Exhibit No.: Issues: Cash Working Capital Witness: Michael J. Adams Sponsoring Party: Missouri Gas Energy Case No.: GR-2006-____ Date Testimony Prepared: May 1, 2006

MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2006-____

DIRECT TESTIMONY OF

MICHAEL J. ADAMS

Jefferson City, Missouri

May 2006

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DIRECT TESTIMONY OF

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CASE NO. GR-2006-

MAY 2006

1 2 3		1. INTRODUCTION AND WITNESS QUALIFICATIONS
4	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
5	A.	My name is Michael Adams. My business address is 77 South Bedford Street, Suite 400,
6		Burlington, MA 01803.
7		
8	Q.	BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?
9	A.	I am a Director in the Energy Practice of Navigant Consulting, Inc.
10		
11	Q.	PLEASE DESCRIBE NAVIGANT CONSULTING, INC.
12	А.	Navigant Consulting, Inc. ("NCI") is a specialized independent consulting firm providing
13		professional services to assist clients in identifying practical solutions to the challenges of
14		uncertainty, risk and distress. We focus on large industry segments that are typically
15		highly regulated and are undergoing significant change.
16		
17		NCI has served the electric and natural gas industries since 1983. We offer a wide range
18		of consulting services related to business strategy and planning, operations advisory
19		management, financial and transaction advisory activities, and technology and innovation
20		management designed to assist our clients in a business environment of changing
21		regulation, increased competition and evolving technology.

2 O. PLEASE DESCRIBE YOUR EDUCATION.

- A. I have an MBA in Finance from the University of Illinois at Springfield and a BS in
 Accounting from Illinois College. I am a member of the American Institute of Certified
 Public Accountants and the Illinois Society of Certified Public Accountants.
- 6

7

Q. WHAT ARE YOUR RESPONSIBILITIES IN YOUR CURRENT POSITION?

A. As a consultant, my responsibilities include assisting clients in identifying and addressing
 business issues. My primary areas of focus have been regulatory-, financial- and
 accounting-related issues.

- 11
- 12

2 **O.** PLEASE DESCRIBE YOUR QUALIFICATIONS.

I have over twenty years of direct experience in the public utility industry. I have worked 13 Α. for an investor-owned utility, a regulatory agency, and most recently as a consultant to 14 the energy industry. I have managed and/or participated in a wide variety of consulting 15 engagements and have testified in other regulatory proceedings. I have provided expert 16 testimony or reports on issues related to cash working capital requirements before the 17 Arkansas Public Service Commission, the Illinois Commerce Commission, the Missouri 18 Public Service Commission, the Oklahoma Public Service Commission, the Ontario 19 Energy Board, and the Pennsylvania Public Utility Commission. I have testified on other 20 financial, operational or regulatory matters before the Arkansas Public Service 21 Commission, the Illinois Commerce Commission, the Massachusetts Department of 22 Telecommunications and Energy, and the Pennsylvania Public Utility Commission. 23

1		
2		2. EXECUTIVE SUMMARY
3	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
4	А.	I am sponsoring this testimony addressing Missouri Gas Energy's ("MGE" or the
5		"Company") cash working capital requirements. As a result of my analysis, I have
6		determined that the appropriate level of cash working capital required by MGE for its gas
7		operations is \$13,353,691, which amount should be added to the Company's rate base.
8		
9	Q.	ARE YOU SPONSORING ANY SCHEDULES?
10	А.	Yes. In addition to my prepared testimony, which has been labeled as MGE Schedule
11		MJA-1, I am co-sponsoring Schedule MJA-2 with Company witness Noack. I will
12		discuss the nature of the schedules later in my testimony.
13 14 15 16		3. SUMMARY OF THE CASH WORKING CAPITAL ANALYSIS
17	Q.	HAS NCI PERFORMED A STUDY TO DETERMINE THE LEVEL OF CASH
18		WORKING CAPITAL THE COMPANY REQUIRES TO FINANCE ITS DAY-
19		TO-DAY OPERATIONS?
20	A.	Yes, NCI performed a lead lag study by analyzing the Company's cash transactions and
21		invoices for the twelve months ended December 31, 2005.
22		
23	Q.	PLEASE DEFINE WHAT YOU MEAN BY THE PHRASE "CASH WORKING
24		CAPITAL."

1	А.	Cash working capital is the amount of funds required to finance the day-to-day operations
2		of the Company.
3		
4	Q.	HOW SHOULD THE RESULTS OF THE CASH WORKING CAPITAL
5		ANALYSIS BE TREATED FOR RATEMAKING PURPOSES?
6	A.	The cash working capital requirements should be included as part of MGE's gas business
7		rate base for ratemaking purposes.
8		
9	Q.	IS THE ANALYSIS OF THE DIFFERENCES BETWEEN THE REVENUE LAGS
10		AND EXPENSE LEADS TYPICALLY REFERRED TO AS A LEAD LAG
11		STUDY?
12	A.	Yes. Cash working capital determinations are generally intertwined with lead lag studies
13		that are used to analyze the lag time between the date customers receive service and the
14		date that customers' payments are available to the Company. This lag is offset by a lead
15		time during which the Company receives goods and services, but pays for them at a later
16		date. The "lead" and "lag" are both measured in days. The dollar-weighted lead and lag
17		days are then divided by 365 to determine a daily cash working capital factor ("CWC
18		factor"). This CWC factor is then multiplied by the annual test year cash expenses to
19		determine the amount of cash working capital required for operations. The resulting
20		amount of cash working capital is then included as part of the Company's rate base. The
21		test year operating expenses to which the leads and lags were applied are described in the
22		direct testimony of Company witness Noack.
23		

1	Q.	WHAT ARE THE VARIOUS LEADS AND LAGS THAT SHOULD BE
2		CONSIDERED IN A CASH WORKING CAPITAL ANALYSIS?
3	A.	Two broad categories of leads and lags should be considered: 1) lags associated with the
4		collection of revenues owed to the Company ("revenue lags"); and 2) lead times
5		associated with the payments for goods and services received by the Company ("expense
6		leads").
7		
8	Q.	WHAT IS A REVENUE LAG?
9	A.	A revenue lag refers to the elapsed time between the delivery of the Company's product
10		(i.e., natural gas) and its ability to use the funds received as payment for the delivery of
11		the product.
12		
13	Q.	WHAT IS AN EXPENSE LEAD?
14	A.	The expense lead refers to the elapsed time from when a good or service is provided to
15		the Company to the point in time when the Company pays for the good or service and the
16		funds are no longer available to the Company.
17		
18	Q.	WHAT SOURCES OF INFORMATION WERE EMPLOYED TO DETERMINE
19		THE LEADS AND LAGS IN THE CASH WORKING CAPITAL ANALYSIS?
20	A.	Personnel in the Company's Accounting, Customer Service, Human Resources, Payroll,
21		and Tax Departments were interviewed to identify payment policies and procedures.
22		Data from the Company's Accounts Payable, Customer Service, Payroll, and Tax
23		Systems as well as records from the Company's bank accounts were also utilized. The

- information derived from these sources, together with analyses of specific invoices, led to
 the determination of the appropriate number of lead lag days for MG&E's gas operations.
- 3

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4 5

<u>a. Revenue Lags</u>

- Q. HOW IS THE REVENUE LAG DETERMINED?
- A. The revenue lag measures the number of days from the date service was rendered by the
 Company until the date payment was received from customers and such funds were
 available to the Company. In the calculation, the revenue lag was divided into five
 distinct components: 1) service lag; 2) billing lag; 3) collections lag; 4) payment lag, and
 5) bank float on collections from customers. Considered together, these five components
 of retail revenue lag totaled a weighted average of 47.59 lag days. An explanation of
 each component of the base revenue lag follows.

13

14 Q. WHAT IS MEANT BY SERVICE LAG?

15 A. The service lag refers to the number of days from the mid-point of the service period to 16 the meter reading date for that service period. Using the mid-point methodology, the 17 average lag associated with meter reading was 15.21 days (365 days in the year divided 18 by 12 months divided by 2).

19

20

O. WHAT IS MEANT BY BILLING LAG?

A. Billing lag refers to the average number of days from the date on which the meter was
read until the date the customer was billed. The billing lag was determined by analyzing
the Company's monthly billing schedules, and meter reading records. The analysis
resulted in a billing lag of 4.26 days.

2

Q. WHAT IS MEANT BY COLLECTIONS LAG?

A. The collections lag refers to the average amount of time from the date when the Company mailed a bill to the date that the Company received payment from its customers. An aging report from the Company's customer service system was used to determine the collections lag for MG&E's Missouri operations. Based on weighted average data from the Company's Customer Service System and by considering accounts receivables balances by class of customer by days aged, the average collection lag was determined to be 27.17 days.

10

11 **O**.

Q. WHAT IS MEANT BY PAYMENT LAG?

A. Payment lag refers to the elapsed time between the Company's receipt of the customer's
payment and its transmittal to the bank for collection from the customer's account.

14 Q. WHAT FACTORS CAN INFLUENCE THE PAYMENT LAG?

15 A. The Company received payments from customers typically in one of the following ways: 16 a) by check; b) via payment agents; c) by credit cards; or d) electronically. Taking this 17 information into account and using deposits from all the methods listed above by day for 18 the twelve months ended December 31, 2005 for the purpose of dollar-weighting the un-19 weighted payment lags, the payment lag was determined to be 0.96 days.

20

21 Q. WHAT IS MEANT BY BANK FLOAT?

A. Bank float refers to the time between the Company's deposit of the customer's check and
the time the Company had access to the cash. Based on interviews with Company

personnel, NCI determined that there is no float time on cash deposits and that funds
 were generally available on the same day as the deposit.

3

4 Q. PLEASE SUMMARIZE THE CALCULATION OF REVENUE LAG DAYS.

5 A. The calculation of the overall revenue lag, by lag component is summarized in the 6 following table.

Lag Component	Lag Days
Meter Reading Lag	15.21
Billing Lag	4.26
Collections Lag	27.17
Payment Lag	0.96
Bank Float	-
Total Lag Days	47.59

7

8

b. Expense Leads

9 Q. WHAT EXPENSE-RELATED LEADS WERE CONSIDERED IN THE LEAD 10 LAG ANALYSIS?

11 A. Lead times associated with the following expense categories were considered in the 12 study: a) base payroll; b) FICA (social security) and other withholdings; c) Employee 13 pensions and benefits; d) other operations and maintenance expenses; e) fuels – gas; f) 14 general taxes including taxes other than income taxes; g) federal income taxes; h) state 15 income taxes; and i) interest on long-term debt.

1Q.PROVIDE AN EXPLANATION OF THE LEADS ASSOCIATED WITH THE2COMPANY'S PAYROLL EXPENSES.

A. Company employees are paid on a bi-weekly basis. Payday is on the Friday following
the end of a pay period ending the Saturday prior. Beginning in 2006, the Company
plans to outsource its payroll operations. Payroll and related funds such as withholdings,
FICA, and 401-K contributions will be transferred to the Company's payroll
administrator two days before the Friday payday. Taking this information into account,
NCI determined that the payroll related expense lead time was 11 days.

9

10Q.PLEASE EXPLAIN THE LEAD EFFECTS ASSOCIATED WITH FICA AND11OTHER FEDERAL AND STATE WITHHOLDING TAXES.

As discussed above, the Company plans to remit employee FICA and employee Federal 12 A. and State withholdings to its external payroll administrator two days before the Friday 13 payday. Thus, NCI determined that there will be no incremental lead time associated 14 with employee FICA and federal and state withholding remittances over and above the 15 normal payroll expense lead time discussed above. Since the Company plans to remit to 16 its payroll administrator the Company share of FICA two days before payday, NCI 17 determined that the expense lead time associated with the employer share of FICA was 18 19 11 days.

20

COMPANY'S LEADS ASSOCIATED WITH THE WHAT TYPES OF 21 **Q**. THE WERE CONSIDERED IN BENEFIT PROGRAMS EMPLOYEE 22 **ANALYSIS?** 23

A. The estimated lead times associated with the following major categories of the
Company's employee benefit programs were considered: a) contributions to the
Company's pension fund; b) group life insurance, c) group health insurance including
claims and administration costs, and d) the Company's 401-K plan. Taken together,
these programs had a dollar-weighted lead time of 47.19 days for the twelve months
ended December 31, 2005.

7

8 Q. WHAT WAS THE EXPENSE LEAD TIME ASSOCIATED WITH THE 9 COMPANY'S CONTRIBUTION TO ITS PENSION PLAN?

A. Based on an actuarial study, the Company plans to make contributions to its pension fund in July and October 2006. Taking this information into account and using actual dates and expected dollar contributions to be made by the Company, a weighted average pension expense lead time of 62.93 days was determined. Since these contributions will be made electronically, no additional float time was included.

15

Q. WHAT WERE THE EXPENSE LEADS ASSOCIATED WITH THE COMPANY'S GROUP LIFE INSURANCE PROGRAM?

A. Based on interviews with the Company's Human Resources Department, NCI determined that the Company, beginning in 2006, pays its provider of life insurance on a monthly basis. The Company expects to pay its bill around the 15th of the month for the current month. Payment will be made by check. Taking this information into account and including bank float (since the payment is made by check), NCI determined that the group life insurance expense lead time was 7.46 days.

2 Q. WHAT WERE THE EXPENSE LEADS ASSOCIATED WITH THE COMPANY'S 3 GROUP HEALTH INSURANCE PROGRAMS?

NCI examined the time taken to pay: a) health and dental claims (i.e., from the time the 4 Α. provider provided the claim to the Company for reimbursement and the time the 5 reimbursement occurred); and, b) group health and dental administration related 6 expenses. Based on interviews with the Company's Human Resources department, NCI 7 determined that, beginning 2006, group health claims are paid by MGE's parent 8 company; MGE reimburses, via wire transfer, its parent company monthly typically 9 around the 18th of the month following. Taking this information into account, NCI 10 determined an expense lead time of 33.21 days associated with group health claims 11 payments. Also beginning in 2006, MG&E reimburses its dental claims administrator 12 weekly via ACH on the last day of the week for claims settled two weeks prior. Taking 13 this information into account, NCI determined that the expense lead time associated with 14 dental claims was 18 days. Finally in 2006, health and dental administration fees are 15 expected to be paid by MGE around the 10th of the month for the current month via ACH 16 resulting in an expense lead time of negative (5.21) days. 17

18

Q. WHAT WAS THE EXPENSE LEAD ASSOCIATED WITH THE COMPANY'S MATCH ASSOCIATED WITH THE 401-K PLAN?

A. The Company remits 401-K funds to its payroll administrator two days before a Friday
 payday. Taking this information into account, NCI determined that the lead time
 associated with the Company's 401-K program was 11 days.

2 Q. WHAT ARE OTHER OPERATIONS AND MAINTENANCE EXPENSES AND 3 WHAT LEAD TIMES WERE ASSOCIATED WITH SUCH EXPENSES?

The Company engages in transactions with other vendors (not associated with payroll, 4 A. benefits, pensions, interest payments, or taxes) for a variety of purposes including facility 5 maintenance, maintenance of system reliability, and customer service. Invoices from 6 providers of such services were analyzed in order to estimate a lead time associated with 7 payment for services related to other operations and maintenance activities. The analysis 8 indicates that on average, invoices were paid by the Company 38.47 days after receipt. 9 This estimate of lead time relating to the Company's other operations and maintenance 10 expenses is the sum of 30.80 days of weighted invoice processing lead time (including 11 15.21 days of service lead time) and 7.67 days of bank float since most of these other 12 operations and maintenance related expense payments were made by check. 13

14

Q. WHAT DOES BANK FLOAT MEAN IN THE CONTEXT OF THE COMPANY'S ACCOUNTS PAYABLES?

A. Bank float is the difference in time between the date the Company mails a check to one
of its vendors and the date the cash leaves the Company's bank account.

19

20 Q. WHY IS IT NECESSARY TO CONSIDER THE FLOAT ON THE COMPANY'S 21 ACCOUNTS PAYABLES IN A LEAD LAG STUDY?

A. It is the Company's intent to present an unbiased and comprehensive analysis of its cash
 working capital requirements to the Commission in this proceeding; thus, the estimate of

1		float (or bank processing) time was considered on both the receivable and payable side of
2		the cash working capital equation.
3		
4	Q.	HOW WAS THE BANK FLOAT ON THE COMPANY'S ACCOUNTS
5		PAYABLES ESTIMATED?
6	А.	The float time was estimated using data on cancelled checks provided by the Company's
7		bank. Using a sample of checks for the twelve months ended December 31, 2005, the
8		analysis indicated that the average float time was 7.67 days, on a dollar weighted basis.
9		
10	Q.	WHAT IS THE EXPENSE LEAD TIME ASSOCIATED WITH THE
11		COMPANY'S PURCHASES OF NATURAL GAS?
12	А.	Based on an examination of invoices of a sample of commodity and pipeline suppliers to
13		the Company, a weighted expense lead time of 40.01 days was determined. This lead
14		time includes a half month's worth of service lead time and excludes float since payments
15		are made electronically.
16		
17	Q.	WHAT ARE THE VARIOUS GENERAL TAXES CONSIDERED IN THE
18		ANALYSIS?
19	A.	Each category of General Taxes and how it was considered in the Company's study is
20		described below:
21		
22		a) <u>Federal Unemployment Taxes</u> : Federal unemployment taxes are due quarterly
23		by the 15 th of the month following the end of the quarter. Taking this information

into account, a weighted average expense lead time of 60.63 days was
 determined. Since payments are made by wire transfer, no additional bank float
 time was considered.

- b) <u>Property Taxes</u>: The Company pays real estate and personal property taxes in
 Missouri. In the State of Missouri, all current-year property taxes are due on
 December 31st of the current year. Taking this schedule into consideration a
 dollar-weighted expense lead of 182.50 days was estimated. Since payments are
 made by check, an additional float time of 7.67 days was included bringing the
 total weighted property tax expense lead time estimate to 190.17 days.
- 11

4

c) <u>Corporation Franchise Taxes</u>: The State of Missouri levies a Corporation Franchise Tax on companies with in-state assets of \$1,000,000 or more. The tax is due on April 15th of the current fiscal year. Based on this information a negative expense lead time of negative (69.83) days was used in the calculation of cash working capital associated with corporation franchise taxes. Since the payment is made by check, this estimate of lag includes bank float time.

- 18
- 19d)Missouri Sales and Use Taxes:The Company pays its Sales Tax in quarter20month installments to the Missouri Department of Revenue. Equal installments21are remitted on the 7th, 14th, 21st, and 28th of each month electronically. Taking22this information into account, NCI determined that the expense lead time23associated with sales taxes was 2.29 days. Missouri Use Taxes are payable to the

1 Missouri Department of Revenue for purchases made by the Company from out-2 of-state (and is thus known as a compensating tax). This tax is paid quarterly and 3 is due on the last day of the month following the end of a quarter. Based on when 4 payments are due, a weighted lead time of 76.31 days was calculated. .Since 5 payments are made by check, an additional float time of 7.67 days was included 6 bringing the total use tax related expense lead time to 83.98 days.

- Gross Receipts Taxes: In the State of Missouri, gross receipts taxes are payable 8 e) to municipalities and are typically estimated as a percent of billings to customers 9 within the municipality. The Company typically pays these taxes on the last day 10 of the month following the end of a monthly, quarterly, semi-annually, or annual 11 tax period depending on the municipality. Based on the specific tax periods of the 12 various municipalities, a dollar-weighted gross receipts tax expense lead time of 13 60.90 days was calculated. This lead time includes float since the municipalities 14 are paid by check. 15
- 16

7

17 Q. HOW DID THE STUDY ADDRESS FEDERAL INCOME TAXES?

A. The lead time associated with federal income tax payments was based on the provisions of the Internal Revenue Code that require estimated tax payments of 25 percent of total income taxes on the 15th of the month following the end of a quarter. Taking this schedule into consideration a lead time of 60.63 days for federal income tax payments made by the Company was determined. This lead time did not include bank float since payments were made electronically.

23

HOW WERE STATE INCOME TAXES CONSIDERED IN THE STUDY? 2 0. State income taxes follow a patter similar to that of its federal counterpart. Thus, 3 А. assuming quarterly payments due on the 15th of the month following the end of a quarter, 4 an expense lead time of 60.63 days was determined. Since payments are made 5 electronically, no additional float time was considered in this study. 6 7 PROVIDE A DESCRIPTION OF HOW LEAD TIMES ASSOCIATED WITH THE 8 **Q**. COMPANY'S INTEREST EXPENSES WERE ADDRESSED BY THE STUDY. 9 The Company's interest payments on its long-term bonds were made from current 10 A. revenues. Thus, there was a lead (or lag) between the date the interest payments were 11 collected from customers and the date when such amounts were paid to financial 12 institutions. The Company generally made interest payments on its long-term debt twice 13 a year at varying times. Using actual due dates on interest payments, a dollar-weighted 14 expense lead time of negative (4.72) days for interest payments were determined. Since 15 interest payments were made electronically, no additional lead time was included. 16 17 HAVE YOU SUMMARIZED THE RESULTS OF YOUR ANALYSIS OF THE 18 **Q**. COMPANY'S CASH WORKING CAPITAL REQUIREMENTS? 19 Yes. The results of the cash working capital study are presented in MG&E Exhibit No. 20 А. MJA-2. I am sponsoring the data in the columns labeled "Revenue Lag Days", "Expense 21 Lead Days", "Net Lag Days", and "CWC Factor" as set forth on the exhibit. The 22 expense amounts included on the exhibit are being sponsored by MGE witness Noack.

	As the exhibit shows, the appropriate level of cash working capital required by MGE for
	its gas operations is \$13,353,691. In the context of this proceeding, I recommend that
	this amount be added to the Company's rate base.
Q.	DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
А.	Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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In the Matter of Missouri Gas Energy's Tariff Sheets Designed to Increase Rates for Gas Service in the Company's Missouri Service Area.

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Case No. GR-2006-

AFFIDAVIT OF MICHAEL J. ADAMS

SS.

STATE OF ILLINOIS

COUNTY OF SANGAMON

Michael J. Adams, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

MICHAEL J. ADAMS

Subscribed and sworn to before me this $\frac{364}{2}$ day of 2006.

Public

My Commission Expires:

OFFICIAL SEAL
KATHERINE P. ADAMS
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 7-14-2009