

CURRICULUM VITAE

NAME

Barry E. Sullivan

BUSINESS ADDRESS

Brown, Williams, Moorhead & Quinn, Inc.
P.O. Box 10
Sunderland, MD 20689-0010

PRESENT POSITION

Associate

EDUCATION

Bachelor of Arts Degree in Economics
University of Massachusetts at Boston
Graduate Work at University of York, England

NATURE OF WORK PERFORMED WITH FIRM

Mr. Sullivan joined BWMQ in September 2005. He was elected President of BWMQ in April 2006 and CEO in March 2015. Mr. Sullivan's recent work as an expert witness before the Federal Energy Regulatory Commission and Canadian National Energy Board has concerned the following issues: market power and market-based rates in oil and natural gas pipeline proceedings, natural gas pipeline rate design, short-term rate design, return on equity, the appropriate Proxy Group companies utilized in return on equity studies, business risk of natural gas pipeline companies, oil pipeline ratemaking and prudent cost recovery, and economic life, depreciation and negative salvage studies for natural gas and oil pipeline companies in formal FERC rate case proceedings.

Mr. Sullivan's most recent filed testimonies are in the Texas Eastern Transmission proceeding in Docket No. RP19-343, WBI Energy proceeding in Docket No. RP19-165, Enable MRT Docket No. RP18-923, Trailblazer Docket No. RP18-922, and Empire Docket No. RP18-940 proceedings and MoGas proceeding in Docket No. RP18-877. Mr. Sullivan's testimony concerned business risk, rate design, tariff issues and the Proxy Group companies. Testimony in the Eastern Shore proceeding in Docket No. RP17-363 concerned rate design, business risk and the Proxy Group companies, his testimony in Dominion Cove Point in Docket No. RP17-197



concerned the Proxy Group companies and business risk, his testimony in the Great Lakes proceeding in Docket No. RP17-598 concerned the Proxy Group companies and business risk, his testimony in the TIGT proceeding in Docket No. RP16-137 concerned rate design, business risk and the Proxy Group companies, his testimony in the Alliance proceeding in Docket No. RP15-1022 concerned return, business risk and the Proxy Group companies, his testimony in the Sabine proceeding in Docket No. RP15-1322 involved rate design and billing determinants; testimony in the Gulf South proceeding, Docket No. RP15-65, concerned rate design, business risk and the Proxy Group entities. Testimony in the ANR Storage proceeding in Docket No. RP12-479 concerned market power and market-based pricing authority for ANR storage facilities; testimony in CenterPoint in Docket No. RP12-955, and Southern Star in RP13-941 concerned Proxy Group companies, business risk and rate design issues; TAPS testimony in Docket No. IS09-348 on prudent cost recovery and oil pipeline rates; CGT testimony in Docket No. RP11-1435 concerned rate design, short-term rates and business risk; PNGTS testimony in Docket Nos. RP10-729 and RP08-306 concerned economic life, depreciation, short-term rates, and the Proxy Group companies. Mr. Sullivan filed testimony in support of El Paso's rate design in Docket No. RP10-1398; market power in the Mobil Pipe Line Company proceeding in Docket No. OR07-21; the Proxy Group companies included in return calculations in the Southern Natural proceeding in Docket No. RP09-427; short-term value-based rates, FERC cost allocation and rate design history, and discounting in the El Paso proceedings in Docket No. RP08-426; Commission policy and market power in the GTN proceeding in Docket No. RP06-407, an expert report in the USGen proceeding in Docket No. RP06-391, and oil pipeline ratemaking testimony in the TAPS proceeding in Docket No. IS05-82.

Mr. Sullivan has 39 years of experience in the natural gas pipeline, oil pipeline and electric utility industries. His areas of expertise include formal market power analysis and all facets of natural gas and oil pipeline ratemaking. He has testified as an expert witness on economic life, depreciation, cost classification, cost allocation, rate design, billing determinants, market power, market-based rates,



PREVIOUS EMPLOYMENT

market manipulation and other rate-related issues in numerous natural gas pipeline proceedings, oil pipeline proceedings, and electric proceedings.

Mr. Sullivan was employed by the Federal Energy Regulatory Commission from March 1979 to September 2005. He retired as a Supervisor in the Technical Analysis Division of the Office of Administrative Litigation. Mr. Sullivan was a technical expert for the entire 26 years he was at the Commission and provided testimony in many formal proceedings. The areas of his expertise included: formal market power analysis, market-based rates, cost allocation and rate design, oil pipeline regulation, electric utility regulation, depreciation, Mcf/mileage studies, refunctionalization studies, offshore regulation, negotiated rates, discount studies, and other regulatory issues. Mr. Sullivan has applied his expertise relating to natural gas pipeline, oil pipeline and electric utility issues in a wide range of formal proceedings at the Commission. He has developed many creative and innovative approaches to deal with these and related issues in administrative proceedings at the Commission.

As a Supervisor in the Office of Administrative Litigation, Mr. Sullivan supervised, initiated, directed and coordinated the preparation and presentation of the Commission's technical Trial Staff's settlement and testimony position on all matters set for formal hearing in natural gas pipeline, oil pipeline and electric utility proceedings. These issues include formal market power analysis, market based rates, rate design; seasonal rates; distance based rates; separation of services (unbundling); discounting; capacity release; capacity assignments; interruptible transportation rates; storage rate design; refunctionalization studies; stranded costs; restructuring issues; incremental versus rolled-in rates; depreciation and negative salvage; cost of service and rate base issues; oil pipeline rates; tariffs and operational issues; and the resolution of contract disputes.

Mr. Sullivan has testified as an expert witness on market power and market based rates, cost classification, allocation and rate design, billing determinants, depreciation, and



other rate related issues in numerous natural gas pipeline and storage rate proceedings, oil pipeline proceedings and electric proceedings. He has been responsible for various presentations to FERC Commissioners on such topics as Offshore Gathering Policy, Negotiated Rates and Discounting, Enron and Manipulation of the Western Energy Markets in 2000-2001, and Section 5 rate case proceedings.

A list of the cases in which Mr. Sullivan provided testimony and/or testified is attached below. A list of the cases that Mr. Sullivan supervised while at the Commission is also attached.



#	JURISDICTION	CASE OR DOCKET NO.	UTILITY/ORGANIZATION INITIATING PROCEEDING	POSITION	SUBJECT MATTER
Formal Proceedings In Which Barry E. Sullivan Testified					
61	FERC	RP19-343	TEXAS EASTERN	Witness	Business Risk and Proxy Group Entities
60	FERC	RP19-165	WBI ENERGY	Witness	Business Risk and Proxy Group Entities
59	FERC	RP18-923	ENABLE MRT	Witness	Rate Design, Discount Adjustment, Tariff Issues and Billing Determinants
58	FERC	RP18-922	TRAILBLAZER PIPELINE COMPANY	Witness	Business Risk and Proxy Group Entities
57	FERC	RP18-940	EMPIRE	Witness	Business Risk and Proxy Group Entities
56	FERC	RP18-877	MOGAS PIPE LINE COMPANY	Witness	Business Risk and Proxy Group Entities
55	FERC	RP17-598	GREAT LAKES GAS TRANSMISSION	Witness	Business Risk and Proxy Group Entities
54	FERC	PL17-1-000	INGAA	Witness	Affidavit in MLP Income Tax Proceeding
53	FERC	OR17-19-000	WEST TEXAS LPG PIPELINE	Witness	Affidavit in WTXP Market Power Proceeding
52	FERC	RP17-363	EASTERN SHORE NATURAL GAS COMPANY	Witness	Rate Design, Business Risk and Proxy Group Entities
51	FERC	RP17-197	DOMINION COVE POINT	Witness	Business Risk and Proxy Group Entities
50	FERC	OR15-25	BP PRODUCTS NORTH AMERICA INC. V SUNOCO PIPELINE L.P.	Witness	Oil Pipeline Pro-Rationing Policy and Transportation Service Agreements
49	FERC	RP15-1022	ALLIANCE PIPELINE L.P.	Witness	Return, Business Risk and Proxy Group Entities
48	FERC	RP16-137	TALLGRASS INTERSTATE GAS TRANSMISSION LLC	Witness	Rate Design, Business Risk and Proxy Group Entities
47	FERC	RP15-1322	SABINE PIPE LINE LLC	Witness	Rate Design and Billing Determinants
46	FERC	RP15-65-000	GULF SOUTH PIPELINE COMPANY LP	Witness	Rate Design, Business Risk and Proxy Group Entities
45	FERC	RP12-479	ANR STORAGE COMPANY	Witness	Market Power Analysis



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44	FERC	RP13-941	SOUTHERN STAR CENTRAL GAS PIPELINE INC.	Witness	Business Risk and Proxy Group Companies
43	FERC	RP12-955-000	CENTERPOINT ENERGY – MISSISSIPPI RIVER TRANSMISSION	Witness	Rate Design, Business Risk and Proxy Group Companies
42	National Energy Board of Canada	RH-003-2011	NATIONAL ENERGY BOARD OF CANADA, TRANSCANADA PIPELINES BUSINESS AND SERVICES RESTRUCTURING AND MAINLINE 2012-2013 TOLLS APPLICATION	Witness	Economic Life of TransCanada Mainline Pipeline and Depreciation by Mainline Segment, Reallocation of Depreciation Reserve by Segment
41	FERC	IS09-348-004, et al.	BP PIPELINES (ALASKA)	Witness	Prudence of Cost Incurrence in TAPS Strategic Reconfiguration
40	FERC	RP12-88-000	NATIONAL FUEL SUPPLY CORPORATION	Witness	Rate Design, System-Wide Postage Stamp Rate
39	FERC	RP11-1435-000	CGT TRANSMISSION COMPANY	Witness	Rate Design, Business Risk, Proxy Group Companies and Short-Term Rates
38	FERC	RP10-1398-000	EL PASO NATURAL GAS COMPANY	Witness	Rate Design
37	FERC	RP10-729-000	PORTLAND NATURAL GAS TRANSMISSION SYSTEM	Witness	Economic Life, Depreciation and Negative Salvage
36	FERC	RP09-427-000	SOUTHERN NATURAL GAS COMPANY	Witness	Business Risk and Proxy Group Companies
35	FERC	RP08-426-000	EL PASO NATURAL GAS COMPANY	Witness	Rate Design and Short-Term Rates
34	FERC	RP08-306-000	PORTLAND NATURAL GAS TRANSMISSION SYSTEM	Witness	Economic Life, Depreciation, Negative Salvage and Short-Term Rates
33	FERC	RP07-21-000	MOBIL PIPELINE COMPANY	Witness	Market Power Analysis
32	FERC	RP06-407-000	GAS TRANSMISSION NORTHWEST	Witness	Short-Term Rates and Market Power
31	FERC	IS05-82-000	ANADARKO/TESORO VS. TAPS CARRIERS	Witness	TAPS Oil Pipeline Ratemaking Standards
30	FERC	EL03-154 & EL03-180	ENRON POWER MARKETING, INC.	Witness	Market Power & Manipulation
29	FERC	EL02-114-000	PORTLAND GENERAL ELECTRIC COMPANY	Witness	Market Power & Manipulation



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28	FERC	RP02-99-000	SHELL OFFSHORE INC., V WILLIAMS FIELD SERVICES	Witness	Market Power
27	FERC	RP97-288-009 – 016	TRANSWESTERN PIPELINE COMPANY	Witness	Market Power
26	FERC	OR98-11-000	SFPP, L.P.	Witness	Market Power
25	FERC	RP98-203-000	NORTHERN NATURAL GAS COMPANY	Witness	Rate Design
24	FERC	RP97-373-000	KOCH GATEWAY PIPELINE CO	Witness	Rate Design
23	FERC	RP97-126-000	IROQUOIS GAS TRANSMISSION SYSTEM	Witness	Rate Design
22	FERC	RP91-203-062	TENNESSEE GAS PIPELINE CO	Witness	Rate Design
21	FERC	RP95-362-000	KOCH GATEWAY PIPELINE CO	Witness	Market Power
20	FERC	RP95-364-000	WILLISTON BASIN INTERSTATE PIPELINE CO	Witness	Rate Design
19	FERC	RP95-112-000	TENNESSEE GAS PIPELINE CO	Witness	Rate Design
18	FERC	RP94-72-000	IROQUOIS GAS TRANSMISSION CO.	Witness	Economic Life, Depreciation and Rate Issues
17	FERC	RP93-55-000	TRAILBLAZER PIPELINE COMPANY	Witness	Economic Life and Depreciation
16	FERC	RP85-39-009	WYOMING INTERSTATE COMPANY, LTD	Witness	Economic Life and Depreciation
15	FERC	RP90-8-000	TRANSCONTINENTAL GAS PIPE LINE CORP.	Witness	Restructuring, Economic Life and Depreciation
14	FERC	RP90-119-000	TEXAS EASTERN TRANSMISSION CORPORATION	Witness	Economic Life and Depreciation
13	FERC	RP90-109-000	PACIFIC GAS TRANSMISSION COMPANY	Witness	Economic Life and Depreciation
12	FERC	RP88-197-000	WILLISTON BASIN INTERSTATE PIPELINE CO.	Witness	Economic Life and Depreciation
11	FERC	CP85-437 ET AL	MOJAVE PIPELINE COMPANY	Witness	Economic Life and Depreciation



#	JURISDICTION	CASE OR DOCKET NO.	UTILITY/ORGANIZATION INITIATING PROCEEDING	POSITION	SUBJECT MATTER
10	FERC	IS85-9 & OR85-1	KUPARUK TRANSPORTATION COMPANY	Witness	Economic Life and Depreciation
9	FERC	RP84-94	TRAILBLAZER PIPELINE COMPANY	Witness	Economic Life and Depreciation
8	FERC	RP85-60	OVERTHRUST PIPELINE COMPANY	Witness	Economic Life and Depreciation
7	FERC	RP85-39	WYOMING INTERSTATE COMPANY, LTD	Witness	Economic Life and Depreciation
6	FERC	RP82-46	SOUTH GEORGIA NATURAL GAS COMPANY	Witness	Economic Life and Depreciation
5	FERC	CP80-17	TRANS ANADARKO PIPELINE SYSTEM	Witness	Economic Life and Depreciation
4	FERC	RP81-17 & RP81-57	MIDWESTERN GAS TRANSMISSION COMPANY	Witness	Economic Life and Depreciation
3	FERC	RP80-97 & RP81-54	TENNESSEE GAS PIPELINE COMPANY	Witness	Economic Life and Depreciation
2	FERC	RP80-121	UNITED GAS PIPELINE COMPANY	Witness	Economic Life and Depreciation
1	FERC	CP79-80	TRAILBLAZER PIPELINE COMPANY	Witness	Economic Life and Depreciation



#	JURISDICTION	CASE OR DOCKET NO.	UTILITY/ORGANIZATION INITIATING PROCEEDING	POSITION	SUBJECT MATTER
Formal Proceedings Supervised by Mr. Sullivan					
1	FERC	RP04-249	AES OCEAN EXPRESS V FGT	Sponsor	Complaint Gas Quality on FGT
2	FERC	IS01-0033-000	ALPINE TRANSPORTATION COMPANY	Sponsor	Oil Pipeline Cost Based Rates
3	FERC	CP00-0391-000	ANR PIPELINE COMPANY	Sponsor	Gas Section 7 Certificate Proceeding
4	FERC	RP02-0335-000	ANR PIPELINE COMPANY	Sponsor	Gas Section 5 Cost Based Rates
5	FERC	RP04-435-000	ANR PIPELINE COMPANY	Sponsor	Complaint on Gas Quality Hydrocarbon Dew Point
6	FERC	OR96-2-000	ARCO PRODUCTS	Sponsor	Oil Pipeline Cost Based Rates
7	FERC	OR01-0003-002	BIG WEST OIL CO v. ANSCHUTZ RANCH EAST	Sponsor	Complaint Oil
8	FERC	OR01-0002-002	BIG WEST OIL CO v. FRONTIER PIPELINE CO	Sponsor	Complaint Oil
9	FERC	EL02-0123-000	BOSTON EDISON COMPANY	Sponsor	Complaint/Electric Transmission Rates, losses, Transmission Upgrades
10	FERC	IS01-0504-000	BP TRANSPORTATION (ALASKA) INC	Sponsor	Oil Pipeline Cost Based Rates
11	FERC	RP02-0356-000	CANYON CREEK COMPRESSION COMPANY	Sponsor	Gas Section 4 Cost Based Rates
12	FERC	ER01-0200-000	CINERGY SERVICES INC.	Sponsor	Electric Contractual Dispute
13	FERC	EL00-0071-000	CITY OF DETROIT, MICHIGAN v. DETROIT EDI	Sponsor	Electric Contractual Dispute



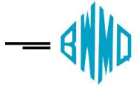
#	JURISDICTION	CASE OR DOCKET NO.	UTILITY/ORGANIZATION INITIATING PROCEEDING	POSITION	SUBJECT MATTER
14	FERC	RP01-0350-000	COLORADO INTERSTATE GAS COMPANY	Sponsor	Gas Section 4 Cost Based Rates
15	FERC	IS01-0444-000	CONOCO PIPE LINE COMPANY	Sponsor	Oil Pipeline Cost Based Rates
16	FERC	IS01-0445-005	CONOCO PIPE LINE COMPANY	Sponsor	Oil Pipeline Cost Based Rates
17	FERC	RP02-0034-000	EASTERN SHORE NATURAL GAS COMPANY	Sponsor	Gas Section 4 Cost Based Rates
18	FERC	EL03-180 et al.	ENRON POWER MARKETING INC.	Sponsor	Western Market Show Cause Proceeding
19	FERC	EL03-0047-000	ENRON AFFILIATED QF'S (INVESTIGATION OF)	Sponsor	Complaint/Electric - Not Otherwise Categorized
20	FERC	ER99-3084-000	ENTERGY OPERATING COMPANIES	Team Leader	Electric Transmission Rate, Ancillary Services and/or Terms and Conditions
21	FERC	ER05-696	ENTERGY SERVICES, INC.	Sponsor	Electric Transmission Rate, Ancillary Services and/or Terms and Conditions
22	FERC	RP05-164	EQUITRANS	Sponsor	Gas Section 4 Cost Based Rates
23	FERC	IS02-0081-000	EXPRESS PIPELINE LLC	Sponsor	Oil Pipeline Cost Based Rates
24	FERC	IS00-0221-000	EXXON-MOBILE PIPELINE COMPANY	Sponsor	Oil Pipeline Cost Based Rates
25	FERC	EL00-0076-000	FRENCH BROAD ELECTRIC MEMBERSHIP CORP V.	Sponsor	Electric Contractual Dispute
26	FERC	RP03-221	HIGH ISLAND OFFSHORE SYSTEM	Sponsor	Gas Section 4 Cost Based Rates
27	FERC	RPO4-274	KERN RIVER GAS TRANSMISSION	Sponsor	Gas Section 4 Cost Based Rates
28	FERC	IS02-0230-000	KINDER MORGAN OPERATING L.P.	Sponsor	Oil Pipeline Cost Based Rates



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29	FERC	IS05-216	MIDAMERICA OIL PIPELINE	Sponsor	Oil Pipeline Cost Based Rates
30	FERC	ER05-163	MILFORD POWER COMPANY, LLC	Sponsor	Electric Cost Based Rates RMR
31	FERC	ER01-0745-000	NEW ENGLAND POWER COMPANY	Sponsor	Electric Interconnection of Transmission Facilities
32	FERC	RP01-503-002	NATURAL GAS PIPELINE COMPANY	Sponsor	Complaint on Gas Quality Hydrocarbon Dew Point
33	FERC	RP01-0395-000	NORTHERN NATURAL GAS COMPANY	Member	Fuel Adjustment Rates
34	FERC	RP98-0203-000	NORTHERN NATURAL GAS COMPANY	Member	Gas Section 4 Cost Based Rates
35	FERC	EL00-0062-010	NSTAR SERVICES CO v. NEPOOL	Sponsor	Complaint/Electric Transmission Rates, losses, Transmission Upgrades
36	FERC	RP99-0518-019	PG&E GAS TRANSMISSION, NW CORPORATION	Sponsor	Gas Market Based Rates
37	FERC	RP02-0407-000	PINE NEEDLE LNG COMPANY, L.L.C.	Sponsor	Gas Section 4 Cost Based Rates
38	FERC	IS01-0108-000	PIONEER PIPE LINE COMPANY	Sponsor	Oil Pipeline Cost Based Rates
39	FERC	IS02-0384-000	PLATTE PIPE LINE COMPANY v. EXPRESS PIPE	Sponsor	Oil Pipeline Cost Based Rates
40	FERC	RP02-0013-000	PORTLAND NATURAL GAS TRANSMISSION SYSTEM	Sponsor	Gas Section 4 Cost Based Rates
41	FERC	ER05-231	PSEG POWER CONNECTICUT, LLC	Sponsor	Electric Cost Based Rates RMR
42	FERC	RP00-0241-006	PUB. UTIL. Comm. (CPUC) v. EL PASO NAT.	Subject Expert	Gas Market Based Rates
43	FERC	RP00-0241-000	PUB. UTIL. COMM. (CPUC) v. EL PASO NAT.	Subject Expert	Complaint/Gas or Oil - Not Otherwise Categorized



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44	FERC	OR98-0011-000	SFPP, L.P. (PHASE I - MARKET POWER)	Team Leader	Complaint/Gas or Oil - Not Otherwise Categorized
45	FERC	OR98-0011-001	SFPP, L.P. (PHASE II - COST-OF-SERVICE)	Sponsor	Complaint/Gas or Oil - Not Otherwise Categorized
46	FERC	RP02-0099-000	SHELL OFFSHORE INC v. TRANSCO ET AL	Member	Complaint/Gas or Oil - Not Otherwise Categorized
47	FERC	RP02-0129-000	SOUTHERN LNG INC	Sponsor	Gas Section 4 Cost Based Rates
48	FERC	RP99-0496-000	SOUTHERN NATURAL GAS COMPANY	Team Leader	Gas Section 4 Cost Based Rates
49	FERC	RP04-523	SOUTHERN NATURAL GAS COMPANY	Sponsor	Gas Section 4 Cost Based Rates
50	FERC	TX96-0004-000	SUFFOLK COUNTY ELECTRICAL AGENCY	Sponsor	Electric Transmission Rate, Ancillary Services and/or Terms and Conditions
51	FERC	RP01-0433-000	SUMMIT POWER NW LLC, v. PORTLAND GENERAL	Sponsor	Complaint/Gas or Oil - Not Otherwise Categorized
52	FERC	RP00-0260-000	TEXAS GAS TRANSMISSION CORPORATION	Subject Expert	Gas Section 4 Cost Based Rates
53	FERC	RP03-0162-000	TRAILBLAZER PIPELINE COMPANY	Sponsor	Gas Section 4 Cost Based Rates
54	FERC	RP01-0245-000	TRANSCONTINENTAL GAS PIPELINE CORPORATION	Sponsor	Gas Section 4 Cost Based Rates
55	FERC	RP97-0288-009	TRANSWESTERN PIPELINE COMPANY	Sponsor and Witness	Gas Section 4 Cost Based Rates
56	FERC	RP01-0196-000	VENICE GATHERING SYSTEM, L.L.C.	Sponsor	Gas Section 4 Cost Based Rates
57	FERC	RP02-0132-000	VIKING GAS TRANSMISSION COMPANY	Sponsor	Gas Section 4 Cost Based Rates
58	FERC	IS02-0331-000	WEST TEXAS LPG PIPELINE LIMITED PARTNERS	Sponsor	Oil



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59	FERC	EC97-0056-000	WESTERN RESOURCES, INC	Member	Merger Proceeding
60	FERC	RP00-107	WILLISTON BASIN INTERSTATE PIPELINE COMPANY	Sponsor	Gas Section 4 Cost Based Rates