THE BERKSHIRE GAS COMPANY
SEASONAL COST OF GAS ADJUSTMENT CLAUSE

Section

1.0 Purpose

The Cost of Gas Clause ("CGAC") establishes the procedures that allow The Berkshire Gas Company ("Company), subject to the jurisdiction of the Massachusetts Department of Public Utilities ("DPU"), to adjust on a semi-annual basis, the Company's rates for firm gas sales, in order to recover the cost of gas supplies, along with any taxes applicable to those supplies, pipeline and storage capacity, the costs of local production and storage, other gas supply expenses incurred to procure and transport gas supplies, the cost of the load management credit, the costs of purchased gas working capital, and certain bad debt expenses to reflect the seasonal variation of gas costs. Further, the CGAC provides for the credit of: (i) all supplier refunds and (ii) ninety (90) percent of the margins associated with capacity release, off-system sales and non-core gas sales will be credited to core sales customers pursuant to the directives of D.P.U. 10-62 (2012).

2.0 Applicability

This CGAC is applicable to all core gas sales made by the Company, unless otherwise designated. As stated in Section 12.0, the application of this CGAC may, for good cause shown, be modified by the Department.

3.0 Cost of Firm Gas Allowable for CGAC

All costs of firm gas including, but not limited to, commodity costs, taxes on commodity, demand charges, local production and storage costs, other gas supply expenses incurred to procure and transport supplies, bad debt expense as calculated using CGAC costs for the forecast period, administrative and generals costs, transportation fees and costs associated with buyouts of existing contracts, the cost of the load management credit, and purchased gas working capital costs may be included in the CGAC. Any costs to be recovered through the application of this CGAC shall be identified and explained in the Company's semi-annual filings as outlined in Section 10.0. Gas costs for non-core customers, the cost of gas for Company use that is reflected in the base rates, and those gas costs associated with the incremental supply procured to ensure a sufficient capacity available to meet operational flow order hourly requirements, which are recovered pursuant to the Company's Local Distribution Adjustment Clause Tariff M.D.P.U. No. 583, as amended from time to time, are not recoverable through this CGAC.

4.0 Effective Date of Cost Adjustment Factor

The date on which the seasonal cost of Gas Adjustment Factors ("GAF") become effective will be the first day of either the Summer Season or the Winter Season each season as designated by the Company. Unless otherwise notified by the Department, the Company shall submit CGAC filings as outlined in Section 10.0 at least 45 days before they are to take effect.

5.0 Definitions

The following terms shall be defined in this section, unless the context requires otherwise:

Administrative & General Costs - Test year administrative and general costs of $180,154 as approved by the Department in the Company's most recent base rate case.

Bad Debt Expense The portion of the Company's uncollectible expense that is attributable to gas costs.

Bad Debt Working Capital - The allowable working capital related to Bad Debt Expense.

Cost of Debt (CD) - The debt component of the rate of return as approved by the Department in the Company's most recent base rate case.

Cost of Equity (CE) – The equity component of the rate of return as approved by the Department in the Company's most recent base rate case.

Dispatch, Acquisition, and FERC Proceeding costs (DAFP) - Test year dispatch, acquisition, and FERC proceeding costs of $526,674 as approved by the Department in the Company's most recent base rate case.

Effective Tax Rate (TR) – The combined effective state and federal income tax rate for the Company.

Inventory Finance Charges (IFC) - As billed in the Winter Season, the total represents the cost of financing gas inventories through a trust or other financing vehicle.

Local Production Capacity and Storage Costs (LPLNG) - The costs of providing storage service from the Company's storage facilities (*i.e.*, LNG and LPG) of $1,256,033 as approved by the Department in the Company's most recent base rate case.

Non-core Sales Margins (NCSM) – The economic benefit derived from any profits on non-firm sales as calculated by forecasting non-firm rates, costs and associated sales volumes for the twelve-month period. Also includes any profits from capacity release and sales for resale.

Number of Days Lag (DL) - As defined in the Company's most recent gas-related Lead/Lag Study, the days lag are used to calculate the purchased gas working capital requirement and the bad debt working capital requirement.

PR Allocator – The Proportional Responsibility Method of assigning annual charges to the Winter Season and Summer Season.

Purchased Gas Working Capital - The allowable working capital related to Winter Season and Summer Season demand and commodity costs.

Reconciliation- The over/under collection of gas costs related to the Summer Season and Winter Season.

Summer Commodity – The gas supplies required by the Company to serve firm load in the Summer Season.

Summer Demand - The gas supply demand and transmission capacity required by the Company to serve firm load in the Summer Season.

Summer Season – The consecutive months May through October, inclusive.

Winter Commodity – The gas supplies required by the Company to serve firm load in the Winter Season.

Winter Demand – The gas supply demand, peaking demands, storage and transmission capacity required by the Company to serve firm load in the Winter Season.

Winter Season – The consecutive months November through April, inclusive.

6.0 Cost of Gas Adjustment Clause Formulas

The Winter GAF shall be comprised of the peak demand factor (DFw); the peak commodity factor (CFw); the LPLNG; the DAFP; Bad Debt Expense (BD); Supplier Refunds (R1d, R2d); the AG; Reconciliation Adjustments as determined Section 8.0; the load management credit (LMC) as determined from the application of the Company's Load Management tariff; and Inventory Finance Charges (IFC) according to the following formula:

GAF Winter = DFw + CFw + LPLNG + DAFP + BDw + R1d + R2d + AG + Rw + LMC + IFC

(A) Winter Demand Factor (DFw) Formula:

$$DFw = \frac{Dw - NCSMw + WCwd}{W{:}Sales}$$

And:

NCSMw = CRRw + ISMw + OSSMw

And:

WCwd = WCAwd * (CD + (CE/(1 - TR))) + WCRw

And:

WCAwd = Dw * (DL/365)

Where:

Dw Total demand charges allocated to the winter period using the PR methodology.

W: Sales Forecasted sales volumes associated with the winter period.

PR Proportional Responsibility allocator as defined in Section 5.0.

WCwd Working Capital costs associated with Dw.

WCAwd Dw for working capital calculation.

NCSMw Non-core Sales margins equal to the sum of the Winter Season Interruptible Sales Margins, the Capacity Release Revenues and Off-System Sales Margins as defined in Section 1.0.

CE Weighted cost of equity as defined in Section 5.0.

CD Weighted cost of debt as defined in Section 5.0.

TR Effective Tax rate as defined in Section 5.0.

DL Number of days lag from the purchase of gas from suppliers to the payment by customers as defined in Section 5.0.

WCRwd Working Capital Reconciliation amount determined in Section 8.0 divided by forecasted sales volumes

(B) Winter Commodity Factor (CFw) Formulae:

$$CFw = \frac{Cw - NCCCw + WCwc}{W{:}Sales}$$

and:

$$WCwc = WCAwc * (CD + (CE/(1 - TR))) + WCRwc$$

$$WCAwc = Cw * (DL/365)$$

Where:

Cw	Total commodity charges allocated to the winter period.
W:Sales	Forecasted sales volumes associated with the winter period.
WCwc	Working Capital associated with Cw.
WCAwc	Cw for working capital calculation.
CE	Weighted cost of equity as defined in Section 5.0.
CD	Weighted cost of debt as defined in Section 5.0.
TR	Effective Tax rate as defined in Section 5.0.
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers as defined in Section 5.0.
WCRwc	Working Capital Reconciliation amount determined in Section 8.0 divided by forecasted sales volumes.
NCCCw	Non-core commodity costs incurred in the Winter Season.

GAF Winter = DFw + CFw + LPLNG + DAFP + BDw + R1d + R2d + AG + Rw + LMC + IFC

Summer GAF Formula

The Summer GAF shall be comprised of the off-peak demand factor (DFs); the off-peak commodity factor (CFs); the DAFP; Bad Debt Expense (BD); Supplier Refunds (R1d, R2d); the AG; and Reconciliation Adjustments as determined Section 8.0 according to the following formula:

GAFs= DFs + CFs + DAFP + BDs+ R1d + R2d + AG + Rs

Summer Demand Factor (DFs) Formula:

$$DFs = \frac{Ds - NCSMs + WCsd}{S:Sales}$$

and:

WCsd = WCAsd * (CD + (CE/(1 - TR))) + WCRs

WCAsd = Ds * (DL/365)

Where:

Ds	Total demand charges allocated to the summer period using the PR methodology.
S:Sales	Forecasted sales volumes associated with the summer period
PR	Proportional Responsibility allocator as defined in Section 5.0.
WCsd	Working Capital associated with Ds.
WCAsd	Ds for working capital calculation.
CD	Weighted cost of debt as defined in Section 5.0.
CE	Weighted cost of equity as defined in Section 5.0.
TR	Effective Tax rate as defined in Section 5.0.
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers as defined in Section 5.0.
WCRsd	Working Capital Reconciliation amount determined in Section 8.0 divided by forecasted sales volumes.
NCSMs	Non-core Sales margins equal to the sum of the Summer Season returnable Interruptible Sales Margins, the Capacity Release Revenues and Off-System Sales Margins.

Summer Commodity Factor (CFs) Formulae:

$$CFs = \frac{Cs - NCCCs + WCsc}{S{:}Sales}$$

and:

$$WCsc = WCAsc * (CD + (CE/(1 - TR))) + WCRsc$$

$$WCAsc = Cs * (DL/365)$$

Where:

Cs	Total summer period commodity charges.
S:Sales	Forecasted sales volumes for the summer period.
WCsc	Working Capital associated with Cs.
WCAsc	Cs for working capital calculation.
CE	Weighted cost of equity as defined in Section 5.0.
CD	Weighted cost of debt as defined in Section 5.0.
TR	Effective Tax rate as defined in Section 5.0.
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers as defined in Section 5.0.
WCRsc	Working Capital Reconciliation amount determined in Section 8.0 divided by forecasted sales volumes.
NCCCs	Non-core commodity costs incurred in the Summer Season.

(2) Liquefied Propane and Liquefied Natural Gas Costs Formula

The LPLNG shall be calculated by dividing test year Local Production Capacity and Storage costs by the firm winter season sales according to the following formula:

LPLNG = LPLNGC

W:Sales

(3) Dispatch, Acquisition and FERC Proceeding Costs Formula

The DAFP shall be calculated by dividing test year Dispatch, Acquisition, and FERC Proceeding costs by the firm sales according to the following formula:

$$DAFP = \frac{DAFPC}{W{:}Sales + S{:}Sales}$$

(4) Bad Debt Expense Formula

The Bad Debt Expense shall be computed on a semi-annual basis by multiplying the forecast of gas costs in the respective seasonal GAF by the prior year's percent of net write-offs to total firm revenues. The Bad Debt Factor shall be calculated by dividing the sum of forecasted bad debt expense, seasonal reconciliation and bad debt working capital allowance by the seasonal firm sales according to the following formula:

$$BD = \frac{BDE + R_{BDE} + WCbd}{Sales}$$

and:

$$WCbd = WCAbd * (CD + (CE/(1 - TR))) + WCRbd$$

and:

$$WCAbd = BDE * (DL/365)$$

Where:

BDE	Costs associated with uncollected gas costs including any applicable taxes derived by multiplying the forecasted gas costs by the prior year's percent of net write-offs to total firm revenues.
Sales	Forecasted seasonal sales volumes.
WCbd	Working Capital associated with BDE.
WCAbd	Bad Debt expenses allowable for working capital application.

CE Weighted cost of equity as defined in Section 5.0.

CD Weighted cost of debt as defined in Section 5.0.

TR Effective Tax rate as defined in Section 5.0.

DL Number of days lag from the purchase of gas from suppliers to the payment by customers as defined in Section 5.0.

WCRbd Working Capital Reconciliation amount determined in Section 8.0 divided by forecasted sales volumes.

R_{BDE} Balance in Account 175.2 as outlined in Section 8.0 inclusive of the associated Account 175.2 interest.

(5) Gas Supplier Refunds

R1d and R2d shall be calculated in the manner described in Section 7.0.

(6) Administrative & General Costs Formula

The AG shall be calculated by dividing test year administrative and general costs by the firm sales according to the following formula:

$$AG = \frac{AGC}{W{:}Sales + S{:}Sales}$$

(7) Load Management Credit

The LMC shall be calculated by dividing a 12-month forecast of the load management credit by winter sales according to the following formula:

$$LMC = \frac{LMC}{W{:}Sales}$$

(8) Inventory Finance Charge Formula

The IFC shall be calculated by dividing a 12-month forecast of finance charges by the winter sales according to the following formula:

$$IFC = \frac{FC}{W:Sales}$$

7.0 Gas Suppliers' Refunds Formula (R1d, R2d)

Refunds from upstream capacity suppliers and suppliers of gas are credited to Account 242.1, "Undistributed Purchased Capacity Refunds." Transfers from these accounts will be reflected as a credit in the semi-annual calculation of the CGAC to be calculated as follows:

Refund programs shall be initiated with each semi-annual CGAC filing and shall remain in effect for a period of one year. The total dollars to be placed into a given refund program shall be net of over/under-returns from expired programs plus refunds received from suppliers since the previous program was initiated. Refunds shall be segregated by demand and commodity charges and distributed volumetrically, producing per-unit refund factors that will return, over the one-year period, the principal amount with interest as calculated using the Federal Reserve Statistical Release of Selected Interest Rates prime lending rate. The Company shall track and report on all Account 242.1 activities as specified in Section 10.0.

8.0 Reconciliation Adjustments

(1) Gas Costs:

(a.) Account 175.1 shall contain the accumulated difference between the actual Costs of Firm Gas and the revenue collected for gas costs. Interest shall be calculated on the average monthly balance of Account 175.1 using the Federal Reserve Statistical Release of Selected Interest Rates prime lending rate, then added to each end-of-month balance.

(b.) The gas costs reconciliation adjustment (R) shall be taken as the Account 175.1 balance as of October 31st for the Summer Season and April 30^{th} for the Winter Season.

(2) Bad Debt Expense:

(a.) Account 175.2 shall contain the accumulated difference between the actual gas cost portion of write-offs and the revenue collected for bad debt. Interest shall be calculated on the average monthly balance of Account 175.2 using Federal Reserve Statistical Release of Selected Interest Rates prime lending rate, then added to each end-of-month balance.

(b.) The BD reconciliation adjustment (Rbd) shall be taken as the Account 175.2 balance as of October 31st for the Summer Season and April 30th for the Winter Season.

(3) Working Capital:

(a.) Account 142.1 shall contain the accumulated difference between the actual monthly working capital allowance and the working capital allowance revenues for the Winter Season and Summer Season, respectively. Interest shall be calculated on the average monthly balance of Account 142.1 using Federal Reserve Statistical Release of Selected Interest Rates prime lending rate, then added to each end-of-month balance.

(b.)The GAF working capital reconciliation adjustment shall be taken as the Account 142.1 balance as of October 31st for the Summer Season and April 30th for the Winter Season.

(c.) Account 142.2 shall contain the accumulated differences between the bad debt working capital revenues and the actual monthly bad debt working capital expenses incurred by the Company for the Winter Season and Summer Season, respectively. Interest shall be calculated on the average monthly balance of Account 142.2 using Federal Reserve Statistical Release of Selected Interest Rates prime lending rate, then added to each end-of-month balance.

(d.) The Bad Debt reconciliation adjustment (WCRbd) shall be taken as the Account 142.2 balance as of October 31st for the Summer Season and April 30th for the Winter Season.

(4) Supplier Refunds:

(a.) Account 242.1 shall contain the accumulated difference between the supplier refunds allowable per the Gas Suppliers' Refund formula and the revenue collected from supplier refunds. Interest shall be calculated on the average monthly balance of Account 242.1 using Federal Reserve Statistical Release of Selected Interest Rates prime lending rate, then added to each end-of-month balance.

9.0 Application of the CGAC to Bills

The Company will employ the CGAC as follows: The CGAC ($/therm) for each customer group for each season shall be calculated to the nearest hundredth of a cent per unit and will be applied to each customer's monthly sales volume within the corresponding customer classification. The CGAC will be applied to gas consumed on or after the first day of the month in which the cost of gas becomes effective.

10.0 Information to be Filed with the Department

(1) Reconciliation Adjustments

The Company shall file with the DPU a seasonal reconciliation of gas costs and gas cost collections including bad debt expense and bad debt collections containing information in support of the reconciliation calculations set out in Section 8.0. Such information shall include the complete list by (sub) account of all gas costs claimed as recoverable through the CGAC over the previous season. This seasonal reconciliation shall be submitted with each seasonal CGA filing, along with complete documentation of the reconciliation adjustment calculations.

(2) Monthly Reports and GAF Filings

The Company shall file a monthly report, which shall be submitted to the Department on the twentieth of each month, and a semi-annual GAF filing which shall be submitted to the Department at least 45 days before the date on which the new GAF is to be effective.

11.0 Gas Supply Service Credits

Any revenues billed by the Company for gas supply services other than Default Service shall be credited to the total allowable gas costs prior to the calculation of the GAFs.

12.0 <u>Other Rules</u>

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

2. At any time, the Department may require the Company to file, or the Company may file with the Department an amended CGA. Said filing must be submitted at least seven (7) days before the first billing cycle of the month in which it is proposed to take effect.

3. The operation of this rate schedule is subject to all powers of suspension and investigation vested in the DPU by Chapter 164 of the General Laws of the Commonwealth of Massachusetts.

4. Pursuant to the Department's directives in Cost of Gas Adjustment Clause, D.T.E. 01-49-A (October 9, 2001), the Company will file an amended GAF when it is determined that the projected deferred gas cost balance at the end of the season exceeds the projected gas costs by five (5) percent.