#### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

# THE APPLICATION OF COLUMBIA GAS OF KENTUCKY, INC.)CASE NO.FOR AN ADJUSTMENT OF RATES FOR GAS SERVICE)2013-00167

# ATTORNEY GENERAL'S RESPONSES TO DATA REQUESTS OF COLUBMIA GAS OF KENTUCKY, INC.

Comes now the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention, and files his responses to the data requests of Columbia Gas of Kentucky, Inc.

Respectfully submitted,

JACK CONWAY ATTORNEY GENERAL

Record

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#### Certificate of Service and Filing

Counsel certifies that an original and ten photocopies of the foregoing were served and filed by hand delivery to Jeff Derouen, Executive Director, Public Service Commission, 211 Sower Boulevard, Frankfort, Kentucky 40601; counsel further states that true and accurate copies of the foregoing were mailed via First Class U.S. Mail, postage pre-paid, to:

Honorable Stephen B Seiple Attorney at Law Columbia Gas of Kentucky, Inc. P.O. Box 117 Columbus, OH 43216-0117

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Honorable Iris G Skidmore 415 W. Main Street Suite 2 Frankfort, KENTUCKY 40601

this 7th day of October, 2013

Gregory T. Dutton Assistant Attorney General

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QUESTION NO. 1 Page 1 of 1

Please provide an executable electronic copy with all formulas intact of Mr. Watkins' cost of service study used to create Schedule GAW-5.

# **RESPONSE:**

Please see attached files: GAW-5.xls and GAW-5.123. Please note that Mr. Watkins utilized Lotus 1-2-3 to conduct his CCOSS analyses. These have been converted to Excel as a matter of courtesy.

QUESTION NO. 2 Page 1 of 1

Please provide an executable electronic copy with all formulas intact of Mr. Watkins' Determination of Residential Customer Costs presented in Schedule GAW-11.

**RESPONSE:** 

Please see attached file: Schedule GAW-11.xlsx

QUESTION NO. 3 Page 1 of 1

Please provide an executable electronic copy with all formulas intact of Mr. Watkins' Comparison of Columbia and AG Proposed Class Revenue Distribution presented in Schedule GAW-9.

#### **RESPONSE:**

Please see attached file: Schedule GAW-9.xls

QUESTION NO. 4 Page 1 of 1

Please provide all workpapers, spreadsheets, analyses, source documents and supporting calculations (to the extent not already provided in response to Data Request Nos. 1-3) which relate to Mr. Watkins' Direct Testimony and Schedules.

# **RESPONSE:**

Please see response to Questions 1, 2 and 3. In addition, please see attached files. Please note that Mr. Watkins utilized Lotus 1-2-3 to conduct his CCOSS analyses. These have been converted to Excel as a matter of courtesy.

- (a) Schedule GAW-2.123;
- (b) Schedule GAW-2.xls;
- (c) Schedule GAW-4, Page 1.xlsx;
- (d) Schedule GAW-4, Page 2.xlsx;
- (e) GAW Table 5 Cust Demand.123;
- (f) GAW Table 5 Cust Demand.xls;
- (g) GAW Table 5 Peak & Avg.123;
- (h) GAW Table 5 Peak & Avg.xlsx;
- (i) GAW Table 6 Cust Demand.123;
- (j) GAW Table 6 Cust Demand.xlsx;
- (k) GAW Table 6 Peak & Avg.123;
- (l) GAW Table 6 Peak & Avg.xls;
- (m) GAW Table 9 Confidential.xlsx;
- (n) Schedule GAW-10.xlsx; and
- (o) Schedule GAW-10 Workpapers.pdf

QUESTION NO. 5 Page 1 of 1

Please provide a list of all assumptions and any analyses used by Mr. Watkins to support the conclusion on Page 6, lines 18 and 19, of his Direct Testimony that Columbia's infrastructure benefits "all customers."

#### RESPONSE:

No quantitative analyses were performed. Mr. Watkins' statement is based on his education and experience in public utility regulation, economics, and operations.

QUESTION NO. 6 Page 1 of 1

Please provide any studies, reports or other analyses prepared by Mr. Watkins that demonstrate the level of gas throughput causes a gas utility to incur investment costs in distribution mains.

#### **RESPONSE:**

No quantitative analyses were performed. Mr. Watkins' statement is based on his education and experience in public utility regulation, economics, and operations.

QUESTION NO. 7 Page 1 of 1

At page 54, lines 10-13, of his Direct Testimony, Mr. Watkins concludes that Columbia's proposed RNA Rider provides it with a "revenue guarantee.

a. Please provide any studies, reports, or other analyses prepared by Mr. Watkins to support his above-stated conclusion.

b. For each of the analyses provided by Mr. Watkins in response to part a, please provide the assumptions used in each analysis and define the actual level of "revenue guaranteed" relative to Columbia's approved annual revenue requirement resulting from this rate case.

# **RESPONSE:**

- (a) No analyses were required
- (b) See response to (a) above.

QUESTION NO. 8 Page 1 of 1

At page19 lines 3-5, of Mr. Watkins' Direct Testimony, he states that the allocation of the cost of distribution mains on a peak load basis "assumes there is a direct and perfectly linear relationship between load (capacity) and the cost of mains."

a. Please provide references to any testimony or exhibits filed in this proceeding that make that assumption.

b. Please provide a detailed explanation for the basis of Mr. Watkins' statement, including any study or analysis he has prepared to support this assumption.

# **RESPONSE:**

(a) See Mr. Feingold's design day class cost of service study (Schedule 2);

(b) Mr. Watkins made no assumption. Rather, mathematical fact. See Mr. Watkins Direct Testimony, page 19, line 17 through page 19, line 6.

QUESTION NO. 9 Page 1 of 1

Please provide references to any economic studies on the theory of rate design discussed at pages 62-63 of Mr. Watkins' Direct Testimony that address the efficiency of recovering a gas utility's fixed costs through volumetric or variable charges.

#### **RESPONSE:**

The recent advocacy of some natural gas companies that "fixed" costs should be recovered from fixed charges (rates) is in direct conflict with accepted microeconomic principles and theory. Under the theory of microeconomics, efficiency is maximized when a firm producers are at a level of output where Marginal Cost (MC) equals Marginal Revenue (MR). In competitive markets, a firm's price will be most efficient where Price (P) equals its Marginal Cost of production. By definition, MC is equal to the change in total cost with respect to a change in output. Furthermore, in competitive markets (or in other instances in which there is not idle or excess capacity), short-run MC will equal long-run MC.<sup>1</sup> Because MC reflects the change in total costs (including short-run "fixed"), efficient pricing is volumetrically based on a firm's MC per unit of output; i.e., the volume of units. The basic principles of microeconomic theory is discussed and covered in virtually every undergraduate Principles of Economics text book.

<sup>&</sup>lt;sup>1</sup> In situations in which there is idle or excess capacity, a firm's short-run MC may be significantly less than long-run MC and may closely approximate incremental variable costs. However, such situations are economically inefficient and not sustainable in competitive markets due to the lack of recovery of unused capacity costs.

QUESTION NO. 10 Page 1 of 1

On page 24, lines 21-26, of Mr. Watkins' Direct Testimony, he cites Item (3) of the Availability provision under Columbia's Delivery Service (DS) tariff. Under that provision, please indicate how much gas Columbia is required to deliver to a DS customer if the quantity of gas scheduled and confirmed to be delivered into Columbia's distribution facilities for the customer's account is zero?

#### **RESPONSE:**

Unknown. Mr. Watkins is not familiar with Columbia Gas of Kentucky banking and balancing policies and/or requirements.

QUESTION NO. 11 Page 1 of 1

For each Value Line Natural Gas Utility cited by Mr. Watkins in Schedule GAW-10, please provide the following information:

a. the percent of earnings accounted for by non-state regulated entities held within the natural gas utility's holding company,

b. the number of state regulated natural gas utilities with ratemaking provisions designed to produce revenue stability, including but not limited to Straight Fixed-Variable (SFV) rates, revenue decoupling mechanisms, rate stabilization mechanisms, revenue true-up provisions, weather normalization adjustment mechanisms, or monthly customer charges in excess of Columbia's currently-effective residential monthly customer charge,

c. a list of each state regulated operating utility owned by the holding company listed in Schedule GAW-10, and

d. the portion of revenue, in each year, collected on a per unit volumetric rate basis.

**RESPONSE:** 

- (a) unknown;
- (b) unknown;
- (c) unknown; and,
- (d) unknown.

QUESTION NO. 12 Page 1 of 1

Please provide examples or specific projects which Mr. Watkins' experienced that demonstrate his knowledge regarding a natural gas end use customer's decision making process to by-pass a local distribution company as discussed on pages 41-51 of his testimony.

# **RESPONSE:**

Mr. Watkins has evaluated the need for, and pricing of, "special" contracts/discounted rates on numerous occasions beginning shortly after FERC Order 636 (which essentially enabled large industrial customers the ability to by-pass a local distribution company). Examples include:

Virginia Natural Gas (VA)

National Fuel Gas Distribution Company (PA)

Equitable Gas (PA)

Columbia Gas of Pennsylvania (PA)

UGI (PA)

Avista Corp. (WA)

South Carolina Electric & Gas (SC)

In these cases, Mr. Watkins did not have direct contact with the end-users, as such he is unaware of the specifics as to their "decision making process." In these cases, Mr. Watkins relied upon confidential data and records provided by each local distribution company.

QUESTION NO. 13 Page 1 of 1

Please provide examples of specific projects which demonstrate Mr. Watkins' knowledge of the cost of to install a private sector natural gas pipeline.

**RESPONSE:** 

None.

QUESTION NO. 14 Page 1 of 1

Please provide examples of specific projects that demonstrate Mr. Watkins' knowledge of private pipelines that were not installed due to the pipeline's lack of eminent domain authority.

# **RESPONSE:**

It is common knowledge that as a general matter, private industry does not enjoy eminent domain authority. As such, it is impossible to determine what did not happen as a result of any firm's lack of legal authority for eminent domain.

QUESTION NO. 15 Page 1 of 1

What specific selection criteria did Mr. Watkins use to select the specific by-pass cost scenario for Customers A, C, & E in order to arrive at the "threat of by-pass rate" for each customer?

#### **RESPONSE:**

Mr. Watkins evaluated every scenario provided by Columbia. However, Mr. Watkins focused on the following:

Customer A: please see Mr. Watkins' Direct Testimony, page 44, lines 1 through 7.

Customer C: please see Mr. Watkins' Direct Testimony, page 46, lines 15 and 16.

Customer E: please see Mr. Watkins' Direct Testimony, page 48, lines 14 through 16.

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QUESTION No. 16 Page 1 of 1

Please provide all workpapers, spreadsheets, analyses, source documents and supporting calculations, that are not provided elsewhere, which relate to Mr. Radigan's Direct Testimony and Schedules.

#### **RESPONSE:**

Please see attached files – Regression analysis 1991-2013.123, weather normalized data.123, fwrschedules 9-10-13.xlsx, Huntington.xlsx, adjustments.xlsx, AG 1-156 Residential.xlsx, Copy of Ag-1-156 Industrial.xlsx, Copy of Ag 1-156 Commercial.xlsx, Copy of AG-157.xlsx, Lexington.xlsx, OtherGasRevenues(Accts.493-495)-rev.xlsx, RevenueAdjustmentWorkpaperForRadigan-rewfwr.xlsx, and tables for testimony.xlsx.

# QUESTION No. 17 Page 1 of 1

Refer to the discussion of a regression analysis on page 8 and the graph on page 9 of Mr. Radigan's testimony. Please provide work papers (excel files with formulas where possible) showing:

- a. all historical data used in the regression,
- b. the specification of the regression model,
- c. the regression software output showing model statistics and coefficients,
- d. all calculations used to create the series graphed on page 9, titled "Residential UPC Actual and Weather Normalized, and;
- e. State the exact definition of the series graphed, show all calculations used to develop each point in the graph and provide the value for each point in the graph.

# **RESPONSE:**

- a. Please see workpaper regression analysis 1991-2013.123
- b. See responses to 17a
- c. See responses to 17a
- d. See responses to 17a
- e. See responses to 17a

QUESTION No. 18 Page 1 of 1

Please explain this statement from page 8 of Mr. Radigan's testimony: "Using the results to predict what sales should have been, factoring the weather, gives us a statistical prediction of weather normalized sales." Specifically, please explain the following:

- a. the phrase "what sales should have been"
- b. the process of factoring
- c. whether you consider this statistical prediction to be a statement of weather normalized residential use per customer
- d. please provide all work papers (excel files with formulas where possible).

# **RESPONSE:**

- a. The regression output is the predicted sales, which would have been, with the historic actual HDD.
- b. The factoring is actual HDD and regression coefficients.
- c. If weather was the only factor, yes.
- d. Please response to 16.

QUESTION No. 19 Page 1 of 1

Refer to the paragraph on page 10 that ends with Mr. Radigan concluding that, "the model is telling them exactly what they want to hear." Please provide the analysis used to arrive at this conclusion including all descriptive text, work papers, excel files with formulas intact, data and formulas. Did you evaluate the model coefficients and the forecast of independent variables? If so, please provide the analysis including all descriptive text, work papers, excel files with formulas intact, work papers, excel files with formulas intact, data and formulas.

#### **RESPONSE:**

The analysis is as follows. In response to AG-157, the Company states the following "Residential and commercial usage per customer (UPC) are forecasted using annual trends from the econometric models described in the work papers supplied in Columbia's response to AG data request number 1-156. The models are not used directly because the beginning point of the forecast is set to a take-off point (TOP). This calibration eliminates the annual level of random error in the forecast models and allows for professional judgment in setting the TOP." Once the effect of HDD is eliminated the trends from the econometric model are the remaining explanatory variables -- real price, energy conservation, and economic conditions. A review of input data to the econometric model shows economic conditions declining and real income increasing by an offsetting amount. Thus the trend from the econometric model is energy conservation. QUESTION No. 20 Page 1 of 1

Refer to the last paragraph on page 10 of Mr. Radigan's testimony. How did you determine that for the residential class there are 4,500 HDD per year and 72 MCF per year? Please provide work papers including excel files with formulas intact citing sources and showing all calculations.

Response:

Please see graph in Mr. Radigan's testimony of UPC. Also please see workpaper HDD Lexington.123 which contains actual HDD for the period from September 1924 through May 2013. The average HDD for Lexington for that period was 4,674 and Mr. Radigan used 4,600.

QUESTION No. 21 Page 1 of 1

Refer to the page 5 of Mr. Radigan's testimony where he acknowledges that "Use per customer for the Residential and Commercial classes is forecast with separate econometric models that incorporate weather, real price, energy conservation, and economic conditions." Refer also to page 12 which says "the Commercial and Industrial classes are impacted by many things and the development of the sales forecasts for these classes is based more on judgment than modeling." Please explain how the Commercial forecast is based more on judgment than modeling.

Response:

Please see quote from Company response to AG-157 supplied in responses to question 19 where the Company states that the econometric models are not used directly and the Company replaces econometric output with its own judgment.

QUESTION No. 22 Page 1 of 1

Refer to page 12 of Mr. Radigan's testimony where he makes a comparison of forecasted Commercial use per customer with a current value for weather normalized use per customer.

- a. Did the witness realize that the forecasted use per customer does not include the category titled "other" which is a separate forecast for the largest commercial customer which makes means that the two use per customer numbers cited in the testimony are not comparable?
- b. Was the artificially high number used to calculate the \$1.2 million adjustment recommended on page 13?
- c. If the answer to b is affirmative, how was it used?
- d. Please provide all work papers (excel files with formulas where possible).

## Response:

- a. Mr. Radigan's testimony is consistent with the presentation made by the Company in response to 2-21 Attachment A. Whether the response to 2-21 Attachment A includes the category "other" is unclear from a review of the responses.
- b. See response to a) above
- c. As shown in Mr. Radigan's workpapers. The change between Mr. Radigan's sales figure from using his UPC and the Company's UPC was multiplied by the incremental revenues from the Commercial class.
- d. Please see response to question 16.

QUESTION No. 23 Page 1 of 1

Please provide work papers (excel files with formulas where possible) and analysis of residential customer counts as described on page 11 of Mr. Radigan's testimony.

Response:

Please see response to question 16.

QUESTION No. 24 Page 1 of 1

Refer to page 5 of Mr. Radigan's testimony where he states, "Based on responses to discovery questions the Company was unable to provide sufficient factual support for its claim that sales were declining." Refer also to the work paper provided in response to AG 1-158, the historical data provided in response to AG 1-156 and the description of the normalization method provided in response to Staff 2-21. Finally, refer to page 9 where actual and weather normalized usage are graphed and a conclusion is drawn, "This data is plotted in the graph below and it shows that, when the effects of weather are accounted for, there has been a marked decrease in usage over a long period of time." Both you and Columbia concluded that there has been a trend of decreasing use per customer by inspecting a graph of weather-normalized data. How does your factual support differ from the Columbia's?

Response:

Please see Mr. Radigan's testimony and response to question 19 above.

QUESTION No. 25 Page 1 of 1

Refer to the graph on page 9 of witness Radigan's testimony and to the graph provided in response to AG 1-158. Explain why the weather-normalized series follows the up and down movements of the actual series so closely. Is this expected from a good normalization procedure?

Response:

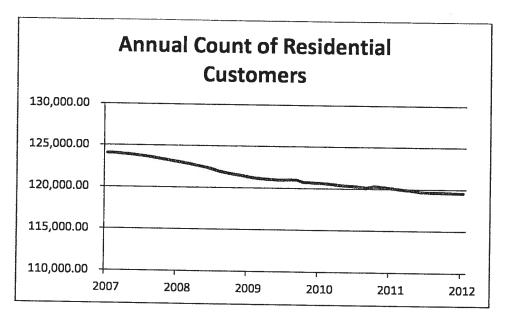
It is because there is a strong correlation between UPC and heating degree days. As to AG-158, Mr. Radigan did not prepare that graph and cannot comment on it.

QUESTION No. 26 Page 1 of 1

Refer to page 11 of witness Radigan's testimony where a customer count of 120,000 "seems reasonable." Please provide the analysis used to arrive at this conclusion including all descriptive text, work papers, excel files with formulas intact, data and formulas.

Response:

Please see work paper Copy of AG-157 and the graph below developed from that data. Mr. Radigan interprets this graph to indicate that customer loss has stabilized.



QUESTION No. 27 Page 1 of 1

Please refer to the testimony of Mr. Radigan page 29 lines 2 - 4. Is Mr. Radigan aware that Columbia's gas cost adjustment includes a gas cost uncollectible rate? If so, please explain the statement that he rejects "...the Columbia's method of setting uncollectibles as some percentage of revenues because of the fact that the commodity cost of gas varies so much from year to year makes this method unreliable."

#### **Response:**

Mr. Radigan was not aware that Columbia's gas cost adjustment includes a gas cost uncollectible rate and it doesn't matter for the issue at hand. The issue is which method is the best to determine what level of uncollectibles should be built into rates as a reasonable expense level. To do this we need to understand exactly what is an uncollectible expense. An uncollectible expense represents the dollar value of unpaid bills by customers. The customer may not have paid the bill for a number of reasons. For example, the customer may have moved or gotten ill, the customer may be behind on a payment or a customer may knowingly not pay the bill and is trying to avoid the expense. The utility tracks these unpaid bills and carries them as a liability on the balance sheet while it attempts to collect payment. Some customers do eventually pay their bills and some do not. At some point in time the utility must make a decision to write off some of these liabilities and the amount is entered as an expense on the income statement. Estimating the amount of uncollectibles could be studied and correlations may be found to the number of unpaid accounts as a percentage of total accounts, or some time series that a certain percentage of accounts are generally written off after some period of time, or some relationship could be studies that as the gas bill increases the uncollectible amount increases as customers find it harder to get the cash to pay their utility bill. All of these or some combination of these may be an acceptable means by which uncollectibles might be estimated if they were studied and correlations do exist. A simple assumption that uncollectibles have a direct relation to the amount of revenues should not be assumed to be a realistic assumption without back up. In this case there was no back up offered and Mr. Radigan observed that uncollectible expenses have been trending downward. Hence, he has recommended that a dollar level be imputed to rates which represent the current uncollectible expense being incurred.

QUESTION No. 28 Page 1 of 1

Regarding forecasted test period uncollectibles expense, is Mr. Radigan aware that \$713,581 is matched in forecasted test period revenues as indicated in Schedule D-2.4 workpapers WPD-2.4A, WPD-2.4D, and WPD-2.4H?

Response:

Mr. Radigan's adjustment is based on the information provided in response to AG-1-66. QUESTION No. 29 Page 1 of 1

Regarding Mr. Radigan's forecasted test period uncollectibles expense recommendation of \$600,000, please provide the breakdown of this amount between non-gas cost, gas cost, large volume, and energy assistance.

Response:

Mr. Radigan did not develop uncollectible expense by non-gas cost, gas cost, large volume, and energy assistance.

QUESTION No. 30 Page 1 of 1

Identify each rate proceeding in which Mr. Radigan has performed a return on equity analysis and recommended a utility return on equity to a regulatory commission. For each such proceeding, please provide: (a) the case number, (b) jurisdiction; (c) party on whose behalf you performed the analysis and recommendation; (d) a copy of any testimony sponsored by Mr. Radigan in such proceeding (s).

Response:

Mr. Radigan has not performed a return on equity analysis in any proceeding but Mr. Radigan has twice testified on return on equity in an informational manner as he sponsored here. Both cases were in New York State and Mr. Radigan testified on the behalf of the County of Westchester. The cases were Case 07-E-0523 and Case 08-E-0539. Copies of the testimony are attached.

QUESTION No. 31 Page 1 of 1

Has Mr. Radigan performed any surveys, focus groups, interviews or similar research in an effort to determine Columbia customers' opinions and attitudes about automated meter reading technology? If the answer is in any manner affirmative, produce all documents referring, reflecting or relating to such surveys, focus groups, interviews or other research.

Response:

No.

QUESTION No. 32 Page 1 of 1

Has Mr. Radigan performed any surveys, focus groups, interviews or similar research in an effort to determine any utility customers' opinions and attitudes about automated meter reading technology? If the answer is in any manner affirmative, produce all documents referring, reflecting or relating to such surveys, focus groups, interviews or other research.

Response:

No.

QUESTION No. 33 Page 1 of 1

Has Mr. Radigan performed any surveys, focus groups, interviews or similar research in an effort to determine utility customer opinions and attitudes about estimated bills? If the answer is yes, produce all documents referring, reflecting or relating to such surveys, focus groups, interviews or other research.

Response:

No.

QUESTION No. 34 Page 1 of 1

How long does Mr. Radigan believe the Accelerated Main Replacement Program will continue?

Response:

Thirty years, see Belle direct at page 13.

QUESTION No. 35 Page 1 of 1

Please justify how Mr. Radigan concluded that the net salvage percent of (10%) for Account 376 and (50%) for Account 380 was appropriate.

Response:

Please see Mr. Radigan's testimony at pages 25 and 26.

QUESTION No. 36 Page 1 of 1

Can Mr. Radigan identify the average age of the retirements for Account 376 and 380 for the period 2000-2012 and 2008-2012?

Response:

Based on data provided by the Company Mr. Radigan could identify the average age of retirements, but he has not done so.