Exhibit No.:
Issues: Weather Normalization
Witness: Joel McNutt
Sponsoring Party: MO PSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: GR-2014-0152
Date Testimony Prepared: July 30, 2014

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION
Tariff, Safety, Economic & Engineering Analysis

REBUTTAL TESTIMONY

OF

JOEL MCNUTT

LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP.
d/b/a LIBERTY UTILITIES

CASE NO. GR-2014-0152

PSC Exhibit No. 33
Date 9/8/14 Reporter SJP
File No.

Jefferson City, Missouri
July 2014

** Denotes Highly Confidential Information **

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BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities' Tariff Revisions Designed to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company	))))))	File No. GR-2014-0152

AFFIDAVIT OF JOEL MCNUTT

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Joel McNutt, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 6 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Joel McNutt

Subscribed and sworn to before me this 29th day of July, 2014.

LAURA BLOCH
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: June 21, 2015
Commission Number: 11203914

Notary Public

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D/B/A LIBERTY UTILITIES

CASE NO. GR-2014-0152

Q. Please state your name and business address.

A. My name is Joel McNutt and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. Who is your employer and what is your present position?

A. I am employed by the Missouri Public Service Commission ("Commission") and my title is Regulatory Economist II, Tariff/Rate Design Section, Energy Unit, Utility Operations, Regulatory Review Division.

CREDENTIALS

Q. What is your educational background and work experience?

A. I received my Bachelor of Science Degree in Economics with a minor in Business Management from Central Missouri State University in 2002. I also received a Master of Business Administration from William Woods University in 2007. I joined the Missouri Public Service Commission in June 2013. Prior to joining the Missouri Public Service Commission, I was employed in the fields of economic development, banking, healthcare, and nuclear security in both the public and private sectors. I have filed testimony in Missouri Gas Energy's ("MGE") rate case No. GR-2014-0007 and Summit Natural Gas Company in GR-2014-0086. I supported the Staff's Class-Cost-Of-Service studies in both of those rate cases, and was Staff's rate design witness in the MGE case.

WEATHER NORMALIZATION

Q. Are you the same Staff witness who contributed to Staff's Direct Revenue Requirement Cost of Service Report ("Report") on the issue of weather normalization usage per customer in case GR-2014-0152?

A. Yes.

Q. What did you state in the Report?

A. I stated that the Company had not provided the necessary information at that time to allow Staff to complete its analysis of test year revenues. Due to the lack of revenue data provided by Liberty Utilities for the test year ending September 30, 2013, Staff's filed revenues in its direct case were actual revenues for the twelve months ending March 31, 2014.

Q. Has Liberty now provided the necessary test year revenue information for Staff to complete a weather normalization analysis?

A. Yes. The Company has provided sufficient data for Staff to complete their weather normalization analysis. Staff finally received sufficient data from Liberty during the week before the settlement conference which began on July 14.

Q. What is weather normalization?

A. Weather normalization is the process in which abnormal weather influences that could result in changes in natural gas usage are removed. Since the weather within any given time period is unique and contains variations from what is considered to be normal weather, weather normalization is performed so that the usage and revenue of weather sensitive customer rate classes are adjusted to those that are considered normal weather conditions.

STAFF'S ANALYSIS

Q. Describe the process undertaken by Staff to complete their weather normalization analysis?

A. Staff's analysis weather normalizes natural gas sales for Liberty's customers in the Residential Class ("RS"), Small General Service Class ("SGS"), Medium General Service Class ("MGS"), and Large General Service Class ("LGS") for the test year ending September 30, 2013. Staff's weather normalized adjustments of natural gas sales correct for deviations from normal weather conditions that have occurred during the test year. The Staff adjusted monthly natural gas volumes to normal by first equalizing each billing cycle's annual total normal heating degree days ("HDDs"). The Staff then added or subtracted a number of days to make each billing cycle's annual total days equal to 365. This adjustment for days sets each billing cycle to the same total number of days and normal HDD's. Once each billing cycle has the proper normal HDD, the second step is to calculate each billing cycle's difference between normal and actual HDD's. The third step is to multiply these differences times the appropriate estimate from the regression results. The fourth step is to sum each billing cycle's adjustment volumes by billing month. The fifth step is to add the monthly adjustments in hundreds of cubic feet ("Ccf") to the total monthly natural gas sales to calculate normalized volumes.

The Staff completed these calculations by first subdividing Liberty's billing records into three geographic regions – NEMO, WEMO and SEMO districts. Staff witness Seoung Joun Won provided the daily actual and daily normal HDD's for each of the three geographic regions.

Liberty provided Staff with monthly natural gas sales in Mcf, which Staff converted to Ccf, and the corresponding number of customers for each billing cycle by

customer class and geographic region for each month of the test year. The Company groups natural gas accounts into billing cycles whose meters are to be billed throughout a month. The Company bills the accounts based on the meter reading. Since there are approximately twenty (20) working days in a month, customer accounts are usually grouped into one of the approximately twenty (20) billing cycles. The Staff calculated two sets of twelve billing month averages by customer class for Residential, SGS, MGS, and LGS in the three geographic regions specified above. One set of these averages was the daily average natural gas usage in Ccf and another set was the daily average HDD.

These billing month averages were calculated from the data on numbers of customers, natural gas usage in Ccf, and summed HDD from approximately twenty (20) billing cycles for each billing month by customer class. Each billing month's daily average HDD in each billing cycle was weighted by the percentage of customers in that billing cycle. Thus, the billing cycles with the most customers are given more weight in computing the billing month daily average HDD. The Staff calculated twelve monthly average-usage-per-customer amounts across the billing cycles to calculate one month's daily average usage in Mcf. The Staff's study estimates the change in usage in Ccf related to a change in HDD. The study was based on two sets of twelve monthly billing month averages. One was the average daily usage in Ccf per customer and the other was the customer weighted average daily HDD. These two sets of billing month averages (usage and weather) were used to study the relationship between space-heating natural gas usage in Ccf and colder weather.

The Staff used regression analyses to estimate the relationship for each of the Residential, SGS, MGS, and LGS customers in each geographic region. The regression equation develops quantitative measures that describe the relationship between daily space-

heating sales per customer in Ccf to the daily HDD. The regression equation estimates a change in the daily natural gas usage per customer whenever the daily average weather changes one HDD.

The Staff's analyses resulted in decreases to natural gas sales because the weather during the test year was colder than normal. The Staff's analysis resulted in an approximate decrease of 1.46 percent for the Residential customer class for weather and cycle days. SGS class resulted in no adjustment for cycle days and an approximate decrease of 1.67 percent for weather. MGS class resulted in an approximate decrease of 1.32 percent for weather and cycle days. LGS class resulted in an approximate decrease of 3.34 percent for weather and cycle days. (See attached Schedules JM-1 through JM-8) The adjustments to natural gas sales do not include the Staff's adjustments for customer levels.

STUDY COMPARISON

Q. Does Staff have any specific issues or concerns with Liberty's methodology utilized for their weather normalization study?

A. Yes.

Q. What are those concerns?

A. Staff does not agree with how Liberty derived Actual HDDs for their weather normalization study. The Company, in their billing determinant study work papers, utilized actual HDD's obtained from NOAA (U.S. National Oceanic and Atmospheric Administration) for the 30 year period of January 1, 1984 through December 31, 2013. Staff contends that the use of this time period methodology is flawed and will not yield accurate HDD adjustments to obtain normalized usages per customer per month.

Q. Does Staff agree that the billing determinant data used by the Company for its weather normalization analysis is correct?

A. No. It was immediately apparent to Staff after reviewing the Company's billing determinant study that the first five months of test year billing determinant data was aggregated and not delineated properly by customer class and corresponding usage within the NEMO, WEMO, and SEMO districts. This lack of data detail prohibited Staff from accurately determining usage per customer, per customer class, per district that is necessary to perform an accurate weather normalization analysis in Staff's direct filing.

Q. What other issues would Staff like to identify with Liberty's weather normalization analysis?

A. Staff witness Tom Imhoff, in his direct testimony, cited concerns by Staff regarding the data volatility noticed among the 12 months of the test year regarding customer counts and volumes. These discrepancies strongly lead Staff to believe that this information was incorrect. Staff witness Won also discusses in his rebuttal testimony other problems with the information used by Liberty in their normal weather data that will prohibit Liberty's weather normalization analysis from reflecting the same results as Staff's.

CONCLUSION

Q. Does Staff agree with the results from Company Witness Chris Krygier's weather normalization analysis?

A. No. Staff finds that the Company's weather normalization analysis is incorrect for the reasons listed above. Staff cannot support the Company's results from this study. Staff recommends that the Commission use Staff's weather normalization analysis.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

Schedule JM 1 Is Deemed Highly Confidential In Its Entirety

Schedule JM 2
Is Deemed
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Schedule JM 3 Is Deemed Highly Confidential In Its Entirety

Schedule JM 4

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Schedule JM 5
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Schedule JM 6

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Schedule JM 7
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