BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's Actual Cost Adjustment for the Period July 1, 2001 through June 30, 2002 and July 1, 2002 through June 30, 2003	))))	Case No. GR-2002-348 Case No. GR-2003-0330

AFFIDAVIT OF JOHN J. REED

COMMONWEALTH OF MASSACHUSETTS	)	
	)	ss.
COUNTY OF MIDDLESEX	)	

John J. Reed, 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.

John J. Reed

John J. Reed

Subscribed and sworn to before me this 21st day of November, 2005.

Jessica Musumarra

Jessica Musumarra

My Commission Expires: 12/8/11

JESSICA LYNN M...
Notary Public
Commonwealth of Massach...
My Commission Expires
December 8, 2011

John J. Reed
Chairman and Chief Executive Officer

John J. Reed is a financial and economic consultant with more than 25 years of experience in the energy industry. Mr. Reed has also been the CEO of an NASD member securities firm, and Co-CEO of the nation's largest publicly traded management consulting firm (NYSE: NCI). He has provided advisory services in the areas of mergers and acquisitions, asset divestitures and purchases, strategic planning, project finance, corporate valuation, energy market analysis, rate and regulatory matters and energy contract negotiations to clients across North and Central America. Mr. Reed's comprehensive experience includes the development and implementation of nuclear, fossil, and hydroelectric generation divestiture programs with an aggregate valuation in excess of $20 billion. Mr. Reed has also provided expert testimony on financial and economic matters on more than 125 occasions before the FERC, Canadian regulatory agencies, state utility regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada. After graduation from the Wharton School of the University of Pennsylvania, Mr. Reed joined Southern California Gas Company, where he worked in the regulatory and financial groups, leaving the firm as Chief Economist in 1981. He served as executive and consultant with Stone & Webster Management Consulting and R.J. Rudden Associates prior to forming REED Consulting Group (RCG) in 1988. RCG was acquired by Navigant Consulting in 1997, where Mr. Reed served as an executive until leaving Navigant to join CEA as Chairman and Chief Executive Officer.

REPRESENTATIVE PROJECT EXPERIENCE

Executive Management

As an executive-level consultant, worked with CEOs, CFOs, other senior officers, and Boards of Directors of many of North America's top electric and gas utilities, as well as with senior political leaders of the U.S. and Canada on numerous engagements over the past 20 years. Directed merger, acquisition, divestiture, and project development engagements for utilities, pipelines and electric generation companies, repositioned several electric and gas utilities as pure distributors through a series of regulatory, financial, and legislative initiatives, and helped to develop and execute several "roll-up" or market aggregation strategies for companies seeking to achieve substantial scale in energy distribution, generation, transmission, and marketing.

Financial and Economic Advisory Services

Retained by many of the nation's leading energy companies and financial institutions for services relating to the purchase, sale or development of new enterprises. These projects included major new gas pipeline projects, gas storage projects, several non-utility generation projects, the purchase and sale of project development and gas marketing firms, and utility acquisitions. Specific services provided include the development of corporate expansion plans, review of acquisition candidates, establishment of divestiture standards, due diligence on acquisitions or financing, market entry or expansion studies, competitive assessments, project financing studies, and negotiations relating to these transactions.

Litigation Support and Expert Testimony

Provided expert testimony on more than 125 occasions in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included gas distribution utilities, gas pipelines, gas producers, oil producers, electric utilities, large energy consumers, governmental and regulatory agencies, trade associations, independent energy project developers, engineering firms, and gas and power marketers. Testimony has focused on issues ranging from broad regulatory and economic policy to virtually all elements of the utility ratemaking process. Also frequently testified regarding energy contract interpretation, accepted energy industry practices, horizontal and vertical market power, quantification of damages, and management prudence. Have been active in regulatory contract and litigation matters on virtually all interstate pipeline systems serving the U.S. Northeast, Mid-Atlantic, Midwest, and Pacific regions.

Also served on FERC Commissioner Terzic's Task Force on Competition, which conducted an industry-wide investigation into the levels of and means of encouraging competition in U.S. natural gas markets. Represented the interests of the gas distributors (the AGD and UDC) and participated actively in developing and presenting position papers on behalf of the LDC community.

Resource Procurement, Contracting and Analysis

On behalf of gas distributors, gas pipelines, gas producers, electric utilities, and independent energy project developers, personally managed or participated in the negotiation, drafting, and regulatory support of hundreds of energy contracts, including the largest gas contracts in North America, electric contracts representing billions of dollars, pipeline and storage contracts, and facility leases.

These efforts have resulted in bringing large new energy projects to market across North America, the creation of hundreds of millions of dollars in savings through contract renegotiation, and the regulatory approval of a number of highly contested energy contracts.

Strategic Planning and Utility Restructuring

Acted as a leading participant in the restructuring of the natural gas and electric utility industries over the past fifteen years, as an adviser to local distribution companies (LDCs), pipelines, electric utilities, and independent energy project developers. In the recent past, provided services to many of the top 50 utilities and energy marketers across North America. Managed projects that frequently included the redevelopment of strategic plans, corporate reorganizations, the development of multi-year regulatory and legislative agendas, merger, acquisition and divestiture strategies, and the development of market entry strategies. Developed and supported merchant function exit strategies, marketing affiliate strategies, and detailed plans for the functional business units of many of North America's leading utilities.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)
Chairman and Chief Executive Officer

Navigant Consulting, Inc. (1997 – 2002)
President, Navigant Energy Capital (2000 – 2002)
Executive Director (2000 – 2002)
Co-Chief Executive Officer, Vice Chairman (1999 – 2000)
Executive Managing Director (1998 – 1999)
President, REED Consulting Group, Inc. (1997 – 1998)

REED Consulting Group (1988 – 1997)
Chairman, President and Chief Executive Officer

R.J. Rudden Associates, Inc. (1983 – 1988)
Vice President

Stone & Webster Management Consultants, Inc. (1981 – 1983)
Senior Consultant
Consultant

Southern California Gas Company (1976 – 1981)
Corporate Economist
Financial Analyst
Treasury Analyst

EDUCATION AND CERTIFICATION

BS, Economics and Finance, Wharton School, University of Pennsylvania, 1976
Licensed Securities Professional: NASD Series 7, 63, and 24 Licenses.

BOARDS OF DIRECTORS (PAST AND PRESENT)

Concentric Energy Advisors, Inc.
Navigant Consulting, Inc.
Navigant Energy Capital
Nukem, Inc.
New England Gas Association
R. J. Rudden Associates
REED Consulting Group

AFFILIATIONS

National Association of Business Economists
International Association of Energy Economists
American Gas Association
New England Gas Association
Society of Gas Lighters
Guild of Gas Managers

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Alaska Public Utilities Commission				
Chugach Electric	12/86	Chugach Electric	Docket No. U-86-11	Cost Allocation
Chugach Electric	6/87	Enstar Natural Gas Company	Docket No. U-87-2	Tariff Design
Chugach Electric	12/87	Enstar Natural Gas Company	Docket No. U-87-42	Gas Transportation
Chugach Electric	2/88	Chugach Electric	Docket No. U-87-35	Cost of Capital
California Energy Commission				
Southern California Gas Co.	8/80	Southern California Gas Co.	Docket No. 80-BR-3	Gas Price Forecasting
California Public Utility Commission				
Southern California Gas Co.	3/80	Southern California Gas Co.	TY 1981 G.R.C.	Cost of Service, Inflation
Pacific Gas Transmission Co.	10/91	Pacific Gas & Electric Co.	App. 89-04-033	Rate Design
Pacific Gas Transmission Co.	7/92	Southern California Gas Co.	A. 92-04-031	Rate Design
Colorado Public Utilities Commission				
AMAX Molybdenum	2/90	Commission Rulemaking	Docket No. 89R-702G	Gas Transportation
AMAX Molybdenum	11/90	Commission Rulemaking	Docket No. 90R-508G	Gas Transportation
Xcel Energy	8/04	Xcel Energy	Docket No. 031-134E	Cost of Debt
Conn. Department of Public Utilities Control				
Connecticut Natural Gas	12/88	Connecticut Natural Gas	Docket No. 88-08-15	Gas Purchasing Practices
United Illuminating	3/99	United Illuminating	Docket No. 99-03-04	Nuclear Plant Valuation
Southern Connecticut Gas	2/04	Southern Connecticut Gas	Docket No. 00-12-08	Gas Purchasing Practices
Southern Connecticut Gas	4/05	Southern Connecticut Gas	Docket No. 05-03-17	LNG/Trunkline
District Of Columbia PSC				
Potomac Electric Power Company	3/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Direct)
Potomac Electric Power Company	5/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Supplemental Direct)
Potomac Electric Power Company	7/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Rebuttal)

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Federal Energy Regulatory Commission				
Western Gas Interstate Company	5/84	Western Gas Interstate Company	Docket No. RP84-77	Load Fcst. Working Capital
Southern Union Gas	4/87	El Paso Natural Gas Company	Docket No. RP87-16-000	Take-or-Pay Costs
Connecticut Natural Gas	11/87	Penn-York Energy Corporation	Docket No. RP87-78-000	Cost Alloc./Rate Design
AMAX Magnesium	12/88	Questar Pipeline Company	Docket No. RP88-93-000	Cost Alloc./Rate Design
Western Gas Interstate Company	6/89	Western Gas Interstate Company	Docket No. RP89-179-000	Cost Alloc./Rate Design, Open-Access Transportation
Associated CD Customers	12/89	CNG Transmission	Docket No. RP88-211-000	Cost Alloc./Rate Design
Utah Industrial Group	9/90	Questar Pipeline Company	Docket No. RP88-93, Phase II	Cost Alloc./Rate Design
Iroquois Gas Trans. System	8/90	Iroquois Gas Transmission System	Docket No. CP89-634-000	Gas Markets, Rate Design, Cost of Capital, Capital Structure
Boston Edison Company	1/91	Boston Edison Company	Docket No. ER91-243-000	Electric Generation Markets
Cincinnati Gas and Electric Co., Union Light, Heat and Power Company, Lawrenceburg Gas Company	7/91	Texas Gas Transmission Corp.	Docket No. RP90-104-000, RP88-115-000, RP90-192-000	Cost Alloc./Rate Design Comparability of Svc.
Ocean State Power II	7/91	Ocean State Power II	ER89-563-000	Competitive Market Analysis, Self-dealing
Brooklyn Union/PSE&G	7/91	Texas Eastern	RP88-67, et al	Market Power, Comparability of Service
Northern Distributor Group	9/92	Northern Natural Gas Company	RP92-1-000, et al	Cost of Service
Canadian Association of Petroleum Producers and Alberta Pet. Marketing Comm.	10/92	Lakehead Pipe Line Co. L.P.	IS92-27-000	Rate Case Analysis Cost of Service
Colonial Gas, Providence Gas	7/93	Algonquin Gas Transmission	RP93-14	Cost Allocation, Rate Design
Colonial Gas, Providence Gas	8/93	Algonquin Gas Transmission	RP93-14 – Rebuttal	Cost Allocation, Rate Design
Iroquois Gas Transmission	94	Iroquois Gas Transmission	RP94-72-000	Cost of Service and Rate Design
Transco Customer Group	1/94	Transcontinental Gas Pipeline Corporation	Docket No. RP92-137-000	Rate Design, Firm to Wellhead
Pacific Gas Transmission	2/94	Pacific Gas Transmission	Docket No. RP94-149-000	Rolled-In vs. Incremental Rates
Tennessee GSR Group	1/95	Tennessee Gas Pipeline Company	Docket Nos. RP93-151-000, RP94-39-000, RP94-197-000, RP94-309-000	GSR Costs

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Pacific Gas Transmission	2/95	Pacific Gas Transmission	RP94-149-000	Rate Design
Tennessee GSR Customer Group	3/95	Tennessee Gas Pipeline Company	Docket Nos. RP93-151-000, RP94-39-000, RP94-197-000, RP94-309-000	GSR Costs
ProGas and Texas Eastern	1/96	Tennessee Gas Pipeline Company	RP93-151	Declaration
PG&E and SoCal Gas	96	El Paso Natural Gas Company	RP92-18	Stranded Costs
Iroquois Gas Transmission System, L.P.	97	Iroquois Gas Transmission System, L.P.	RP97-126-000	Cost of Service, Rate Design
BEC Energy - Commonwealth Energy System	2/99	Boston Edison Company/ Commonwealth Energy System	EC99-___-000	Market Power Analysis – Merger
Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	10/00	Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	Docket No. EC00-___	Market Power 203/205 Filing
Wyckoff Gas Storage	12/02	Wyckoff Gas Storage	CP03-33-000	Need for Storage Project
Indicated Shippers/Producers	10/03	Northern Natural Gas	Docket No. RP98-39-029	Ad Valorem Tax Treatment
Maritimes & Northeast Pipeline	6/04	Maritimes & Northeast Pipeline	Docket No. RP04-360-000	Rolled-In Rates
ISO New England	8/04	ISO New England	Docket No. ER03-563-030	Cost of New Entry
Hawaii Public Utility Commission				
Hawaiian Electric Light Company, Inc. (HELCO)	6/00	Hawaiian Electric Light Company, Inc.	Docket No. 99-0207	Standby Charge
Indiana Utility Regulatory Commission				
Northern Indiana Public Service Company	10/01	Northern Indiana Public Service Company	Docket No. 99-0207	Direct Testimony, Valuation of Electric Generating Facilities
Maine Public Utility Commission				
Northern Utilities	5/96	Granite State and PNGTS	Docket No. 95-480, 95-481	Transportation Service and PBR

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Maryland Public Service Commission				
Eastalco Aluminum	3/82	Potomac Edison	Docket No. 7604	Cost Allocation
Potomac Electric Power Company	8/99	Potomac Electric Power Company	Docket No. 8796	Stranded Cost & Price Protection (Direct)
Mass. Department of Public Utilities				
Haverhill Gas	5/82	Haverhill Gas	Docket No. DPU #1115	Cost of Capital
New England Energy Group	1/87	Commission Investigation		Gas Transportation Rates
Energy Consortium of Mass.	9/87	Commonwealth Gas Company	Docket No. DPU-87-122	Cost Alloc./Rate Design
Mass. Institute of Technology	12/88	Middleton Municipal Light	DPU #88-91	Cost Alloc./Rate Design
Energy consortium of Mass.	3/89	Boston Gas	DPU #88-67	Rate Design
PG&E Bechtel Generating Co./ Constellation Holdings	10/91	Commission Investigation	DPU #91-131	Valuation of Environmental Externalities
The Berkshire Gas Company	5/92	The Berkshire Gas Company	DPU #92-154	Gas Purchase Contract Approval
Essex County Gas Company	5/92	Essex County Gas Company	DPU #92-155	Gas Purchase Contract Approval
Fitchburg Gas and Elec. Light Co.	5/92	Fitchburg Gas and Elec. Light Co.	DPU #92-156	Gas Purchase Contract Approval
Boston Edison Company	7/92	Boston Edison	DPU #92-130	Least Cost Planning
Boston Edison Company	7/92	The Williams/Newcorp Generating Co.	DPU #92-146	RFP Evaluation
Boston Edison Company	7/92	West Lynn Cogeneration	DPU #92-142	RFP Evaluation
Boston Edison Company	7/92	L’Energia Corp.	DPU #92-167	RFP Evaluation
Boston Edison Company	7/92	DLS Energy, Inc.	DPU #92-153	RFP Evaluation
Boston Edison Company	7/92	CMS Generation Co.	DPU #92-166	RFP Evaluation
Boston Edison Company	7/92	Concord Energy	DPU #92-144	RFP Evaluation
The Berkshire Gas Company	11/93	The Berkshire Gas Company	DPU #93-187	Gas Purchase Contract Approval
Colonial Gas Company	11/93	Colonial Gas Company	DPU #93-188	Gas Purchase Contract Approval
Essex County Gas Company	11/93	Essex County Gas Company	DPU #93-189	Gas Purchase Contract Approval
Fitchburg Gas and Electric Company	11/93	Fitchburg Gas and Electric Company	DPU #93-190	Gas Purchase Contract Approval
Bay State Gas Company	10/93	Bay State Gas Company	Docket No. 93-129	Integrated Resource Planning
Boston Edison Company	94	Boston Edison	DPU #94-49	Surplus Capacity
Hudson Light & Power Department	4/95	Hudson Light & Power Dept.	DPU #94-176	Stranded Costs – Direct
Essex County Gas Company	5/96	Essex County Gas Company	Docket No. 96-70	Unbundled Rates

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Boston Edison Company	8/97	Boston Edison Company	D.P.U. No. 97-63	Holding Company Corporate Structure
Berkshire Gas Company	6/98	Berkshire Gas Mergeco Gas Co.	D.T.E. 98-87	Regulatory Issues
Eastern Edison Company	8/98	Montaup Electric Company	D.T.E. 98-83	Marketing for divestiture of its generation business.
Boston Edison Company	98	Boston Edison Company	D.T.E. 97-113	Fossil Generation Divestiture
Boston Edison Company	98	Boston Edison Company	D.T.E. 98-119	Nuclear Generation Divestiture
Eastern Edison Company	12/98	Montaup Electric Company	D.T.E. 99-9	
Mass. Energy Facilities Siting Council				
Mass. Institute of Technology	1/89	M.M.W.E.C.	EFSC-88-1	Least-Cost Planning
Boston Edison Company	9/90	Boston Edison	EFSC-90-12	Electric Generation Mkts
Silver City Energy Ltd. Partnership	11/91	Silver City Energy	D.P.U. 91-100	State Policies; Need for Facility
Michigan Public Service Commission				
Detroit Edison Company	9/98	Detroit Edison Company	Case No. U-11726	Market Value of Generation Assets
Minnesota Public Utilities Commission				
Xcel Energy/No. States Power	9/04	Xcel Energy/No. States Power	Docket No. G002/GR-04-XXX	Cost of Debt
Missouri Public Service Commission				
Missouri Gas Energy	1/03	Missouri Gas Energy	Case No. GR-2001-382	Gas Purchasing Practices; Prudence
Aquila Networks	2/04	Aquila-MPS, Aquila_L&P	Case Nos. ER-2004-0034 HR-2004-0024	Cost of Capital, Capital Structure
Aquila Networks	2/04	Aquila-MPS, Aquila_L&P	Case No. GR-2004-0072	Cost of Capital, Capital Structure
Montana Public Service Commission				
Great Falls Gas Company	10/82	Great Falls Gas Company	Docket No. 82-4-25	Gas Rate Adjust. Clause

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Nat. Energy Board of Canada				
Alberta-Northeast	2/87	Alberta Northeast Gas Export Project	Docket No. GH-1-87	Gas Export Markets
Alberta-Northeast	11/87	TransCanada Pipeline	Docket No. GH-2-87	Gas Export Markets
Alberta-Northeast	1/90	TransCanada Pipeline	Docket No. GH-5-89	Gas Export Markets
Indep. Petroleum Association of Canada	1/92	Interprovincial Pipe Line, Inc.	RH-2-91	Pipeline Valuation, Toll
The Canadian Association of Petroleum Producers	11/93	Transmountain Pipe Line	RH-1-93	Cost of Capital
Alliance Pipeline L.P.	6/97	Alliance Pipeline L.P.	GH-3-97	Market Study
Maritimes & Northeast Pipeline	97	Sable Offshore Energy Project	GH-6-96	Market Study
Maritimes & Northeast Pipeline	2/02	Maritimes & Northeast Pipeline	GH-3-2002	Natural Gas Demand Analysis
TransCanada Pipelines	8/04	TransCanada Pipelines	RH-3-2004	Segmented Service
New Hampshire Public Utilities Commission				
Bus & Industry Association	6/89	P.S. Co. of New Hampshire	Docket No. DR89-091	Fuel Costs
Bus & Industry Association	5/90	Northeast Utilities	Docket No. DR89-244	Merger & Acq. Issues
Eastern Utilities Associates	6/90	Eastern Utilities Associates	Docket No. DF89-085	Merger & Acq. Issues
EnergyNorth Natural Gas	12/90	EnergyNorth Natural Gas	Docket No. DE90-166	Gas Purchasing Practices
EnergyNorth Natural Gas	7/90	EnergyNorth Natural Gas	Docket No. DR90-187	Special Contracts, Discounted Rates
Northern Utilities, Inc.	12/91	Commission Investigation	Docket No. DR91-172	Generic Discounted Rates
New Jersey Board of Public Utilities				
Hilton/Golden Nugget	12/83	Atlantic Electric	B.P.U. 832-154	Line Extension Policies
Golden Nugget	3/87	Atlantic Electric	B.P.U. No. 837-658	Line Extension Policies
New Jersey Natural Gas	2/89	New Jersey Natural Gas	B.P.U. GR89030335J	Cost Alloc./Rate Design
New Jersey Natural Gas	1/91	New Jersey Natural Gas	B.P.U. GR90080786J	Cost Alloc./Rate Design
New Jersey Natural Gas	8/91	New Jersey Natural Gas	B.P.U. GR91081393J	Rate Design; Weather Norm. Clause
New Jersey Natural Gas	4/93	New Jersey Natural Gas	B.P.U. GR93040114J	Cost Alloc./Rate Design
South Jersey Gas	4/94	South Jersey Gas	BRC Dock No. GR080334	Revised levelized gas adjustment
New Jersey Utilities Association	9/96	Commission Investigation	BPU AX96070530	PBOP Cost Recovery

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
New Mexico Public Service Commission				
Gas Company of New Mexico	11/83	Public Service Co. of New Mexico	Docket No. 1835	Cost Alloc./Rate Design
New York Public Service Commission				
Iroquois Gas. Transmission	12/86	Iroquois Gas Transmission System	Case No. 70363	Gas Markets
Brooklyn Union Gas Company	8/95	Brooklyn Union Gas Company	Case No. 95-6-0761	Panel on Industry Directions
Central Hudson, ConEdison and Niagara Mohawk	9/00	Central Hudson, ConEdison and Niagara Mohawk	Case No. 96-E-0909 Case No. 96-E-0897 Case No. 94-E-0098 Case No. 94-E-0099	Section 70
Central Hudson, New York State Electric & Gas, Rochester Gas & Electric	5/01	Joint Petition of NiMo, NYSEG, RG&E, Central Hudson, Constellation and Nine Mile Point	Case No. 01-E-0011	Section 70, Rebuttal Testimony
Rochester Gas & Electric	12/03	Rochester Gas & Electric	Case No. 03-E-1231	Sale of Nuclear Plant
Rochester Gas & Electric	01/04	Rochester Gas & Electric	Case No. 03-E-0765	Sale of Nuclear Plant; Ratemaking Treatment of Sale
Oklahoma Corporation Commission				
Oklahoma Natural Gas Company	6/98	Oklahoma Natural Gas Company	Case PUD No. 980000177	Evaluate their use of storage
Pennsylvania Public Utility Commission				
ATOC	4/95	Equitrans	Docket No. R-00943272	Tariff Changes
ATOC	3/96	Equitrans	Docket No. P-00940886	Rate Service - Direct
Rhode Island Public Utilities Commission				
Newport Electric	7/81	Newport Electric	Docket No. 1599	Rate Attrition
South County Gas	9/82	South County Gas	Docket No. 1671	Cost of Capital
New England Energy Group	7/86	Providence Gas Company	Docket No. 1844	Cost Alloc./Rate Design
Providence Gas	8/88	Providence Gas Company	Docket No. 1914	Load Forecast., Least-Cost Planning

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Providence Gas Company and The Valley Gas Company	1/01	Providence Gas Company and The Valley Gas Company	Docket No. 1673 and 1736	Gas Cost Mitigation Strategy
The New England Gas Company	3/03	New England Gas Company	Docket No. 3459	Cost of Capital
Texas Public Utility Commission				
Southwestern Electric	5/83	Southwestern Electric		Cost of Capital, CWIP
P.U.C. General Counsel	11/90	Texas Utilities Electric Company	Docket No. 9300	Gas Purchasing Practices
Texas Railroad Commission				
Southern Union Gas	5/85	Southern Union Gas Company	G.U.D. 1891	Cost of Service
Utah Public Service Commission				
AMAX Magnesium	1/88	Mountain Fuel Supply Company	Case No. 86-057-07	Cost Alloc./Rate Design
AMAX Magnesium	4/88	Utah P&L/Pacific P&L	Case No. 87-035-27	Merger & Acquisition
Utah Industrial Group	7/90	Mountain Fuel Supply	Case No. 89-057-15	Gas Transportation Rates
AMAX Magnesium	9/90	Utah Power & Light	Case No. 89-035-06	Energy Balancing Account
AMAX Magnesium	8/90	Utah Power & Light	Case No. 90-035-06	Electric Service Priorities
Vermont Public Service Board				
Green Mountain Power	8/82	Green Mountain Power	Docket No. 4570	Rate Attrition
Green Mountain Power	12/97	Green Mountain Power	Docket No. 5983	Tariff Filing
Green Mountain Power	7/98	Green Mountain Power	Docket No. 6107	Direct Testimony
Green Mountain Power	9/00	Green Mountain Power	Docket No. 6107	Rebuttal Testimony
Wisconsin Public Service Commission				
WEC & WICOR	11/99	WEC	Docket No. 9401-YO-100 Docket No. 9402-YO-101	Approval to Acquire the Stock of WICOR

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
American Arbitration Association				
Michael Polsky	3/91	M. Polsky vs. Indeck Energy		Corporate Valuation, Damages
ProGas Limited	7/92	ProGas Limited v. Texas Eastern	Arbitration Panel	Gas Contract Arbitration
Attala Generating Company	12/03	Attala Generating Co v. Attala Energy Co.	Case No. 16-Y-198-00228-03	Power Project Valuation; Breach of Contract; Damages
Commonwealth of Massachusetts, Suffolk Superior Court				
John Hancock	1/84	Trinity Church v. John Hancock	C.A. No. 4452	Damages Quantification
State of Colorado District Court, County of Garfield				
Questar Corporation, et al	11/00	Questar Corporation, et al.	Case No. 00CV129-A	Partnership Fiduciary Duties
Illinois Appellate Court, Fifth Division				
Norweb, plc	8/02	Indeck No. America v. Norweb	Docket No. 97 CH 07291	Breach of Contract; Power Plant Valuation
Independent Arbitration Panel				
Ocean State Power	9/02	Ocean State Power v. ProGas Ltd.	2001/2002 Arbitration	Gas Price Arbitration
Ocean State Power	2/03	Ocean State Power v. ProGas Ltd.	2002/2003 Arbitration	Gas Price Arbitration
Ocean State Power	6/04	Ocean State Power v. ProGas Ltd.	2003/2004 Arbitration	Gas Price Arbitration
International Court of Arbitration				
Wisconsin Gas Company, Inc.	2/97	Wisconsin Gas Co. vs. Pan-Alberta	Case No. 9322/CK	Contract Arbitration
Minnegasco, A Division of NorAm Energy Corp.	3/97	Minnegasco vs. Pan-Alberta	Case No. 9357/CK	Contract Arbitration
Utilicorp United Inc.	4/97	Utilicorp vs. Pan-Alberta	Case No. 9373/CK	Contract Arbitration
IES Utilities	97	IES vs. Pan-Alberta	Case No. 9374/CK	Contract Arbitration
U.S. Securities and Exchange Commission				
Eastern Utilities Association	10/92	EUA Power Corporation	File No. 70-8034	Value of EUA Power
State of Rhode Island, Providence City Court				
Aquidneck Energy	5/87	Laroche vs. Newport		Least-Cost Planning

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
State of Texas Hutchinson County Court				
Western Gas Interstate	5/85	State of Texas vs. Western Gas Interstate Co.	Case No. 14,843	Cost of Service
U.S. Bankruptcy Court, District of New Hampshire				
EUA Power Corporation	7/92	EUA Power Corporation	Case No. BK-91-10525-JEY	Pre-Petition Solvency
U.S. Bankruptcy Court, So. District Of New York				
Johns Manville	5/04	Enron Energy Mktg. v. Johns Manville; Enron No. America v. Johns Manville	Case No. 01-16034 (AJG)	Breach of Contract; Damages
U.S. Bankruptcy Court, Northern District Of Texas				
Southern Maryland Electric Cooperative, Inc. and Potomac Electric Power Company	11/04	Mirant Corporation, et al. v. SMECO	Case No. 03-4659; Adversary No. 04-4073	PPA Interpretation; Leasing
U. S. District Court, Boulder County, Colorado				
KN Energy, Inc.	3/93	KN Energy vs. Colorado GasMark, Inc.	Case No. 92 CV 1474	Gas Contract Interpretation
U. S. District Court, Northern California				
Pacific Gas & Electric Co./PGT PG&E/PGT Pipeline Exp. Project	4/97	Norcen Energy Resources Limited	Case No. C94-0911 VRW	Fraud Claim
U. S. District Court, District of Connecticut				
Constellation Power Source, Inc.	12/04	Constellation Power Source, Inc. v. Select Energy, Inc.	Civil Action 304 CV 983 (RNC)	ISO Structure, Breach of Contract
U.S. District Court, Massachusetts				
Eastern Utilities Associates & Donald F. Pardus	3/94	NECO Enterprises Inc. vs. Eastern Utilities Associates	Civil Action No. 92-10355-RCL	Seabrook Power Sales

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
U. S. District Court, Montana				
KN Energy, Inc.	9/92	KN Energy v. Freeport MacMoRan	Docket No. CV 91-40-BLG-RWA	Gas Contract Settlement
U.S. District Court, New Hampshire				
Portland Natural Gas Transmission and Maritimes & Northeast Pipeline	9/03	Public Service Company of New Hampshire vs. PNGTS and M&NE Pipeline	Docket No. C-02-105-B	Impairment of Electric Transmission Right-of-Way
U. S. District Court, Southern District of New York				
Central Hudson Gas & Electric	11/99	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Expert Report, Shortnose Sturgeon Case
Central Hudson Gas & Electric	8/00	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Revised Expert Report, Shortnose Sturgeon Case
Consolidated Edison	3/02	Consolidated Edison v. Northeast Utilities	Case No. 01 Civ. 1893 (JGK) (HP)	Industry Standards for Due Diligence
Merrill Lynch & Company	1/05	Merrill Lynch v. Allegheny Energy, Inc.	Civil Action 02 CV 7689 (HB)	Due Diligence, Breach of Contract, Damages
U. S. District Court, Eastern District of Virginia				
Aquila, Inc.	1/05	VPEM v. Aquila, Inc.	Civil Action 304 CV 411	Breach of Contract, Damages
U. S. District Court, Portland Maine				
ACEC Maine, Inc. et al.	10/91	CIT Financial vs. ACEC Maine	Docket No. 90-0304-B	Project Valuation
Combustion Engineering	1/92	Combustion Eng. vs. Miller Hydro	Docket No. 89-0168P	Output Modeling; Project Valuation

DEC 22 2003
12-19-03

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Staff's Recommendation	)	
In Missouri Gas Energy's 2001-2002	)	Case No. GR-2002-348
Actual Cost Adjustment.	)	

STAFF'S RECOMMENDATION IN THIS CASE

COMES NOW the Staff of the Missouri Public Service Commission ("Staff") and files its Recommendation in this case.

1. On October 18, 2002, Missouri Gas Energy (MGE) filed proposed tariff sheets with the Missouri Public Service Commission containing MGE's calculations of the ACA, Refund, Transition Costs, and Take-or-Pay account balances.

2. The Procurement Analysis Staff has audited MGE's documentation and has prepared the attached Memorandum.

3. Staff performed a thorough review and has made recommendations to assure, among other things that MGE obtains sufficient but not excess capacity to meet its customers needs.

4. Staff has other recommendations that it believes are necessary to assure that MGE is making prudent gas supply decisions.

WHEREFORE, the Staff respectfully requests that the Commission issue an order that MGE comply with all of the Staff's recommendations as set out in the attached Memorandum and Staff also suggests that this ACA case remain open pending an Order from the Commission in Case No. GR-98-167, Case No. GR-99-304, Case No. GR-2000-425 and Case No. GR-2001-382.

NP

Respectfully submitted,

DANA K. JOYCE
General Counsel

/s/ Lera L. Shemwell

Lera L. Shemwell
Senior Counsel
Missouri Bar No. 43792

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Certificate of Service

I hereby certify that copies of the foregoing have been mailed emailed, sent by facsimile or hand-delivered to all counsel of record this 19th day of December 2003.

/s/ Lera L. Shemwell

MEMORANDUM

TO: Missouri Public Service Commission Official Case File, Case No. GR-2002-0348, Missouri Gas Energy, a Division of Southern Union Company

FROM: Dave Sommerer, Manager- Procurement Analysis Department
Anne Allee, Regulatory Auditor -Procurement Analysis Department
Lesa Jenkins, P.E., Regulatory Engineer, Procurement Analysis Department
Kwang Choe, PhD, Regulatory Economist, Procurement Analysis Department

/s/ Dave Sommerer 12/18/03	/s/ Thomas R. Schwarz 12/18/03
Project Coordinator / Date	General Counsel's Office / Date

SUBJECT: Staff's Recommendation in Missouri Gas Energy's 2001-2002 Actual Cost Adjustment Filing

DATE: December 18, 2003

The Staff has reviewed the Missouri Gas Energy (MGE or Company) 2001-2002 Actual Cost Adjustment (ACA) filing. The filing was made on October 18, 2002, and is docketed as Case No. GR-2002-0348. The filing contains the Company's calculations of the ACA, Refund, Transition Costs, and Take-or-Pay account balances.

MGE serves approximately 508,000 customers in the Kansas City, Joplin and St. Joseph area. MGE transports its gas supply over Panhandle Eastern Pipe Line (PEPL), Williams Gas Pipeline (Williams) now called Southern Star Central Gas Pipeline, Mid-Kansas Partnership/Riverside Pipeline Company (MKP/RPC) now called Kansas Pipeline Company (KPC) and KN Interstate Pipeline (KNIP).

The Staff's review consisted of an analysis of the billed revenues and actual gas costs, for the period of July 1, 2001 to June 30, 2002. A comparison of billed revenue recovery with actual gas costs will yield either an over-recovery or under-recovery of the ACA, Refund, Take-or-Pay (TOP) and Transition Cost balances. The Staff also reviewed MGE's gas purchasing practices to determine the prudence of the Company's purchasing and operating decisions.

In addition, Staff conducted a reliability analysis for MGE including a review of estimated peak day requirements and the capacity levels to meet those requirements, peak day reserve margin and the rationale for this reserve margin, comparison of actual demand to estimated demand and annual estimated demand.

MKP/RPC PIPELINE ADJUSTMENT

MGE incurred natural gas costs, with respect to its transportation contract with KPC, that are substantially greater than comparable pipelines. Based upon this, the Staff has proposed the following adjustments to reduce MGE's gas costs in the prior four ACA cases:

Case Number	ACA Period	Adjustment
GR-96-450	1996/1997	$3,490,082.81
GR-98-167	1997/1998	$4,330,731.88
GR-99-304	1998/1999	$5,914,199.59
GR-2000-425	1999/2000	$5,886,058.13
GR-2001-382	2000/2001	5,341,127.63

Likewise, the Staff proposes to reduce MGE's gas costs by $6,099,369.34 for this ACA period. The Staff believes this adjustment is necessary for the same reasons that the Commission found that an adjustment was appropriate in Case No. GR-93-140, that the heart of the problem with the initial 1991 contract was the excessive transportation charges from the Kansas Pipeline company (KPC) contract, when compared to the costs to transport gas on the Williams system. The subsequent modifications to the contracts mitigated, but did not completely eliminate, the imprudence of the KPC contract cited by the Commission in Case No. GR-93-140. These excessive transportation charges were simply continued in the 1995 contracts, with some mitigation that Staff fully credits in its proposed adjustments for the relevant periods. During 1998, the existing sales service with KPC was replaced with a "transportation only" service rather than the historical "bundled" (supply and transportation) service acquired from KPC. On March 12, 2002, the Commission issued a Report and Order in Case No. GR-96-450. Although the Commission did not rule in favor of the Staff's prudence disallowance in Case No. GR-96-450, it did not specifically rule on the question of whether or not a Stipulation and Agreement filed in 1996 barred future prudence reviews. The Report and Order was subsequently appealed by KPC. The Commission's Report and Order in Case No. GR-96-450 is now before the Court of Appeals. On September 10, 2002, the Commission consolidated the ACA cases for the periods covering July 1997 through June of 2001. The Commission noted that "a second portion of the procedural schedule leading to a hearing on the MKP/RPC contract issue may need to be established after completion of the hearing on the first set of issues. The Commission will issue a single Report and Order after completion of both portions of the hearing." The hearing for the first set of issues was recently concluded and in fact was itself bifurcated into a two-part hearing. There is no procedural schedule at this time, to address the consolidated MKP/RPC contract issue.

HEDGING

In its review of MGE's purchasing practices, the Staff reviewed the Company's hedging transactions. Although MGE employed storage, fixed forward price and collars strategies for the 2001/2002 winter, the Staff did not find any evidence that the Company maintained a current hedging plan or risk management plan. Furthermore, MGE did not provide the Staff with any documentation or analyses for each hedging transaction at the time the transaction was completed that would help the Staff understand the rationale for entering into each hedging decision. Therefore, the Staff recommends that for the 2003/2004 ACA period forward, the Company provide documentation for each hedging transaction from the time the decision is made and the transaction is executed to include: (1) the purpose of the hedge, (2) the Company evaluation of the market conditions supporting the hedge, and (3) all transactions details, including but not limited to, the date the transaction is executed and the costs to establish the hedge position, if any. The same information should be noted and provided to Staff for any hedge that is liquidated. In addition, when storage is relied upon as part of the Company's hedging strategy, an analysis needs to be done that evaluates the interplay between monthly storage available under various operating/weather conditions versus financial and fixed price gas supply hedges. Finally, when the vast majority of the Company's gas supply portfolio is indexed based and is not finalized until late summer, additional price exposure is created by prevailing market forces in that short period of time. The Company should perform multi-period planning for its gas supply packages with a due consideration given to pricing that is diversified. Such considerations should take place well in advance of the impending winter. For the 2002/2003 ACA period, the Staff recommends that the Company provide all documentation noted above supporting its hedging decisions. The Staff further recommends this documentation should be maintained and be made available to the Staff during each ACA review.

RELIABILITY ANALYSIS

The Company submitted a 2001/2002 Reliability Report that shows peak day estimates for the 12 years of 2000/2001 through 2011/2012. Staff has the following concerns regarding the Company's reliability analysis.

1. Staff questions whether the Company has adequately planned for peak day demand for each area served by specific pipelines. The Company's Reliability Report estimates peak firm usage for the entire Missouri system – no separate analysis is done for the three major service areas of Kansas City, Joplin and St. Joseph. However, the 2001/2002 Reliability Report states that the St. Joseph and Joplin areas are served exclusively by Southern Star Central Gas Pipeline, Inc. (f/k/a) Williams Gas Pipelines – Central, and Panhandle Eastern Pipe Line provides exclusive service to small farming communities located east of Kansas City. Page 23 of the Reliability Report states that ** ____________________________
____
____
____
____
______________ **.

   Staff requested clarifying information from MGE and analyses and work papers showing the peak day demand in Warrensburg for the 2001/2002 ACA period and for the 2000/2001 ACA period. The Company provided a copy of various emails from 1996 and 1997 (DR57).

These emails raise an issue about needed capacity east of Kansas City and ask the question of whether ** ____ **.

Staff recommends that the Company submit more complete detail than that provided in the Company's Reliability Reports that documents the Company's analysis of usage and capacity for areas served by specific pipeline(s) to assure that adequate, but not excessive capacity, is available to meet peak day requirements. Staff recommends that this information be submitted to address the Reliability issues for the next ACA case, the 2002/2003 ACA, Case No. GR-2003-0330.

2. Staff continues to have concerns with the methodology used by the Company to calculate the system-wide peak day requirements.

   a. The Company states that a series of regression analyses are performed on the historic daily firm sales to determine the base load and weather sensitive heat load factors. However, the information provided by the Company to-date does not support that regression analyses are used to develop the base load and heat load estimates. In its May 14, 2002 document, the Company states that it has been unable to locate the original base regression that was used in determining the base load and heat load factors.

   b. The base load reported in the 2001/2002 Reliability Report is ** ______ ** and is the same in the current and past three Reliability Reports (1997/1998, 1998/1999 and 2000/2001). The Company is proposing in future forecasts, to calculate a new base load factor by averaging summer months from 1996 forward where there are zero heating degree days (HDD). The Company states that the past two years of data shows a lower base load trend, but the Company is concerned about lowering this factor too soon.

   Staff is concerned that the Company is including data from too far back and that customer usage patterns could have changed or customer mix could have changed in that time. The Company should consider a shorter time frame to establish the base load and should consider other estimating techniques such as a regression analysis to estimate the base load. The Company may also find in performing a more detailed regression analysis that the base load is different in the summer months, shoulder months (spring and fall) and winter months. Meeting customers' needs requires prudent planning, which should have included such an analysis. Staff recommends that the Company reevaluate its base load estimate and that supporting analysis be provided to Staff. Such an evaluation should encompass the 2001/2002

ACA period and provide a reasonable outlook for the next four to five ACA periods, 2002/2003, 2003/2004, 2004/2005, 2005/2006 and 2006/2007.

c. As with the 1999/2000 and 2000/2001 ACA reviews, the heat load estimate in the Company's Reliability Report for the peak day is not from a series of regression analyses as stated by the Company. MGE simply uses an evaluation of one cold day to estimate the heat load factor. This same methodology appears to be used by the Company in its May 14, 2002 document that describes a revised base load methodology. As noted in prior ACA cases, Staff does not believe that the review of one cold day in each year, one data point, is sufficient to establish the peak day heat load factor. Accurate determination of peak day requirements is essential to adequate risk analysis and management so that customers' needs may be met without overestimation of the risk.

Staff would expect to see a review of one or two years of daily data (monthly data if daily data is not available or is not reliable) to estimate a heat load factor. With computer software, it is fairly easy for the Company to conduct a regression analysis of usage data and HDD data to obtain estimates of base load and heat load. Such an analyses would also provide an estimate of the coefficient of determination, R^2, which indicates whether the factors being considered have a good correlation with estimated usage. It would also be prudent for the Company to consider other factors such as whether weekday or weekends have an impact on expected usage, whether seasonal businesses have an impact on expected usage; whether base load is different in the summer months versus the winter months; etc. The factors to consider in usage analyses should be based on the Company's knowledge and evaluation of customer usage. If the Company expects growth/decline in a particular customer class, then the Company should submit the explanation for this growth/decline and adjust the base load or heat load factor accordingly – providing copies of the calculations to Staff.

Staff recommends that the Company reevaluate its heat load estimate and that supporting analysis be provided to Staff. Such an evaluation should encompass the 2001/2002 ACA period and reasonable outlook for the next 4-5 ACA periods, 2002/2003, 2003/2004, 2004/2005, 2005/2006 and 2006/2007.

d. The Company adds an annual escalator to the peak day estimate to calculate the peak day usage in future years. The escalator is ** _____ **, the same as in the 2000/2001 ACA. The escalator was ** _____ ** in the 1998/1999 Reliability Report. Insufficient explanation is given supporting the value of the escalator. Staff would not normally argue over ** _____ **, but this value is a consideration in calculating the reserve margin, which is an issue. Staff recommends that the Company provide supporting data and a more complete analysis for an escalator or other growth factor. Again thorough analysis of peak day usage is essential if the

Company is to plan adequately to meet its customers needs, without excess capacity purchases.

e. Staff obtains a different estimate of peak day than the Company. Staff cannot support the Company's current method of estimating peak day demand. The Staff's estimate is 7.3% lower than the Company's Reliability Report estimate.

Staff's estimate was calculated from a regression analysis of Company information for actual HDD and actual usage for July 1998 through June 2000. This regression analysis results in a coefficient of determination, R^2, of 0.9857, which means there is a strong relationship between HDD and expected usage, leading to the conclusion that Staff's methodology is reasonably accurate.

The Company estimate uses a base load factor that is not current and a heat load factor that is based on a review of usage on only a single cold day. There is no Company evaluation of how well or how poorly the Company base load and heat load factors predict peak day usage. Absent an evaluation of the reliability of the factors used to make a peak day usage estimate, reliance on the factors is not sound practice.

3. Staff evaluated the reasonableness of the Company's reserve margin (capacity less estimated peak day requirements). The Company provides no estimate of standard error and no other estimate of variability or its rationale for an appropriate reserve margin, other than to state that it's reserve margin is consistent with Staff's concept of an appropriate level of reserve margin in the Laclede ACA case, Case No. GR-2000-622, in which Staff stated that some variability is reasonable and until better rationale is developed a reserve of three percent be allowed.

It is not reasonable for MGE to automatically assume that three percent is a reasonable reserve margin to meet MGE's customer needs without any analysis. Staff reviews the reserve margin based on each local distribution company's (LDC) explanation of the assumptions used to estimate the peak demand and the capacity available to meet that demand. The reserve margin targeted by each LDC would be dependent upon a number of factors such as expected customer growth, the expiration date of contracts, cost of carrying any reserve volumes, the rationale surrounding the selection of the peak cold day and assumptions regarding peaking capacities. Therefore, a reserve margin that would be appropriate given one LDC's analysis, may not be appropriate for another LDC. It is especially unreasonable for MGE to use three percent when it has not evaluated the accuracy of the factors it used to estimate usage. Additionally, the larger issue for the Company is to more reasonably estimate peak day usage so that when contracts are renewed, the capacity is based on a reasonable estimate of peak day usage requirements.

When Staff's estimate of peak day is used, there is excess capacity in this ACA period. Staff considered two approaches to calculate the cost of this excess reserve margin. One approach considers a reserve equal to the standard error of the y-estimate obtained in Staff's regression analysis of Company data for actual HDD and actual usage for July 1998 through June 2000. The second approach considers a three percent reserve margin. Although there is no data that supports a greater reserve of three percent for MGE, a three percent reserve margin has been found in other Staff ACA reviews. Additionally, MGE has referred to the three percent reserve margin allowed by Staff in the Laclede case, Case No. GR-2000-622, as rationale for MGE's reserve margin. Staff also considered a third approach with a reserve equal to the average of the first two approaches.

For all three approaches, Staff took into consideration that the Company reviews capacity over longer blocks of time, as stated in its Reliability Report, to allow for contracting of capacity in blocks. Thus, more reserve may be warranted in the 2001/2002 ACA to allow for a sufficient reserve in the 2005/2006 ACA. Staff considered five-year planning for contracting of capacity as reasonable since the Company has contracts that expire in the fall of 2005 and the fall of 2006. If Staff accepts that the Company reviews capacity for the next five years when contracts are renewed, a review of peak day requirements in 2005/2006 is appropriate.

A summary follows of the peak day estimates and reserve margin considered by Staff:

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The excess reserve in 2001/2002 under the three approaches is ** ______ ** or ** ______ ** or ** ______ ** dekatherms per day (Dth/day), respectively for approach one, two or three. However, because of planning for capacity over a longer five year block of time, Staff is only proposing to disallow ** ______ ** or ** ______ ** or ** ______ ** Dth/day, respectively for approach one, two or three. The cost of the excess reserve for these three approaches is as follows:

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Summary of Reserve Margin Disallowance for 2001/2002 ACA	Reserve of Standard Error of y-estimate in Year 2005/2006	3% Reserve in Year 2005/2006	Reserve Equal to Average of These Two
Excess Capacity (Dth/day)	** ______ **	** ______ **	** ______ **
Recommended Disallowance	$1,589,989	$1,156,044	$1,373,016
Approx. Max # customers	508,000	508,000	508,000
$/customer/yr	$3.13	$2.28	$2.70

Staff has documented concerns with the Company's peak day planning/reliability analysis in the previous two cases, the 2000/2001 ACA, Case No. GR-2001-382, and the 1999/2000 ACA, Case No. GR-2000-425. Concerns with the Company's peak day planning are also documented in this case. Because of inadequate peak day analysis, the Company's estimates of peak day usage are not an appropriate basis to use in making decisions regarding contract renewal. However, the Company was making contract decisions impacting customer bills based on this inadequate analysis. ** ______________

____

____

______________ **. Excess reserve margins means that there is excess capacity, beyond reasonable levels, that is not required to meet the peak day requirements of MGE's customers. Pursuant to MGE's most recent rate case, Case No. GR-2001-292, if this excess capacity were released in the capacity release market, the Company keeps all revenues associated with this capacity release. The cost to customers for this excess capacity is $1,156,044 to $1,589,989 for the 2001/2002 ACA period, which is approximately $2.28-$3.13 per customer. Staff supports reasonable reserve margins to meet customer demand, and Staff believes that a reserve equal to the standard error of the y-estimate is more defensible because it is based on an analysis of MGE data. However, a disallowance in the range of these two approaches described above is acceptable. Therefore, because MGE made decisions based on inadequate information and analysis, Staff recommends a disallowance of the average of the two excess reserve margins, which is a disallowance of $1,373,016.

4. MGE's Reliability Report includes two annual load projections for 2001/2002. One looks at 30-years of normalized weather data and the other looks at 10-years of normalized weather data. The Company states that since projections based on 30 years result in a more conservative forecast, for reliability purposes, the Company will use it for fiscal 2002 planning.

MGE develops three separate forecasts for planning purposes – a base case, high case and low case forecast. The Company calculates heat load in its estimates of normal (base case) month usage, low case usage and high case usage from a review of the actual usage for the same month in the prior year. Staff has concerns about estimating a separate heat load factor for each heating season month based only on a review of the one-month usage in the prior year. The Company has done no analysis to verify that this methodology reasonably estimates monthly usage. Again, when the Company does nothing to test the reasonableness or accuracy of its methodology, basing decisions on that methodology is not sound practice. Additionally, the Company's low-case and high-case heat load estimates only consider 15 years of weather. As stated by the Company, a key consideration in the forecasting process is the firm demand during extreme weather conditions. Staff does not believe that a review of 15 years of weather data is sufficient, especially when 30 years data is readily available to account for the extremes in weather. At least 30 years of weather data should be considered in order to capture extreme cold and extreme warm temperatures.

Staff recommends that the Company's base-case, low-case and high-case estimates be reevaluated to consider a more thorough analysis of base load and heat load, which may be done by using a regression analysis as discussed above in item number two of this Reliability Analysis section. Additionally, to improve its reliability as an estimating method, this analysis should consider at least 30 years of weather data. Such an evaluation should encompass the 2001/2002 ACA period and reasonable outlook for at a minimum the 2002/2003 and 2003/2004 ACA periods. The Company's supporting data and analyses should be provided to Staff.

5. Staff continues to have concerns regarding the Company's planned normal storage withdrawals. MGE's current plan for normal weather is to have the largest planned withdrawal in November, the heating season month with the fewest number of heating degree days, and to have the smallest planned withdrawals in December and January, the heating season months with the greatest number of heating degree days. Staff's concerns were documented in the 2000/2001 ACA case, Case No. GR-2001-382. Staff would expect the plan for storage withdrawals to follow a similar distribution to that of normal heating degree days. It seems more reasonable that the Company would want to conserve storage so that it could have storage to meet customer demand during the later winter months when the potential for cold weather is still great.

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The actual withdrawals for 2001/2002 are not consistent with the Company's plan for normal storage withdrawals, but none of the months had normal HDD. The Company only withdrew ** ___ ** from storage compared to its plan of ** _____ **. Storage inventory at the end of March 2002 was at ** _____ ** of the maximum storage inventory (MSQ) and this is much higher than the planned end of March storage inventory of ** ____ ** of MSQ.

The Company's plans for meeting customers natural gas requirements from flowing supplies and from storage for situations involving other than normal weather each month of the winter is not documented. To state it another way, the Company has not provided any plans for meeting demand if the weather is extremely warm or extremely cold. Staff recommends that the Company more fully document its plans for flowing natural gas supplies (base load, term, swing, and spot) and planned storage injections and storage withdrawals to meet customer usage requirements for the extremes of warm or cold weather. The Company's documentation should encompass the 2001/2002 and 2002/2003 ACA periods. The documentation should also include more detail regarding minimum storage inventory that must be maintained in the early winter months so that adequate storage is available for the later winter months.

SUMMARY

The Staff has addressed the following concerns regarding Case No. GR-2001-382 for Missouri Gas Energy:

1. The Staff (pending a final Commission Order in Case Nos. GR-98-167, GR-99-304, GR-2000-425 and GR-2001-382) proposes for this ACA case, Case No. GR-2002-348 an adjustment to reduce MGE's gas costs by $6,099,369.34. This adjustment is reasonable and necessary for the same reasons as the Commission found in Case No. GR-93-140 that the problem with the imprudence of MGE entering into the initial 1991 KPC contract was the excessive transportation charges when compared to the Williams alternative. Staff expressed similar concerns in its direct, rebuttal and surrebuttal testimony filed in Case No. GR-96-450 and in its recommendations in Case Nos. GR-98-167, GR-99-304, GR-2000-425 and GR-2001-382. In June of 1998, the contract itself changed from the contract that was the subject in Case No. GR-96-450. The replacement contract is "transportation" only rather than the bundled supply and transportation service litigated in the 1996-1997 ACA case. The Staff believes the operation of the contract in subsequent ACA periods after June 1998 only serves to strengthen Staff's argument that the rates paid are excessive.

2. To adequately review MGE's hedging decisions, Staff recommends that additional information be submitted.

3. To adequately review MGE's estimated peak day requirements and the rationale for the reserve margins, Staff recommends that additional information be submitted by March 2, 2004.

4. Staff recommends disallowance of $1,373,016 to reflect the excess gas costs for peak day reserve.

RECOMMENDATIONS

1. The Staff recommends that this ACA case remain open pending an Order from the Commission in Case Nos. GR-98-167, GR-99-304, GR-2000-425 and GR-2001-382.

2. Establish the account balances shown in the table below in it next ACA filing to reflect the (over)/under recovery of ACA, Refund, Transition Costs and Take-or-Pay balances to be (refunded)/collected from the ratepayers as of June 30, 2001.

Account	Balance per MGE Filing	Staff Adjustments Current ACA Period	Staff Adjustments Prior ACA Periods	Ending Balances
ACA	$ (3,316,033.96)	$ (7,472,385.34)	$ (24,962,200.04)	$ (35,750,619.34)
Residential & Small General Service Refund	$ (340,650.92)	$0	$ 0	$ (340,650.92)
Large Volume Refund	$ (683,039.24)	$0	$0	$ (683,039.24)
Transition Cost	$0	$0	$0	$0
Take-or-Pay	$0	$0	$0	$0

3. To assure sufficient capacity, but not excess capacity, is available to meet firm customer peak day capacity and natural gas supply requirements, Staff recommends that the Commission issue an order requiring MGE to submit information by March 2, 2004 to address Staff's comments and concerns listed in the Reliability Analysis section of this document.

4. The Staff recommends that the Commission issue an order requiring MGE to take the following actions regarding its hedging activities:

   a. For each hedging transaction executed during the 2003/2004 ACA period, the Company shall provide documentation for each hedging transaction from the time the decision is made and the transaction is executed to include: (1) the purpose of the hedge, (2) the Company evaluation of the market conditions supporting the hedge, and (3) all transactions details, including but not limited to, the date the transaction is executed and the costs to establish the hedge position, if any. The same information should be noted and provided to Staff for any hedge that is liquidated. In addition, when storage is relied upon as part of the Company's hedging strategy, the Company will provide its analysis that evaluates the interplay between monthly storage available under various operating/weather conditions versus financial and fixed price gas supply hedges. The Company will submit a copy of this documentation to Staff by December 1, 2004.

b. For each hedging transaction executed for the 2002/2003 ACA period, the Company shall provide documentation for each hedging transaction from the time the decision is made and the transaction is executed to include: (1) the purpose of the hedge, (2) the Company evaluation of the market conditions supporting the hedge, and (3) all transactions details, including but not limited to, the date the transaction is executed and the costs to establish the hedge position, if any. The same information should be noted and provided to Staff for any hedge that is liquidated. In addition, when storage is relied upon as part of the Company's hedging strategy, the Company will provide its analysis that evaluates the interplay between monthly storage available under various operating/weather conditions versus financial and fixed price gas supply hedges. The Company will submit a copy of this documentation to Staff by March 2, 2004.

5. The Staff recommends that the Commission order the Company to respond to recommendations 1-4 herein by January 19, 2004.

Service List for
Case No. GR-2002-348
Verified: December 19, 2003 (SW)

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MEMORANDUM

TO: Missouri Public Service Commission Official Case File, Case No. GR-2003-0330, Missouri Gas Energy, a Division of Southern Union Company

FROM: Dave Sommerer, Manager- Procurement Analysis Department
Anne Allee, Regulatory Auditor -Procurement Analysis Department
Lesa Jenkins, P.E., Regulatory Engineer, Procurement Analysis Department
Kwang Choe, Ph.D., Regulatory Economist, Procurement Analysis Department

/s/ Dave Sommerer 12/28/04	/s/ Thomas R. Schwarz 12/28/04
Project Coordinator / Date	General Counsel's Office / Date

SUBJECT: Staff's Recommendation in Missouri Gas Energy's 2002-2003 Actual Cost Adjustment Filing

DATE: December 28, 2004

The Staff has reviewed the Missouri Gas Energy (MGE or Company) 2002-2003 Actual Cost Adjustment (ACA) filing. The filing was made on October 17, 2003, and is docketed as Case No. GR-2003-0330. The filing contains the Company's calculations of the ACA, Refund, Transition Costs, and Take-or-Pay account balances.

MGE serves approximately 508,000 customers in the Kansas City, Joplin and St. Joseph area. MGE transports its gas supply over Panhandle Eastern Pipe Line (PEPL), Williams Gas Pipeline (Williams) now called Southern Star Central Gas Pipeline, Mid-Kansas Partnership/Riverside Pipeline Company (MKP/RPC) now called Kansas Pipeline Company (KPC) and Kinder Morgan Interstate Gas Transmission (KM).

The Staff's review consisted of an analysis of the billed revenues and actual gas costs, for the period of July 1, 2002 to June 30, 2003. A comparison of billed revenue recovery with actual gas costs will yield either an over-recovery or under-recovery of the ACA, Refund, Take-or-Pay (TOP) and Transition Cost balances.

Staff conducted a reliability analysis for MGE including a review of estimated peak day requirements and the capacity levels to meet those requirements, peak day reserve margin and the rationale for this reserve margin, and a review of normal and cold weather requirements. The Staff also reviewed MGE's gas purchasing practices to determine the prudence of the Company's purchasing and operating decisions.

MKP/RPC PIPELINE ADJUSTMENT

MGE incurred natural gas costs, with respect to its transportation contract with KPC, that are substantially greater than comparable pipelines. Based upon this, the Staff has proposed the following adjustments to reduce MGE's gas costs in the prior six ACA cases:

Case Number	ACA Period	Adjustment
GR-96-450	1996-1997	$3,490,082.81
GR-98-167	1997-1998	$4,330,731.88
GR-99-304	1998-1999	$5,914,199.59
GR-2000-425	1999-2000	$5,886,058.13
GR-2001-382	2000-2001	$5,341,127.63
GR-2002-0348	2001-2002	$6,099,369.34

Likewise, the Staff proposes to reduce MGE's gas costs by $3,570,935.52 for this ACA period. The Staff believes this adjustment is necessary for the same reasons that the Commission found that an adjustment was appropriate in Case No. GR-93-140, that the initial 1991 contract resulted in imprudent excessive transportation charges from the KPC contract, when compared to the costs to transport gas on the Williams system. The subsequent modifications to the contracts mitigated, but did not completely eliminate, effects of the imprudence of the KPC contract cited by the Commission in Case No. GR-93-140. These excessive transportation charges were continued in the 1995 contracts, with some mitigation that Staff fully credits in its proposed adjustments for the relevant periods. During 1998, the existing sales service with KPC was replaced with a "transportation only" service rather than the historical "bundled" (supply and transportation) service acquired from KPC. On March 12, 2002, the Commission issued a Report and Order in Case No. GR-96-450. Although the Commission did not rule in favor of the Staff's prudence disallowance in Case No. GR-96-450, it did not specifically rule on the question of whether or not a Stipulation and Agreement filed in 1996 barred future prudence reviews. The Report and Order was subsequently appealed by KPC. The Court of Appeals entered an order dismissing the appeal on October 19, 2004, and an application for transfer to the Missouri Supreme Court was filed on December 8, 2004.

Also, the Federal Energy Regulatory Commission (FERC) has required significant refunds related to KPC's rates that were charged during several of the ACA periods discussed above. Once the FERC has approved the refund plan, and the refunds are flowed to customers, the disallowances summarized in the table above will need to be reduced.

On September 10, 2002, the Commission consolidated the ACA cases for the periods covering July 1997 through June of 2001. The Commission noted that "a second portion of the procedural schedule leading to a hearing on the MKP/RPC contract issue may need to be established after completion of the hearing on the first set of issues. The Commission will issue a single Report and Order after completion of both portions of the hearing." Likewise, the Commission recently determined that the issues in the July 2001 through June 2002 ACA case should also be bifurcated. Therefore there is no procedural schedule at this time, to address the consolidated MKP/RPC contract issue.

RELIABILITY ANALYSIS

The Company submitted a 2002-2003 Reliability Report that shows peak day estimates for the twelve years of 2001-2002 through 2012-2013. The Company also submitted a March 2004 Draft Demand/Capacity Analysis (March 2004 Analysis) and subsequent data and information. Although the peak day estimates in the March 2004 Analysis are not for this 2002-2003 ACA period, some of the daily data provided should have been available to the Company for the 2002-2003 ACA period. Analyses and conclusions can be drawn from this information.

Staff has several concerns regarding the Company assumptions and methodology for calculating estimated requirements for a peak cold day and for estimated requirements for normal weather, cold weather, and warm weather as documented in MGE's 2002-2003 Reliability Report. However, MGE has presented information to Staff that indicates MGE's assumptions and methodology will be much different on a going forward basis. Therefore, Staff is not providing detailed comments regarding concerns with MGE's assumptions and methodology in its 2002-2003 Reliability Report. However, Staff will comment on issues related to peak cold day selection and excess reserve margin.

1. <u>MGE Peak Cold Day Selection</u>
MGE considers information regarding appropriate values for historic peak cold day values, expressed in heating degree days (HDD). HDD is a measure of how cold a location is relative to a base temperature of 65 degrees. The HDD for a single day is the difference between 65 degrees and the days average temperature. For example, if the average daily temperature were 30 degrees, this would represent 35 HDD.

MGE's 2002-2003 Reliability Report indicates that the historic peak cold day for the Kansas City market areas is ** __ ** HDD on December 21, 1989. This Reliability Report includes Kansas City, Joplin, and St. Joseph in the Kansas City market area.

The Company's most recent peak day analysis, the March 2004 Analysis, uses a peak cold day of ** __ ** HDD for Kansas City and St. Joseph. However, the Company response to Data Request (DR) No. 96 (in Case No. GR-2002-348) states that the Kansas City peak day is ** ________ ** HDD as previously asserted by MGE. MGE finds the peak from a review of Accuweather data. Staff reviewed this data and found a peak of ** ___ ** HDD by reviewing HDD high and lows from 9 a.m. on December 22, 1989, to 9 a.m. on December 23, 1989. The Company's summary of National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center weather data shows the peak of ** ___ ** HDD occurred December 22, 1989. Staff review of NOAA data shows the peak occurred December 22, 1989, and is 80.5 HDD. The March 2004 Analysis also considers a confidence interval review for HDD; a 99% confidence interval

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calculation reveals a projected peak day of ** ___ ** HDD, and a 95% confidence interval calculation reveals a projected peak day of ** ___ ** HDD.

Staff recommends using a peak of 80.5 HDD as the highest observed from review of NOAA weather data or using ** ___ ** as the highest observed HDD from review of Accuweather data.

The Company's most recent peak day analysis, the March 2004 Analysis, uses a peak cold day of ** ___ ** HDD for Joplin. However this is based on MGE's consideration of a 99% confidence interval of Springfield, Missouri HDD data. Staff does not agree with calculating a higher HDD using a 99% probability than has actually occurred from a review of historical data. A 95% confidence interval would result in an estimated peak day of ** ___ ** HDD. MGE's data review shows the actual peak cold day occurred December 22, 1989, and was ** ___ ** HDD. Staff's review of NOAA data shows the peak occurred December 22, 1989, and was 72.1 HDD. Staff recommends using a peak of 72.1 as the highest observed HDD from a review of NOAA data.

2. Continued Concern with Excess Reserve Margin

Staff has documented concerns with the Company's peak day planning/reliability analysis in the previous three cases, the 2001-2002 ACA, Case No. GR-2002-348, the 2000-2001 ACA, Case No. GR-2001-382, and the 1999-2000 ACA, Case No. GR-2000-425. The Company's 2002-2003 estimate of a peak day in its 2002-2003 Reliability Report is calculated using a heat load factor from a review of four cold days for the entire system, one from each of the winters of 1996-1997, 1997-1998, 1998-1999, and 2000-2001. From these four data points the Company uses both the median heat load factor and the maximum heat load factor to calculate a range of usage for a peak cold day. Although a review of four data points is more than the one data point used by the Company in past ACA cases to estimate peak day usage, it is not reasonable to assume that the Company average of four data points is sufficient to estimate the peak day average heat load factor, and it is not reasonable to assume that one data point represents the high range of the peak day heat load factor. Review of a single data point, one cold day, or four data points, four cold days, is not sufficient to establish the peak day estimate. Accurate determination of peak day requirements is essential to adequate risk analysis and management so that customers' needs are reasonably met.

Additionally, no separate analysis is done for the Kansas City service area, Joplin service area, and St. Joseph service area. First, it is not appropriate to lump Kansas City, Joplin, and St. Joseph together in a peak day estimate because sufficient but not excess capacity must be available for each area for even cold days. Customers do not benefit by having the overall capacity for a monthly average at an acceptable level, or the daily overall capacity at an acceptable level, but then find that there is excess capacity in one area and a shortfall in another area to handle historic peak cold day requirements. Staff has verified with MGE that excess capacity in the areas of Kansas City and St. Joseph cannot be relied on to offset shortfalls of capacity in Joplin.

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MGE revised and extended transportation contracts beginning with the 2001-2002 ACA and continuing through 2005-2006. The decision to contract for this level of capacity results in an excess reserve margin and increases costs to customers beginning with the 2001-2002 ACA and continuing through the 2005-2006 ACA. No evaluation or analysis indicates that the transportation contract volumes could not have been reduced. MGE has not adequately calculated its peak day requirements and has not provided justification for its excess reserve margin.

Excess capacity in the 2002-2003 ACA case, Case No. GR-2003-0330, is tied to the excess capacity issue in the 2001-2002 ACA case, Case No. GR-2002-348. In Case No. GR-2002-348 Staff originally recommended an adjustment to reduce MGE's gas costs by $1,373,016 to reflect an excess capacity of ** _____ ** MMBtu/Day. Staff's original disallowance was based on an analysis of MGE monthly data; however, Staff filed a third status report for Case No. GR-2002-348 on December 20, 2004, noting that more recent data provided by MGE contains daily data and the Staff analysis of the daily MGE data for each service area results in a revised calculation of the excess gas costs for peak day reserve for the 2001-2002 ACA. Excess capacity for the Kansas City and St. Joseph service areas totals ** _____ ** Dth/day and this excess capacity cost MGE's customers $2,041,931 for the 2001-2002 ACA, which is approximately $4.02 per customer. The Staff analysis of the daily MGE data for Joplin reveals a shortfall of capacity beginning with the 2004-2005 winter.

For this 2002-2003 ACA case, the revised disallowed volumes would be the same as shown in the revised Staff analysis in the 2001-2002 ACA case, Case No. GR-2002-348. This is because Staff's disallowance for the 2001-2002 ACA considered that the Company reviews capacity over longer blocks of time to allow for contracting of capacity in blocks. Thus, more reserve is acceptable in the 2001-2002 ACA (the ACA first impacted by the contract decision) to allow for a sufficient reserve in the 2005-2006 ACA. Staff considered five-year planning for contracting of capacity as reasonable since the Company has contracts that expire in the fall of 2005 and the fall of 2006. With the assumption that the Company reviews capacity for the next five years when contracts are renewed, a review of peak day requirements in 2005-2006 is appropriate when considering any disallowance for 2001-2002 and 2002-2003. Thus, the volume disallowed for the 2002-2003 ACA would be the same as the volume disallowed for the 2001-2002 ACA, which is ** _____ ** Dth/day for the Kansas City portion of MGE's service area and ** _____ ** Dth/Day for the St. Joseph portion of MGE's service area, for a total disallowance of ** _____ ** Dth/Day. No disallowance is proposed for the Joplin portion of MGE's service areas because the analysis shows there is a shortfall of capacity beginning in the 2004-2005 ACA for the Joplin area. The cost of the disallowance is different from the revised 2001-2002 ACA analysis because the reservation costs were slightly different for the 2002-2003 ACA. The disallowance is $2,015,661 for this excess capacity for the 2002-2003 ACA period, which is

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approximately $3.97 per customer. A breakdown of this disallowance is shown in the following tables:

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PURCHASING PRACTICES - GENERAL

The Staff review of MGE's gas purchasing practices results in comments and concerns regarding: planned use of natural gas from storage; MGE decisions and documentation regarding natural gas purchasing and storage utilization; MGE decisions impacting firm customers related to volumes needed by transportation customers; and, supply requirement plans for normal, warm and cold weather.

1. <u>MGE Gas Supply Plans – Planned Storage</u>
   Staff continues to have concerns regarding the Company's planned normal storage withdrawals. MGE's plan for normal weather is to have the largest planned withdrawal in November, the heating season month with the second fewest number of heating degree days (and very near March, the month with the fewest HDD). Similar concerns were documented in the 2001-2002 case, Case No. GR-2002-348 and the 2000-2001 ACA case, Case No. GR-2001-382.

   A review of recent Reliability Reports illustrates that the planned withdrawal for November, beginning with the 2000-2001 Reliability Report was higher than that shown for November in the previous three Reliability Reports (1998-1999, 1997-1998, and 1996-1997). Staff would expect the plan for storage withdrawals to follow a similar distribution to that of normal heating degree days.

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The Company's previous rationale for withdrawing a substantial quantity of storage gas during the month of November is to ensure that MGE can contract for a high level of flowing gas volumes for the remaining winter months. Staff does not follow the Company's logic that it must withdraw large amounts of storage gas in November so that the Company can have more flowing supply in the later winter months. Staff would expect the plan for storage withdrawals to follow a similar distribution to that of normal heating degree days. It seems more reasonable that the Company would want to conserve storage for the later winter months, months with the real possibility of having extremely cold temperatures, and so that it can meet the Southern Star requirement of having one-half to two-thirds supply from storage for cold days.

2. <u>MGE Documentation for Decisions Related to Natural Gas Purchasing and Storage Utilization.</u>

a. MGE maintains insufficient documentation regarding storage inventory to support its purchasing decisions. The Company states that its decisions for flowing supply in March 2003 are based on the low storage inventory, but documentation about the storage levels is not current when these decisions are made. The Company has the capability of updating its Storage Analysis reports several times a day, but has not done this when key decisions are made. Additionally the Company has the capability of obtaining daily data from Southern Star Central regarding its largest storage contract. Some examples of these storage documentation concerns are as follows:

(1) ** ____

(2) ____

(3) ____ **

(4) Corrections to TSS storage for end-user imbalances are made after the end of the month. The Company states that it could not monitor intra-month nominations until November 2003 (DR No. 132, 133). However, the Company has the capability of monitoring daily usage of end-use

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transportation customers. If the Company knows the total daily city gate volumes, it knows the daily volumes that it nominates, and knows the daily end-use transportation customer volumes, it should be able to calculate the storage injections and withdrawals on a daily basis. (City gate volume – End user usage – MGE nominations = Storage injection or withdrawal for firm customers).

b. MGE maintains insufficient documentation regarding storage inventory during the Southern Star Central March 7 through March 23, 2003, Operational Flow Order (OFO). The OFO notified storage customers with inventory levels below 10% of their maximum storage quantity not to withdraw volumes in excess of their remaining storage inventory. As of February 28, 2003, MGE had only ** ____ ** in storage, when considering the combined storage levels for TSS and FSS storage. The March 7, 2003, MGE Storage Analysis report shows that MGE was only expected to have ** ____ ** in storage, when considering the combined storage levels for TSS and FSS. Based on this information, it would have been prudent for MGE to monitor its storage balance frequently, and at least daily when supply decisions are being made. But as noted in the above examples, daily reports were not maintained.

c. The Company's plans for meeting natural gas requirements from flowing supplies and storage for situations involving other than normal weather each month of the winter are not documented. To state it another way, the Company has not provided any plans for meeting demand if the weather is extremely warm or extremely cold. Staff recommends that the Company more fully document its plans for flowing supplies (base load, term, swing, and spot) and planned storage injections and storage withdrawals for the extremes of warm or cold weather months. This concern and recommendation was also noted in the 2001-2002 ACA review, Case No. GR-2002-348. The Company's documentation should encompass the 2003-2004 ACA period.

(1) Staff recommends that the Company provide more detail regarding minimum storage inventory that must be maintained in the early winter months so that adequate storage is available for the later winter months.

(2) Storage is the major component of the Company's stated plans to provide some level of protection for its customers against price volatility in each winter month. Therefore, if the Company plans to reduce storage inventory levels beyond the planned level when the weather is cold, the Company must have a contingency price protection plan for each winter month.

Staff recommends that MGE maintain copies of all reports/analyses that it considers to make its purchasing decisions and that these reports/analyses be maintained until the

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completion of Staff's ACA audit, the closing of the ACA case, and beyond if other requirements dictate. Additionally, in order to document any discrepancies between the PEPL or SSC storage inventory reports and the MGE inventory reports maintained by MGE, MGE should maintain both the MGE reports and the pipeline telemetry data or other pipeline reports.

3. <u>Increasing Flowing Supplies for Regulated Customers To Make Up for Volumes Needed by Transportation Customers</u>

   ** ______________________________ **

4. <u>Warm Winter Requirements Estimates and Supply Plans for Normal, Warm, and Cold Weather</u>

   MGE's revised assumptions and methodology shown in the March 2004 Analysis reveals that it only estimates requirements for normal winter and cold winter (design winter). MGE has commented that estimates of usage for warm weather are not provided. Since planning for extremes also includes the extreme of warm weather, the MGE decision to not consider planning for warm weather requirements is of concern to Staff. In addition to estimates, MGE should detail how supply decisions change when the month is warm or cold. How will MGE manage its flowing supply and storage resources when the weather is warm and requirements are considerably less than normal weather requirements? How will MGE manage its flowing supply and storage resources when the weather is extremely cold and requirements are considerably more than normal weather requirements? How will natural gas supply plans for subsequent months be affected and modified when storage is above or below planned levels? How will MGE assure that adequate supplies of natural gas from storage are available in the later winter months? What production area capacity is necessary for peak requirements? All these questions should be addressed in MGE's gas supply planning process and documented.

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HEDGING

In its review of MGE's purchasing practices, the Staff reviewed the Company's hedging transactions. However, the Staff did not find any evidence that the Company maintained a current hedging plan or risk management plan.

Although MGE planned to employ storage for the winter heating season November 2002 through March 2003 and fixed forward price for December 2002 through February 2003, an important exception to the overall hedging achievements was a serious shortfall of any actual protection in March 2003. Even though the Company plans to use natural gas from storage in March, in fact, no natural gas was withdrawn from storage and the month of March 2003 was left completely unhedged, subjecting the company to whatever market price called for at the time. It turned out that the natural gas prices shot up significantly during late February 2003 and as a result, the Company was totally exposed to the significant natural gas price spikes experienced for March 2003.

Although the LDC may achieve significant overall winter hedging coverage, it may at the same time leave individual winter months totally exposed to price escalation. This is precisely what happened to MGE when March 2003 was hedged 0%. Overall, the winter hedge could yield a significant coverage, and still not address the unprotected winter months. If pricing mechanisms worked in such a way as to be set one time for the entire winter, then a total seasonal approach to hedging might protect the monthly and daily exposures to price increases. However, this is not the price risk that most LDCs face in terms of hedging. LDCs generally buy and sell gas in the monthly and daily markets. The relevant price risk the Company must hedge is the risk in the monthly and daily gas markets. That is, the Company is exposed to the daily and the monthly market price volatility.

Based upon information the Staff has reviewed, the Company made an assessment of which direction prices were going to move in the market. However, the outcome of an LDC's market view with selective hedging practices should not result in winter months that are left unprotected against price fly-ups.

Given the cold weather impact of late February 2003 and subsequently the company's failure to hedge for March 2003, Staff recommends that the company analyze its hedging risk for each winter month under normal conditions and cold weather conditions, including cold weather that may occur late in the winter season. This analysis should include a review of the volumes hedged and the associated cost. Finally, each month where price exposure exists should be analyzed to evaluate the costs and risks of not covering, or minimally covering, the unhedged price volatility for that particular month. The Staff further recommends that the Company document its hedging decisions and this documentation should be maintained and be made available to the Staff during each ACA review. This documentation should include an overall hedging plan that addresses hedging goals, objectives, and strategies for each month of each

ACA review. The plan should be documented and completed well in advance of each approaching winter season.

SUMMARY

The Staff has addressed the following concerns regarding Case No. GR-2003-0330 for Missouri Gas Energy:

1. The Staff (pending a final Commission Order in Case Nos. GR-98-167, GR-99-304, GR-2000-425, GR-2001-382 and GR-2002-348) proposes for this ACA case, Case No. GR-2003-330, an adjustment to reduce MGE's gas costs by $3,570,935.52. This adjustment is reasonable and necessary for the same reasons as the Commission found in Case No. GR-93-140, the imprudence of MGE entering into the initial 1991 KPC contract resulted in excessive transportation charges when compared to the Williams alternative. Staff expressed similar concerns in its direct, rebuttal and surrebuttal testimony filed in Case No. GR-96-450 and in its recommendations in Case Nos. GR-98-167, GR-99-304, GR-2000-425 and GR-2001-382. In June of 1998, the contract terms changed to provide "transportation" only rather than the bundled supply and transportation service litigated in the 1996-1997 ACA case. The Staff believes the operation of the contract in subsequent ACA periods after June 1998 only serves to strengthen Staff's argument that the rates paid are excessive.

2. To adequately review MGE's hedging decisions, Staff recommends that MGE keep and submit additional information to Staff as documented in the Hedging section of this document.

3. Staff has expressed concerns in the Reliability Analysis and Purchasing Practices - General sections of this document regarding peak cold day selection, gas supply plans for use of natural gas from storage, documentation for Company decisions regarding gas purchasing and utilization of natural gas from storage, effects on flowing supply and costs for regulated sales customers by volumes needed by transportation customers, documentation of Company requirements for warm weather, and documentation of natural gas supply plans for normal, cold, and warm weather. Staff recommends that MGE address these concerns.

4. Staff recommends disallowance of $2,015,661 to reflect the excess gas costs for peak day reserve.

RECOMMENDATIONS

1. The Staff recommends that this ACA case remain open pending an Order from the Commission in Case Nos. GR-98-167, GR-99-304, GR-2000-425, GR-2001-382 and GR-2002-0348.

2. The Staff recommends the Company establish the account balances shown in the table below in it next ACA filing to reflect the (over)/under recovery of ACA, Refund, Transition Costs and Take-or-Pay balances to be (refunded)/collected from the ratepayers as of June 30, 2003.

Account	Balance per MGE Filing	Staff Adjustments Current ACA Period	Staff Adjustments Prior ACA Periods	Ending Balances
ACA	$ 29,006,965	$ (5,586,597)	$ (33,103,500)	$ (9,683,132)
Residential, Small General Service & Large General Service Refund	$ 175,679	$0	$ 0	$ 175,679
Large Volume Refund	$ (615,595)	$0	$0	$ (615,595)
Transition Cost	$0	$0	$0	$0
Take-or-Pay	$0	$0	$0	$0

3. To assure sufficient capacity, but not excess capacity, is available to meet firm customer peak day transportation and supply requirements for a peak cold day and for varying weather conditions, Staff recommends that the Commission require MGE to submit information by March 23, 2005, to address Staff's comments and concerns listed in the Reliability Analysis and Purchasing Practices - General sections of this document.

4. The Staff recommends that the Company analyze its hedging risk for each winter month under normal conditions and cold weather conditions, including cold weather that may occur late in the winter season. This analysis should include a review of the volumes hedged and the associated cost. Finally, each month where price exposure exists should be analyzed to evaluate the costs and risks of not covering, or minimally covering, the unhedged price volatility for that particular month. The Staff further recommends that the Company document its hedging decisions and preserve it for the Staff to review during each ACA review. MGE should develop an overall hedging plan that addresses hedging goals, objectives, and strategies for each month of each ACA review. MGE should prepare and complete the plan well in advance of each approaching winter season.

5. The Staff recommends that the Commission order the Company to respond to recommendations herein within 30 days.

Schedule JJR-3

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Comparison of Design Day Weather Probability - Staff Analysis v. CEA Analysis

(Kanas City and St. Joseph)

Line No.	Design Day HDD	Probability of Occurrence: 1-in-__ Years	Probability of Actual HDD Being Greater Than or Equal To Design Day HDD	Note
	(a)	(b)	(c)	(d)
1	64.2	2	50.00%	
2	70.6	5	20.00%	
3	73.9	10	10.00%	
4	76.7	20	5.00%	
5	78.2	30	3.33%	
6	79.1	40	2.50%	
7	79.8	50	2.00%	
8	80.4	60	1.67%	
9	80.9	70	1.43%	
10	81.3	80	1.25%	
11	81.5	87	1.15%	Staff Recommended Design Day Weather
12	81.6	90	1.11%	
13	81.8	95	1.05%	
14	81.9	100	1.00%	CEA Design Day Weather

Comparison of Design Day Weather Probability - Staff Analysis v. CEA Analysis

(Joplin)

Line No.	Design Day HDD	Probability of Occurrence: 1-in-__ Years	Probability of Actual HDD Being Greater Than or Equal To Design Day HDD	Note
	(a)	(b)	(c)	(d)
1	59.1	2	50.00%	
2	65.3	5	20.00%	
3	68.6	10	10.00%	
4	71.3	20	5.00%	
5	72.1	25	4.00%	Staff Recommended Design Day Weather
6	72.7	30	3.33%	
7	73.6	40	2.50%	
8	74.3	50	2.00%	
9	74.9	60	1.67%	
10	75.3	70	1.43%	
11	75.7	80	1.25%	
12	75.9	87	1.15%	
13	76.0	90	1.11%	
14	76.2	95	1.05%	
15	76.3	100	1.00%	CEA Design Day Weather

Schedule JJR-5

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Schedule JJR-6

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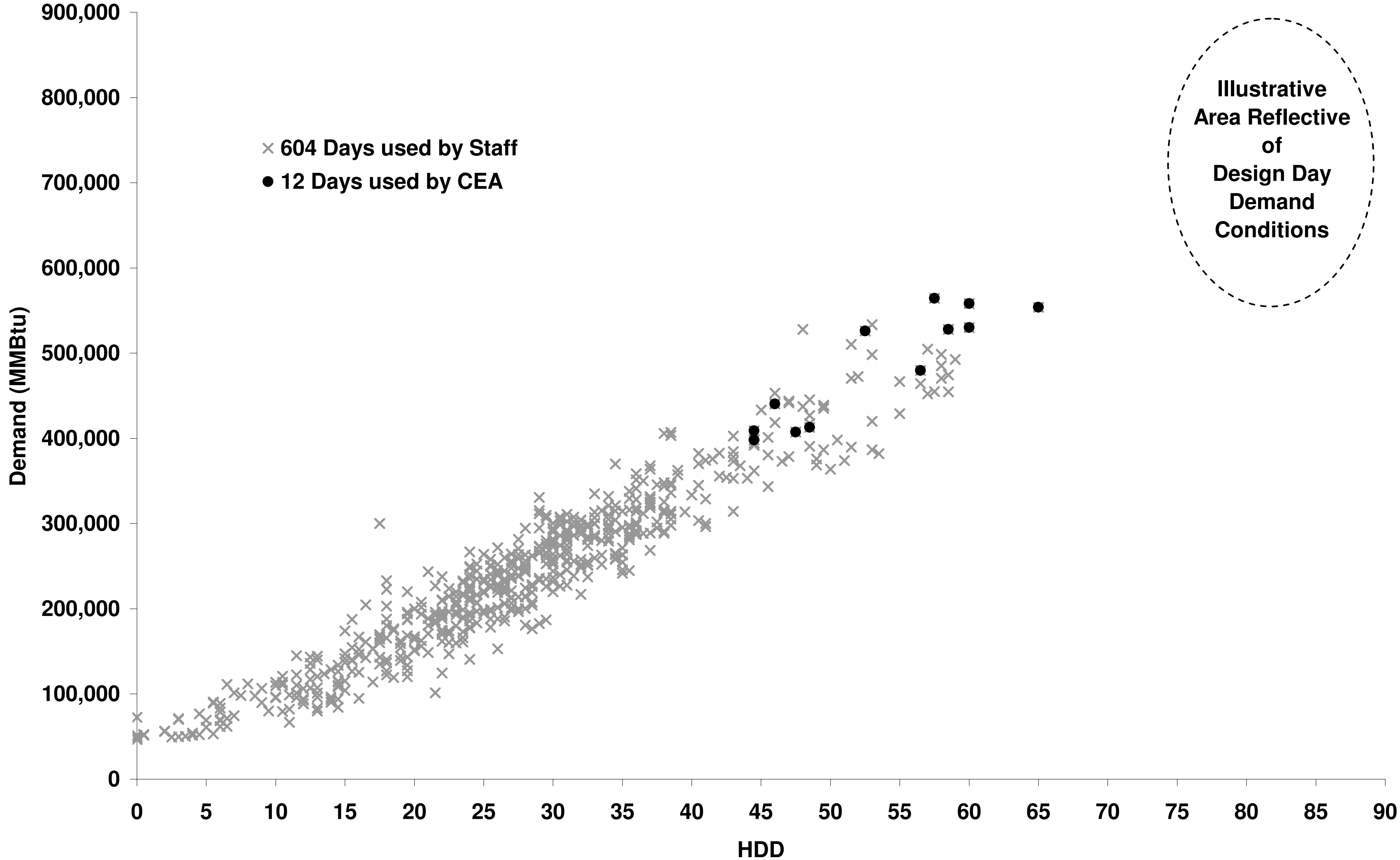
Schedule JJR-7
Case Nos. GR-2002-348/
GR-2003-0330

Projected Kansas City Design Day Demand - Staff Proposed Data v. CEA Proposed Data



Schedule JJR-8

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