

Exhibit No.:  
Issue: Revenue Requirement  
Witness: Jatinder Kumar  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Department Of Energy,  
National Nuclear Security  
Administration And Federal  
Executive Agencies  
Case No.: ER-2009-0089  
Date Testimony Prepared: February 11, 2009

MISSOURI PUBLIC SERVICE COMMISSION

**CASE NO.: ER-2009-0089**

APPENDIX TO  
DIRECT TESTIMONY  
OF  
JATINDER KUMAR

SUBMITTED ON BEHALF  
OF  
THE UNITED STATES DEPARTMENT OF ENERGY, THE  
NATIONAL NUCLEAR SECURITY ADMINISTRATION AND THE FEDERAL  
EXECUTIVE AGENCIES

February 11, 2009

Qualifications and Experience  
of  
Jatinder Kumar

**EDUCATION**

B.S., Petroleum Technology, 1963, Indian School of Mines, Dhanbad, India

Diploma in French Language, 1965, Besancon University, France

Post Graduate Diploma, Petroleum Engineering, 1965, French Petroleum Institute, Paris, France

M.S., Mechanical Engineering, 1966, University of California, Berkeley

Advanced Studies toward Ph.D., Mechanical Engineering, 1969, University of California, Berkeley

Evening and correspondence courses: Business Management, Corporate Organization, Risk Analysis, Economics, Accounting, Management and Organization, Business Finance, Thermal Recovery of Petroleum, Technical Supervision, Operation Research, Waste Water Treatment, Corrosion, General Electric Time Share Computer Programming, Solid State Control, Instrumentation and Control, Log Interpretation, Properties and Application of Plastics, Supervisory Control, Spanish, German.

**EXPERIENCE**

President of Economic & Technical Consultants, Inc, December 1980 to present

Vice President, Associated Regulatory Consultants, April 1973, to November 1980

Utility Consultant Engineer, Van Scoyoc & Wiskup, Inc., September 1972 to April 1973

Design and Project Engineer, Pacific Gas & Electric Company of California, San Francisco, December 1969 to September 1972.

Staff Petroleum Engineer, Standard Oil Company of California, Bakersfield, California, August 1967 to August 1969

Assistant Engineer, University of California, Berkeley, August 1969 to December 1969

Research Assistant, University of California, Berkeley, October 1966 to August 1967

Extra Assistant Director, Indian Standards Institution, New Delhi, India, April 1964 to May 1965

Drilling Engineer, Oil India Ltd., India, January 1963 to April 1964

Senior Technical Assistant, Oil & Natural Gas Commission, India, August 1963 to December 1963

Mr. Kumar has appeared in more than 200 proceedings before FERC, ICC, 25 retail jurisdictions in USA, two retail jurisdictions in Canada, two pollution control boards, and thirteen judicial proceedings as an expert witness in the matters relating to public utilities and energy matters; electric and gas restructuring, unbundling, competition, merger/acquisition, ISO/RTO issues, incentive rate making; gas and electric power acquisition and transmission; competition, anti-trust and "price-squeeze" issues; contracting and buyouts; ratemaking and operation issues; accounting, economic, regulatory and technical matters. He has been involved with most of the important FERC rulemakings for the gas and electric utilities since the 1970s. Mr. Kumar has advised the White House as well as advised a member of the Senate Sub-Committee on Energy on energy-related matters. Besides his experience in the utility consulting business, Mr. Kumar

served as an alternate member of the Pipeline Committee of the International Standards Organization. He has working knowledge in the areas of utility operations; power plant installation; oil and gas production and reserve estimation; drilling; underground gas storage; designing technical facilities; project engineering and evaluation; environmental control; supply and demand analysis of various fuel supplies; feasibility of alternative fuels; and management efficiency studies. He has also assisted a number of clients in the acquisition of financing, wholesale and retail electric and gas supplies, transportation services, and gas storage services. He has authored more than 30 technical papers. Mr. Kumar is listed in the 1996 Edition of Marquis Who's Who in Finance and Industry.

### **MEMBERSHIPS**

The National Association of Accountants

The Society of Petroleum Engineers

American Society of Mechanical Engineers

Registered Professional Engineer in the States of Maryland and Virginia

## Representative Publications and Program Appearances

### I. Representative Publications

"Nuclear Magnetic Relaxation Time of Water in a Porous Medium with Heterogeneous Surface Wettability", Journal of Applied Physics, Vol. 40, No. 10, September 1969, p.4165 (with Dr. I. Fatt and Dr. D.N. Saraf).

"Nuclear Magnetic Resonance Study of Porosity, Permeability and Surface Area of Unconsolidated Porous Materials", The Log Analyst, January-February 1970, p. 13 (with Dr. I. Fatt).

"Rating Alternatives to Chromates in Cooling Water Treatment", Chemical Engineering, April 26, 1976, p.111.

"Specified Surface of Porous Materials", Society of Petroleum Engineer Journal, March 1970, p.4 (with Dr. I. Fatt).

"Determination of Wettability of Porous Materials by the Nuclear Magnetic Resonance Techniques", Indian Journal of Technology, Vol. 8, April 1970, p. 125 (with Dr. D.N. Saraf and Dr. I. Fatt).

"Determination of Specific Permeability from Electric Logs", World Oil, February 1, 1971, p.38.

"Nuclear Magnetic Relaxation Time of Blood and Blood Velocity", Science, Vol. 175, February 18, 1972, p.794 (with V. Kumar, M.D.)

"Selecting and Installing Synthetic Pond Linings", Chemical Engineering, Vol. 1, No. 3, February 5, 1963, p. 67 (with Mr. J.A. Jedlicka).

"Quick Visual Comparison of Fuel Values", Chemical Engineering, February 18, 1974, p.156.

Comments on Cost Allocation, Public Utilities Fortnightly, February 17, 1977, Volume 99, No. 4, page 5.

Comments on Impact of Tax Reform Act, Public Utilities Fortnightly, June 25, 1987.

Natural Gas Transportation and Transportation Rates, Journal of Petroleum Technology, Vol. 40, No. 2, page 237.

## II. Representative Program Appearances

"Synthetic Liners for Ponds", presented at 1976 Water and Wastewater Equipment Manufacturers Association Conference at Houston, April 1, 1976.

"Corrosion of Subsurfaces Equipment in Producing Oil and Gas Wells", presented at a Seminar, University of California, Berkeley, February 1967.

"Problems of Steam Recovery", presented at a Seminar, University of California, Berkeley, February 1967.

"Role of Explosives in Petroleum Industry", presented at High Explosives Corporation of India Silver Jubilee Seminar, March 1965.

"Effects of Poisson's Ratio on Rock Properties", presented at the Society of Petroleum Engineers 51st Annual Fall Meeting, New Orleans, October 3-6, 1976.

"The Role of Anaerobic Digestion for the Production of Methane from Municipal Waste", presented at 1976 American Society of Mechanical Engineers Solid Waste Processing Conference at Boston, May 23, 26, 1976.

"Trends in Natural Gas Regulation" (with John W. Griggs), presented at the Society of Petroleum Engineers 59th Annual Technical Conference held in Houston, September 19, 1984.

Open Access for Alternate Gas Supplies (Orders 436 and 500). Presented a speech at the annual meeting of the National Association of Gas Consumers, Lake of the Ozarks, MO, October 29, 1987.

"Gas Market Restructuring through Regulation and Legislations". Presented at the Society of Petroleum Engineers 63rd Annual Conference held in Houston, Texas, on October 3-5, 1988.

Important Points for Gas Acquisition and Contract. A speech presented at the Annual Conference of National Association of Gas Consumers, October 19, 1988.

"Solution of Blasius Flow Equation by Electronic Analog Computers".

"Estimation of Thermal Conductivity of Porous Materials", Part I and Part II, American Petroleum Institute Project Report, 1970 (with Prof. W. H. Somerton).

Impact of FERC's Rate Design Policy Statement. Presented at NASUCA's meeting held in June 1990 at Santa Fe, New Mexico.

"Tax Implications of Utility Restructuring", presented at NASUCA's Semi Annual Conference, Charleston, SC, June, 1997.

"Gas Marketing Restructuring through Regulations and Legislations", presented at the Society of Petroleum Agencies meeting in New York, December 7, 1988.

"Engineering Aspects of Gas from Wellhead to Burntip", presented at a conference arranged by the District of Columbia Office of People's Counsel, (1989)

"Natural Gas Contracting", presented at the International Power Conference, Tampa, Florida, February 1992.

"Tax Implications of Utility Deregulation", presented at Michigan State University's Annual Conference, Williamsburg, VA, December 3, 1997.

"Independent System Operators (ISO), Issues and Impact on Electric Market", presented at International Power Conference, Dallas, TX, December 10, 1997.

III. Other Reports and Studies Prepared

Offshore oil spills

"Summary and Explanation of FERC Order 436". Prepared for Department of Energy, March 1986.

Gas from Eastern U.S. Shale, prepared for Gulf Oil Company.

Summary of Court Order Remanding and Vacating FERC Order 436.

Summary of FERC Order 500.

"Alternatives in Permeability of Sandstones after Super-Cooling", Research Report, Indian School of Mines, Dahnbad, India, May 1963.

A comparative Study of Gas Pipeline Flow Equations.

Working Capital for Electric Utilities.

Correlations: Types and Applications in Public Utilities.

Future Gas Marketing Strategies

Cost of Service Manual for Electric Utilities prepared for Bonneville Power Administration (with Edgar H. Bernstein and Ken Robertson)

Summary of Amendment to Clean Air Act.

Summary of FERC Order 592, Ref. Merger Policy

Summary of FERC Order 636, Ref. Gas Industry Restructuring

Price Indexing in Gas Industry

Evaluation of Formulae Used for Gas Flows Through Pipelines

Summary of FERC Orders 888, 888 A and 888 B, Ref. Electric Industry Restructuring

Brief Description of Electric Utility Ratemaking Process

How Electric Utilities Rates Can Be Made More Competitive Through Ratemaking

Problems with ISO Locational Marginal Pricing

How ISO Can Perform "Balancing Only" Function?

Electric Price Forecast, Prepared for US Department of Energy

Summary of Order 2000, Ref. RTO Formation

Rate Design and Cost of Service Presentation

Depreciation in Utility Rate Making Presentations

**TESTIMONY SUBMITTED****JATINDER KUMAR**

<u>COMPANY</u>	<u>CASE NO.</u>	<u>JURISDICTION</u>
Detroit Edison Co. (Steam)	U-4024	Michigan
Detroit Edison Co. (Electric)	U-4257	Michigan
Union Electric Co. (Direct)	E-8215	Federal Power Commission
Union Electric Co. (Rebuttal)	E-8215	Federal Power Commission
Washington Gas Light Co.	6738	Maryland
Boston Gas Co.	DPU 19885	Massachusetts
Columbia Gas Co.	6810	Maryland
Frederick Gas Co.	6839	Maryland
Union Electric Co.	E-9496	Federal Power Commission
Delmarva Power & Light Co.	6860	Maryland
Baltimore Gas & Electric Co.	7033	Maryland
Upper Peninsula Generating Co.	15852-C	Michigan (Court)
Upper Peninsula Generating Co.	18852-C	Michigan (Air Pollution Control Commission)
Delmarva Power & Light Co. (Direct)	7065	Maryland
Delmarva Power & Light Co. (Surrebuttal)	7065	Maryland
Upper Peninsula Generating Co.	18852-C	Michigan (Water Pollution Control Commission)
Potomac Electric Power Co.	630	District of Columbia
Delmarva Power & Light Co.	E-8947	Federal Power Commission
Washington Gas Light Co.	6977	Maryland
Illinois Power Co.	E-9520	Federal Power Commission
Delmarva Power & Light Co.	ER76-494	Federal Power Commission
Missouri Power & Light Co.	ER76-539	Federal Power Commission
Bridgeport Hydraulic Co.	7703301	Connecticut
Commonwealth Edison Co.	76-0698	Illinois
Purchased Gas Adjustment Investigation (Direct)	6865	Maryland
El Paso Electric Co.	522	Texas
Baltimore Gas & Electric Co.	7070	Maryland
Purchased Gas Adjustment Investigation (Rebuttal)	6865	Maryland
El Paso Electric Co.	1360	New Mexico
Potomac Electric Power Co.	7149	Maryland
Union Electric Co.	ER77-614	FERC
Indiana & Michigan Electric Co.	U-5608	Michigan
Missouri Utilities Co.	ER77-354	FERC

El Paso Electric Co.	1481	Texas
Union Electric Co. (Direct)	ER77-614	FERC
Union Electric Co. (Rebuttal)	ER77-614	FERC
Public Service Co. of New Mexico	1419	New Mexico
Illinois Power Co.	ER77-531	FERC
Delmarva Power & Light Co. (Cost of Service)	ER78-414	FERC
Michigan Consolidated Gas Co. (Interim)	U-5955	Michigan
Michigan Consolidated Gas Co.(Direct)	U-5955	Michigan
Columbia Gas of Ohio	771204-GA-CRC	Ohio
Delmarva Power & Light Co. (Price Squeeze)	ER78-414	FERC
Union Electric Co. (Surrebuttal)	ER77-614	FERC
Union Electric Co. (Rebuttal to Supplemental)	ER77-614	FERC
Michigan Consolidated Gas Co. (Rebuttal)	U-5955	FERC
Detroit Edison Co. (Direct)	U-6006	Michigan
Detroit Edison Co. (Rebuttal)	U-6006	Michigan
Detroit Edison Co. (Surrebuttal)	U-6006	Michigan
Detroit Edison Co. (Steam)	U-6103	Michigan
Delmarva Power & Light Co. (Fuel)	ER78-414	FERC
Delmarva Power & Light Co. (Rebuttal Price Squeeze)	ER78-414	FERC
Mobile Gas Service Corporation	17820	Alabama
Columbia Gas of Ohio (Supplemental)	77-1204-GA-CRC	Ohio
Potomac Electric Power Co.	7384	Maryland
Indiana-Michigan Electric Co.	U-6148	Michigan
Michigan Consolidated Gas Co.(Direct)	U-6372	Michigan
Consumers Power Co.	U-5732-R	Michigan
Michigan Consolidated Gas Co. (Rebuttal)	U-6372	Michigan
Marshall-Durbin & Co. vs. The Jasper Utility Board	CV 77-39	Alabama Circuit Court
Detroit Edison Co. (Electric)	U-6488	Michigan
Public Service Co. of Colorado	1425	Colorado
Consumers Power Co.	U-6360	Michigan
Implementation of Michigan Rule No. 1980-139	U-6590	Michigan
Central Illinois Power & Light Co.	80-0157	Illinois
Wolverine Electric & Northern Michigan	U-5407 &	Michigan
Detroit Edison Co.(Abandonment of Nuclear Units)	U-6474	Michigan
Brooklyn Union Gas Co.	27855	New York
Potomac Electric Power Co.	748	District of Columbia
Public Service of New Hampshire (Direct)	DR 79-187	New Hampshire
Interstate Commerce Commission Nationwide Coal Rate Guidelines)	Ex Parte No. 347 (Sub-No. 1)	Interstate Commerce Commission



Gas Co. of New Mexico (Interim)	1568	New Mexico
Public Service of New Hampshire Supplemental)	DR 79-187	New Hampshire
Delmarva Power & Light Co.	ER80-363	FERC
Washington Gas Light Co.	768	District of Columbia
Stierren Farms	QF 80-28	FERC
Niagara-Mohawk (Direct)	ER81-499	FERC
Potomac Electric Power Co. (Cogeneration)	757	District of Columbia
Gas Co. of New Mexico (General)	1629	New Mexico
Consumers Power Co. (Interim Rate Relief)	U-6923	Michigan
Consumers Power Co. (Direct)	U-6923	Michigan
Niagara-Mohawk (Rebuttal)	ER81-499	FERC
UGI Corp. (Direct)	R-811488	Pennsylvania
Union Electric Co. (Remand)	ER77-614	FERC
Detroit Edison Co. (Direct)	U-6949	Michigan
UGI Corp. (Rebuttal)	ER81-1488	FERC
Delmarva Power & Light Co. (Direct)	ER81-504-000	FERC
UGI Corp. (Direct)	R-821899	Pennsylvania
Detroit Edison Co. (Rebuttal)	U-6949	Michigan
Union Electric Co. (Supplemental)	ER77-614	FERC
Delmarva Power & Light Co. (Supplemental)	ER81-504-000	FERC
Gas Co. of New Mexico	1710	New Mexico
Columbia Gas Transmission	RP75-105	FERC
UGI Corp. (Rebuttal)	R-821899	Pennsylvania
Detroit Edison Co. (Steam)	U-7126	Michigan
Pennsylvania Gas & Water Co.	R-821961	Pennsylvania
Toledo Edison Co.	82165ELEFC	Ohio
New York State Electric & Gas Corp.	82-410-000	FERC
Consumers Power Co. (GCR Clause)	U-7487	Michigan
Michigan Consolidated Gas Co. (GCR Clause)	U-7479	Michigan
Consumers Power Co. (GCR Factor)	U-7488	Michigan
Consumers Power Co. (PSCR Clause)	U-7511	Michigan
Michigan Consolidated Gas Co. (GCR Factor)	U-7480	Michigan
Gas Co. of New Mexico	1787	New Mexico
Pennsylvania GCR Investigation (Direct)	M-78050055 & D-79800192	Pennsylvania
Detroit Edison Co. (PSCR Clause)	U-7510	Michigan
Consumers Power Co. (PSCR Clause)	U-7512	Michigan
Pennsylvania GCR Investigation (Surrebuttal)	M-78050055 & D-79800192	Pennsylvania
United Gas Pipe Line Co.	RP82-57	FERC

Detroit Edison Co. (PSCR Factor)	U-7550	Michigan
Gas Co. of New Mexico	1787	New Mexico
UGI Corp.	R-832331	Pennsylvania
Consumers Power Co.	U-7650	Michigan
Gas Co. of New Mexico (Gas Costs)	1796	New Mexico
East Ohio Gas Co.	83-19GAGCR	Ohio
Potomac Electric Power Co. (Phase III)	759	District of Columbia
Wisconsin Power & Light Co.	ER83-429-000	FERC
Commonwealth Edison Co.	830537	Illinois
Potomac Electric Power Co. (Direct)	813	District of Columbia
Potomac Electric Power Co. (Rebuttal)	813	District of Columbia
Gas Co. of New Mexico	1875	New Mexico
Detroit Edison Co. (Steam)	U-7906	Michigan
New England Power Co.	EL84-6000	FERC
Houston Light & Power Co.	5779	Texas
New England Power Co. (Rebuttal)	EL84-6000	FERC
Wisconsin Power & Light Co.	ER84-57-6000	FERC
Union Electric Co.	ER84-56-0000	FERC
Consumers Power Co.	U-5732	Ingham County Court, Michigan
UGI Corporation (Remand)	R-821899 & R-832331	Pennsylvania
Union Electric Co.	CA77-094-7(C)-2	Federal District Court
Southwestern Public Service Co.	6465	Texas
Utah Associated Municipal Power System	85201101	Utah
Mountain Fuel Resources	RP86-7-000	FERC
Union Electric Co. (Rebuttal)	ER84-56-000	FERC
Commonwealth Edison Co.	84-0554	Illinois
National Fuel Gas Co.	29375	New York
Review of Gas Distribution Applications	86-057-03	Utah
Consumers Power Co.	U-7830	Michigan
Union Electric Co.	CA 83-2756C(C)	Federal District Court
Consumers Power Co. (Rebuttal)	U-7830	Michigan
Mountain Fuel Resources (436 Filing)	RP86-87-001	FERC
MichCon (Gas Transmission)	U-8635	Michigan
Consumers Power Co. (Gas Transmission)	U-8678	Michigan
Delmarva Power & Light Co.	DA77-254	Federal District Court
Williams Natural Gas Co.	RP87-33-000 & RP87-39-000	FERC
Williams Natural Gas Co.	CA87-1463K	Federal District Court
Consumers Power Co.(Step 3B)	U7830	Michigan

Potomac Electric Power Co.	7972	Maryland
Gas Co. of New Mexico (Gas Transportation)	2068	New Mexico
Gas Co. of New Mexico (Standby Service)	2068	New Mexico
Gas Co. of New Mexico	2147	New Mexico
Potomac Electric Power Co.	8079	Maryland
Williams Natural Gas Co. (Gathering Facilities)	RP87-33	FERC
Potomac Electric Power Co.	FC 869	District of Columbia
Union Gas Co. vs. DOE	238-88C	U.S. Court of Claims
Questar Pipeline Co.	RP88-93-000	FERC
Gas Co. of New Mexico	2183	New Mexico
Questar Pipeline Co. (Direct)	RP88-93 Phase II	FERC
Questar Pipeline Co. (Rebuttal)	RP88-93 Phase II	FERC
Questar Pipeline Co. (Surrebuttal)	RP88-93 Phase II	FERC
Colorado Gas Utilities (Gas Cost Adjustment and Transportation Investigation)	5721	Colorado
Gas Co. of New Mexico	2307	New Mexico
Central Louisiana Electric Co.(Direct)	ER90-39-000	FERC
Central Louisiana Electric Co. (Rebuttal)	ER90-39-000	FERC
Gas Co. of New Mexico	2320	New Mexico
KPL Gas Service Co.	GR90-16	Missouri
Gas Co. of New Mexico	2366	New Mexico
Pennsylvania Gas & Water Co.	R-901699	Pennsylvania
Potomac Electric Power Company	905	District of Columbia
Potomac Edison Co.	8341	Maryland
Gas Co. of New Mexico (Direct)	2353	New Mexico
Gas Co. of New Mexico (Rebuttal & Supplemental)	2353	New Mexico
Potomac Electric Power Co. (Direct)	912	District of
Potomac Electric Power Co. (Rebuttal)	912	Columbia
Questar Pipeline Co. (Direct)	RP-91-140-	FERC
Questar Pipeline Co. (Rebuttal)	000, et al	
Mississippi Valley Gas	U-5307	Mississippi
IRP for Gas Utilities	91-667-G	South Carolina
Western Gas Supply Company and Public Service Company of Colorado	92A-352G3	Colorado
Gas Company of New Mexico (Supplemental Direct)	2353	New Mexico
Gas Company of New Mexico (Rebuttal)	2352	New Mexico
Gas Service to Wisconsin Towns	5820-CG-100, 4220-CG-114, 4220-CG-114,	Wisconsin
Cajun Electric Power	EC92-21-000,	FERC

	ER92-806-000	
Delmarva Power & Light	EL93-42	FERC
J.W. Spedden et al vs. B. Ajmera et al (Damage Case)	CAL91-16034	Dist. Court of Maryland
Central Louisiana Electric Company	ER90-39-000	FERC
Union Gas Company's Protest to Energy Board	EBCNA No. 435-12-89 & 436-12-89	U.S. Claims Court
Entergy/Gulf States Utilities (Merger Case)	EC92-21 & ER92-806	FERC
Gas Company of New Mexico	2340	New Mexico
Potomac Electric Power Company	FC 905	Dist. of Columbia
Pennsylvania Gas & Water Company	RP91-1980	Pennsylvania
IRP for Gas Utilities	91-667-G	South Carolina
West Virginia Power	92-0401-E-42T	W. Virginia
Questar Pipeline (Restructuring Comments)	RS092-9-000	Utah Div. of Public Utilities
Delmarva Power & Light Company	ER93-96& EL93-11	FERC
Potomac Electric Power Co. (Direct)	FC 929	Dist. of Columbia
Potomac Electric Power Co. (Rebuttal)	FC 929	District of Columbia
Gas Company of New Mexico	2521	New Mexico
SCPSC Section 712, Implementation of EPACT 1992 (Comments)	93-231E	South Carolina
EPACT Section 115, Gas Utilities Energy Efficiency (Comments)	93-730-G	South Carolina
Public Service Co. of Colorado	93A-561G	Colorado
EPACT Section 111, Electric Utilities Energy Efficiency	93-748-E	South Carolina
Oil Institute of Long Island vs. LILCO	94/011879	New York State Court
Gas Company of New Mexico (PGA)	2508	New Mexico
Gas Company of New Mexico (Balancing Rule)	2526	New Mexico
Niagara Mohawk	94-E-0098 et al	New York
Long Island Lighting Company	93-E-1123	New York
Gas Company of New Mexico	2587	New Mexico
Delmarva Power & Light Company	EL93-24	FERC
Questar Pipeline Co.	RP95-407-000	FERC
PNM Gas Service (Gas Purchasing Practices)	2759	New Mexico
ARKLA	95-401-U	Arkansas
Gas Company of New Mexico	2639	New Mexico
Gas Company of New Mexico	2662	New Mexico
Union Electric/CIPS (Merger Case)	EC96-7-000	FERC
Long Island Lighting Co. (Show Cause Notice)	96-E-0132	New York
PNM Gas Service (Unbundling)	2760	New Mexico
PNM Gas Service (Collapse of Rate Riders)	2752	New Mexico

PNM Gas Services (Rate Case)	2759	New Mexico
Exxon Pipeline Co.	OR96-1-000	FERC
PJM, LLC. (Congestion Investigation)	PA03-12-000	FERC
PJM Utilities et al	P-00971168	Pennsylvania
PNM Gas Service (Rate Case)	2762	New Mexico
West Virginia-American Water Company	98-0246-W-42T	W. Virginia
Shenandoah Gas Company	98-0289-G-42T	W. Virginia
Southwestern vs. FERC	EL99-14-000	FERC
Northern Utilities	97-373	Maine
Nova Scotia Power Inc.	P-871	Nova Scotia, Canada
CornBelt vs. Soyland	EL01-100-000	FERC
Monroe vs. Soyland	EL01-108-000	FERC
Nova Scotia Power Inc.	P-872	Nova Scotia, Canada
Enbridge Gas Co.	NBPUB299	New Brunswick, Canada
PNM Gas Services (Remand)	2762 & 2662	New Mexico
St. Joseph Light & Power Co.	EO-2000-845	Ohio
Public Service Co. of New Mexico	03-00017-UT	New Mexico
PJM Rate Design	EL05-121-000	FERC
Public Service Company of Oklahoma	200500516	Oklahoma
Public Service Company of Oklahoma	2006-0030	Oklahoma
Southern Connecticut Gas Co. (Rate Increase)	05-03-17	Connecticut
PNM Gas Services	06-UT-00212T	FERC
PJM Interconnection LLC (Sch 12 RTEP Filing)	ER06-50-000	FERC
Dynegy, Inc	ER08-356	FERC
New Mexico Gas Co.	08-00078-UT	New Mexico
Pepco Holdings, Inc PHI RTO ROE	ER08-656	FERC

**CASES IN WHICH ANALYSIS WAS PERFORMED**  
**BUT NO TESTIMONY WAS SUBMITTED**  
**JATINDER KUMAR**

<u>COMPANY</u>	<u>CASE NO.</u>	<u>JURISDICTION</u>
Chesapeake and Potomac Telephone Co.	6651	Maryland
Chesapeake and Potomac Telephone Co.	777	District of Columbia
Michigan-Wisconsin Pipeline Co.	RP75-96	FERC
Michigan-Wisconsin Pipeline Co.	RP77-60	FERC
National Gas Pipeline Co.	RP81-49	FERC
Southern Natural Gas Co.	RP72-74	FERC
Massachusetts Fuel Clause	1766	Massachusetts
All Maryland Electric Utilities Fuel Case Investigation	6759	Maryland
Crab Run Gas Co.	CP75-329	FERC
East Ohio Gas Co.	75-404GA-GMR	Ohio
Hampshire Gas Co.	RP79-97	FERC
Delmarva Power & Light Co. (Phase II)	ER76-494	FERC
Ontario Hydro		Canada
Missouri Utilities	ER80-124 & 125	FERC
Trunkline Gas Co.	TA81-504	FERC
Potomac Electric Power Co.	785	District of Columbia
Delmarva Power & Light Co.	ER82-751-000	FERC
Northern Natural Gas Co.	RP83-73-000	FERC
Union Electric Co.	ER83-646	FERC
Union Electric Co.	ER81-450	FERC
Union Electric Co. (Wheeling)	ER84-582	FERC
Kansas City Power & Light Co.	EO85-224	Missouri
Gulf States Utilities	U-16950	Louisiana
Delmarva Power & Light Co. (Complaint Filing)	EL86-11-000	FERC
Gas Rulemaking	844	District of Columbia
Panhandle Eastern Pipeline	CP86-232	FERC
Wisconsin Power & Light Co.	EL86-40-999	FERC
Gas Co. of New Mexico	1871	New Mexico
Potomac Electric Power Co. (Productivity Improvement Group)	766	District of Columbia
Delmarva Rate Reduction	ER82-751 (Revd)	FERC
Delmarva Power & Light Co.	CA84-1033	Court of Appeals
General Rulemaking (Phase II)	834	District of Columbia
Tennessee Gas Pipeline Co.	RP81-54 et al.	FERC

Mountain Fuel Supply (PGA)	87-057-01	Utah
Natural Gas Regulations for the District of Columbia	FC 844	District of Columbia
Potomac Electric Power Co. (Regulation of Power Contract)	FC 766	District of Columbia
Commonwealth Edison Co.	ICC87-0427	Illinois
Kansas City Power & Light Co.	ER86-701	FERC
Union Electric Co. (Amendment to Transmission Service)	ER87-419-000	FERC
Delmarva Power & Light Co. (Rate Filing)	ER87-556-000	FERC
Delmarva Power & Light Co. (Complaint Re Fuel and Purchased Power Costs)	EL87-58-001	FERC
Mountain Fuel Supply (TRA)		Utah
Mountain Fuel Supply (Gas Transportation)		Utah
Union Electric Co. vs. FERC and WDG vs. FERC	88-1125	Court of Appeals
Williams Natural Gas Co.	RP86-325	FERC
Wisconsin Power & Light Co.		FERC
Washington Gas Light Co.	849	District of Columbia
Delmarva Power & Light Co.	CA88-1557	D.C. Court of Appeals
KPL Gas Service Co.	GR89-62	Missouri
Potomac Electric Power Co.	FC 881	District of Columbia
Northern Natural Gas Co.	RP88-259	FERC
El Paso Natural Gas Co.	RP88-44	FERC
Delmarva Power & Light Co.	EL89-10	FERC
LaCledde Gas Co.	GC89-85	Missouri
Delmarva Power & Light Co.	EL89-16	FERC
Gas Co. of New Mexico	2147	New Mexico
Washington Gas Light Co.	FC 849	District of Columbia
Potomac Electric Power Co. (Least Cost Planning)	FC 884	District of Columbia
El Paso Natural Gas Co.	RP89-132	FERC
Williams Natural Gas Co. (Take-or-Pay)	RP89-40 & RP89-142	FERC
Vesta Energy Co. vs. Williams Natural Gas Co.	RP89-152	FERC
Williams Natural Gas Co. (Rate Case)	RP89-183	FERC
Colorado Take-or-Pay Investigation	89I-288G	Colorado
Potomac Electric Power Co.	FC 889	District of Columbia
KPL Gas Service Co.	GR90-50	Missouri
Louisiana Power & Light Co.	EL90-12	FERC
Louisiana Power & Light Co.	EL90-15	FERC
Allegheny Power Service Corporation	ER90-174	FERC
KPL Gas Company	GR90-40	Missouri
KPL Gas Service Co.	GR91-149	Missouri

Gas Co. of New Mexico	2361	New Mexico
KPL Gas Service Co.	GR91-286	Missouri
KPL Gas Service Co.	GR91-291	Missouri
Gas Co. of New Mexico	2395	New Mexico
KPL Gas Service Co.	GR-91-296	Missouri
KPL Gas Service Co.	GR-91-337	Missouri
KPL Gas Service Co.	GR-92-9	Missouri
Delmarva Power & Light Co.	ER-92-236	FERC
West Gas Co.	CPUC 915-552G	Colorado
Williams Natural Gas Co.	RP91-152	FERC
Southern Companies	EL 91-14 & ER 91-570	FERC
Gas Company of New Mexico (Blanco Hub)	2422	New Mexico
Gulf States Utilities	ER 87-051-000	FERC
Gas Company of New Mexico Integrated Resource Planning	2449	New Mexico
Potomac Electric Power Company	8466	Maryland
West Virginia Power	92-0401-E 42T	West Virginia
Questar Pipeline Company	RP93-18	FERC
Union Electric Company	ER93-267	FERC
Delmarva Power & Light and Baltimore Gas & Electric	ER93-340-000	FERC
Public Service Company of Colorado	93S-001EG	Colorado
Southwestern Electric Power Company	ER93-399-000	FERC
Delmarva Power & Light Company (Fuel Cost Waiver)	EL93-24-000	FERC
Union Electric Company	ER93-517-000	FERC
Productivity Improvement Analysis	FC 766	D.C.
KPL Gas Company	GR90-40	Missouri
Delmarva Power & Light Company	ER92-236 & EL92-113	FERC
Williams Natural Gas Company	RP92-152	FERC
Gas Company of New Mexico	2422	New Mexico
Public Service Co. of Colorado (West Gas Merger)	92A-352G-3	Colorado
New Mexico Transportation Rates	2472	New Mexico
Gas Co. of New Mexico Integrated Resource Planning	2449	New Mexico
Potomac Electric Power Co.	8466	Maryland
Western Resources, Inc	GR93-240	Missouri
Delmarva Power & Light Co. (Complaint Billing Selection)	EL93-47	FERC
Delmarva Power & Light Co. (Power Sale to LILCO)	ER93-731-000	FERC
Delmarva Power & Light Co. vs. FERC	93-1819	D.C. Court of Appeals
Delmarva Power & Light Co. (Power Sale)	EL94-23-000	FERC
Philadelphia Electric Co.	EL94-8	FERC



Delmarva Power & Light/New York State E&G (Power Sale)	ER94-967-000	FERC
Delmarva Power & Light Co. (Fuel Clause Waiver)	ER94-48-000	FERC
Gas Company of New Mexico (TOP)	2503	New Mexico
Delmarva Power & Light Co. vs. FERC	93-1819	D.C. Court of Appeals
Effect of Cold Weather on PJM	EL94-23-000	FERC
Old Dominion Electric Coop. (Wheeling Request)	TX94-5-000	FERC
Delmarva Power & Light Co. (Wheeling Rates)	ER94-1265	FERC
LDC Regulations	8683	Maryland
Delmarva Power & Light Co.(Partial Requirement Rates)	ER94-1319-000	FERC
Delmarva Power & Light Company (Power Sales to PSE&G)	ER94-1377	FERC
Delmarva Power & Light Company (Declaratory Order)	EL94-78	FERC
Old Dominion Electric Coop.(Waiver)	EL94-77	FERC
Delmarva Power & Light (Smyrna Agreement)	ER94-1501	FERC
Duquesne Power & Light Company	TX94-8-000	FERC
FERC Audit Report	FA92-39-000	FERC
Delmarva Power & Light Company (Clayton Settlement)	ER94-1628-000	FERC
Delmarva Power & Light (Fuel Cost Adjust.)	ER94-1620	FERC
Duquesne Light Company	TX94-10-000	FERC
PECO Energy	ER94-1673	FERC
PECO Energy Company (Power Sale to ODEC)	ER95-145-000	FERC
Conowingo Power Company/ Delmarva Power & Light Co. (Merger)	EC95-3-000 et al	FERC
PECO Energy (Power Sale)	ER95-312 and ER95-316	FERC
Delmarva Power & Light Co. (Power Agreements)	ER95-521 and ER95-524	FERC
Union Electric Co.(Remand)	ER84-560-036	FERC
Delmarva Power & Light Company (Network Transmission)	ER95-222-000	FERC
Gas Company of New Mexico/Southern Union Gas Company	2639	New Mexico
Industrial Gas Sales, Inc. vs.	GCNM 2649	New Mexico
Mega NOPR	RM95-8	FERC
Union Electric Co.	ER95-1437	FERC
Delmarva Power & Light (Open Access Tariff)	R95-1639	FERC
Questar Pipeline Co.	P95-407-000	FERC
PECO Energy	R96-641-000	FERC
Ameren Corp. (Open Access Tariff)	ER96-923-000	FERC
PJM Pool (Power Contract with Enron)	ER96-821-000	FERC
Delmarva Power & Light Co.	ER96-1360	FERC

Enron Power Marketing & PJM	ER96-821-000	FERC
Delmarva Power & Light Co.	ER96-852-000	FERC
PJM Interconnection Agreement	ER96-1433-000	FERC
Delmarva Power & Light Co. (Retail Wheeling)	96-83	Delaware
Delmarva Power & Light (Rate Increase)	ER96-1962-000	FERC
CRT NOPR	RM96-11-000	FERC
PECO Energy Co.	OA96-13-000	FERC
Delmarva Power & Light Co. (Order 888 Filing)	OA96-90 and OA96-165-000	FERC
PECO Energy (Pool Filing)	ER96-2668-000	FERC
PJM Pool, Inc. (Restructuring Filing)	EC96-28	FERC
Illinois Power Co.	OA96-66-000	FERC
CIPS Filing	OA96-154-000	FERC
Delmarva Power & Light Co. (Market Based Rates)	ER96-2571-000	FERC
Soyland Power (Wholesale Power) Power Cost Analysis	ER96-2974	FERC
Soyland Power Short term Sale)	ER96-2969 & 2970	FERC
Industrial Gas Sales vs. PNMGS	Case #2734	New Mexico
NMIEC vs. PNMGS	Case #2720	New Mexico
Delmarva Power & Light Sales to Marketers	ER97-440-000	FERC
Merger of Delmarva Power & Light Co. and Atlantic City Electric	EC97-7-000	FERC
Delmarva Power & Light Co. (Order 889 Filing)	ER97-912-000	FERC
PJM Interconnection (Open Access Filing)	ER97-881-000	FERC
Illinois Power/Soyland Power	NRC Docket # 50-461	NRC
Illinois Power Co. (Sale and Trans. Contracts)	ER97-1809, et al	FERC
PNM Gas Service (GAC Rule Making)	2670	New Mexico
Duke Power Co./ Pan Energy Merger	EC97-13-000	FERC
PNM Gas Service (Service Rate Case)	Case # 2762	New Mexico
DPL/ACE Merger (Transfer of Nuclear Plant)	50-354	NRC
PJM Interconnection	ER97-3189 and EC97-38	FERC
Filing by PJM Companies (Restructuring)		
IP/Soyland Contract	ER97-3090	FERC
ISO Filing by PECO	ER97-3273	FERC
PNM Gas Service (PGAC Rule)	2759 AND 2772	New Mexico
PNM Gas Service (Levelized PGAC)	2777	New Mexico
PJM Companies (Market Based Rate)	ER97-3729-000	FERC
PJM Revised Tariffs	ER97-3385 and ER97-3415	FERC
PJM Open Access Tariffs	OA-97-678-000	FERC
Delaware Retail Electric Restructuring	97-229	FERC

RTO Transmission Rates	ER97-3189-003	FERC
PJM Interconnection (Installed Capacity)	OA97-261-000 et al	FERC
PJM Interconnection (FTR Auction)	ER98-1581-000	FERC
PNM Gas Service (Fuel and Losses)	2811	New Mexico
Soyland Power Coop.	ES98-22-000	FERC
West Virginia American Water Co.	98-0246-W-42T	West Virginia
FERC Merger Policy	RM96-6-000	SWEC
Cinergy Services, Inc.	ER97-1747	SWEC
Soyland Power Co. (Asset Transfer)	EC97-54-000	SWEC
PJM Utilities	P-00971168 et al	Pennsylvania
Atlantic City Electric (Transmission Rate)	ER97-3189-001	FERC
Delmarva Power & Light (Seaford Rate Decrease)	ER98-3464-000	DEMEC
Consumer Owned Utilities Unbundled Rates	98-596	Maine
ODEC vs. PJM	EL99-9-000	DEMEC
Questar Gas Co.	98-057-12	Utah
Northern Utilities (GCA)	99-586	Maine
PJM Interconnection, LLC (Unbundled Costs)	ER00-298-000	FERC
Illinois Power (Transmission Rate)	ER99-4415	FERC
Kansas Electric Power Coop.	00-KERE-1132-E	Kansas
Ameren Services (Transmission contract)	ER00-1760 et al	FERC
Delmarva P&L Co. (Facilities to NRG)	EC00-97-000	FERC
Old Dominion Electric Coop.vs. PJM Interconnect, LLC	EL00-96-00	FERC
PJM Interconnection, (Order 2000 Compliance Filing)	RT01-2-000	FERC
Conectiv Power Co. (Asset Sale & Transfer)	EC-00-34-000, EC-00-35-000, EC-00-40-000	FERC
Allegheny Power Service Corporation	RT01-10-000	FERC
Desert Star (Order 2000 Compliance Filing)	RT01-44-000	FERC
Dispute with Illinois Power	2001 L95	Illinois Court
Illinois Valley vs. Soyland	EL01-07-000	FERC
PJM Interconnection LLC & Allegheny Power PJM West	RT01-98-000	FERC
Conectiv/ Pepco Merger	EC01-101	FERC
Conectiv's Facility Charges		FERC
Transmission Service	TS04-62-000, AC04-88-000	FERC
Northern RTO et al	RT01-99-000	FERC
Kansas Electric Power (Rate Case)	01-KEPE-1106-RTS	Kansas
Delmarva Power & Light Co. (Revised Contracts)	ER01-209-000	FERC
Public Service Co. of New Mexico (Merchant Plant)	3657	New Mexico
Old Dominion Cooperative vs. PJM, LLC.	EL01-106-000	FERC
Transmission Rates	ER01-2999-000	FERC

Interconnect & Transmission Upgrades	RM02-1-000	FERC
West Connect RTO	RT02-1-000 & EL02-9-000	FERC
Cinergy Corp.	EC02-15-000	FERC
PNM Gas Advise Notice 706	3701	New Mexico
Market Based Rates	EL-01-118	FERC
FERC Filings	ER-02-623-000	FERC
Public Service Co. of New Mexico (Acquisition of Transmission Assets)	3727	New Mexico
Public Service Co. of New Mexico (Cost of Service)	3137	New Mexico
McKinley Paper Co. vs. Continental Divide		New Mexico
SWEC vs. FERC	02-1168	US Court of Appeals
Power Supplies SNL/KAFB	FA1-SNL-E-05*02	DOE
Delmarva Power & Light (Updated Market Power Analysis)	ER96-2571 & ER99-2781	FERC
Granite Pipeline	DG00-172	New Hampshire
SMD NOPR	RM01-12-000	FERC
Illinois Power (Declaratory Order)	EL03-32-000	FERC
Public Service Co. of New Mexico	EC03-30-000	FERC
PJM Interconnection, LLC. (Governance)	ER03-332-000	FERC
PNM Gas Service (Rate Case)	03-00017-UT	New Mexico
PJM Interconnection (RTO Expansion)	ER03-262-000	FERC
PJM Interconnection (Transmission Interconnect)	ER03-405-000	FERC
PJM Interconnection (FTR Auction)	ER03-406-000	FERC
New York ISO (Demand Curve)	ER03-647-000	FERC
Reliant Energy vs. PJM	EL03-116-000	FERC
PJM Transmission Owners (Rate Filing)	ER03-738-000	FERC
PJM Interconnection (Market Auction)	EL03-236-000	FERC
PJM Transmission Owners	ER04-156-000	FERC
PJM Interconnection LLC	ER04-361-000	FERC
Midwestern ISO (SECA Filing)	EL02-111 & EL03-112	FERC
PJM Interconnection, LLC (SECA Filing)	EL03-112	FERC
MISO/PJM Joint Agreement	ER04-375-000	FERC
DP&L Interconnection Agreements	ER04-509-000	FERC
Gas and Electric Price Index	PL03-300 & AD03-7-000	FERC
Ameren's Acquisition of IP	EC04-81-000	FERC
PNM Gas Service (Gas Line Extension)	03-00017-UT	New Mexico
MISO Energy Market	ER04-691-000	FERC
Market-Based Rates for Public Utilities	RM04-7-000	FERC
PJM South	ER04-829-000	FERC

MISO Energy Market (Grandfathered Agreements and General Matters)	ER-106-000 & ER-691-000	FERC
Public Service Co. of New Mexico (TNP Acquisition)	04-00315	New Mexico
Long Term Transmission Pricing	ER05-6-000	FERC
Southwestern Public Service Co. (Complaint)	EL05-19-000	FERC
Southwestern Public Service Co. (Complaint)	ER05-168-000	FERC
Public Service Resources (TNP Acquisition)	EC05-29-000	FERC
Xcel Co. (Transmission Rate)	ER04-1174	FERC
PJM TO Formula Rate	ER05-515	FERC
PJM Schedule 12 Filing	ER05-513	FERC
Reactive Power	AD05-1	FERC
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PNM Energy Efficiency Rider	05-00261-6T	DOE
Questar Gas Co.	98-057-12	Utah
PJM (BTMG)	EL05-127-000	FERC
Order 888 Revision	RM05-25-000	FERC
PSEG (RMR)	ER05-644 & EL03-236-005	FERC
Public Service Co. of New Mexico	ER05-741-000	FERC
MISO (Allocation of new transmission facilities)	ER06-18-000	FERC
PJM Schedule 12 RTEP Filing	ER06-456-000	FERC
American Electric Power Corporation	EL06-50-00	FERC
Pepco Holdings Inc. (Marginal Losses)	EL06-55-00	FERC
PNM/TNMP (Joint OATT)	ER05-689	FERC
Public Service of New Mexico	ER05-741-000	New Mexico
PJM Rate Design	EL05-121-000	FERC
PNM Energy Efficiency Rider	05-2261-6T	FERC
Rate Design (City of Owensville)		Missouri
Rate Design (City of Herman)		Missouri
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PJM Interconnection, LLC (ARR Allocation)	ER06-1218-000	FERC
WPS vs. MISO/PJM (Complaint)	EL06-97-000	FERC
PJM Interconnection, LLC (RTEP Allocation)	EL06-1217-000	FERC
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General Electric Issues	TO No. FAI-SNL-E-05402	New Mexico
Ameren Energy (Ancillary Services)	ER07-169 & ER07-170	FERC
Dynegy, Inc	ER07-323	FERC
Ameren/UE (Ancillary Services)	ER07-153-000	FERC
MISO, LLC (Ancillary Services)	ER07-550-000	FERC
MISO, LLC (RAR Plan)	ER07-478-000	FERC
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MISO, LLC (Revised Ancillary Services)	ER07-1372	FERC
Union Electric Co. (Ancillary Services)	ER08-185 & ER08-1086	FERC
MISO, LLC (RAR)	ER08-394	FERC
Potomac Appalachian Transmission Highline, LLC	ER08-386-000	FERC
PHI/Delmarva Power and Light	Er08-686	FERC
MISO, LLC (890 Compliance)	OA8-106	FERC
Delmarva Power and Light (Formula Rate)	ER08-978	FERC
Public Service Co. of New Mexico	08-00018-UT	FERC
Ameren and UE (Ancillary Service Filings)	ER08-1262, ER08-1268	FERC
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MISO, LLC (Suspension of ASM)	ER08-1375	FERC
Coal Power Plant		Delaware
MISO (Ancillary Service)	ER09-15	FERC
MISO (Formula Transmission Rate)	ER09-91	FERC
City of Milford (Unbundled Rates)		Delaware
City of Milford, Chesapeake Utilities		Delaware
City of Seaford		Delaware
Southwester Public Service Co.		Texas & New Mexico