

BACKGROUND & EXPERIENCE PROFILE
GLENN A. WATKINS
VICE PRESIDENT/SENIOR ECONOMIST
TECHNICAL ASSOCIATES, INC.

EDUCATION

1982 - 1988	M.B.A., Virginia Commonwealth University, Richmond, Virginia
1980 - 1982	B.S., Economics; Virginia Commonwealth University
1976 - 1980	A.A., Economics; Richard Bland College of The College of William and Mary, Petersburg, Virginia

POSITIONS

Jul. 1995-Present	Vice President/Senior Economist, Technical Associates, Inc.
Mar. 1993-1995	Vice President/Senior Economist, C. W. Amos of Virginia
Apr. 1990-Mar. 1993	Principal/Senior Economist, Technical Associates, Inc.
Aug. 1987-Apr. 1990	Staff Economist, Technical Associates, Inc., Richmond, Virginia
Feb. 1987-Aug. 1987	Economist, Old Dominion Electric Cooperative, Richmond, Virginia
May 1984-Jan. 1987	Staff Economist, Technical Associates, Inc.
May 1982-May 1984	Economic Analyst, Technical Associates, Inc.
Sep. 1980-May 1982	Research Assistant, Technical Associates, Inc.

EXPERIENCE

I. Public Utility Regulation

- A. Costing Studies -- Conducted, and presented as expert testimony, numerous embedded and marginal cost of service studies. Cost studies have been conducted for electric, gas, telecommunications, water, and wastewater utilities. Analyses and issues have included the evaluation and development of alternative cost allocation methods with particular emphasis on ratemaking implications of distribution plant classification and capacity cost allocation methodologies. Distribution plant classifications have been conducted using the minimum system and zero-intercept methods. Capacity cost allocations have been evaluated using virtually every recognized method of allocating demand related costs (e.g., single and multiple coincident peaks, non-coincident peaks, probability of loss of load, average and excess, and peak and average).

Embedded and marginal cost studies have been analyzed with respect to the seasonal and diurnal distribution of system energy and demand costs, as well as cost effective approaches to incorporating energy and demand losses for rate design purposes. Economic dispatch models have been evaluated to determine long range capacity requirements as well as system marginal energy costs for ratemaking purposes.

- B. Rate Design Studies -- Analyzed, designed and provided expert testimony relating to rate structures for all retail rate classes, employing embedded and marginal cost studies. These rate structures have included flat rates, declining block rates, inverted block rates, hours use of demand blocking, lighting rates, and interruptible rates. Economic development and special industrial rates have been developed in recognition of the competitive environment for specific customers. Assessed alternative time differentiated rates with diurnal and seasonal pricing structures. Applied Ramsey (Inverse Elasticity) Pricing to marginal costs in order to adjust for embedded revenue requirement constraints.

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- C. Forecasting and System Profile Studies -- Development of long range energy (Kwh or Mcf) and demand forecasts for rural electric cooperatives and investor owned utilities. Analysis of electric plant operating characteristics for the determination of the most efficient dispatch of generating units on a system-wide basis. Factors analyzed include system load requirements, unit generating capacities, planned and unplanned outages, marginal energy costs, long term purchased capacity and energy costs, and short term power interchange agreements.
- D. Cost of Capital Studies -- Analyzed and provided expert testimony on the costs of capital and proper capital structures for ratemaking purposes, for electric, gas, telephone, water, and wastewater utilities. Costs of capital have been applied to both actual and hypothetical capital structures. Cost of equity studies have employed comparable earnings, DCF, and CAPM analyses. Econometric analyses of adjustments required to electric utilities cost of equity due to the reduced risks of completing and placing new nuclear generating units into service.
- E. Accounting Studies -- Performed and provided expert testimony for numerous accounting studies relating to revenue requirements and cost of service. Assignments have included original cost studies, cost of reproduction new studies, depreciation studies, lead-lag studies, Weather normalization studies, merger and acquisition issues and other rate base and operating income adjustments.

II. Transportation Regulation

- A. Oil and Products Pipelines -- Conducted cost of service studies utilizing embedded costs, I.C.C. Valuation, and trended original cost. Development of computer models for cost of service studies utilizing the "Williams" (FERC 154-B) methodology. Performed alternative tariff designs, and dismantlement and restoration studies.
- B. Railroads -- Analyses of costing studies using both embedded and marginal cost methodologies. Analyses of market dominance and cross-subsidization, including the implementation of differential pricing and inverse elasticity for various railroad commodities. Analyses of capital and operation costs required to operate "stand alone" railroads. Conducted cost of capital and revenue adequacy studies of railroads.

III. Insurance Studies

Conducted and presented expert testimony relating to market structure, performance, and profitability by line and sub-line of business within specific geographic areas, e.g. by state. These studies have included the determination of rates of return on Statutory Surplus and GAAP Equity by line - by state using the NAIC methodology, and comparison of individual insurance company performance vis a vis industry Country-Wide performance.

Conducted and presented expert testimony relating to rate regulation of workers compensation, automobile, and professional malpractice insurance. These studies have included the determination of a proper profit and contingency factor utilizing an internal rate of return methodology, the development of a fair investment income rate, capital structure, cost of capital.

Other insurance studies have included testimony before the Virginia Legislature regarding proper regulatory structure of Credit Life and P&C insurance; the effects on competition and prices resulting from proposed insurance company mergers, maximum and minimum expense multiplier limits, determination of specific class code rate increase limits (swing limits); and investigation of the reasonableness of NCCI's administrative assigned risk plan and pool expenses.

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IV. Anti-Trust and Commercial Business Damage Litigation

Analyses of alleged claims of attempts to monopolize, predatory pricing, unfair trade practices and economic losses. Assignments have involved definitions of relevant market areas(geographic and product) and performance of that market, the pricing and cost allocation practices of manufacturers, and the economic performance of manufacturers' distributors.

Performed and provided expert testimony relating to market impacts involving automobile and truck dealerships, incremental profitability, the present value of damages, diminution in value of business, market and dealer performance, future sales potential, optimal inventory levels, fair allocation of products, financial performance; and business valuations.

MEMBERSHIPS AND CERTIFICATIONS

Member, Association of Energy Engineers (1998)
Certified Rate of Return Analyst, Society of Utility and Regulatory Financial Analysts (1992)
Member, American Water Works Association
National Association of Business Economists
Richmond Association of Business Economists
National Economics Honor Society

EXPERT TESTIMONY
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YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
1985	SAVANNAH ELECT. & PWR CO.	GA. PSC	3523U	SALES FORECAST, RATE DESIGN ISSUES
1990	CENTRAL MAINE PWR CO.	ME. PUC	89-88	MARGINAL COST OF SERVICE
1990	COMMONWEALTH GAS SERVICES (Columbia Gas)	VA. SCC	PUE900034	CLASS COST OF SERVICE
1990	WARNER FRUEHAUF	U.S. BANKRUPTCY CT.	n/a	VALUE OF STOCK, COST OF CAPITAL
1991	W. VA. WATER	WVA PSC	91-140-W-42T	RATE DESIGN
1992	S.C. WORKERS COMPENSATION	SC DEPT OF INSUR	92-034	INTERNAL RATE OF RETURN
1992	GRASS v. ATLAS PLUMBING, et.al.	RICHMOND CIRCUIT CT	n/a	DAMAGES, BREACH OF COVENANT NOT TO COMPETE (PROFFERED TEST)
1992	VIRGINIA NATURAL GAS	VA SCC	PUE920031	JURISDICTIONAL & CLASS COST OF SERVICE
1992	ALLSTATE INSURANCE COMPANY (DIRECT)	N.J. DEPT OF INSUR	INS 06174-92	COST ALLOCATIONS, PROFITABILITY
1992	ALLSTATE INSURANCE COMPANY (REBUTTAL)	N.J. DEPT OF INSUR	INS 06174-92	VEHICLE ALLOCATIONS, INVENTORY LEVELS, INCREMENTAL PROFIT, & DAMAGES
1993	MOUNTAIN FORD v FORD MOTOR COMPANY	FEDERAL DISTRICT CT	n/a	DIRECT: CLASS COST ALLOCATIONS
1993	SOUTH WEST GAS CO.	AZ. CORP COMM	U-1551-92-253	SURREBTAL: CLASS COST ALLOCATIONS
1993	SOUTH WEST GAS CO.	AZ. CORP COMM	U-1551-92-253	COST ALLOCATIONS, RATE DESIGN
1993	POTOMAC EDISON CO.	VA. SCC	PUE930033	JURISDICTIONAL ALLOCATIONS
1995	VIRGINIA AMERICAN WATER CO.	VA. SCC	PUE950003	COST ALLOCATIONS, RATE DESIGN
1995	NEW JERSEY AMERICAN WATER COMPANY	N.J. B.P.U.	WR95040165	COST ALLOCATIONS, RATE DESIGN, WEATHER NORMALIZATION
1995	PIEDMONT NATURAL GAS COMPANY	S.C. P.S.C.	95-715-G	MARKET PERFORMANCE, FINANCIAL IMPACT OF NEW DEALER
1995	CYCLE WORLD v. HONDA MOTOR CO.	VA. DMV	None	WATER / WASTEWATER CONNECTION FEES
1996	HOUSE BILL # 1513	VA. GENL ASSEMBLY	N/A	JURISDICTIONAL ALLOCATIONS
1996	VIRGINIA AMERICAN WATER CO.	VA. SCC	PUE950003	COST ALLOCATIONS, RATE DESIGN
1996	ELIZABETH TOWN WATER CO.	N.J. B.P.U.	WR95110557	SURREBTAL COST ALLOCATIONS, RATE DESIGN
1996	ELIZABETH TOWN WATER CO.	N.J. B.P.U.	WR95110557	CLASS COST OF SERVICE
1996	SOUTH JERSEY GAS CO.	N.J. B.P.U.	GR96010032	COST ALLOCATIONS, INSURANCE PROFITABILITY
1996	VIRGINIA LIABILITY INSURANCE COMPETITION	VA. SCC	INS960164	REBUTTAL - CLASS COST OF SERVICE
1996	SOUTH JERSEY GAS CO.	N.J. B.P.U.	GR96010032	WATER / WASTEWATER CONNECTION FEES
1996	HOUSE BILL # 1513	VA. GENL ASSEMBLY	N/A	MARKET DETERMINATION & PERFORMANCE
1997	NISSAN v. CRUMPLER NISSAN	VA. DMV	None	COST ALLOCATIONS, RATE DESIGN, RATE DISCOUNTS
1997	PHILADELPHIA SUBURBAN WATER CO. (DIRECT)	PA. PUC	R-00973952	COST ALLOCATIONS, RATE DESIGN, RATE DISCOUNTS
1997	PHILADELPHIA SUBURBAN WATER CO. (REBUTTAL)	PA. PUC	R-00973952	COST ALLOCATIONS, RATE DESIGN, RATE DISCOUNTS
1997	PHILADELPHIA SUBURBAN WATER CO. (SURREBTAL/ PA. PUC)	PA. PUC	R-00973952	JURISDICTIONAL/CLASS ALLOCATIONS
1997	VIRGINIA AMERICAN WATER CO.	VA. SCC	PUE970523	CLASS COST OF SERVICE and TIME DIFFERENTIATED FUEL COSTS
1998	VIRGINIA ELECTRIC POWER COMPANY	VA. SCC	PUE960296	CLASS COST OF SERVICE and TIME DIFFERENTIATED FUEL COSTS
1998	NEW JERSEY AMERICAN WATER COMPANY	N.J. B.P.U.	WR98010015	CLASS COST OF SERVICE and TIME DIFFERENTIATED FUEL COSTS
1998	AMERICAN ELECTRIC POWER COMPANY	VA. SCC	PUE960296	CLASS COST OF SERVICE and TIME DIFFERENTIATED FUEL COSTS
1998	FREEMAN WRONGFUL DEATH	FEDERAL DISTRICT CT.	N/A	REVENUE REQUIREMENT
1998	EASTERN MAINE ELECTRIC COOPERATIVE	MAINE PUC	98-596	PRIMA FACIA RATES, LEVEL OF COMPETITION
1998	CREDIT LIFE/AH RATE FILING	VA. SCC	N/A	COST ALLOCATIONS, INSURANCE PROFITABILITY
1998	CREDIT LIFE & A&H LEGISLATION	VA. GENL ASSEMBLY	None	VEHICLE ALLOCATIONS/CSI
1999	MILLER VOLKSWAGEN v. VOLKSWAGEN of AMERICA	VA. DMV	None	RATE STRUCTURE
1999	COLUMBIA GAS of VIRGINIA	VA. SCC	PUE980287	WORKERS COMPENSATION RATES
1999	ROANOKE GAS	VA. SCC	INS990165	Rate Design/Weather Norm
1999	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	PUE980626	LOST INCOME
2000	PERSON-SMITH v. DOMINION REALTY	RICHMOND CIRCUIT	n/a	PRIMA FACIA RATES, LEVEL OF COMPETITION
2000	CREDIT LIFE/AH RATE FILING	VA. SCC	None	Cost Allocations/ Rate Design
2000	UNITED CITIES GAS	VA. SCC	n/a	WORKERS COMPENSATION RATES
2001	VERMONT WORKERS COMPENSATION RATE CASE	VT. INSURANCE COMM.	n/a	ECONOMIC DAMAGES
2001	SERRA CHEVROLET v. GENERAL MOTORS CORP.	ALABAMA CIRCUIT CT.	98-2089	RATE Design (UNBUNDLING)
2001	VIRGINIA POWER ELECTRIC RESTRUCTURING	VA. SCC	PUE000684	WORKERS COMPENSATION RATES
2001	AMERICAN ELECTRIC POWER RESTRUCTURING	VA. SCC	PUE010011	COST ALLOCATIONS AND RATE DESIGN
2001	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	INS010190	LOST WAGES
2002	PHILADELPHIA SUBURBAN WATER CO. (DIRECT)	PA. PUC	R00016750	REVENUE RQMT, COST OF CAPITAL
2002	HAROLD MORRIS PERSONAL INJURY	FED. DIST CT (RICHMOND)	n/a	JURISDICTIONAL/CLASS ALLOCATIONS
2002	PIEDMONT NATURAL GAS	S.C. PSC	2002-63-G	WEATHER NORMALIZATION RIDER
2002	VIRGINIA AMERICAN WATER COMPANY	VA. SCC	PUE-2002-00375	REVENUE RQMT.
2002	ROANOKE GAS COMPANY	VA. SCC	PUE-2002-00373	WORKERS COMPENSATION RATES
2002	SOUTH CAROLINA ELECTRIC & GAS (ELECTRIC)	S.C. PSC	2002-223-E	PRIMA FACIA RATES, LEVEL OF COMPETITION
2003	NCCI (WORKERS COMPENSATION INSURANCE)	VA. SCC	INS-2003-00157	WEATHER NORMALIZATION ADJUSTMENT RIDER
2003	CREDIT LIFE/AH RATE FILING	VA. SCC	None	COST OF GAS AND INTERRUPT. SALES PROGRAM
2003	ROANOKE GAS	VA. SCC	PUE-2003-00425	JURISDICTIONAL/CLASS ALLOCATIONS
2003	SOUTHWESTERN VIRGINIA GAS CO.	VA. SCC	PUE-2003-00426	
2004	SOUTH CAROLINA PIPELINE COMPANY	S.C. PSC	2004-6-G	
2004	VIRGINIA AMERICAN WATER COMPANY	VA. SCC	PUE-2003-00539	

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YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
2004	SCE&G FUEL CONTRACT	S.C. PSC	2004-126-E	GAS CONTRACT FOR COMBINED CYCLE PLANT
2004	WASHINGTON GAS LIGHT	Va. SCC	PUJ-2003-00603	RATE DESIGN/ WVA RIDER
2004	ATMOS ENERGY	Va. SCC	PUJ-2003-00507	RATE DESIGN/ WVA RIDER
2004	SCE&G RATE CASE (ELECTRIC)	S.C. PSC	2004-178-E	COST OF CAPITAL/ REV RQMT.
2004	MEDICAL MALPRACTICE LEGISLATION	Va. GENERAL ASSEMBLY	N/A	INDUSTRY RESTRUCTURE/ PROFITABILITY
2004	ATLAS HONDA v. HONDA MOTOR CO.	Va. DMV	None	NEW DEALER PROTEST
2004	NCCI (WORKERS COMPENSATION INSURANCE)	Va. SCC	INS-2004-00124	WORKERS COMPENSATION RATES
2004	NATIONAL FUEL GAS DISTRIBUTION	PA, PUC	R00049656	COST ALLOCATIONS/ RATE DESIGN
2005	WASHINGTON GAS LIGHT	Va. SCC	PUJ-2005-00010	WEATHER NORMALIZATION ADJUSTMENT RIDER
2005	Serra Chevrolet	US Federal Ct.	CV-01-P-2882-S	Dealer incremental profits and costs
2005	NEWTOWN ARTESIAN WATER	PA, PUC	INS-2005-00159	REV. RQMT./ RATE STRUCTURE
2005	CITY OF BETHLEHEM WATER RATE CASE	PA, PUC	PUJ-2005-00057	WORKERS COMPENSATION RATES
2005	NCCI (WORKERS COMPENSATION INSURANCE)	Va. SCC	None	Revenue Requirement/ Alt. Regulation Plan
2005	Virginia Natural Gas	KS DMV	INS-2006-00013	Market Structure
2006	Olaitha Hyundai v. Hyundai Motors of America	Va. SCC	INS-2006-00011	Revenue Requirements/ Alt. Regulation Plan
2006	Virginia Credit Life & A&H Prima Facia Rates	Va. SCC	PUJ-2005-00098	COST ALLOCATIONS/ RATE DESIGN
2006	Columbia Gas of Virginia	PA, PUC	R-00061398	WORKERS COMPENSATION RATES
2006	PPL Gas	Va. SCC	INS-2006-00197	Private Pass Auto level of competition
2006	NCCI (WORKERS COMPENSATION INSURANCE)	Ma. Dept of Insur	N/A	Cost Allocations/ Rate Design/ Alt Regulation Plan
2007	Level of Private Pass. Auto Competition	Va. SCC	PUJ-2006-00059	Cost of Capital/Rate Design
2007	WASHINGTON GAS LIGHT	PA, PUC	R-00072349	Cost of Capital/Rate Design
2007	Valley Energy	PA, PUC	R-00072350	Cost of Capital/Rate Design
2007	Wellsboro Electric	PA, PUC	R-00072348	Cost of Capital/Rate Design
2007	Citizens' Electric Of Lewisburg, Pa	PA, PUC	INS-2007-00224	WORKERS COMPENSATION RATES
2007	NCCI (WORKERS COMPENSATION INSURANCE)	Va. SCC	25080-U	Cost Allocations/Rate Design
2007	Georgia Power	Ga.PSC	R-2008-2011621	COST ALLOCATIONS/ RATE DESIGN
2008	Columbia Gas of Pennsylvania	PA, PUC	N/A	Affiliate Transactions
2008	Greenway Toll Road Investigation	Va. UTC	UE-072300	Cost Allocations/Rate Design
2008	Puget Sound Energy (Electric)	Wa. UTC	UE-072301	Cost Allocations/Rate Design
2008	Puget Sound Energy (Gas)	Ky PSC	2008-00011	Cost Allocations/Rate Design
2008	Blue Grass Electric Cooperative	OH PUC	08-72-GA-AIR, et. al	Cost Allocations/Rate Design
2008	Columbia Gas of Ohio	Va. SCC	PUJ-2008-00060	Nat'l Gas Conservation/ Revenue Decoupling
2008	Virginia Natural Gas	PA, PUC	R-2008-2029325	Cost Allocations/Rate Design/ Discounted Rates
2008	Equitable Natural Gas	Ky PSC	2008-000252	Cost Allocations/Rate Design/ Weather Normalization
2008	LG&E (Electric)	Ky PSC	2008-000252	Cost Allocations/Rate Design
2008	LG&E (Natural Gas)	Ky PSC	2008-00251	Cost Allocations/Rate Design/ Weather Normalization
2008	Kentucky Utilities	PA, PUC	R-2008-2046520	Cost Allocations/Rate Design
2008	Pike County Natural Gas	PA, PUC	R-2008-2046518	Cost Allocations/Rate Design
2008	Pike County Electric	PA, PUC	R-2008-2042293	Revenue Requirement
2008	Newtown Artesian Water	Pa. Circuit Ct.	Civil Action 42736	Revenue Requirement/ Excess Rates
2009	Leesburg Water & Sewer	PA, PUC	R-02008-2079675	Cost Allocation/Rate Design
2009	Central Penn Gas, Inc.	PA, PUC	R-2008-2079660	Cost Allocation/Rate Design
2009	Penn Natural Gas, Inc.	Va. SCC	n/a	Market Structure and Availability
2009	Credit Life/ A&H ratemaking	Fairfax Circuit Ct. (Va.)	CL-2008-16114	Water Revenue Requirement
2009	Fairfax County v. City of Falls Church Virginia	Wa. UTC	UE-090134	Electric rate Design
2009	Avista Utilities (Electric)	Wa. UTC	UG-090135	Gas Rate design
2009	Avista Utilities (Gas)	Wa. UTC	2009-00141	Cost Allocations/Rate Design
2009	Columbia Gas of Kentucky	Ky PSC	INS-2009-00142	Workers Compensation Rates
2009	NCCI (Workers Compensation Rates)	Va. SCC	2009-00202	Rate Design
2009	Duke Energy of Kentucky (Gas)	Ky. PSC	E-7 Sub 909	Cost Allocations/Rate Design
2009	Duke Energy Carolinas (Electric)	NC UC	UE-090205	Rate Design/Low Income
2009	PacificCorp	Wa. UTC	UE-090704	Cost Allocations/Rate Design
2009	Puget Sound Energy (Electric)	Wa. UTC	UG-090705	Cost Allocations/Rate Design
2009	Puget Sound Energy (Gas)	Wa. UTC	2009-212287	Cost Allocations/Rate Design
2009	United Water of Pennsylvania	PA PUC	PUJ-2009-00059	Rate Design
2010	Aqua Virginia, Inc.	Va. SCC	2009-00548	Cost Allocations/Rate Design/ Weather Normalization
2010	Kentucky Utilities	Ky PSC	2009-00549	Cost Allocations/Rate Design
2010	LG&E (Electric)	Ky PSC	2009-00549	Cost Allocations/Rate Design/ Weather Normalization
2010	LG&E (Natural Gas)	Ky PSC	2009-00549	Cost Allocations/Rate Design
2010	Philadelphia Gas Works	PA PUC	2009-2139884	Cost Allocations/Rate Design
2010	Columbia Gas of Pennsylvania	PA PUC	2009-2149262	Cost Allocations/Rate Design
2010	PPL Electric Company	PA PUC	2010-2161694	Cost Allocations/Rate Design

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YEAR	CASE NAME	JURISDICTION	DOCKET NO.	SUBJECT OF TESTIMONY
2010	York Water Company	PA PUC	2010-2157140	Cost Allocations/Rate Design
2010	Valley Energy, Inc.	PA PUC	2010-2174470	Cost of Capital/Revenue Requirement/Rate Design
2010	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	INS-2010-00126	WORKERS COMPENSATION RATES
2010	Columbia Gas of Virginia	VA SCC	PUE-2010-00017	Cost of Capital/Revenue Requirement/Rate Design
2010	Georgia Power Company	GA PSC	Docket No. 31958	Cost Allocations/Rate Design
2010	City of Lancaster, Bureau of Water	PA PUC	R-2010-2179103	Cost of Capital
2011	Columbia Gas of Pennsylvania	PA PUC	R-2010-2215623	Cost Allocations/Rate Design
2011	Owen Electric Cooperative	KY PSC	PUE-2011-00037	Rate Design
2011	Virginia Natural Gas	VA SCC	PUE-2010-00142	Pipeline Prudence/Cost Allocations/Rate Design
2011	United Water of Pennsylvania	PA PUC	2011-2232985	Cost Allocations/Rate Design
2011	PPL Electric Company (Remand)	PA PUC	2010-2161694	Negotiated Industrial Rate
2011	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	11-00163	WORKERS COMPENSATION RATES
2011	Artesian Water Company	DE PSC	11-207	Cost Allocations/Rate Design
2011	Arizona-American Water Company	AZ. CORP COMM	W-01303A-10-0448	Excess Capacity/Need For Facilities
2012	Tidewater Utilities, Inc.	DE PSC	11-397	Cost of Capital/Revenue Requirement/Rate Design
2012	PPL Electric	PA PUC	R-2012-2290597	Cost Allocations/Rate Design
2012	NCCI (WORKERS COMPENSATION INSURANCE)	VA SCC	2012-00144	WORKERS COMPENSATION RATES
2012	Credit Life Accident & Health	VA SCC		Market Structure and Performance
2012	Avista Utilities (Electric)	Wa. UTC	UE-120436	Electric rate Design
2012	Avista Utilities (Gas)	Wa. UTC	UG-120437	Gas Rate design
2012	Kentucky Utilities	Ky PSC	2012-00221	Cost Allocations/Rate Design/ Weather Normalization
2012	LG&E (Electric)	Ky PSC	2012-00222	Cost Allocations/Rate Design
2012	LG&E (Natural Gas)	Ky PSC	2012-00222	Cost Allocations/Rate Design/ Weather Normalization
2012	Columbia Gas of Pennsylvania	PA PUC	2012-2321748	Cost Allocations/Rate Design/Revenue Distribution
2013	Virginia Natural Gas - CARE Plan	VA SCC	2012-00118	Energy Conservation and Decoupling
2013	Columbia Gas of Maryland	MD OPC	9316	Cost Allocations/Rate Design

Schedule GAW-2

Delmarva Power & Light --- Gas
OAG Adjusted Rate of Return Statement
Docket No. 12-546

Line No.	Description	Per Books 1/ Test Year	DPL Test Year Ratemaking Adjustments 1/ Proforma	DPL Adjustments 2/ Proforma	DPL As Adjusted	OAG Adjustments 3/ Period	OAG Adjusted Test Period	OAG Required Increase @ ROR 6.66%	OAG Revenue Requirement
Operating Income & Rate of Return									
1	Operating Revenues								
	Sales	\$155,381,787	-\$83,751,087	\$1,735,703	\$36,137,657	-\$2,688,271	\$33,449,386	\$705,800	\$72,576,338
	Other Revenue	\$26,107,270	-\$23,671,982	\$1,888,375	\$14,368,270	-\$1,522,046	\$12,846,224		\$435,288
	Total Operating Revenue	\$181,489,057	-\$109,423,069	\$0	\$4,868,235	\$720	\$4,868,955	\$705,800	\$73,011,626
	Operating expenses								
2	Operation and Maintenance Expenses	\$147,352,405	-\$112,950,451	\$1,735,703	\$36,137,657	-\$2,688,271	\$33,449,386		\$33,449,386
3	Depreciation and Amortization Expenses	\$12,502,265	-\$22,370	\$1,888,375	\$14,368,270	-\$1,522,046	\$12,846,224		\$12,846,224
4	Taxes Other Than Income	\$6,842,864	-\$1,974,629	\$0	\$4,868,235	\$720	\$4,868,955	\$2,117	\$4,871,072
7	State Income Taxes (Curr + Deferred)	\$670,481	\$581,181	-\$388,630	\$863,032	\$484,812	\$1,347,844	\$61,220	\$1,409,065
8	Federal Income Taxes (Curr + Deferred)	\$2,230,907	\$2,366,431	-\$1,427,432	\$3,169,906	\$1,780,709	\$4,950,615	\$224,862	\$5,175,477
	ITC	-\$56,561	\$0	\$0	-\$56,561		-\$56,561		-\$56,561
	Interest on Cust. Deposits	\$3,977	\$0	\$0	\$3,977		\$3,977		\$3,977
9	Total Operating Expenses	\$169,546,338	-\$111,999,838	\$1,808,016	\$59,354,516	-\$1,944,076	\$57,410,440	\$288,200	\$57,698,639
	AFUDC Income	\$259,486	\$0	\$17,300	\$276,786	-\$276,786	\$0		\$0
	Net Operating Income	\$12,202,205	\$2,576,769	-\$1,790,716	\$12,988,258	\$1,907,128	\$14,895,386	\$417,600	\$15,312,987
10	Rate Base	\$251,449,196	\$23,221,138	\$274,670,334	\$274,670,334	-\$44,745,726	\$229,924,608		\$229,924,608
11	Rate of Return	4.85%	4.73%	4.73%	4.73%	6.48%	6.48%	6.66%	6.66%
Rate Base									
	Gross Plant	\$479,519,146	\$22,838,607	\$502,357,753	\$502,357,753	-\$29,926,399	\$472,431,354		\$472,431,354
	Less: Depr. Reserve	-\$200,625,674	\$4,401,670	-\$196,224,004	-\$196,224,004	\$1,946,056	-\$198,170,060		-\$198,170,060
	Net Plant in Service	\$278,893,472	\$27,240,277	\$306,133,749	\$306,133,749	-\$31,872,455	\$274,261,294		\$274,261,294
	CWIP	\$10,231,437	-\$1,136,366	\$9,095,071	\$9,095,071	-\$9,095,071	\$0		\$0
	Cash Working Capital	\$12,498,707	-\$32,021	\$12,466,686	\$12,466,686	-\$6,451,201	\$6,015,485		\$6,015,485
	Materials & Supplies	\$14,419,211	\$0	\$14,419,211	\$14,419,211	\$0	\$14,419,211		\$14,419,211
	Prepaid Balances	\$17,641,760	\$421,733	\$18,063,493	\$18,063,493	-\$446,995	\$17,616,498		\$17,616,498
	Accum Deferred Income Taxes	-\$78,404,438	-\$3,272,485	-\$81,676,923	-\$81,676,923	\$3,121,196	-\$78,555,727		-\$78,555,727
	Unamortized ITC	-\$489,224	\$0	-\$489,224	-\$489,224		-\$489,224		-\$489,224
	Customer Deposits	-\$3,341,729	\$0	-\$3,341,729	-\$3,341,729		-\$3,341,729		-\$3,341,729
	Customer Advances	\$0	\$0	\$0	\$0	-\$1,200	-\$1,200		-\$1,200
	Total Rate Base	\$251,449,196	\$23,221,138	\$274,670,334	\$274,670,334	-\$44,745,726	\$229,924,608		\$229,924,608

1/ Per DPL Schedule (JCZ-S)-1 and 12+0 Updated WP #6 and #7.

2/ Per Schedule GAW-3.

3/ Per Schedule GAW-4.

Delmarva Power & Light --- Gas
DPL Proposed Adjustments
Docket No. 12-546

DPL Adjustment	Operating Income							
	Revenue	O&M Expense	Depr./Amort Expense	Taxes Other than Income	State Income Tax	Federal Income Tax	AFUDC Income	Earnings
1 Emp. Assoc. Exp.		-\$31,452			\$2,736	\$10,050		\$18,665
2 Reg. Comm. Exp.		\$241,180			-\$20,983	-\$77,069		-\$143,128
3 Salaries & Wages Exp.		\$640,689			-\$55,740	-\$204,732		-\$380,217
4 Exec. Incentive Comp.		-\$843,110			\$73,351	\$269,416		\$500,344
5 Exec. Other Comp.		-\$14,918			\$1,298	\$4,767		\$8,853
6 Uncollectible		\$301,917			-\$26,267	-\$96,478		-\$179,173
7 Injuries & Damages		-\$16,208			\$1,410	\$5,179		\$9,619
8 Medical/Dental/Vision Care		\$310,059			-\$26,975	-\$99,079		-\$184,005
9 Reliability Plant Add.			\$417,200		-\$36,296	-\$133,316		-\$247,587
10 Bloom Related Investment			-\$2,261		\$197	\$723		\$1,342
11 AMI Plant Investment			\$700,266		-\$60,923	-\$223,770	\$17,300	-\$398,273
12 Meter Reading Exp.		\$1,147,546			-\$99,837	-\$366,698		-\$681,011
13 Loss/Gain On Refinancing			\$209,897		-\$18,261	-\$67,073		-\$124,563
14 Investment Tax Credit			\$50,470					-\$50,470
15 Affiliate Credit Facilities			\$118,094		-\$10,274	-\$37,737		-\$70,083
16 Tax On OPEB Medicare			\$11,907		-\$1,036	-\$3,805		-\$7,066
17 Depreciation Annualization			\$382,802		-\$33,304	-\$122,324		-\$227,174
18 Interest Sync.					-\$77,726	-\$285,486		\$363,212
19 Cash Working Capital								
Total		\$1,735,703	\$1,888,375	\$0	-\$388,630	-\$1,427,432	\$17,300	-\$1,790,716

DPL Adjustment	Rate Base							
	Gross Plant In Service	Depr./Amort. Reserve	CWIP	Accumulated Deferred Income Taxes	Materials & Supplies	Cash Working Capital	Other Additions/ Deductions	Total Rate Base
1 Emp. Assoc. Exp.								
2 Reg. Comm. Exp.				-\$171,456			\$421,733	\$250,277
3 Salaries & Wages Exp.								
4 Exec. Incentive Comp.								
5 Exec. Other Comp.								
6 Uncollectible								
7 Injuries & Damages								
8 Medical/Dental/Vision Care								
9 Reliability Plant Add.	\$15,167,530	\$3,391,400		-\$1,822,678				\$16,736,252
10 Bloom Related Investment	-\$386,936	\$2,261		\$78,195				-\$306,480
11 AMI Plant Investment	\$8,058,013	-\$846,548	-\$1,136,366	-\$676,650				\$5,398,449
12 Meter Reading Exp.								
13 Loss/Gain On Refinancing		\$2,031,341		-\$825,842				\$1,205,499
14 Investment Tax Credit								
15 Affiliate Credit Facilities		\$182,203						\$182,203
16 Tax On OPEB Medicare		\$23,815		-\$9,682				\$14,133
17 Depreciation Annualization		-\$382,802		\$155,628				-\$227,174
18 Interest Sync.								
19 Cash Working Capital						-\$32,021		-\$32,021
Total	\$22,838,607	\$4,401,670	-\$1,136,366	-\$3,272,485	\$0	-\$32,021	\$421,733	\$23,221,138

Source: Schedule (JCZ-S)-3 through (JCZ-S)-20.

Schedule GAW - 4

Delmarva Power & Light --- Gas
Summary of OAG Adjustments
Docket No. 12-546

Item	Company Schedule Ref	Operating Income					AFUDC Income
		Revenue	O&M Expense	Depreciation Expense	Taxes Other than Income	State Income Tax	
Revenue-- Cust Growth		\$239,838			\$720	\$20,803	\$76,410
Regulatory Commission (Rate Case) Expense	(JCZ-S)-4		-\$80,433			\$6,998	\$25,702
Salaries, Wages & FICA			-\$640,689			\$55,740	\$204,732
Non-Executive Incentive Compensation			-\$391,450			\$34,056	\$125,088
Medical/Dental/Vision Care Expenses			-\$310,059			\$26,975	\$95,079
Forecasted Additions to Reliability Plant in Service				-\$417,200		\$36,296	\$133,316
AMI Plant				-\$991,447		\$86,256	\$316,817
Meter Reading			-\$1,147,546			\$99,837	\$366,698
Affiliate Credit Facilities			-\$118,094			\$10,274	\$37,737
Depreciation Annualization				-113,399		\$9,866	\$36,237
CWIP/ AFUDC Income							-\$276,786
Interest Synchronization						97,711	358,892
Total Operating Income Adjustments		\$239,838	-\$2,688,271	-\$1,522,046	\$720	\$484,812	\$1,780,709

Item	Company Schedule Ref	Rate Base							Total Rate Base			
		Gross Plant in Service	Depreciation Reserve	CWIP	Accumulated Deferred Income Taxes	Materials & Supplies	Cash Working Capital	Other Additions		Customer Advances		
Regulatory Commission (Rate Case) Amortization	(JCZ-S)-4											
Forecasted Additions to Reliability Plant in Service		-\$15,167,530	-\$3,391,400		\$1,822,678							-\$16,736,252
AMI Plant		-\$14,758,869	\$1,445,344		\$1,298,518							-\$12,015,007
Affiliate Credit Facilities												-\$182,203
CWIP				-\$9,095,071								-\$9,095,071
Cash Working Capital										-\$6,451,201		-\$6,451,201
Prepaid Insurance												-\$14,514
Customer Advances												-\$1,200
Total Rate Base Adjustments		-\$29,926,399	-\$1,946,056	-\$9,095,071	\$3,121,196	\$0	-\$6,451,201	-\$446,995	-\$1,200	-\$44,745,726		

Source: Schedules GAW-5 through GAW-19.

Delmarva Power & Light --- Gas
Usage Charge Revenue --- Customer Growth
Docket No. 12-546

	RG-R	RG-RSH	GG	Total
I. Customer Growth				
Bills Per Books	119,891	1,252,285	112,082	
DPL YE Customer Bills	<u>119,400</u>	<u>1,261,464</u>	<u>112,524</u>	
Growth In Bills	-491	9,179	442	
II. Weather Normalized Usage Before Growth				
Total Weather Normalized Usage (CCF)	2,437,335	74,925,821	37,973,032	
Actual Bills	119,891	1,252,285	112,082	
Average Use Per Bill	20.33	59.83	338.80	
III. Additional Usage Due to Customer Growth (CCF)	-9,982	549,191	149,748	
IV. Incremental Usage Rate	\$0.45802	\$0.36754	\$0.28421	
V. Incremental Revenue	-\$4,572	\$201,850	\$42,560	\$239,838
Regulatory Tax @0.30%				\$720

Source: Response to PSC-RR-15.

Delmarva Power & Light --- Gas
Rate Case Expense
Docket No. 12-546

Operating Income

DPL Requested Cost of Capital Consultant in Rates	\$92,600	
OAG Allowed Expense	\$46,300 1/	
Adjustment		-\$46,300
DPL Requested External Legal Fees in Rates	\$315,000	
OAG Allowed Expense	\$120,000 2/	
Adjustment		-\$195,000
Total OAG Rate Case Expense Adjustment		-\$241,300
<u>Amortization period (yrs)</u>		<u>3</u>
OAG Expense Adjustment		-\$80,433

Rate Base

Company Requested Capitalization of Rate Case Expense	\$250,278	
OAG Rate Base Adjustment to Reflect Expense Normalization		-\$250,278

1/ Upper limit of reasonable COC services.

2/ Highest external legal fees from Docket Nos. 11-528,10-237, and 9-414 (rounded up)
Per response to PSC-RR-22.

**Delmarva Power & Light --- Gas
Salary, Wages, & FICA Adjustment
Docket No. 12-546**

	OAG Adjustment
Remove DPL Forecasted Wages Increases (Jan. 2013 - June 2014)	-\$607,550
<u>Remove DPL Forecasted FICA Increases (Jan. 2013 - June 2014)</u>	<u>-\$33,139</u>
Total OAG Adjustment	-\$640,689

Calculated Per DPL WP#4.1.

Delmarva Power & Light --- Gas
Non-Executive Financial Performance Incentive Compensation
Docket No. 12-546

Remove Non-Executive Incentive Compensation Attributable to Financial Performance	-\$363,632 1/
Remove FICA & Mcare Employer Contribution @ 7.65%	-\$27,818
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Total OAG Adjustment	-\$391,450

1/ Per response to PSC-RR-29.

**Delmarva Power & Light --- Gas
Medical/Dental/Vision care Expenses
Docket No. 12-546**

Remove Out Of Period (2013) Forecasted Expense Escalations - \$310,059 1/

1/ Per Schedule (JCZ-S)-10 and 10.1.

Delmarva Power & Light --- Gas
Forecasted Additions to Reliability Plant in Service
Docket No. 12-546

Rate Base

Eliminate Out of Period Additions (2013) to Plant 1/	
Gross Plant	-\$15,167,530
<u>Depreciation Reserve</u>	<u>-\$3,391,400</u>
Net Plant	-\$18,558,930
ADIT	\$1,822,678
<u>Total Rate Base Adjustment</u>	<u>-\$16,736,252</u>

Operating Income

Eliminate Out of Period (2013) Depreciation Expense 1/	-\$417,200
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1/ Per Schedule (JCZ-S)-11.

**Delmarva Power & Light
AMI Plant
Docket No. 12-546**

Rate Base

Eliminate Amounts Reflected In Books As Of 12/31/12 1/		
Gross Plant		-\$6,700,856
<u>Depr. Reserve</u>		<u>\$598,796</u>
Net Plant		-\$6,102,060
CWIP		-\$1,136,366
ADIT		\$621,868
Eliminate Out of Period Proforma Adjustments 1/		
Gross Plant		-\$8,058,013
<u>Depr. Reserve</u>		<u>\$846,548</u>
Net Plant		-\$7,211,465
CWIP		\$1,136,366
ADIT		\$676,650
Total OAG adjustment		
Gross Plant		-\$14,758,869
<u>Depr. Reserve</u>		<u>\$1,445,344</u>
Net Plant		-\$13,313,525
CWIP		\$0
ADIT		\$1,298,518

Operating Income

Eliminate Amounts Reflected In Books As Of 12//31/12		
Depreciation		-\$291,181
Eliminate Out of Period Proforma Adjustment		
Depreciation		-\$700,266
Total OAG adjustment		
Depreciation		-\$991,447

1/ Per DPL 12+0 Update WP #12.1

**Delmarva Power & Light --- Gas
Meter Reading
Docket No. 12-546**

Eliminate DPL Adjustment To Increase 2012 Meter Reading Expense	- \$1,147,546 1/
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1/ Per Confidential Response & Attachment (b) to AG-A-45.

**Delmarva Power & Light --- Gas
Affiliate Credit Facilities Costs
Docket No. 12-546**

Eliminate Costs Associated With Affiliate (PHI) Credit Facility

Operating Income

Eliminate Claimed Expenses - \$118,094

Rate Base

Eliminate Unamortized Balance of Affiliate (PHI) Start-Up
Cost Investment Reflected in DPL Application - \$182,203

**Delmarva Power & Light --- Gas
Depreciation Annualization
Docket No. 12-546**

AMI related 2012 Per Books Depreciation			
	DPL Gas	Service	
	IMU	Company	Total
<u>Jan-12</u>	\$7,596	\$13,912	\$21,508
<u>Feb-12</u>	\$7,596	\$13,977	\$21,573
<u>Mar-12</u>	\$7,596	\$13,980	\$21,575
<u>Apr-12</u>	\$7,596	\$13,980	\$21,576
<u>May-12</u>	\$7,596	\$13,980	\$21,576
<u>Jun-12</u>	\$7,596	\$13,980	\$21,576
<u>Jul-12</u>	\$8,811	\$13,980	\$22,791
<u>Aug-12</u>	\$10,159	\$13,980	\$24,139
<u>Sep-12</u>	\$10,378	\$13,980	\$24,358
<u>Oct-12</u>	\$12,442	\$13,980	\$26,422
<u>Nov-12</u>	\$16,393	\$13,980	\$30,373
<u>Dec-12</u>	\$19,735	\$13,980	\$33,715
<u>Total 2012</u>	\$123,493	\$167,688	\$291,181
DPL Annualization (Based on Dec-12)	\$236,820	\$167,760	\$404,580
DPL AMI Depreciation Annualization Adjustment	\$113,327	\$71	\$113,399
Eliminate AMI Depreciation Annualization	-\$113,327	-\$71	-\$113,399

Source: Response to PSC-RR-41.

Schedule GAW-15

Delmarva Power & Light --- Gas
Cash Working Capital
Docket No. 12-546

Item	Amount	Revenue Lag Days	(Lead) Lag Days	Net Lag Days	% 365 Days	CWC Requirement
DPL Cash Working Capital Request:						
O&M Expense						
Purchased Fuel	\$104,699,352	63.20	40.71	22.49	6.162%	\$6,451,201
Deferred Fuel	\$8,501,663	63.20	63.20	0.00	0.000%	\$0
Other Production	\$2,741,284	63.20	17.33	45.87	12.567%	\$344,501
Transmission	\$1,669,915	63.20	17.33	45.87	12.567%	\$209,860
Distribution	\$10,943,398	63.20	17.33	45.87	12.567%	\$1,375,270
Other O&M	\$18,796,672	63.20	17.33	45.87	12.567%	\$2,362,201
Total O&M Expense	<u>\$147,352,284</u>					<u>\$10,743,033</u>
Other						
Utility Taxes	\$1,974,629	63.20	35.88	27.32	7.485%	\$147,800
FICA	\$531,806	63.20	12.03	51.17	14.019%	\$74,555
Federal Unemployment	\$5,978	63.20	76.38	(13.18)	-3.611%	(\$216)
State Unemployment	\$22,340	63.20	76.38	(13.18)	-3.611%	(\$807)
Property Taxes	\$4,302,584	63.20	(90.50)	153.70	42.110%	\$1,811,800
SIT	\$630,076	63.20	(17.30)	80.50	22.055%	\$138,962
FIT	\$2,206,259	63.20	58.95	4.25	1.164%	\$25,689
Interest Expense	\$5,945,890	63.20	90.26	(27.06)	-7.414%	(\$440,810)
IOCD	\$3,977	63.20	182.50	(119.30)	-32.685%	(\$1,300)
Preferred Dividends	\$0	63.20	45.63	17.57	4.814%	\$0
Total Other	<u>\$15,623,539</u>					<u>\$1,755,673</u>
Total	<u>\$162,975,823</u>					<u>\$12,498,707</u>
Eliminate Purchased Gas Costs						-\$6,451,201

Source: DPL 12+0 Update WP #4.

**Delmarva Power & Light --- Gas
Prepaid Insurance
Docket No. 12-546**

Prepaid Insurance Included In DPL Rate Base	\$14,514 1/
Eliminate Prepaid Insurance As It Is Also Reflected In CWC	-\$14,514 2/

1/ Per DPL 12+0 Update WP #3.
2/ Per Response to PSC-RR-10.

Schedule GAW-17

**Delmarva Power & Light --- Gas
Customer Advances
Docket No. 12-546**

DPL Customer Advances Reflected In Updated Filing	\$0
DPL Correction 1/	-\$1,200

1/ Per PSC-RR-11.

Schedule GAW-18

Delmarva Power & Light --- Gas
Construction Work In Progress
Docket No. 12-546

DPL Requested CWIP Inclusion In Rate Base	
Per Books	\$10,231,437
<u>DPL Adjustment 11</u>	<u>-\$1,136,366</u>
Net DPL Requested CWIP	\$9,095,071
Eliminate CWIP From Rate Base	-\$9,095,071
DPL AFUDC Income In Request	
Per Books	\$259,486
<u>DPL Adjustment 11</u>	<u>\$17,300</u>
Net DPL Requested CWIP	\$276,786
Eliminate AFUDC Income Credit	-\$276,786

Schedule GAW-19

**Delmarva Power & Light
Interest Synchronization
Docket No. 12-546**

OAG Rate Base Adjustments	-\$44,745,726 1/
Weighted Cost of Debt	2.51%
<hr/>	
OAG Interest Adjustment	-\$1,123,118
State Income Tax Effect	\$97,711
Federal Income Tax Effect	\$358,892

1/ Per Schedule GAW-4.