancement Adjustment Factor, by Rate Class Grouping, as defined in Section 6.14.
i:	Designates a separate factor for each division, Boston Gas and the former Colonial Gas.
s:	Designates a separate factor for each Rate Class Grouping.
GSEP_REC:	The GSEP Recovery, consisting of GSEP Revenue Requirement associated with the cumulative Eligible GSEP Investments for the respective GSEP Investment Year, excluding Eligible G3SEI Expense. Cumulative Eligible GSEP Investments will consist of actual and planned investment from January 1, 2017 through the end of the respective GSEP Investment.
$GSEAF\_REC_p$:	The annual recovery amount reflected in the GSEAF for the applicable prior GSEP Investment Year excluding Eligible G3SEI Expense. The current year GSEP_REC is compared against the $GSEAF\_REC_p$ to quantify the change in the recovery that is to be compared to the CAP.
RBA:	Rate Base Allocator as defined in Section 9.4.
A:TPvol:	Forecasted Annual Throughput Volumes for each Rate Class Grouping, inclusive of all firm sales and firm transportation throughput.
RB_{GSEP}:	For the purpose of calculating the GSEAF, the average annual Rate Base associated with the cumulative Eligible GSEP Investments, based upon the beginning of the year and end of the year GP, ARD, and ADIT balances of the respective GSEP Investment Year. For the year in which Eligible GSEP Investment will be placed into service, Rate Base will be calculated using projected beginning and end of month balances for GP, ARD, and ADIT balances. For purposes of establishing the GSEP Reconciliation Adjustment for the year during which Eligible GSEP Investment is placed into service, Rate Base will be calculated using actual beginning and end of month balances for GP, ARD, and ADIT balances.
PTRR:	The pre-tax rate of return shall be the after-tax weighted average cost of capital established by the Department in the Company's most recent base distribution rate case, adjusted to a pre-tax basis by using currently effective federal and state income tax rates applicable to the period of the Eligible GSEP Investment.

$DEPR_{GSEP}$:	The annual depreciation expense associated with the cumulative Eligible GSEP Investments as of the end of the respective GSEP Investment Year. For purposes of determining the GSEAF, depreciation expense will be based on the average of the beginning and end of year plant balances. For the year in which Eligible GSEP Investment will be placed into service, depreciation expense will be calculated on a monthly basis based upon a monthly projection of GSEP Gross Plant Investment to be recorded as in-service. For purposes of determining the GSEP Reconciliation Adjustment for the year during which Eligible GSEP Investment is placed into service, depreciation expense will be calculated on a monthly basis based on the actual depreciation recognized on the monthly plant balances used in determining Rate Base.
$PTMS_{GSEP}$:	The property taxes calculated based on the cumulative net GSEP plant investment at the end of the GSEP Investment Year multiplied by the Property Tax Rate established by the Department in the Company's most recent base distribution rate case. Property taxes will be included in the GSEP Revenue Requirement beginning in the year following the GSEP Investment Year at 50% of the annual property tax amount for the first year. In subsequent years, the GSEP Revenue Requirement will reflect a full year of property taxes.
OFF_{GSEP}:	The total GSEP Offset associated with reduced leak repair operation and maintenance costs. The GSEP Offset for the first GSEP Investment Year will be 50% of the annual GSEP Offset calculated. In subsequent years, the GSEP Offset will reflect a full year of the calculated GSEP Offset. For purposes of determining the GSEP Reconciliation Adjustment for the first year of each GSEP Investment Year, the annual GSEP Offset will be allocated to months based upon the monthly miles of main replaced.
GP_{GSEP}:	The cumulative GSEP Gross Plant Investments including cost of removal as of the end of the respective GSEP Investment Year. For the year in which Eligible GSEP Investment will be placed into service, GSEP Gross Plant Investments will be determined on a monthly basis based upon a monthly projection of GSEP Gross Plant Investment to be recorded as in-service. For purposes of determining the GSEP Reconciliation Adjustment for the year during which Eligible GSEP Investment is placed into service, GSEP Gross Plant Investments will be determined on a monthly basis based upon the month in which GSEP Gross Plant Investment was recorded as in-service.
ARD_{GSEP}:	The Accumulated Reserve for Depreciation associated with the cumulative Eligible GSEP Investments as of the end of the respective GSEP Investment Year. For the year in which Eligible GSEP Investment will be placed into service, the Accumulated Reserve for Depreciation will be determined on a monthly basis based upon the monthly projection of depreciation expense on GSEP Gross Plant Investment to be recorded as in-service. For purposes of determining the GSEP Reconciliation Adjustment for the year during which Eligible GSEP Investment is placed into service, the Accumulated Reserve for Depreciation will be determined on a monthly basis based upon actual depreciation expense on actual monthly GSEP Gross Plant Investment recorded as in-service.

$ADIT_{GSEP}$:	The Accumulated Deferred Income Taxes associated with the cumulative Eligible GSEP Investments as of the end of the respective GSEP Investment Year. For the year in which Eligible GSEP Investment will be placed into service, the Accumulated Deferred Income Taxes will be determined on a monthly basis based upon a monthly projection of GSEP Gross Plant Investment to be recorded as in-service. For purposes of determining the GSEP Reconciliation Adjustment for the year during which Eligible GSEP Investment is placed into service, the Accumulated Deferred Income Taxes will be determined on a monthly basis based upon the month in which actual GSEP Gross Plant Investment was recorded as in-service.
CAP:	The maximum change in the revenue requirement in any given year through the Company's GSEAF.
TOT_REV:	The total annual delivery and cost of gas revenues from sales and transportation throughput as defined in Section 9.3.
DEF:	Cumulative actual Reconciliation Adjustment amounts for the prior GSEP Investment Years which have not been reflected in rates due to being in excess of the CAP and are deferred for recovery in a subsequent GSEAF.
DEF_REC:	Amount of DEF that is allowed for recovery in the GSEAF.
G3SEI:	Eligible G3SEI Expense representing O&M costs incurred by the Company during the GSEP Investment Year to repair Grade 3 natural gas leaks determined to have significant environmental impact as defined in Section 6.14.
c:	The current year.
p.	The prior year.
r:	Subsequent GSERAF Filing.

<u>Gas System Enhancement Reconciliation Adjustment Factor ("GSERAF") Formula</u>:

If $(RAi - DEF\_RECi - GSERAF\_REVi_{May\text{-}Oct}) < 0$

Then

$$GSERAFis = \frac{((RAi - DEF\_RECi - GSERAF\_REVi_{May\text{-}Oct}) + RA\_G3SEI) \times RBAis}{A: TPvolis}$$

Else

If $CAPi < GSEP\_RECi_c - GSEAF\_RECi_p + DEF\_RECi$

Then

$$GSERAFi = \frac{RA\_G3SEI \times RBAis}{A: TPvolis}$$

Else

$$RA\_RECi = \text{Lesser of } (RAi -+ DEF\_RECi_f - GSERAF\_REVi_{May\text{-}Oct}) \text{ or } (CAPi - (GSEP\_RECi_c - GSEAF\_RECi_p + DEF\_RECi_f))$$

And

$$GSERAFi_s = \frac{(RA\_RECi + RA\_G3SEI) \times RBAis}{A{:}\ TPvolis}$$

And

$$DEFi = RAi - RA\_RECi - DEF\_RECi_f - GSERAF\_REVi_{May\text{-}Oct}$$

Where:

s:	Designates a separate factor for each Rate Class Grouping.
i:	Designates a separate factor for each division, Boston Gas and the former Colonial Gas.
$GSERAF_s$:	The Gas System Enhancement Reconciliation Adjustment Factor, by Rate Class Grouping, as defined in Section 9.4.
CAP:	The maximum change in the revenue requirement in any given year through the Company's GSEAF.
GSEP_REC:	The GSEP Recovery, consisting of GSEP Revenue Requirement associated with the cumulative Eligible GSEP Investments for the respective GSEP Investment Year. Cumulative Eligible GSEP Investments will consist of actual and planned investment from January 1, 2017 through the end of the respective GSEP Investment.
GSEAF_REC:	The annual recovery amount reflected in the GSEAF for the applicable prior GSEP Investment Year. The current year GSEP_REC is compared against the $GSEAF\_REC_p$ to quantify the change in the recovery that is to be compared to the CAP.
RA:	GSEP Reconciliation Adjustment – Account 175.96, inclusive of the associated interest, as outlined in Section 6.16, for the GSEP Investment Years as of May 1 of each year.
RA_REC:	GSEP Reconciliation Adjustment that is allowed to be recovered in the GSERAF.
RBA_s:	Rate Base Allocator for each Rate Class Grouping, as specified in Section 9.4.
$A{:}TPvol_s$:	Forecasted Annual Throughput Volumes for each Rate Class Grouping, inclusive of all firm sales and firm transportation throughput.
c:	The current year.
p:	The pior year.
f:	Subsequent GSEAF filing.

DEF: Cumulative actual Reconciliation Adjustment amounts for the prior GSEP Investment Years which have not been reflected in rates due to being in excess of the CAP and are deferred for recovery in a subsequent GSEAF.

DEF_REC: Amount of DEF that is allowed for recovery in the GSEAF.

$GSERAF\_REV_{May\text{-}Oct}$: GSERAF revenue estimated for the period May through October of the current year.

RA_G3SEI: GSEP Reconciliation Adjustment for cost recovery of Grade 3 leaks determined to have significant environmental impact as defined in Section 9.4.

9.6 Reconciliation Adjustments

Account 175.96 shall contain the accumulated difference between revenues billed through the GSEAF for GSEP Recovery associated with a respective GSEP Investment Year, as calculated by multiplying the $GSEAF_s$ times the respective Rate Class Grouping monthly firm sales and transportation throughput, plus the revenues billed through the GSERAF as calculated by multiplying the $GSERAF_s$ times the respective Rate Class Grouping monthly firm sales and transportation throughput unless otherwise identified in the Company's billing records, and the revenue requirement associated with the actual Eligible GSEP Investment allowed, plus carrying charges calculated on the average monthly balance using the consensus prime rate as reported by Bank of America and then added to the end-of-month balance. Any deferral of GSEP Recovery as a result of the limitation of the amount allowed to be billed in any one year in accordance with the GSEP Cap, shall be reflected in the GSEP Reconciliation Adjustment Account with the monthly calculation of carrying charges as set out herein.

The GSEP Revenue Requirement will initially be based on planned spending for Eligible Infrastructure Replacement Projects for the GSEP Investment Year, plus cumulative actual and planned investment in eligible in-service plant through the end of the prior GSEP Investment Year. Upon Department approval of actual Eligible GSEP Investment, the Company shall adjust the GSEP Revenue Requirement of the applicable GSEP Investment Year.

The GSEP Reconciliation Adjustment as of the implementation date of base distribution rates established in a Company's next base distribution rate case, including any aspect of the GSEP Reconciliation Adjustment pertaining to the cumulative deferral of revenue requirement recovery due to application of the GSEP Cap in prior year(s), shall be included in developing the GSEAF established as of the effective date of the new base distribution rates. Upon the effective date of new base distribution rates, the GSEAF then in effect that is based upon an annual GSEP Revenue Requirement not reflecting any adjustment associated with such pending rate case, shall be reduced to reflect the removal of that portion of the annual GSEP Revenue Requirement on cumulative GSEP Investment approved for recovery in new base rates. Subsequent October 31 filings of GSEP Plans shall exclude cumulative GSEP Investment included in rate base in the Company's most recent distribution rate case. The recovery of GSEP Investment not included in a base distribution rate case shall continue through the GSEP until the GSEP Investment is included in rate base as part of a subsequent base distribution rate case. The filing of a base distribution rate case does not result in a Company not recovering eligible GSEP costs incurred prior to the date new base distribution rates go into effect.

9.7 <u>Information be Filed with the Department</u>

A GSEP Plan submitted on or before October 31 of any year shall include a timeline for removal of all leak-prone infrastructure on an accelerated basis specifying an annual replacement pace and program end date with a target end date of either: (a) not more than 20 years, or (b) a reasonable target end date considering the allowable recovery cap established pursuant to G.L. c. 164, § 145(f). In addition, in relation to Eligible GSEP Investment in the subsequent construction year, the plan shall also include, but not be limited to:

(a) A plan for the completion of eligible infrastructure replacement projects relating to mains, services, meter sets and other ancillary facilities composed of non-cathodically protected steel, cast iron, wrought iron, copper, and pre-1985 Aldyl-A prioritized to implement the federal gas distribution pipeline integrity management plan annually submitted to the Department and consistent with subpart P of 49 C.F.R. part 192;

(b) An anticipated timeline for the completion of each project;

(c) The estimated cost of each project;

(d) Rate change requests;

(e) A description of customer costs and benefits under the plan; and

(f) Any other information the Department considers necessary to evaluate the plan.

The GSEP Plan shall also include a description of the process the Company will follow during the upcoming GSEP Investment Year to identify and repair G3SEI leaks. To the extent available or reasonably estimated, the Company will reference the number of G3SEI leaks to be repaired and provide a general estimate of the costs associated with repairing such leaks.

After the filing of the initial GSEP Plan on October 31, 2014, at five-year intervals, the Company shall provide the Department with a summary of its replacement progress to date, a summary of work to be completed during the next five years, and any similar information the Department may require.

On or before May 1 of each year subsequent to a GSEP Investment Year, the Company shall file with the Department certain information to support its GSEP Reconciliation (“GREC”). The Company shall file final project documentation for projects and GSEP-eligible G3SEI leak repairs completed in the prior year to demonstrate: (a) substantial compliance with the GSEP Plan in effect for the respective GSEP Investment Year; and (b) that project costs were reasonably and prudently incurred. The Company shall also file the revenue requirement based on the actual costs submitted in this filing, which shall form the basis of the GSERAF to become effective on November 1.

9.8 <u>Amendments to Uniform System of Accounts for Gas Companies</u>

175.96 <u>Gas System Enhancement Program Adjustment for LDAC</u>
This account shall be used to record the cumulative difference between revenues toward the Gas System Enhancement Program revenue requirement and Department allowed recoveries. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

10.0 Gas Business Enablement ("GBE") Program Costs

10.1 Purpose

This provision establishes the procedures that allow the Company, subject to the jurisdiction of the Department, to adjust the Gas Business Enablement Factors to recover from customers costs associated with the Company's Gas Business Enablement ("GBE") Program.

10.2 Applicability

The Gas Business Enablement Factor ("GBEF") shall be applicable to the Company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each GBEF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

10.3 Gas Business Enablement Program Costs Allowable for LDAC

For the period before the GBE Program goes into service and is operational, the annual recovery shall be the sum of actual O&M expense incurred to implement the GBE Program and the capital costs incurred by the Company's affiliate, National Grid USA Service Company, Inc., and billed to the Company as rent expense, subject to the review and approval of the Department, which shall be included in the LDAC.

For the period after the GBE Program goes into service and is operational, the annual recovery shall be the sum of actual O&M expense incurred to operate the GBE Program and the capital costs incurred by the Company's affiliate, National Grid USA Service Company, Inc., and billed to the Company as rent expense, as may be amended from time to time, subject to the review and approval of the Department, which shall be included in the LDAC.

The annual Gas Business Enablement Factor ("GBEF") shall be effective on November 1 following each calendar year based on (1) for costs incurred prior to October 1, 2021, the difference between the calendar year's allowable GBE Program costs incurred and the allowance in base distribution rates approved in D.P.U 17-170; and (2) for cost incurred on and after October 1, 2021, the full calendar year's allowable GBE Program costs incurred, as included in the annual GBE Program cost recovery filing submitted to the Department at least 90 days prior to November 1 of each year. To the extent that actual savings resulting from the implementation of the GBE Program are identified, the Company shall reduce the annual GBE Program expense reflected in the LDAC by the actual cost savings.

10.4 Definitions

1) GBEF is the Gas Business Enablement Factor that recovers the GBE Allowable Cost, approved by the Department, beginning November 1 following each calendar year.

2) GBE Allowable Cost is (1) for costs incurred prior to October 1, 2021, the difference between the GBE Recoverable Cost and the annual allowance in base distribution rates for the recovery of GBE Program costs as approved in D.P.U. 17-170, and (2) for cost incurred on and after October 1, 2021, the calendar year's GBE Recoverable Cost. Through September 30, 2021, GBE Allowable Cost can be an amount to be recovered from or credited to customers.

3) GBE Program is the Company's and its affiliated companies' multi-year initiative for the implementation of an operating platform to result in increased efficiencies and the effectiveness of providing gas distribution service to customers, as approved by the Department. This provision allows for the recovery of costs incurred by the Company in associated with the implementation and operation of the GBE Program, subject to the Department's review and approval.

4) GBE Reconciliation is the difference between each year's GBE Allowable Cost to be recovered through the GBEF as approved by the Department and the billed revenue from the GBEF associated with the recovery of the GBE Allowable Cost. The GBE Reconciliation shall include interest on any balance, accrued at the prime rate as reported by Bank of America, beginning in the month recovery commences.

5) GBE Recoverable Cost is the (1) actual annual O&M expense incurred to implement the GBE Program prior to its in-service date and becoming operational, and O&M expense incurred to operate the GBE Program after its in-service date and becoming operational, and (2) actual annual rent expense incurred by the Company associated with the actual capital cost of the GBE Program as incurred by the Company's affiliate National Grid USA Service Company, Inc.

6) GBE Recovery Period is the period during which the respective GBEF is in effect and which shall be the 12-month period November 1 through October 31.

7) The following definition pertains to reconciliation adjustment calculations:

    (a) Gas Business Enablement Program Costs Allowable shall be:
        i. The approved GBE Allowable Cost associated with the Gas Business Enablement Program.
        ii. Account 175.97 annual GBE Program interest costs.

10.5 Calculation of Gas Business Enablement Factors

Gas Business Enablement Factor ("GBEF") Formula:

$$GBEFs = \frac{(\text{GBE-ALLOWp} - \text{GBE-SAVp} + RA_{GBE}) \times DRAs}{A{:}TPvols}$$

Where:

GBEF: The Gas Business Enablement Factor, as defined in Section 10.4.

p: The prior year.

s: Designates a separate factor for each Rate Class Grouping.

A:TPvol: Forecasted Annual Throughput Volumes for each Rate Class grouping, inclusive of all firm sales and firm transportation throughput.

RA_{GBE}: GBE Reconciliation Adjustment – Account 175.97 balance, inclusive of the associated Account 175.97 interest, as outlined in Section 10.6.

GBE-ALLOW: The GBE Allowed Cost for the prior calendar year, as outlined in Section 10.4.

GBE-SAV: The GBE Program direct costs savings identified.

DRA: The Combined Distribution Revenue Allocator as defined in Section 2.0.

10.6 Reconciliation Adjustments

Account 175.97 shall contain the accumulated difference between revenue billed through the GBEF during a GBE Recovery Period associated with the GBE Allowable Cost, as calculated by multiplying the $GBEF_s$ by the respective Rate Class Sector monthly firm sales and transportation throughput, unless otherwise identified in the Company's billing records, and the GBE Allowable Cost, plus carrying charges calculated on the average monthly balance using the consensus prime rate as reported by Bank of America, and then added to the end-of-month balance.

10.7 Information to be Filed with the Department

No later than 90 days prior to November 1 of each year, the Company shall submit a cost recovery filing proposing GBEFs for the recovery of the GBE Allowed Cost for the prior calendar year, plus the GBE Reconciliation, including interest thereon, to take effect November 1. The Company shall also include in this filing capital project documentation for project segments placed into service during the prior calendar year and other documentation supporting actual, O&M expense incurred by the Company through National Grid USA Service Company, Inc., and charged to the Company as O&M expense. The Company shall also include in its annual filing the benefits of GBE Program investments to the Company's customers.

10.8 Amendments to Uniform System of Accounts for Gas Companies

175.97 Gas Business Enablement Program Adjustment for LDAC
This account shall be used to record the cumulative difference between revenues toward the Gas Business Enablement Program revenue requirement and Department allowed recoveries. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

11.0 Earnings Sharing Mechanism Credits

11.1 Purpose

This provision establishes the procedures that allow the Company, subject to the jurisdiction of the Department, to credit any Earning Sharings amount to customers pursuant to the Company's Performance-Based Ratemaking Tariff, M.D.P.U. No 93, as may be amended from time to time.

11.2 Applicability

The Earnings Sharing Mechanism Factor ("ESMF") shall be applicable to the Company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each ESMF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

11.3 Earnings Sharing Mechanism Costs Allowable for LDAC

The annual Earning Sharing amount to be credited to customers pursuant to the Company's Performance-Based Ratemaking Tariff, M.D.P.U. No. 93, as may be amended from time to time. All amounts related to Earnings Sharing Mechanism approved for credit through the LDAF shall be subject to full reconciliation and carrying charges and the Bank of America rate, and subject to investigation and approval by the Department.

11.4 Definitions

1) Earning Sharings is customers' share of the Company's excess earnings that is to be credited to customers pursuant to the Company's Performanced-Based Ratemaking Tariff, M.D.P.U. No. 93, as may be amended from time to time ("PBR Tariff").

2) The following definition pertains to the reconciliation adjustment calculations:

   (a) Earnings Sharing Mechanism Amount Allowable shall be:
      i. The approved Earnings Sharing amount associated with the ESM of the PBR Plan as outlined in Section 11.3.
      ii. Account 175.98 annual ESM interest costs.

11.5 Calculation of the Earnings Sharing Mechanism Factor

Earnings Sharing Mechanism Factor (ESMF) Formula:

$$ESMFs = \frac{((ESM_P + RA_{PIESMY})) \times DRAs}{A{:}TPvols}$$

Where:

s:	Designates a separate factor for each Rate Class Grouping.
p:	The prior year.
ESM:	Earning Sharing amount to be credited to customers as outlined in Section 11.3.
RA_{PIESMY}	Earning Sharing Mechanism Reconciliation Adjustment – Account 175.98 balance, inclusive of the associated Account 175.98 interest, as outlined in Section 11.6.
A:TPvol:	Annual forecasted throughput volumes inclusive of all sales and transportation throughput.
DRA:	Distribution Revenue Allocator as defined in Section 2.0.

11.6 Reconciliation Adjustments

Account 175.98 shall contain the accumulated difference between revenue billed through the ESMF associated with the Earnings Sharing amount, as calculated by multiplying the ESMF by the respective Rate Class Sector monthly firm sales and transportation throughput, and the Earnings Sharing amount, plus carrying charges calculated on the average monthly balance using the consensus prime rate as reported by Bank of America, and then added to the end-of-month balance.

11.7 Amendments to Uniform System of Accounts for Gas Companies

175.98 Earnings Sharing Mechanism Adjustment for LDAC
This account shall be used to record the cumulative difference between Earnings Sharing Mechanism credits to customers and Earning Sharing amounts allowed to be reflected in the LDAF. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

12.0 Geothermal Energy Provision ("GEP")

12.1 Purpose

The purpose of this provision is to provide the Company recovery for the costs assoicatied with the implementation and operation of the Company's Geothermal District Energy Demonstration Program.

12.2 Applicability

The Geothermal Energy Provision Factor ("GEPF") shall be applicable to the Company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each GEPF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

12.3 Geothermal Energy Provision Costs Allowable for LDAC

The annual recovery of the Revenue Requirement associated with investment and O&M incurred associated with the implementation and operation of the Company's Geothermal District Energy Demonstration Program, subject to the review and approval of the Department, will be included in the LDAC. The revenue requirements related to cumulative GEP investments, net of GEP Participant Fees, include depreciation, property taxes, and return based on the pre-tax cost of capital.

12.4 Definitions

1) Eligible GEP O&M Expense is the annual amount O&M expense incurred to implement and operate the Geothermal District Energy Demonstration Program less Geothermal District Energy Demonstration Program Participant Fees associated with O&M expense and billed to participants of the Geothermal District Energy Demonstration Program through the end of the prior GEP Investment Year. Such O&M expense includes costs incurred as a result of:

Conducting thermal conductivity tests
Purchasing, installing, and maintaining within the five year term of the GEP ground source heat pumps
Purchasing and installing water heaters
Air duct and radiator improvement or replacement
Energy efficiency improvements
Gas equipment removal and disposal
Incremental labor
GEP evaluation, measurement, and verification
Geothermal technical analysis and design
Customer research and recruitment

3) GEPF is the Geothermal Energy Provision Factor that recovers the aggregate GEP Revenue Requirement approved by the Department for actual geothermal demonstration project investments made in each GEP Investment Year.

4) GEP Investment Year is the calendar year during which the Company makes eligible Geothermal District Energy Demonstration Program investments and incurs Eligible GEP O&M Expense.

5) GEP Participant shall mean a participant of the Company's Geothermal District Energy Demonstration Program. Those eligible to participate in the Geothermal District Energy Demonstration Program shall be existing customers of the Company and those who have decided to receive service from the Company but have not yet connected to the Company's distribution system, receiving or anticipated to receive gas service on any of the Company's tariff rate classes except the Extra-Large Commercial and Industrial and Gas Lighting rate classes. Upon becoming a Geothermal District Energy Demonstration Program Participant, the Company may discontinue gas service to the Geothermal District Energy Demonstration Program Participant's service location if the Geothermal District Energy Demonstration Program Participant is an existing customer based upon the Geothermal District Energy Demonstration Program Participant's geothermal service in the GEP. If gas service is discontinued, the Geothermal District Energy Demonstration Program Participant shall be responsible for the gas service through the date that gas service is discontinued.

6) GEP Participant Contribution shall mean (1) the GEP Participant Fee and (2) the Geothermal Customer Charge. Geothermal District Energy Demonstration Program Participants will receive a separate bill from the Company for their GEP Participant Contributions. Geothermal District Energy Demonstration Program Participants will receive 1 Geothermal Customer Charge per geothermal service location.

7) GEP Participant Fee shall be a monthly fee billed to Geothermal District Energy Demonstration Program Participants over a 60 month period assessed based on the number of ground source heat pumps installed at the GEP Participant location as follows:

	Monthly	Total
Residential (Rate R-1/R-3)	$60.00	$3,600.00
Residential Low-Income (Rate R-2/R-4)	$45.00	$2,700.00
Commercial & Industrial	$90.00	$5,400.00

Once customers have been billed the total indicated per ground source heat pump for their respective rate class, billing of the applicable GEP Participant Fee will end.

7) GEP Reconciliation is the difference between the GEP Revenue Requirement approved by the Department for recovery through the GEPF and the billed revenue from the Geothermal Customer Charge and the GEPF associated with the same GEP Investment Year. The GEP Reconciliation shall include interest on any balance, accrued at the prime rate as reported by *Bank of America*.

8) GEP Recovery Period is the period during which the respective GEPF is in effect and which shall be the 12-month period November 1 through October 31.

9) GEP Revenue Requirement is the annual revenue requirement associated with cumulative Geothermal Plant Investments and Eligible GEP O&M Expense incurred in the prior GEP Investment Year. For the GEP Recovery Period after a GEP Investment Year in which there is Geothermal Plant Investments, the GEP Revenue Requirement related to Geothermal Plant Investments shall reflect the revenue requirement for the GEP Investment Year and the year subsequent to the GEP Investment Year.

10) Geothermal Customer Charge shall be a monthly charge assessed to all Geothermal District Energy Demonstration Program Participants effective with the commencement of geothermal service to support customer service-related functions associated with geothermal service as follows:

	Monthly
Residential (Rate R-1/R-3)	$4.00
Residential Low-Income (Rate R-2/R-4)	$3.00
Commercial & Industrial	$4.00

11) Geothermal Plant Investments shall be the actual investment for assets associated with the Geothermal Energy Provision recorded as plant in-service and approved by the Department through the end of the prior GEP Investment Year less GEP Participant Fees billed and associated with plant investment to participants of the Geothermal District Energy Demonstration Program through the end of the prior GEP Investment Year.

12) The following definition pertains to reconciliation adjustment calculations:

(a) Geothermal Energy Provision Costs Allowable shall be:
   i. The approved GEP Allowable Cost associated with the Geothermal District Energy Demonstration Program.
   ii. Account 175.99 annual GEP interest costs.

12.5 Calculation of the Geothermal Energy Provision Factor

Geothermal Energy Provision Factor ("GEPF") Formula:

$$GEPFs = \frac{(GEP\_RR + RA) \times DRA}{A: TPvols}$$

Where:

GEPF:	The Geothermal Energy Provision Factor, as defined in Section 12.4.
s:	Designates a separate factor for each Rate Class Grouping.
GEP_RR:	GEP Revenue Requirement as defined in Section 12.4.
RA:	GEP Reconciliation Adjustment – Account 175.99 balance, inclusive of the associated Account 175.99 interest, as outlined in Section 12.6.
DRA:	The Combined Distribution Revenue Allocator as defined in Section 2.0.
A: TPvols:	Forecasted Annual Throughput Volumes for each Rate Class grouping, inclusive of all firm sales and firm transportation throughput

12.6 Reconciliation Adjustments

Account 175.99 shall contain the accumulated difference between revenue billed to Geothermal District Energy Demonstration Program Participants through the Geothermal Customer Charge, revenue billed through the GEPF during a GEP Recovery Period associated with the GEP Allowable Cost, as calculated by multiplying the GEPFs by the respective Rate Class Sector monthly firm sales and transportation throughput, unless otherwise identified in the Company's billing records, and the GEP Allowable Cost, plus carrying charges calculated on the average monthly balance using the consensus prime rate as reported by *Bank of America*, and then added to the end-of-month balance.

12.7 Information to be Filed with the Department

On or before July 1 of each year subsequent to the GEP Investment Year, the Company shall submit a cost recovery filing proposing GEPFs for recovery of the GEP Allowed Cost for the prior calendar year, plus the GEP Reconciliation, including interest thereon, to take effect November 1. The Company shall also include in this filing capital project documentation for projects recorded as in-service during the prior GEP Investment Year and other documentation supporting Eligible GEP O&M Expense incurred by the Company during the GEP Investment Year. The Company shall also report in its annual filing on progress and results of the Geothermal District Energy Demonstration Program, including progress against goals, construction progress, outreach and education efforts, data collected and analyzed, interim lessons learned, and financial performance against budget.

12.8 Amendments to Uniform System of Accounts for Gas Companies

175.99 Geothermal Energy Provision Adjustment for LDAC
This account shall be used to record the cumulative difference between revenues toward the Geothermal Energy Provision revenue requirement and Department allowed recoveries. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

13.0 Electronic Payment Recovery Costs

13.1 Purpose

The purpose of this provision is to establish a procedure that allows the Company, subject to the jurisdiction of the Department, to recover annually the costs directly related to the implementation and administration of the Company's Fee Free Credit Card and Debit Card Payment Option approved by the Department in D.P.U. 20-91-A.

13.2 Applicability

The Fee Free Credit Card and Debit Card Payment Option is only available to residential customers.

13.3 Electronic Payment Recovery Costs Allowable for LDAF Allowable for LDAC

The costs eligible for recovery will be limited to the third-party vendor costs incurred by the Company, net of any applicable savings, plus the cost of incentives credited to customers for enrolling their accounts in the Company's direct debit programs for the processing of recurring pyaments, as approved by the Department. The amount shall be recovered through the Electronic Payment Recovery Factor ("EPRF").

13.4 Definitions

1) The following definition pertains to reconciliation adjustment calculations:

   (a) Electronic Payment Recovery Costs Allowable shall be:
      i. Costs associated with with the implementation and administration of the Fee Free Credit Card and Debit Card Payment Option, net of any applicable savings, plus incentives, one-time per customer available in the first two years after fee free implementation, credited to customers' accounts to enroll in the Company's direct debit programs during the prior year.
      ii. Account 175.95 annual Fee Free Credit Card and Debit Card Payment Option interest costs.

13.5 Calculations

Electronic Payment Recovery Factor (EPRF) Formula:

$$EPRF_r = \frac{FEE_p + RA_{EPR}}{A{:}TPvol_r}$$

Where:

$EPRF_{r:}$ The Electronic Payment Recovery Factor for the Residential Rate Class Grouping.

FEE_P: The actual expenses associated with the implementation and administration of the Fee Free Credit Card and Debit Card Payment Option, net of any applicable savings, plus incentives, one-time per customer in the first two years after fee free program implementation, credited to customers' accounts to enroll in the Company's direct debit programs during the prior year.

RA_{EPR}: EPR Reconciliation Adjustment – Account 175.95 balance, inclusive of the associated Account 175.95 interest, as outlined in Section 6.17.

$A{:}TPvol_r$: Forecasted Annual Throughput Volumes for the Residential Rate Class Grouping.

p: The prior year.

r: Residential Rate Class Grouping.

13.6 Reconciliation Adjustments

Account 175.95 shall contain the accumulated difference between the revenue billed through EPRF, as calculated by the multiplying the annual EPRF by monthly throughput volumes, and Department-allowed recovery amounts plus carrying charges calculated on the average monthly balance using the interest rate paid on customer deposits.

An Electronic Payment Recovery Reconciliation Adjustment (RA_{EPR} - as defined in Section 13.5) shall be determined for use in the LDAF calculations incorporating the EPR account (175.95) balance as of the annual reconciliation date as designated by the Company.

13.7 Amendments to Unifrom System of Accounts for Gas Companies

175.95 Electronic Payment Recovery Program Adjustment for LDAC
This account shall be used to record the cumulative difference between revenues toward recovery of the costs of the Fee Free Credit Card and Debit Card Payment Option and the Fee Free Credit Card and Debit Card Payment Option costs allowed by the Department. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

13.8 Information to be Filed with the Department

(1) Savings

Savings associated with the Fee Free Credit and Debit Card Payment Option shall be tracked and reported based on the following metrics:

(a) Reduced Average Handled Time (“AHT”) – Non-Low Income
(b) Change in AHT – all residential customers;
(c) Call-back avoidance;
(d) Reduced number of customers eligible for disconnect;
(e) Days Revenue Outstanding decrease; and
(f) Improved customer experience.

(2) Customer Bcalenefits

Customer benefits associated with the Fee Free Credit and Debit Card Payment Option shall be tracked and reported based on the following metrics:

(a) Customer participation in fee free transactions;
(b) Demonstrated customer satisfaction through surveys;
(c) Customer comments or other sources detailing experience with the program;

(d) Savings in one or more of the six categories (a) through (f) listed above, to the extent any savings are identified; and
(e) Other changes attributable to fee free debit/credit card transactions.

(3) Operational

The Company shall track and report the following operational data separately for residential and low-income customers:

(a) Total number of one-time, i.e. non-recurring, credit card and debit card payments (including calendar years 2019 and 2020);
(b) The total transaction costs associated with credit card and debit card payments (including calendar years 2019 and 2020);
(c) How quickly payments are received from the date a bill is issued when a credit/debit card transcation is used for payment with no transaction fee (including calendar years 2019 and 2020);
(d) The annual uncollectible receivables (including calendar years 2019 and 2020);
(e) Percentage of new uncollectible accounts that have a credit/debit card payment posted since the inception of the Fee Free Credit and Debit Card Payment Option;
(f) A matrix displaying payment options offered by the Company and monthly usage percentage of each payment option, including changes in the use of credit/debit cards and in other payments, such as the increase or decrease in usage of credit/debit cards and other methods month-by-month from the date of launching the Fee Free credit/debit program;
(g) The difference, month over month, quarter over quarter, or year over year in credit and debit card payments made by low-income customers and customers with a medical/financial hardship designation;
(h) The number of customers who are a member of a low-income rate classification who used a credit card more than three times a year; and the comparison to such usage in 2019 and 2020; and
(i) The quantitative or qualitative improvements in customer satisfaction.

(4) Miscellaneous

The Company shall track and report the following miscellaneous data:

(a) Total number of credit card and debit car transactions per month, reported separately for low-income and non-low-income customers;
(b) Transaction fees and total transaction fees per month;
(c) Total number of low-income customers;
(d) Number of customers enrolled in an arrearage management program;
(e) Number of customer disconnections;
(f) Total arrearages balances per month;
(g) Number of customers enrolled in a recurring ACH program per month;
(h) Number of customers that receive the one-time $3.00 ACH enrollment incentive per month;
(i) Lead/lag changes in cash working capital per month; and
(j) Changes in the amount of uncollectible expense per month, including separate tracking of hardship uncollectible expense.

14.0 Non-Firm Transportation Capacity Credits

14.1 Purpose

This provision establishes the procedures that allow the Company, subject to the jurisdiction of the Department, to credit customers Ninety (90) percent of the Economic Benefit associated with Non Firm Transportation customers which was not already credited in the Company's most recent base distribribution rate case.

14.2 Applicability

The Non Firm Transportation Capacity Credit Factor ("NFTF") shall be applicable to the Company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each NFTF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

14.3 Non-Firm Transportation Capacity Credits Allowable for LDAC

The annual Non Firm Transportation Capacity Credit amount to be credited to customers shall be Ninety (90) percent of the Economic Benefit associated with Non Firm Transportation customers. All amounts approved for credit through the LDAF shall be subject to full reconciliation and carrying charges and the Bank of America rate, and subject to investigation and approval by the Department.

14.4 Definitions

1) Economic Benefit is the difference between the revenue from and the marginal cost determined to provide interruptible transportation.
2) Non Firm Transportation Credits are the benefits derived from non firm transportation services that are not included in base distribution rates. Ninety (90) percent of the Non Firm Transportation Credit will be credited to firm customers.
3) Weighted Cost of Capital is the weighted cost of capital as set in the Company's most recent base distribution rate case.
4) Weighted Cost of Debt is the weighted cost of debt as set in the Company's most recent base distribution rate case.
5) Combined Tax Rate is the combined state and federal income tax rate.
6) The following definition pertains to reconciliation adjustment calculations:
   (a) Non Firm Transportation Capacity Credits Allowable Per Annual Non Firm Transportation Formula shall be:
      i. Credits associated with Non Firm Transportation Capacity Credits not included in base rates.
      ii. Account 175.42 - Annual Non Firm Transportation Capacity Credit interest charges.

(b) Working Capital Gas Costs Allowable Per Attorney General Consultant Expenses Formula shall be:

i. Credits associated with nonfirm transportation capacity credits included in base distribution rates.

ii. Account 142.42 interest charges.

14.5 Calculation of the Non Firm Transportation Capacity Credit Factor

Non Firm Transportation Capacity Credit Factor (NFTF) Formula:

$$NFTFs = \frac{(NFTs + RAnft) \times DRAs}{A{:}TPvols}$$

Where:

NFT: Non Firm Transportation Capacity Credit as defined in Section 14.4.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class Grouping.

RAnft: Non firm Transportation Capacity Credit Reconciliation adjustment - Account 175.42 balance, inclusive of the associated Account 175.42 interest, as outlined in Section 14.6.

Working Capital Factor for Non Firm Transportation Capacity Credit (WCFNMU Formulae):

$$WCFNMUs = ((((WCANMU \times CC) - (WCANMU \times CD)) \div (1 - TR) + (WCANMU \times CD) + WCRNMU) \times DRAs) \div A{:}TPvols$$

And:

$$WCANMU = (NFT) \times (DL \div 365)$$

Where:

NFT: Non Firm Transportation Capacity Credit as defined in Section 14.4.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

WCFNMU: Per unit working capital allowable per billed annual throughput volume as defined in Section 14.4.

WCANMU: Non-firm Transportation Capacity Credit allowable for working capital application.

WCRNMU: Working Capital Reconciliation Adjustment associated with Non Firm Transportation Capacity Credit - Account 142.42 balance as outlined in Section 14.6.

CC: Weighted Cost of Capital as defined in section 14.4.

CD: Weighted Cost of Debt as defined in Section 14.4.

TR: Combined Tax Rate as defined in Section 14.4.

DL: Number of Days Lag from the purchase of gas from suppliers to the payment by customers.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class Grouping.

14.6 Reconciliation Adjustments

1) Calculation of Reconciliation Adjustments

Account 175.43 shall contain the accumulated difference between credits from non firm transportation capacity as calculated by multiplying the Non Firm Transportation Capacity Credit Factor times monthly firm throughput volumes and Non Firm Transportation Capacity Credits allowed.

The Non Firm Transportation Capacity Credit Reconciliation Adjustment (RAnft - as defined in Section 14.5) shall be determined for use in the annual LDAF calculations incorporating the Non Firm Transportation Capacity Credit account (175.43) balance as of the annual reconciliation date as designated by the Company.

2) Calculation of Reconciliation Adjustments – Working Capital

Account 142.43 contains the accumulated difference between working capital allowance revenues and the actual monthly working capital allowance costs as calculated from actual monthly costs. Each Account 142 shall contain the accumulated difference between revenues toward the working capital allowance and the working capital allowance.

An annual Non Firm Transportation Capacity Credit (WCFNMU - as defined in Section 14.5) shall incorporate the Non Firm Transportation Capacity Credit Working Capital Account (142.43) balance as of the annual reconciliation date designated by the Company.

14.7 Amendments to Uniform System of Accounts for Gas Companies

175.43 Annual Non Firm Transportation Capacity Credit Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between annual Non Firm Transportation Capacity Credit refunds and annual Nonfirm Transportation Capacity Credits allowable. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

142.43 Annual Non Firm Transportation Capacity Credit Working Capital Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between annual Non Firm Transportation Capacity Credit and annual Non Firm Transportation Capacity Credit working capital allowance. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

15.0 Balancing Penalty Credit Factor

15.1 Purpose

This provision establishes the procedures that allow the Company, subject to the jurisdiction of the Department, to credit all customers balancing penalties billed to third party gas suppliers pursuant to the Company's Supplier Terms and Conditions as contained in M.D.P.U. No. 61, as amended from time to time.

15.2 Applicability

The Annual Balancing Credit Factor ("ABCF") shall be applicable to the Company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each ABCF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

15.3 Balancing Penalty Credit Factor Allowable for LDAC

The Balancing Penalty Credit amount to be credited to customers shall be the amount of balancing penalties assessed to Suppliers pursuant to the Supplier Terms and Conditions contained in M.D.P.U. No. 61, as amended from time to time. All amounts approved for credit through the LDAF shall be subject to full reconciliation and carrying charges and the Bank of America rate, and subject to investigation and approval by the Department.

15.4 Definitions

1) Balancing Penalty Revenues are penalties charged to third party gas suppliers for over or under deliveries on the Company's gas system as determined by the Company's Supplier Terms and Conditions, contained in M.D.P.U. No. 61, as amended from time to time.

15.5 Calculation of the Balancing Penalty Credit Factor

Balancing Penalty Credit Factor (BPCF) Formula:

$$BPCFs = \frac{BPR \times DRAs}{A{:}TPvols}$$

Where:

BPR: Balancing Penalty Revenues as defined in Section 15.4.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

s: Designates a separate factor for each Rate Class Grouping.

15.6 Reconciliation Adjustments
Account 175.44 shall contain the accumulated difference between credits from balancing penalties as calculated by multiplying the Balancing Penalty Credit Factor times monthly firm throughput volumes and Balancing Penalty Credits allowed.

15.7 Amendments to Uniform System of Accounts for Gas Companies

175.44 Annual Balancing Penalty Credit Reconciliation Adjustment for LDAC
This account shall be used to record the cumulative difference between annual Balancing Penalty Credit refunds and annual Balancing Penalty Credits allowable. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

16.0 Exogenous Cost Adjustment Factor

16.1 Purpose

This provision establishes the procedures that allow the Company to recover qualifying accumulated exogenous costs approved by the Department that are either (1) non-recurring; or (2) associated with a recurring Exogenous Event that has unrecovered costs incurred in the period prior to such costs being included in base distribution rates, pursuant to the Company's PBR Tariff, Section 8.0, as may be amended from time to time.

16.2 Applicability

The Exogenous Cost Adjustment Factor ("ECAF") shall be applicable to the Company's sales and firm transportation throughput as determined in accordance with the provisions of this section. Each ECAF shall be determined annually by the Company, as defined below, and is subject to the Department's review and approval.

16.3 Exogenous Event Costs Allowable for LDAC

The accumulated Exogenous Cost Adjustment amount to be recovered from customers pursuant to the Company's Performance-Based Ratemaking Tariff, M.D.P.U. No. 93.1, as may be amended from time to time. All amounts related to Exogenous Cost Adjustment Factor approved for recovery through the LDAF shall be subject to full reconciliation.

16.4 Definitions

1) Exogenous Cost Adjustment Amount is the accumulated exogenous cost which is either (1) non-recurring; or (2) associated with a recurring exogenous event that has unrecovered costs incurred in the period prior to the recurring costs being included in base distribution rates, pursuant to the Company's PBR Tariff, as may be amended from time to time.

2) The following definition pertains to the reconciliation adjustment calculations:

(a) Exogenous Cost Adjustment Amount Allowable shall be:
i. The approved Exogenous Cost Adjustment Amount associated the PBR Plan as outlined in Section 16.3.

16.5 Calculation of the Exogenous Cost Adjustment Factor

Exogenous Cost Adjustment Factor (ECAF) Formula:

$$ECAFs = \frac{((ECA + RA_{PECA})) \times DRAs}{A{:}TPvols}$$

Where:

s: Designates a separate factor for each Rate Class Grouping.

p: The prior year.

ECA: Exogenous Cost Adjustment amount to be recovered from customers as outlined in Section 16.4.

RA_{PECA} Exogenous Cost Adjustment Reconciliation Adjustment – Account 175.94 balance, as outlined in Section 16.6.

A:TPvol: Annual forecasted throughput volumes inclusive of all sales and transportation throughput.

DRA: Distribution Revenue Allocator as defined in Section 2.0.

16.6 Reconciliation Adjustments

Account 175.94 shall contain the accumulated difference between revenue billed through the ECAF associated with the Exogenous Cost Adjustment amount, as calculated by multiplying the ECAF by the respective Rate Class Sector monthly firm sales and transportation throughput, and the Exogenous Cost Adjustment amount.

16.7 Amendments to Uniform System of Accounts for Gas Companies

175.94 Exogenous Cost Adjustment for LDAC
This account shall be used to record the cumulative difference between Exogenous Cost Adjusment revenue billed and Exogenous Cost Adjustment amounts allowed to be reflected in the LDAF. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 220 C.M.R. 6.10.

17.0 Application of the LDAF to Bills

The Company will employ the LDAFs as follows:

For all customers, the annual rates to customers shall be calculated by adding the appropriate factors as defined in Sections 3.0 through 16.0 – the annual Sector Specific Energy Efficiency Factor (EEF), an annual Sector Specific Energy Efficiency Working Capital Factor (EEWCF), a Low Income Energy Efficiency Factor (LIEEF), a Low Income Energy Efficiency Working Capital Factor (LIEEWCF), a Non Firm Transportation Capacity Credit (NFTF), a Balancing Penalty Credit Factor (BPCF), a Non Firm Transportation Capacity Credit Factor, a Remediation Adjustment Factor (RAF), an Attorney General Consultant Expenses Factor (AGCEF), a credit for Service Quality Penalties (SQPF), a Pension and Pension Benefits Other than Pensions Adjustment Factor (PAF), a Residential Assistance Adjustment Factor (RAAF), a Gas System Enhancement Adjustment Factor (GSEAF), a Gas System Enhancement Reconciliation Adjustment Factor (GSERAF), a Gas Business Enablement Factor (GBEF), an Earning Sharing Mechanism Factor (ESMF), a Geothermal Energy Provision Factor (GEPF), an Exogenous Cost Adjustment Factor (ECAF) and, for residential customers only, an Electronic Payment Recovery Factor (EPRF).

The annual LDAC factors ($/therm) for each sector shall be calculated to the nearest hundredth of a cent per unit and will be applied to each customer's monthly sales volumes.

18.0 Information Required to be Filed with the Department

Information pertaining to the LDAF shall be filed with the Department in accordance with the standardized forms approved by the Department. Required filings include a monthly report which shall be submitted to the Department on the twentieth of each month, and an annual LDAF filing which shall be submitted to the Department at least 90 days before the date on which a new LDAF is to be effective or as directed by the Department.

No later than 90 days prior to November 1 of each year, the Company shall submit an Electronic Payment Recovery ("EPR") filing including testimony, exhibits, and annual reporting encompassing the topics set forth below or modified as necessary. Filings shall also include copies of vendor invoices and transaction fee payment records. If it is unable to track one or more items listed below, the Company will use best efforts to identify and track a comparable or substitute statistic to provide information on the impact of fee free credit/debit card transactions.

Additionally, the Company shall file with the Department a complete list by (sub)account of all local distribution costs claimed as recoverable through the LDAC over the previous year, as included in the annual reconciliation. This information shall be submitted with each annual LDAF filing, along with complete documentation of the reconciliation adjustment calculations.

19.0 Other Rules

(1) The Department may, where appropriate, on petition or on its own motion, grant an exception from the provisions of these regulations, 220 CMR 6.00, upon such terms that it may determine to be in the public interest.

(2) The Company may, at any time, file with the Department an amended LDAF. An amended LDAF filing must be submitted 7 business days before the first billing cycle of the month in which it is proposed to take effect.

(3) The Department may, at any time, require the Company to file an amended LDAF.

(4) The operation of the LDAC is subject to all powers of suspension and investigation vested in the Department by G.L. c. 164.

20.0 Customer Notification

The Company will notify customers in simple terms of changes to the LDAF, including the nature of the change and the manner in which the LDAF is applied to the bill. In the absence of a standard format, the Company will submit this notice for approval at the time of each LDAF filing. Upon approval by the Department, the Company must immediately distribute these notices to all of its customers either through direct mail or with its bills.