Appendix A

Kevin W. O'Donnell, CFA

Nova Energy Consultants, Inc. (Nova)

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Kevin W. O'Donnell, is the founder of Nova Energy Consultants, Inc. in Cary, NC. Mr. O'Donnell's academic credentials include a B.S. in Civil Engineering - Construction Option from North Carolina State University as well as a MBA in Finance from Florida State University. Mr. O'Donnell is also a Chartered Financial Analyst (CFA).

Mr. O'Donnell has over thirty-four years of experience working in the electric, natural gas, and water/sewer industries. He is very active in municipal power projects and has assisted numerous southeastern U.S. municipalities cut their wholesale cost of power by as much as 67%. On Dec. 12, 1998, ***The Wilson Daily Times*** made the following statement about O'Donnell.

> **Although we were skeptical of O'Donnell's efforts at first, he has shown that he can deliver on promises to cut electrical rates.**

Mr. O'Donnell has completed close to 30 wholesale power projects for municipal and university-owned electric systems throughout North and South Carolina. In May of 1996 Mr. O'Donnell testified before the U.S. House of Representatives, Committee on Commerce, Subcommittee on Energy and Power regarding the restructuring of the electric utility industry.

Mr. O'Donnell has appeared as an expert witness in over 130 regulatory proceedings before the North Carolina Utilities Commission, the South Carolina Public Service Commission, the Virginia Corporation Commission, the Minnesota Public Service Commission, the New Jersey Board of Public Utilities, the Colorado Public Service Commission, the Wisconsin Public Service Commission, the Maryland Public Service Commission, the District of Columbia Public Service Commission, the Pennsylvania Public Utility Commission, the Indiana Public Utility Commission, the California Public Service Commission, and the Florida Public Service Commission. His area of expertise has included rate design, cost of service, rate of return, capital structure, asset valuation analyses, fuel adjustments, merger transactions, holding company applications, as well as numerous other accounting, financial, and utility rate-related issues.

Mr. O'Donnell is the author of the following two articles: "Aggregating Municipal Loads: The Future is Today" which was published in the Oct. 1, 1995 edition of *Public Utilities Fortnightly;* and "Worth the Wait, But Still at Risk" which was published in the May 1, 2000 edition of *Public Utilities Fortnightly.* Mr. O'Donnell is also the co-author of "Small Towns, Big Rate Cuts" which was published in the January, 1997 edition of *Energy Buyers Guide.* All of these articles discuss how rural electric systems can use the wholesale power markets to procure wholesale power supplies.

Regulatory Cases of Kevin W. O'Donnell, CFA
Nova Energy Consultants, Inc.

Year	Name of Applicant	State Jusrisdiction	Docket No.	Client/ Employer	Case Issues
1985	Public Service Company of NC	NC	G-5, Sub 200	Public Staff of NCUC	Return on equity, capital structure
1985	Piedmont Natural Gas Company	NC	G-9, Sub 251	Public Staff of NCUC	Return on equity, capital structure
1986	General Telephone of the South	NC	P-19, Sub 207	Public Staff of NCUC	Return on equity, capital structure
1987	Public Service Company of NC	NC	G-5, Sub 207	Public Staff of NCUC	Return on equity, capital structure
1988	Piedmont Natural Gas Company	NC	G-9, Sub 278	Public Staff of NCUC	Return on equity, capital structure
1989	Public Service Company of NC	NC	G-5, Sub 246	Public Staff of NCUC	Return on equity, capital structure
1990	North Carolina Power	NC	E-22, Sub 314	Public Staff of NCUC	Return on equity, capital structure
1991	Duke Energy	NC	E-7, Sub 487	Public Staff of NCUC	Return on equity, capital structure
1991	North Carolina Natural Gas	NC	G-21, Sub 306	Public Staff of NCUC	Natural gas expansion fund
1991	North Carolina Natural Gas	NC	G-21, Sub 307	Public Staff of NCUC	Natural gas expansion fund
1991	Penn & Southern Gas Company	NC	G-3, Sub 186	Public Staff of NCUC	Return on equity, capital structure
1995	North Carolina Natural Gas	NC	G-21, Sub 334	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1995	Carolina Power & Light Company	NC	E-2, Sub 680	Carolina Utility Customers Assoc.	Fuel adjustment proceeding
1995	Duke Power	NC	E-7, Sub 559	Carolina Utility Customers Assoc.	Fuel adjustment proceeding
1996	Piedmont Natural Gas Company	NC	G-9, Sub 378	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Piedmont Natural Gas Company	NC	G-9, Sub 382	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Public Service Company of NC	NC	G-5, Sub 356	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Cardinal Extension Company	NC	G-39, Sub 0	Carolina Utility Customers Assoc.	Capital structure, cost of capital
1997	Public Service Company of NC	NC	G-5, Sub 327	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1998	Public Service Company of NC	NC	G-5, Sub 386	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1998	Public Service Company of NC	NC	G-5, Sub 386	Carolina Utility Customers Assoc.	Natural gas transporation rates
1999	Public Service Company of NC/SCANA Corp	NC	G-5, Sub 400	Carolina Utility Customers Assoc.	Merger case
1999	Public Service Company of NC/SCANA Corp	NC	G-43	Carolina Utility Customers Assoc.	Merger Case
1999	Carolina Power & Light Company	NC	E-2, Sub 753	Carolina Utility Customers Assoc.	Holding company application
1999	Carolina Power & Light Company	NC	G-21, Sub 387	Carolina Utility Customers Assoc.	Holding company application
1999	Carolina Power & Light Company	NC	P-708, Sub 5	Carolina Utility Customers Assoc.	Holding company application
2000	Piedmont Natural Gas Company	NC	G-9, Sub 428	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2000	NUI Corporation	NC	G-3, Sub 224	Carolina Utility Customers Assoc.	Holding company application
2000	NUI Corporation/Virginia Gas Company	NC	G-3, Sub 232	Carolina Utility Customers Assoc.	Merger application
2001	Duke Power	NC	E-7, Sub 685	Carolina Utility Customers Assoc.	Emission allowances and environmental compliance costs
2001	NUI Corporation	NC	G-3, Sub 235	Carolina Utility Customers Assoc.	Tariff change request.
2001	Carolina Power & Light Company/Progress E	NC	E-2, Sub 778	Carolina Utility Customers Assoc.	Asset transfer case
2001	Duke Power	NC	E-7, Sub 694	Carolina Utility Customers Assoc.	Restructuring application
2002	Piedmont Natural Gas Company	NC	G-9, Sub 461	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2002	Cardinal Pipeline Company	NC	G-39, Sub 4	Carolina Utility Customers Assoc.	Cost of capital, capital structure
2002	South Carolina Public Service Commission	SC	2002-63-G	South Carolina Energy Users Committee	Rate of return, accounting, rate design, cost of service
2003	Piedmont Natural Gas/North Carolina Natura	NC	G-9, Sub 470	Carolina Utility Customers Assoc.	Merger application
2003	Piedmont Natural Gas/North Carolina Natura	NC	G-9, Sub 430	Carolina Utility Customers Assoc.	Merger application
2003	Piedmont Natural Gas/North Carolina Natura	NC	E-2, Sub 825	Carolina Utility Customers Assoc.	Merger application
2003	Carolina Power & Light Company	NC	E-2, Sub 833	Carolina Utility Customers Assoc.	Fuel case
2004	South Carolina Electric & Gas	SC	2004-178-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2005	Carolina Power & Light Company	NC	E-2, Sub 868	Carolina Utility Customers Assoc.	Fuel case
2005	Piedmont Natural Gas Company	NC	G-9, Sub 499	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2005	South Carolina Electric & Gas	SC	2005-2-E	South Carolina Energy Users Committee	Fuel application
2005	Carolina Power & Light Company	SC	2006-1-E	South Carolina Energy Users Committee	Fuel application
2006	IRP in North Carolina	NC	E-100, Sub 103	Carolina Utility Customers Assoc.	Submitted rebuttal testimony in investigation of IRP in NC.
2006	Piedmont Natural Gas Company	NC	G-9, Sub 519	Carolina Utility Customers Assoc.	Creditworthiness issue
2006	Public Service Company of NC	NC	G-5, Sub 481	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2006	Duke Power	NC	E-7, 751	Carolina Utility Customers Assoc.	App to share net revenues from certain wholesale pwr trans

Regulatory Cases of Kevin W. O'Donnell, CFA
Nova Energy Consultants, Inc.

Year	Name of Applicant	State Jusrisdiction	Docket No.	Client/ Employer	Case Issues
2006	South Carolina Electric & Gas	SC	2006-192-E	South Carolina Energy Users Committee	Fuel application
2007	Duke Power	NC	E-7, Sub 790	Carolina Utility Customers Assoc.	Application to construct generation
2007	South Carolina Electric & Gas	SC	2007-229-E	South Carolina Energy Users Committee	Rate of return, accounting, rate design, cost of service
2008	South Carolina Electric & Gas	SC	2008-196-E	South Carolina Energy Users Committee	Base load review act proceeding
2009	Western Carolina University	NC	E-35, Sub 37	Western Carolina University	Rate of return, accounting, rate design, cost of service
2009	Duke Power	NC	E-7, Sub 909	Carolina Utility Customers Assoc.	Cost of service, rate design, return on equity, capital structure
2009	South Carolina Electric & Gas	SC	2009-261-E	South Carolina Energy Users Committee	DSM/EE rate filing
2009	Duke Power	SC	2009-226-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2009	Tampa Electric	FL	080317-EI	Florida Retail Federation	Return on equity, capital structure
2010	Duke Power	SC	2010-3-E	South Carolina Energy Users Committee	Fuel application - assisted in settlement
2010	South Carolina Electric & Gas	SC	2009-489-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2010	Virginia Power	VA	PUE-2010-00006	Mead Westvaco	Rate design
2011	Duke Energy	SC	2011-20-E	South Carolina Energy Users Committee	Nuclear construction financing
2011	Northern States Power	MN	E002/GR-10-971	Xcel Large Industrials	Return on equity, capital structure
2011	Virginia Power	VA	PUE-2011-0027	Mead Westvaco	Capital structure, revenue requirement
2011	Duke Energy	NC	E-7, Sub 989	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2011	Duke Energy	SC	2011-271-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2011	Dominion Virginia Power	VA	PUE-2011-00073	Mead Westvaco	Rate design
2012	Town of Smithfield/Partners Equity Group	NC	ES-160, Sub 0	Partners Equity Group	Rate design, asset valuation
2012	Florida Power & Light	FL	120015-EI	Florida Office of Public Counsel	Capital structure
2012	South Carolina Electric & Gas	SC	2012-218-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2013	Progress Energy Carolinas	NC	E-2, Sub 1023	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2013	Duke Energy Carolinas	NC	E-7, Sub 1026	Carolina Utility Customers Assoc.	Rate design
2013	Jersey Central Power & Light	NJ	BPU ER12111052	Gerdau Ameristeel	Return on equity, capital structure
2013	Duke Energy Carolinas	SC	2013-59-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2013	Tampa Electric	FL	130040-EI	Florida Office of Public Counsel	Capital structure and financial integrity
2013	Piedmont Natural Gas	NC	G-9, Sub 631	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2014	Dominion Virginia Power	VA	PUE-2014-00033	Mead Westvaco	Recoverable fuel costs, hedging strategies
2014	Public Service Company of Colorado	CO	14AL-0660E	Colorado Healthcare Electric Coordinating Council	Return on equity, capital structure
2015	WEC Acquisition of Integrys	WI	9400-YO-100	Staff of Wisconsin Public Service Commission	Merger analysis
2015	Dominion Virginia Power	VA	PUE-2015-00027	Federal Executive Agencies	Return on equity
2015	South Carolina Electric & Gas	SC	2015-103-E	South Carolina Energy Users Committee	Return on equity
2015	Western Carolina University	NC	E-35, Sub 45	Western Carolina University	Accounting, cost of service, rate design, ROE, capital structure
2016	Sandpiper Energy	MD	9410	Maryland Office of People's Counsel	Return on equity, capital structure
2016	Washington Gas Light	DC	FC 1137	Washington, DC Office of People's Counsel	Return on equity, capital structure
2016	Florida Power & Light	FL	160021-EI	Florida Office of Public Counsel	Capital Structure
2016	Jersey Central Power & Light	NJ	EM15060733	NJ Division of Rate Counsel	Asset valuation
2016	Rockland Electric Company	NJ	ER16050428	NJ Division of Rate Counsel	Rate design
2016	Dominon NC Power	NC	E-22, Sub 532	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2017	Potomac Electric Power	DC	FC 1139	Healthcare Council of the National Capitol Area (HCNCA)	ROE and capital structure
2017	Columbia Gas of Maryland	MD	FC 9447	Maryland Office of People's Counsel	ROE and capital structure
2017	Washington Gas Light	DC	FC 1142	Washington, DC Office of People's Counsel	Merger analysis
2017	Duke Energy Progress	NC	E-2, Sub 1142	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2018	Public Service Electric & Gas	NJ	GR17070776	NJ Division of Rate Counsel	ROE and capital structure
2018	Duke Energy Carolinas	NC	E-7, Sub 1146	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2018	Elkton Gas/SJI	MD	FC 9475	Maryland Office of People's Counsel	Merger analysis
2018	Entergy Texas	TX	PUC 48371	Entergy Texas Cities	ROE
2018	Duke Energy Carolinas	SC	2018-3-E	South Carolina Energy Users Committee	Fuel case

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Nova Energy Consultants, Inc.

Year	Name of Applicant	State Jusrisdiction	Docket No.	Client/ Employer	Case Issues
2018	Elkton Gas Company	MD	FC 9488	Maryland Office of People's Counsel	Accounting, ROE, capital structure
2018	Baltimore Gas & Electric	MD	FC9484	Maryland Office of People's Counsel	ROE, capital structure
2018	South Carolina Electric & Gas	SC	2017-370-E	South Carolina Energy Users Committee	Creditworthiness issue
2018	Jersey Central Power & Light	NJ	EO18070728	NJ Division of Rate Counsel	ROE and capital structure
2019	Duke Energy Carolinas	SC	2018-319-E	South Carolina Energy Users Committee	Accounting, rate design
2019	Duke Energy Progress	SC	2018-318-E	South Carolina Energy Users Committee	Accounting, rate design
2019	Public Service Electric and Gas	NJ	EO18060629	NJ Division of Rate Counsel	ROE and capital structure
2019	Potomac Electric Power	MD	FC 9602	Maryland Office of People's Counsel	ROE, capital structure
2019	Oklahoma Gas and Electric	OK	PUD 201800140	Sierra Club	Creditworthiness issue
2019	Peoples Natural Gas	PA	R-2018-3006818	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2019	UGI Natural Gas	PA	R-2018-3006814	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2019	Dominion Virginia Power	VA	PUR-2019-00050	Federal Executive Agencies	Return on Equity
2019	Piedmont Natural Gas	NC	G-9, Sub 743	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2019	Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric	CA	A-1904014, et al	Federal Executive Agencies	ROE, capital structure
2019	Duke Energy Indiana	IN	Cause 45253	Federal Executive Agencies	ROE, capital structure
2020	Duke Energy Carolinas	NC	E-7 Sub 1214	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2020	Duke Energy Progress	NC	E-2 Sub 1219	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2020	Dominion Virginia Power	VA	PUR-2019-00154	Southern Environmental Law Center	Financial analysis of plant investment
2020	Southwest Electric Power Company	LA	U-35324	Alliance for Affordable Energy	Financial analysis of plant investment
2020	Texas Gas Company	TX	PUC 10928	Texas Gas Cities	ROE, capital structure
2020	Potomac Electric Power	DC	FC 1156	District of Columbia Office of Peoples Counsel	ROE, capital structure
2020	UGI Gas	PA	R-2019-3015162	Pennsylvania Office of Consumer Advocate	ROE, capital structure, creditworthiness
2020	Columbia Gas of Maryland	MD	FC 9644	Maryland Office of People's Counsel	ROE, capital structure
2020	Columbia Gas of Pennsylvania	PA	R-2020-3018835	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2020	New Mexico Gas Company	NM	19-00317-UT	Federal Executive Agencies	ROE, capital structure, accounting, rate design, cost of service
2020	Washington Gas Light	DC	FC 1162	District of Columbia Office of Peoples Counsel	ROE, capital structure
2020	Dominion Energy South Carolina	SC	2020-125-E	South Carolina Energy Users Committee	Accounting, rate design
2021	Suez Water Company	NJ	BPU WR2011	NJ Division of Rate Counsel	ROE, capital structure, rate design
2021	Columbia Gas of Pennsylvania	PA	R-2021-3024296	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2021	Florida Power & Light	FL	20210015-EI	Florida Office of Public Counsel	Capital structure, financial rate analysis
2021	Piedmont Natural Gas Company	NC	G-9 Sub 781	Carolina Utility Customers Assoc.	Rate of return, cost of service, rate design
2021	Dominion Virginia Power	VA	PUR-2021-00058	Federal Executive Agencies	ROE, capital structure
2021	Public Service Company of NC	NC	G-5 Sub 632	Carolina Utility Customers Assoc.	Rate of return, cost of service, rate design
2022	Entergy Texas	TX	52487	Texas Gas Cities	Generation plant feasibility analysis
2022	New Mexico Gas Company	NM	21-00267-UT	Federal Executive Agencies	ROE, capital structure, accounting, rate design, cost of service
2022	Piedmont Natural Gas	SC	2022-89-G	South Carolina Energy Users Committee	Cost of Service Studies, rate design
2022	Oncor Electric Delivery Company	TX	53601	Federal Executive Agencies	Cost of Service Studies, rate design
2022	Delmarva Power & Light	MD	9681	Maryland Office of People's Counsel	ROE, capital structure

GEORGIA POWER COMPANY

COMPUTATION OF RETAIL REVENUE DEFICIENCY
APPLICABLE TO BASE RATE TARIFFS
FOR THE TWELVE MONTH PERIODS ENDING JULY 31, 2020 AND DECEMBER 31, 2020-2022
(AMOUNTS IN THOUSANDS)

Line No.	Description		Test Period	2020	2021	2022	
(1)	(2)		(3)	(4)	(5)	(6)	
1	Retail Rate Base		$ 20,097,349	$ 20,712,373	$ 21,797,091	$ 22,848,345	(a)
2	Requested Rate of Return	×	6.90%	6.97%	7.07%	7.13%	(b)
3	Earnings Requirement		$ 1,387,699	$ 1,442,758	$ 1,540,895	$ 1,629,892	
4	Less: Earnings Available for Return	-	1,448,591	1,390,793	1,229,291	1,024,065	(c)
5	Earnings Deficiency		$ (60,891)	$ 51,964	$ 311,604	$ 605,827	
6	Income Expansion Factor	÷	74.602%	74.596%	74.597%	74.598%	(d)
7	Total Revenue Deficiency Excluding MFF		$ (81,621)	$ 69,661	$ 417,717	$ 812,125	
8	Sum of 2020 through 2022					$ 1,299,504	

Note: Details may not add to totals due to rounding.

(a) From Exhibit___(DPP/SPA/MBR-1, Schedule 1 Total Company) Pages 3, 5, 7, and 9 for Test Period, 2020, 2021, and 2022, respectively
(b) From Exhibit___(DPP/SPA/MBR-3, Schedule 2, Workpapers 1-4) for Test Period, 2020, 2021, and 2022, respectively
(c) From Exhibit___(DPP/SPA/MBR-1, Schedule 1 Total Company) Pages 4, 6, 8, and 10 for Test Period, 2020, 2021, and 2022, respectively
(d) From Exhibit___(DPP/SPA/MBR-1, Schedule 1 Total Company) Page 2

GEORGIA POWER COMPANY

COMPUTATION OF RETAIL REVENUE DEFICIENCY
APPLICABLE TO BASE RATE TARIFFS
FOR THE TWELVE MONTH PERIODS ENDING JULY 31, 2020 AND DECEMBER 31, 2020-2022
(AMOUNTS IN THOUSANDS)

Line No.	Description		Test Period	2020	2021	2022	
(1)	(2)		(3)	(4)	(5)	(6)	
1	Retail Rate Base		$ 20,097,349	$ 20,712,373	$ 21,797,091	$ 22,848,345	(a)
2	Requested Rate of Return	×	7.70%	7.76%	7.85%	7.90%	(b)
3	Earnings Requirement		$ 1,548,097	$ 1,606,565	$ 1,710,596	$ 1,806,031	
4	Less: Earnings Available for Return	-	1,448,591	1,390,793	1,229,291	1,024,065	(c)
5	Earnings Deficiency		$ 99,506	$ 215,772	$ 481,305	$ 781,966	
6	Income Expansion Factor	÷	74.602%	74.596%	74.597%	74.598%	(d)
7	Total Revenue Deficiency Excluding MFF		$ 133,383	$ 289,255	$ 645,208	$ 1,048,244	
8	Sum of 2020 through 2022					$ 1,982,707	

Note: Details may not add to totals due to rounding.

(a) From Exhibit___(DPP/SPA/MBR-1, Schedule 1 Total Company) Pages 3, 5, 7, and 9 for Test Period, 2020, 2021, and 2022, respectively
(b) From Exhibit___(DPP/SPA/MBR-3, Schedule 2, Workpapers 1-4) for Test Period, 2020, 2021, and 2022, respectively
(c) From Exhibit___(DPP/SPA/MBR-1, Schedule 1 Total Company) Pages 4, 6, 8, and 10 for Test Period, 2020, 2021, and 2022, respectively
(d) From Exhibit___(DPP/SPA/MBR-1, Schedule 1 Total Company) Page 2

Revenue Requirement Using National Average 9.66% ROE and 50.06% Equity Ratio	$ 1,299,504
Revenue Requirement Using National Average 10.50% ROE and 56.00% Equity Ratio	$ 1,982,707
Difference	$ 683,203

Exhibit KWO-1

Credit Spreads January 2012 through August 2022

Year	Month	Public Utility Bonds		
		A-Rated	Baa-Rated	Spread
2012	Jan	4.34	5.06	0.72
	Feb	4.36	5.02	0.66
	March	4.48	5.13	0.65
	April	4.40	5.11	0.71
	May	4.20	4.97	0.77
	June	4.08	4.91	0.83
	July	3.93	4.85	0.92
	August	4.00	4.88	0.88
	Sept.	4.02	4.81	0.79
	Oct.	3.91	4.54	0.63
	Nov.	3.84	4.42	0.58
	Dec.	4.00	4.56	0.56
2013	Jan	4.15	4.66	0.51
	Feb	4.18	4.74	0.56
	March	4.20	4.72	0.52
	April	4.00	4.49	0.49
	May	4.17	4.65	0.48
	June	4.53	5.08	0.55
	July	4.68	5.21	0.53
	August	4.73	5.28	0.55
	Sept.	4.80	5.31	0.51
	Oct.	4.70	5.17	0.47
	Nov.	4.77	5.24	0.47
	Dec.	4.81	5.25	0.44
2014	Jan	4.63	5.09	0.46
	Feb	4.53	5.01	0.48
	March	4.51	5.00	0.49
	April	4.41	4.85	0.44
	May	4.26	4.69	0.43
	June	4.29	4.73	0.44
	July	4.23	4.66	0.43
	August	4.13	4.65	0.52
	Sept.	4.24	4.79	0.55
	Oct.	4.06	4.67	0.61
	Nov.	4.09	4.75	0.66
	Dec.	3.95	4.70	0.75
2015	Jan	3.58	4.39	0.81
	Feb	3.67	4.44	0.77
	March	3.74	4.51	0.77
	April	3.75	4.51	0.76
	May	4.17	4.91	0.74

Credit Spreads January 2012 through August 2022

Year	Month	Public Utility Bonds		
		A-Rated	Baa-Rated	Spread
	June	4.39	5.13	0.74
	July	4.40	5.22	0.82
	August	4.25	5.23	0.98
	Sept.	4.39	5.42	1.03
	Oct.	4.29	5.47	1.18
	Nov.	4.40	5.57	1.17
	Dec.	4.35	5.55	1.20
2016	Jan	4.27	5.49	1.22
	Feb	4.11	5.28	1.17
	March	4.16	5.12	0.96
	April	4.00	4.75	0.75
	May	3.93	4.60	0.67
	June	3.78	4.47	0.69
	July	3.57	4.16	0.59
	August	3.59	4.20	0.61
	Sept.	3.66	4.27	0.61
	Oct.	3.77	4.34	0.57
	Nov.	4.08	4.64	0.56
	Dec.	4.27	4.79	0.52
2017	Jan	4.14	4.62	0.48
	Feb	4.18	4.58	0.40
	March	4.23	4.62	0.39
	April	4.12	4.51	0.39
	May	4.12	4.50	0.38
	June	3.94	4.32	0.38
	July	3.99	4.36	0.37
	August	3.86	4.23	0.37
	Sept.	3.87	4.24	0.37
	Oct.	3.91	4.26	0.35
	Nov.	3.83	4.16	0.33
	Dec.	3.79	4.14	0.35
	Jan	3.86	4.18	0.32
	Feb	4.09	4.42	0.33
	March	4.13	4.52	0.39
	April	4.17	4.58	0.41
	May	4.28	4.73	0.45
	June	4.27	4.71	0.44
	July	4.27	4.67	0.40
	August	4.26	4.64	0.38
	Sept.	4.32	4.74	0.42
	Oct.	4.45	4.91	0.46

Credit Spreads January 2012 through August 2022

Year	Month	Public Utility Bonds		
		A-Rated	Baa-Rated	Spread
	Nov.	4.52	5.03	0.51
	Dec.	4.37	4.92	0.55
2018	Jan	4.35	4.91	0.56
	Feb	4.25	4.76	0.51
	March	4.16	4.65	0.49
	April	4.08	4.55	0.47
	May	3.98	4.47	0.49
	June	3.82	4.31	0.49
	July	3.69	4.13	0.44
	August	3.29	3.63	0.34
	Sept.	3.37	3.71	0.34
	Oct.	3.39	3.72	0.33
	Nov.	3.43	3.76	0.33
	Dec.	3.40	3.73	0.33
2019	Jan	3.29	3.60	0.31
	Feb	3.11	3.42	0.31
	March	3.50	3.96	0.46
	April	3.19	3.82	0.63
	May	3.14	3.63	0.49
	June	3.07	3.44	0.37
	July	2.74	3.09	0.35
	August	2.73	3.06	0.33
	Sept.	2.84	3.17	0.33
	Oct.	2.95	3.27	0.32
	Nov.	2.85	3.17	0.32
	Dec.	2.77	3.05	0.28
2020	Jan	2.91	3.18	0.27
	Feb	3.09	3.37	0.28
	March	3.44	3.72	0.28
	April	3.30	3.57	0.27
	May	3.33	3.58	0.25
	June	3.16	3.41	0.25
	July	2.95	3.2	0.25
	August	2.95	3.19	0.24
	Sept.	2.96	3.19	0.23
	Oct.	3.09	3.32	0.23
	Nov.	3.02	3.25	0.23
	Dec.	3.13	3.36	0.23
2021	Jan	2.91	3.18	0.27
	Feb	3.09	3.37	0.28
	March	3.44	3.72	0.28

Credit Spreads January 2012 through August 2022

Year	Month	Public Utility Bonds		
		A-Rated	Baa-Rated	Spread
	April	3.30	3.57	0.27
	May	3.33	3.58	0.25
	June	3.16	3.41	0.25
	July	2.95	3.2	0.25
	August	2.95	3.19	0.24
	Sept.	2.96	3.19	0.23
	Oct.	3.09	3.32	0.23
	Nov.	3.02	3.25	0.23
	Dec.	3.13	3.36	0.23
2022	Jan	3.33	3.57	0.24
	Feb	3.68	3.95	0.27
	March	3.98	4.28	0.3
	April	4.32	4.61	0.29
	May	4.75	5.07	0.32
	June	4.86	5.22	0.36
	July	4.78	5.15	0.37
	August	4.76	5.09	0.33

Calculation of Yield Spread and Possible Prospective Cost to Georgia Power Consumers Sept., 2019 Debt Issuances.

Period Examined	Public Utility Bonds A-Rated	Baa-Rated	Spread
Calendar Year 2019	3.02	3.39	0.38
One-Notch Spread			0.13
Sept. 2019			0.33
One-Notch Spread			0.11
Average Spread			0.12
Sept. 19 Debt Issuances			$ 1,050,000,000
Interest Cost Difference			$ 1,233,750

Calculation of Yield Spread and Possible Prospective Cost to Georgia Power Consumers Jan., 2020 Debt Issuances.

Period Examined	Public Utility Bonds A-Rated	Baa-Rated	Spread
Calendar Year 2020	3.11	3.36	0.25
One-Notch Spread			0.08
Jan, 2020 Issuance	2.91	3.18	0.28
One-Notch Spread			0.09
Average Spread			0.09
Sept. 19 Debt Issuances			$ 1,200,000,000
Interest Cost Difference			$ 1,061,667

Calculation of Yield Spread and Possible Prospective Cost to Georgia Power Consumers Feb., 2021 Debt Issuances.

Period Examined	Public Utility Bonds A-Rated	Baa-Rated	Spread
Calendar Year 2020	3.11	3.36	0.25
One-Notch Spread			0.08
Feb. 2021 Issuance	3.09	3.37	0.28
One-Notch Spread			0.09
Average Spread			0.09
Sept. 19 Debt Issuances			$ 750,000,000
Interest Cost Difference			$ 663,542

Georgia Power Interest Expense Increase Due to Moodys Downgrade in August, 2019

Line No.	Coupon Rate	Maturity Date	Date of Issue	New Issues	Int. Rate Spread	Annual Int ($)	Interest over Bond Life
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
46	3.250%	03/15/51	02/22/21	$ 750,000,000	0.09%	$ 663,542	$ 19,906,250
47	2.200%	09/10/24	09/10/19	$ 400,000,000	0.12%	$ 470,000	$ 2,350,000
48	2.650%	09/10/29	09/10/19	$ 650,000,000	0.12%	$ 763,750	$ 7,637,500
49	2.100%	07/30/23	01/08/20	$ 700,000,000	0.09%	$ 619,306	$ 2,167,569
50	3.700%	01/30/50	01/08/20	$ 500,000,000	0.09%	$ 442,361	$ 13,270,833
				$ 3,000,000,000			$ 45,332,153

2022 Rate Case Request
Docket No. 43838

	Ratio (%)	Cost Rate (%)	Wgtd Cost Rate (%)	Tax Gross-Up	Pre-tax Wgtd Rate
Long-Term Debt	44.00%	3.53%	1.55%	1.000	1.55%
Common Equity	56.00%	11.00%	6.16%	0.746	8.26%
			7.71%		9.81%

2021 National Average ROE and Eq. Ratio

	Ratio (%)	Cost Rate (%)	Wgtd Cost Rate (%)	Tax Gross-Up	Pre-tax Wgtd Rate
Long-Term Debt	49.94%	3.53%	1.76%	1.000	1.76%
Common Equity	50.06%	9.38%	4.70%	0.746	6.29%
			6.46%		8.06%

Change in COC		1.75%
Rate Base	$ 24,018.13	(mill)
Higher rev req	$ 421.11	(mill)

Year	Month	Public Utility Bonds		
		A-Rated	Baa-Rated	Spread
2011	Jan	5.57	6.06	0.49
	Feb	5.68	6.10	0.42
	March	5.56	5.97	0.41
	April	5.55	5.98	0.43
	May	5.32	5.74	0.42
	June	5.26	5.67	0.41
	July	5.27	5.70	0.43
	August	4.69	5.22	0.53
	Sept.	4.48	5.11	0.63
	Oct.	4.52	5.24	0.72
	Nov.	4.25	4.93	0.68
	Dec.	4.33	5.07	0.74
2012	Jan	4.34	5.06	0.72
	Feb	4.36	5.02	0.66
	March	4.48	5.13	0.65
	April	4.40	5.11	0.71
	May	4.20	4.97	0.77
	June	4.08	4.91	0.83
	July	3.93	4.85	0.92
	August	4.00	4.88	0.88
	Sept.	4.02	4.81	0.79
	Oct.	3.91	4.54	0.63
	Nov.	3.84	4.42	0.58
	Dec.	4.00	4.56	0.56
2013	Jan	4.15	4.66	0.51
	Feb	4.18	4.74	0.56
	March	4.20	4.72	0.52
	April	4.00	4.49	0.49
	May	4.17	4.65	0.48
	June	4.53	5.08	0.55
	July	4.68	5.21	0.53
	August	4.73	5.28	0.55
	Sept.	4.80	5.31	0.51
	Oct.	4.70	5.17	0.47
	Nov.	4.77	5.24	0.47
	Dec.	4.81	5.25	0.44
2014	Jan	4.63	5.09	0.46
	Feb	4.53	5.01	0.48
	March	4.51	5.00	0.49
	April	4.41	4.85	0.44
	May	4.26	4.69	0.43
	June	4.29	4.73	0.44
	July	4.23	4.66	0.43

		August	4.13	4.65	0.52
		Sept.	4.24	4.79	0.55
		Oct.	4.06	4.67	0.61
		Nov.	4.09	4.75	0.66
		Dec.	3.95	4.70	0.75
	2015	Jan	3.58	4.39	0.81
		Feb	3.67	4.44	0.77
		March	3.74	4.51	0.77
		April	3.75	4.51	0.76
		May	4.17	4.91	0.74
		June	4.39	5.13	0.74
		July	4.40	5.22	0.82
		August	4.25	5.23	0.98
		Sept.	4.39	5.42	1.03
		Oct.	4.29	5.47	1.18
		Nov.	4.40	5.57	1.17
		Dec.	4.35	5.55	1.20
	2016	Jan	4.27	5.49	1.22
		Feb	4.11	5.28	1.17
		March	4.16	5.12	0.96
		April	4.00	4.75	0.75
		May	3.93	4.60	0.67
		June	3.78	4.47	0.69
		July	3.57	4.16	0.59
		August	3.59	4.20	0.61
		Sept.	3.66	4.27	0.61
		Oct.	3.77	4.34	0.57
		Nov.	4.08	4.64	0.56
		Dec.	4.27	4.79	0.52
	2017	Jan	4.14	4.62	0.48
		Feb	4.18	4.58	0.40
		March	4.23	4.62	0.39
		April	4.12	4.51	0.39
		May	4.12	4.50	0.38
		June	3.94	4.32	0.38
		July	3.99	4.36	0.37
		August	3.86	4.23	0.37
		Sept.	3.87	4.24	0.37
		Oct.	3.91	4.26	0.35
		Nov.	3.83	4.16	0.33
		Dec.	3.79	4.14	0.35
2018		Jan	3.86	4.18	0.32
		Feb	4.09	4.42	0.33
		March	4.13	4.52	0.39
		April	4.17	4.58	0.41
		May	4.28	4.73	0.45
		June	4.27	4.71	0.44

	July	4.27	4.67	0.40
	August	4.26	4.64	0.38
	Sept.	4.32	4.74	0.42
	Oct.	4.45	4.91	0.46
	Nov.	4.52	5.03	0.51
	Dec.	4.37	4.92	0.55
2019	Jan	4.35	4.91	0.56
	Feb	4.25	4.76	0.51
	March	4.16	4.65	0.49
	April	4.08	4.55	0.47
	May	3.98	4.47	0.49
	June	3.82	4.31	0.49
	July	3.69	4.13	0.44
	August	3.29	3.63	0.34
	Sept.	3.37	3.71	0.34
	Oct.	3.39	3.72	0.33
	Nov.	3.43	3.76	0.33
	Dec.	3.40	3.73	0.33
2020	Jan	3.29	3.60	0.31
	Feb	3.11	3.42	0.31
	March	3.50	3.96	0.46
	April	3.19	3.82	0.63
	May	3.14	3.63	0.49
	June	3.07	3.44	0.37
	July	2.74	3.09	0.35
	August	2.73	3.06	0.33
	Sept.	2.84	3.17	0.33
	Oct.	2.95	3.27	0.32
	Nov.	2.85	3.17	0.32
	Dec.	2.77	3.05	0.28
2021	Jan	2.91	3.18	0.27
	Feb	3.09	3.37	0.28
	March	3.44	3.72	0.28
	April	3.30	3.57	0.27
	May	3.33	3.58	0.25
	June	3.16	3.41	0.25
	July	2.95	3.2	0.25
	August	2.95	3.19	0.24
	Sept.	2.96	3.19	0.23
	Oct.	3.09	3.32	0.23
	Nov.	3.02	3.25	0.23
	Dec.	3.13	3.36	0.23
2022	Jan	3.33	3.57	0.24
	Feb	3.68	3.95	0.27
	March	3.98	4.28	0.3
	April	4.32	4.61	0.29

May	4.75	5.07	0.32
June	4.86	5.22	0.36
July	4.78	5.15	0.37
August	4.76	5.09	0.33

Period Examined	Public Utility Bonds		
	A-Rated	Baa-Rated	Spread
Jan 2012 thru August 2022	3.93	4.45	0.51
August 2022	4.76	5.09	0.33
Average Spread			0.42
One-Notch Spread			0.14

Debt	$ 3,450,000	($000s)
Cost in 2023 Due to Higher Int. Costs	$4,847	($000s)
Estimated Years	20	years
	$96,941	($000s)