State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: October 25, 2019

TO: Adam J. Teitzman, Commission Clerk, Office of Commission Clerk

FROM: Suzanne S. Brownless, Special Counsel, Office of the General Counsel

RE: Docket No. 20190001-EI - Fuel and purchased power cost recovery clause with generating performance incentive factor.

Please file the attached exhibits to the testimony of Richard A. Polich, P.E. on behalf of the Office of Public Counsel in this docket:

Exhibit RAP-1	Resume of Richard A. Polich, P.E.
Exhibit RAP-2	List of Richard A. Polich Testimony
Exhibit RAP-4	Turbine Generator Output Curve
Exhibit RAP-5	BCC ST Operation Greater than 420 MW
Exhibit RAP-9	Replacement Power Costs for BCC 40 MW derate

Should you have any questions or need any additional information, please contact me at 413-6218.

c:20190001.OPC.Exhibit.Memo

GDS Associates, Inc
ENGINEERS & CONSULTANTS

Richard A. Polich, P.E.

Managing Director – Power Supply Services

EDUCATION

Master of Business Administration, University of Michigan, 1990
Bachelor of Science, Mechanical Engineering, University of Michigan, 1979
Bachelor of Science, Nuclear Engineering, University of Michigan, 1979

ENGINEERING REGISTRATION

Professional Engineer in the State of Michigan

PROFESSIONAL MEMBERSHIP

National Society of Professional Engineers
American Nuclear Society
American Society of Mechanical Engineers

PROFESSIONAL EXPERIENCE

Mr. Polich has more than 30 years' experience as an energy industry engineer, manager, and leader, combining his business and technical expertise in the management of governmental, industrial and utility projects. He has worked extensively in nuclear, coal, IGCC, natural gas, green/renewable generation. Mr. Polich has developed generation projects in wind, solar, and biomass in Australia, Canada, Caribbean, South American and United States. His generation experience includes engineering of systems and providing engineering support of plant operations. Notable projects include the Midland Nuclear Project and its conversion to natural gas combined cycle, start-up testing support for Consumers' coal-fired Campbell 3, Palisades nuclear steam generator replacement support, Covert Generating Station feasibility evaluation, and a Lake Erie offshore wind project. He also has extensive experience in utility rates and regulation, having managed Consumers Energy's rates group for a number of years. In that function his responsibilities included load and revenue forecasting, overseeing the design of gas and electric rates and testifying in regulatory proceedings. Mr. Polich has testified in over thirty regulatory and legislative proceedings.

Mr. Polich has been involved in the nuclear industry since 1978. While at GDS, Mr. Polich has provided Utah Associated Municipal Power System project cost analysis for a small modular nuclear power project. Last year, he provided advisory services to the Vermont Public Utility Commission on the ownership transfer, nuclear decommissioning trust fund adequacy and decommissioning methodology of Vermont Yankee. Mr. Polich has supported GDS oversight efforts of the construction of the Vogel Nuclear Plant units 2&3 for the Georgia Public Service Commission. He has also provided decommissioning assessment analysis on St. Lucie Nuclear, and Grand Gulf Nuclear projects. Mr. Polich was part of the design engineering team for the Erie Nuclear Plant by the design engineering firm, Gilbert Commonwealth. Key responsibilities were the design of systems and component specifications associated with the nuclear steam supply systems (NSSS) and steam turbine thermal cycle. Worked directly with Babcock and Wilcox on NSSS design and ancillary system specifications. Mr. Polich was also senior engineer on the Midland Nuclear project, responsible for oversight of Bechtel design engineering and interfacing with NSSS vendor Babcock & Wilcox on ancillary systems. His responsibilities also included negotiation with the Nuclear Regulatory Commission on new regulation requirements. Mr. Polich's role evolved into onsite engineering during construction of the Midland Nuclear Plant and as a project trouble shooter at the Palisades Nuclear Plant.

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SPECIFIC PROJECT EXPERIENCE

NUCLEAR PROJECT EXPERIENCE

Vermont Yankee – Provided the Vermont Public Utility Commission advisory services on the asset transfer of Vermont Yankee from Entergy Nuclear Operations, Inc. to NorthStar Group Holdings, LLC. This effort has included assessment of financial strength of new company, adequacy of Nuclear Decommissioning Trust Fund to fund decommissioning efforts, evaluation of decommissioning methodology and State of Vermont Risk.

Vogel Nuclear Plant Units 3 & 4 – Mr. Polich has provided advisory services to the team performing the oversight of the construction of the Vogel Plant Units 3 & 4 as part of GDS project oversight responsibilities for the Georgia Public Service Commission.

St. Lucie Nuclear Plant – Provided a risk assessment, decommissioning funding study and ownership evaluation for City of Vero Beach. This included review of project maintenance history, steam generator replacement project, analysis of decommissioning needs and funding and assessing current value of Vero Beach's ownership share.

Grand Gulf Nuclear Project – Assessed the adequacy of decommissioning funding and funding level for the grand Gulf Nuclear plant for Cooperative Energy. Project purpose was to assess changes in decommissioning funding rates and to determine if sufficient funds would be available for plant decommissioning.

Consumers Energy Midland Nuclear Plant – Responsible for overseeing EPC contractor design and construction of primary and secondary nuclear systems. Included review of systems for compliance with Nuclear Regulatory Commission regulations. Key projects included:

- Leading team to analyze plant and determine best methods for compliance with new CFR Appendix R Fire Protection rules
- Design of primary cooling system pump oil collection and disposal systems.
- Oversight of redesign of component cooling water systems.
- Analysis of diesel generator capability to meet emergency shutdown power requirements.
- Primary interface with Dow Chemical for steam supply contract.

Ohio Edison Company Erie Nuclear Project – Design engineer responsible for the design, equipment specifications, bid evaluations and regulatory licensing for nuclear steam supply system and ancillary systems. Key projects included:

- Project Thermal Analysis
- Development of NSS valve specifications
- Major equipment bid Proposal Evaluation and recommendations

Interface with Babcock & Wilcox on NSSS Design

RATES & REGULATORY

GDS associates, Inc. – Managing Director

North Dakota Public Service Commission Staff – Case No. PU-16-666 MDU Generatl Rate Case

Provided testimony on behalf of the North Dakota Public Service Commission Staff regarding return on equity, cost of capital, revenue requirement, and generation resource costs.

North Dakota Public Service Commission Staff – Case No. PU-15-96 NSP Determination of Prudence

Provided testimony on behalf of the North Dakota Public Service Commission Staff regarding analysis and recommendation concerning Northern States Power's ("NSP") need for additional generation resources.

Consumers Energy - Supervisor of Pricing and Forecasting

Managed the group responsible for setting and obtaining regulatory approval for the company's electric and gas rates. Developed new approaches to electric and natural gas competitive pricing, redesigned electric rates to simplify rates and eliminate losses and defined new strategies for customer energy pricing. Negotiated new electric supply contracts with key industrial electric customers resulting in over $800M in annual revenue. Testified in multiple regulatory proceedings.

EOS Energy Options & Solutions – Consulting Company

Provided testimony for multiple clients in both Detroit Edison and Consumers Energy in over 30 regulatory proceedings. Testimony topics included rates, public policy and deregulation. Also testified in several legislative proceedings in both Michigan and Ohio, addressing energy policy. Provided expert witness testimony in Massachusetts regarding wind energy projects.

NATURAL GAS COMBINED CYCLE EXPERIENCE

Consumers Energy – 1,560 MW Midland Cogeneration Venture
Member of a small team selected to investigate the feasibility of converting the mothballed Midland Nuclear Plant into a fossil fueled power plant. Established new plant configuration that repowered the existing nuclear steam turbine with natural gas fired combustion turbines and heat recovery steam generators. Developed the new thermal cycle and heat rate, determined how to supply steam to Dow chemical for cogeneration, developed models for projecting plant performance, defined which portions of the nuclear plant were useful in the new combined cycle plant and forecasted project economics.

Nordic Energy – Vice President

Project Manager for the development of two 1,150 MW IGCC projects proposed to Georgia Power and Xcel Energy in response to RFPs. Responsibilities included establishing thermal cycles, equipment selection, site selection, supervising engineering, developing project proforma and proposals.

Project Manager for 230 MW power barge to be located on the Columbia River near Portland Oregon. Lead the project development team responsible for securing equipment, designing the power plant, design of barges, assessing site feasibility, developing project economics and interconnection applications.

RENEWABLE ENERGY EXPERIENCE

Matinee Energy – Utility Scale Solar Developer

Engineering design and project development consultant for utility scale solar photovoltaic projects. Development activities include site selection, equipment specifications, financial analysis and preparation of proposals. Also responsible for engineering and securing electrical interconnection.

Windlab Developments USA – Wind Power Developer

Responsible for greenfield development of the US platform for wind energy projects east of the Mississippi. Developed the company's engineering protocol for wind project design and construction, responsible for managing engineering design and construction of projects, and established six wind power projects (750 MW). Responsible for negation of Power Purchase Agreements, electrical interconnection studies, interface with Midwest ISO and submitting Generation Interconnection Application.

TradeWind Energy - Wind Power Project Developer

Project developer for 800 MW of wind power projects in Michigan and Indiana. Introduced new project management methods to the development process which resulted in savings of over $200,000 annually on each project.

Third Planet Windpower – Wind Power Project Developer

Engineering and project management consultant to support the startup of new wind power company. Established engineering standards used for selection of wind project equipment and project construction, analysis tools for evaluating projecting wind project power production, and performed project economic modeling.

Noble Environmental Power – Wind Power Project Developer

Electric transmission system consultant on the development of several wind power projects. Supported Noble's decisions on transmission gird interconnect and negotiate interconnection agreements.

ENERGY EFFICIENCY EXPERIENCE

Arkansas Energy Office – Weatherization Assistance Program Evaluation

Evaluated the performance and operations of Arkansas's Weatherization Assistance Program. This included review of program effectiveness, program operations, energy efficiencies attained, adequacy of energy efficiency measures and subcontractor performance.

CLEAResult – Arkansas Energy Efficiency Programs

Energy efficiency operations and program support for 400% increase in Arkansas energy efficiency programs. Developed processes for data collection, field staff deployment and job assignments.

ECONOMIC IMPACT ASSESSMENT

Michigan Department of Environmental Quality - Economic Impacts of a Renewable Portfolio Standard and Energy Efficiency Program for Michigan

Project Manager for this report which focused on the economic impact of renewable portfolio standard and energy efficiency programs on the State of Michigan. The evaluation sued in this report encompassed using integrated resource planning models, econometric modeling and electric pricing models for the entire State of Michigan.

West Michigan Business Alliance - Alternative and Renewable Energy Cluster Analysis

Prepared the report provided a road map for Western Michigan businesses to establish new business in the renewable energy industry.

POWER PROJECT EXPERIENCE:

Detroit Edison St Clair Power Station – Performed coal combustion analysis associated with conversion Powder River Basin coal. Work included pulverizer mill performance testing, boiler combustion analysis on new coal, and unit performance analysis.

Consumers Energy Campbell 3 - Supported start-up efforts of this 800 MW pulverized coal power plant. Part of team that performed analysis of boiler data and determined the cause of superheater failure. Also part of team to analyze performance test data for warranty evaluation.

Consumers Energy Weadock Plant – Design oversight and specified various plant upgrades during major maintenance outage. Included replacement of high-pressure superheater, design of new steam supply pipes, valve specifications and supported plant restart.

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Richard A. Polich, P.E.
Managing Director – Power Supply Services

PAPERS & PUBLICATIONS

Engineering and Economic Evaluation of Offshore Wind Plant Performance and Cost Data, 2011, Produced for the Electric Power Research Institute, KEMA, Inc.

FERC's 15% Fast Track Screening Criterion, 2012, Paper reviewing the FERC 15% screening criteria for electrical interconnection, KEMA, Inc.

Island of Saint Maarten Sustainable Energy Study, 2012, Produced for the Cabinet of Ministry VROMI, KEMA Inc.

A Study of Economic Impacts from the Implementation of a Renewable Portfolio Standard and an Energy Efficiency Program in Michigan, 2007, Produced for the Michigan Department of Environmental Quality

Alternative and Renewable Energy Cluster Analysis, 2007, Produced for the West Michigan Strategic Alliance and The Right Place

COURSES & SEMINARS

Association of Energy Engineers – Certified Energy Manager
Green Building Council – Associated LEED Certification Training
CLEAResult Leadership Academy

COMMUNITY SERVICE AND ACTIVITIES

Bicycling, hiking and cross-country skiing
Instrument-Rated Private Pilot
Habitat for Humanity
Scoutmaster
Soccer coach and referee
Volunteer work for disaster relief and building homes in Mexico

PREVIOUS TESTIMONY OF RICHARD A. POLICH

COMMISSION	CASE	ON BEHALF	TITLE
FERC	ER17-1821-002	Joint Customers	Revenue Requirement for Reactive Power Production Capability of the Panda Stonewall Generating Facility
North Carolina	E-2 Sub1142	Duke Energy Progress	Duke Energy Progress General Rate Case
Indiana	38707 FAC111-S1	Nucor Steel	Duke Energy Indiana, LLC for Fuel Cost Adjustment Clause
North Dakota	PU-16-166	ND PSC Staff	Montana-Dakota Utilities 2016 Electric Rate Increase Application
Hawaii	2015-0022	Sun Edison	Regarding the Hawaiian Electric Company, Inc. and NextEra Merger
North Dakota	PU-15-96	ND PSC Staff	Northern States Power Determination of Prudence
Michigan	U-10143	Consumers Energy	Consumers Energy Approval of an Experimental Retail Wheeling Case
Michigan	U-10335	Consumers Energy	General Rate Case
Michigan	U-10625	Consumers Energy	Proposal for Market-Based Rates Under Rate-K
Michigan	U-10685	Consumers Energy	1996 General Rate Case
Michigan	U-11915	Energy Michigan	Supplier Licensing
Michigan	U-11955	Energy Michigan	Consumers Energy Stranded & Implementation Cost Recovery
Michigan	U-11956	Energy Michigan	Detroit Edison Stranded & Implementation Cost Recovery
Michigan	U-12478	Energy Michigan	Detroit Edison Asset Securitization Case
Michigan	U-12488	Energy Michigan	Consumers Energy Retail Open Access Tariff
Michigan	U-12489	Energy Michigan	Detroit Edison Retail Open Access Tariffs
Michigan	U-12505	Energy Michigan	Consumers Energy Asset Securitization Cases
Michigan	U-12639	Energy Michigan	Stranded Cost Methodology Case
Michigan	U-13380	Energy Michigan	Consumers Energy 2000, 2001 & 2002 Stranded Cost Case
Michigan	U-13350	Energy Michigan	Detroit Edison 2000 & 2001 Stranded Cost Case
Michigan	U-13715	Energy Michigan	Consumers Energy Securitization of Qualified Costs
Michigan	U-13720	Energy Michigan	Consumers Energy 2002 Stranded Costs
Michigan	U-13808	Energy Michigan	Detroit Edison General Rate Case
Michigan	U-13808-R	Energy Michigan	Detroit Edison 2004 Stranded Cost & Assistance Credit for Residential Electric Customers

PREVIOUS TESTIMONY OF RICHARD A. POLICH

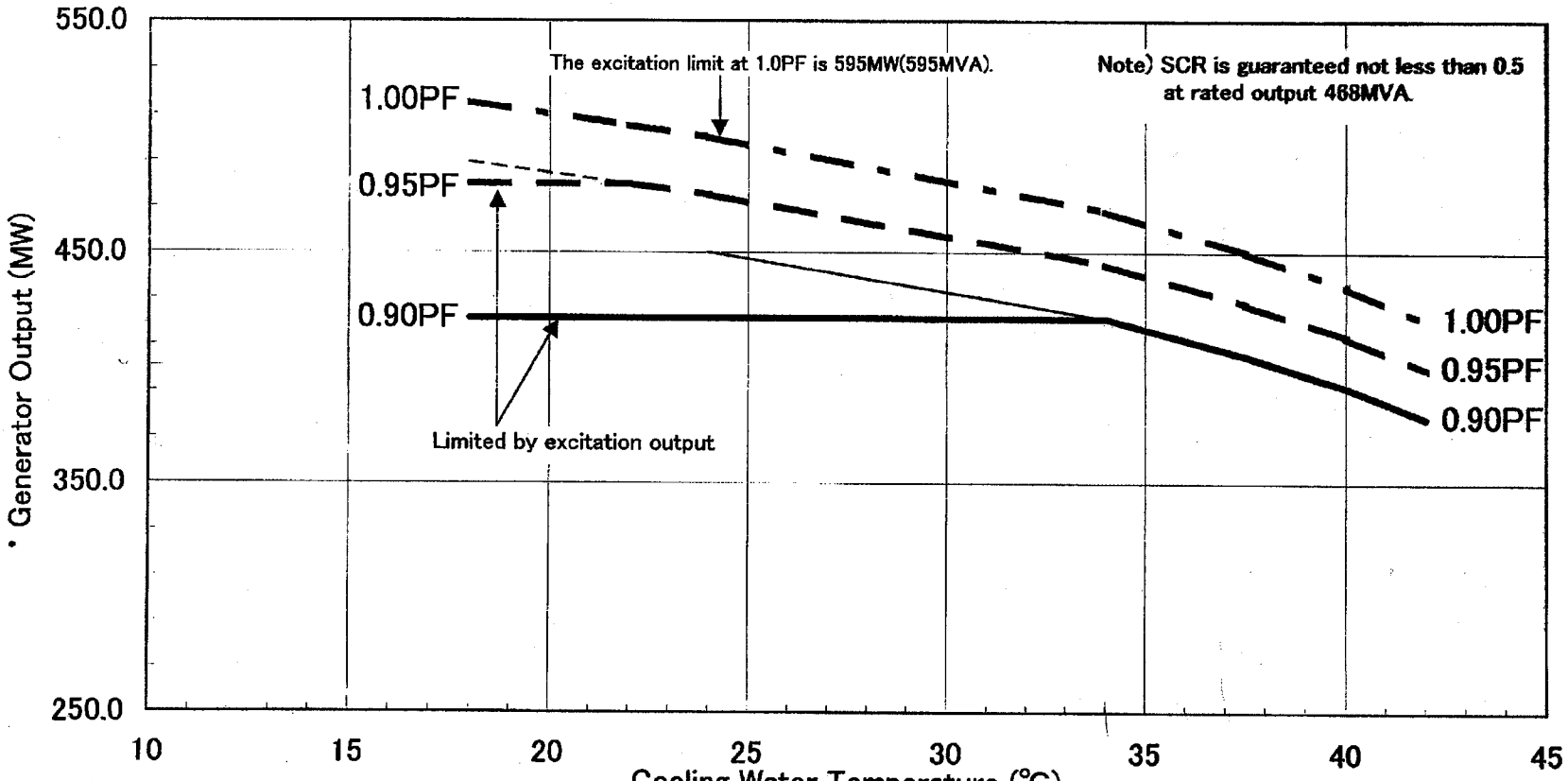
COMMISSION	CASE	ON BEHALF	TITLE
Michigan	U-14474	Energy Michigan	Detroit Edison 2004 PSCR Reconciliation Case
Michigan	U-13933	Energy Michigan	Detroit Edison Low-Income Energy Assistance Credit for Residential Electric Customers
Michigan	U-13917-R	Energy Michigan	Consumers Energy 2004 PSCR Reconciliation Case
Michigan	U-13989	Energy Michigan	Consumers Energy Request for Special Contract Approval

PREVIOUS TESTIMONY OF RICHARD A. POLICH

COMMISSION	CASE	ON BEHALF	TITLE
Michigan	U-14098	Energy Michigan	Consumers Energy 2003 Stranded Costs
Michigan	U-14148	Energy Michigan	Consumers Energy MCL 460.10d(4) Case
Michigan	U-14347	Energy Michigan	Consumers Energy General Rate Case
Michigan	U-14274-R	Energy Michigan	Consumers Energy 2005 PSCR Reconciliation Case
Michigan	U-14275-R	Energy Michigan	Detroit Edison Company 2005 PSCR Reconciliation Case
Michigan	U-14399	Energy Michigan	Detroit Edison Company Application for Unbundling of Rate
Michigan	U-14992	Energy Michigan	Power Purchase Agreement and for Other Relief in Connection with the sale of the Palisades Nuclear Power Plant and Other Asset

KC917171

USA TENASKA C/C STEAM TURBINE GENERATOR
COOLING WATER TEMPERATURE VERSUS GENERATOR OUTPUT CURVE
(According to ANSI B temperature rise, Hydrogen gas pressure:0.50MPa-g)



APPROVED	H. Ohishi
CHECKED	T. Kawata
DESIGNED	'02-4/8 N. Arikawa S. Tomita

(Flesh Water and 34% Propylene Glycol Water)

The generator output curve shows only limitted by ANSI B temperature rise. The generator output may be also limitted by another functions. (i.e. SCR, cooling water condition, and so on.)

KC917171

Bartow Plant Operations History
Operation greater than 420 MW

Note: Data sampled every 10 minutes. Hours listed assumes value does not change for 10 mins.
*Maximum MW values are absolute values at a given sampled data point.
** Bad MW Data removed from time interval.

Month	Year	*Maximum Ouput - MW	Hours Operated Above Following MW						
			420	425	430	435	440	445	450
June	2009	404.3	0	0	0	0	0	0	0
July	2009	429.4	23.3	10.8	0	0	0	0	0
August	2009	429.2	27.2	5	0	0	0	0	0
September	2009	431.2	183.5	59.7	1.2	0	0	0	0
October	2009	438.2	190.7	155	44	25	0	0	0
November	2009	440.2	8	8	8	7	0.5	0	0
December	2009	426.1	0.5	0.5	0	0	0	0	0
January	2010	446.3	27.7	27.7	27.2	22.2	19.2	16.5	0
Feruary	2010	440.4	4.5	4.5	4.2	4	0.2	0	0
March	2010	444.4	56.7	55	43.3	19.2	9.2	0	0
April	2010	445.5	35.8	33.7	28.7	14.7	10.7	0.3	0
May	2010	439.9	67.2	65.7	34.7	0.2	0	0	0
June	2010	454.8	216.3	158	51	31	22.8	1.7	0.3
July	2010	447.1	117.3	116	112.7	95.3	43.5	6	0
August	2010	451.1	220.8	219	217	198.8	112	3.5	0.8
September	2010	446.6	182	180.8	179.5	174.8	102	4.3	0
October	2010	445.7	12	11.8	11.8	11.7	7.8	1.3	0
November	2010	358.5	0	0	0	0	0	0	0
December	2010	0	0	0	0	0	0	0	0
January	2011	452.1	3.2	2.5	1.8	1.8	1.8	0.7	0.2
Feruary	2011	415.4	0	0	0	0	0	0	0
March	2011	443.1	35.3	34.5	31.8	16	3.2	0	0
April	2011	457.6	294.7	290.2	287.3	273.8	185.5	40	0.3
May	2011	446.9	216.7	209.7	199.3	183.5	159.8	10.2	0
June	2011	449.8	180.2	177.5	176.2	174.7	147.5	9.5	0
July	2011	453.4	278.2	276.2	272.3	269.5	258.3	55.8	0.8
August	2011	449.5	317.2	314	306.3	292.5	267.8	45	0
September	2011	447.1	26.8	26.2	25.2	23	21	5	0
October	2011	448.5	118.5	117.2	115.3	106.8	69.7	13.5	0
November	2011	447.1	46.2	45.8	45.3	44.7	42	10.2	0
December	2011	449.2	4.2	4	4	3.7	3.5	0.8	0
January	2012	449.1	68.7	67.5	65.8	64.5	59.5	23.5	0
Feruary	2012	447.8	9.2	9	8.7	8.7	8	0.2	0
March	2012	0	0	0	0	0	0	0	0
April	2012	360.5	0	0	0	0	0	0	0
May	2012	400.6	0	0	0	0	0	0	0

June	2012	397.7	0	0	0	0	0	0	0
July	2012	396.9	0	0	0	0	0	0	0
August	2012	396.9	0	0	0	0	0	0	0
September	2012	397.9	0	0	0	0	0	0	0
October	2012	392.3	0	0	0	0	0	0	0
November	2012	375.8	0	0	0	0	0	0	0
December	2012	381.3	0	0	0	0	0	0	0
January	2013	369.4	0	0	0	0	0	0	0
Feruary	2013	379.3	0	0	0	0	0	0	0
March	2013	382.6	0	0	0	0	0	0	0
April	2013	372.8	0	0	0	0	0	0	0
May	2013	417.5	0	0	0	0	0	0	0
June	2013	420.5	0.2	0	0	0	0	0	0
July	2013	416.9	0	0	0	0	0	0	0
August	2013	405.8	0	0	0	0	0	0	0
September	2013	445.3	1.5	1.5	1.3	1.2	0.2	0.2	0
October	2013	405.3	0	0	0	0	0	0	0
November	2013	404	0	0	0	0	0	0	0
December	2013	411.1	0	0	0	0	0	0	0
January	2014	405.7	0	0	0	0	0	0	0
Feruary	2014	414.6	0	0	0	0	0	0	0
March	2014	403.5	0	0	0	0	0	0	0
April	2014	322.4	0	0	0	0	0	0	0
May	2014	2.5	0	0	0	0	0	0	0
June	2014	404.4	0	0	0	0	0	0	0
July	2014	399.1	0	0	0	0	0	0	0
August	2014	404.2	0	0	0	0	0	0	0
September	2014	407.5	0	0	0	0	0	0	0
October	2014	400.7	0	0	0	0	0	0	0
November	2014	356.2	0	0	0	0	0	0	0
December	2014	**452.5	16.3	10	8.8	7.5	3.6	3.1	1.5
January	2015	387.7	0	0	0	0	0	0	0
Feruary	2015	416.6	0	0	0	0	0	0	0
March	2015	295.8	0	0	0	0	0	0	0
April	2015	**421.1	0.2	0	0	0	0	0	0
May	2015	403.4	0	0	0	0	0	0	0
June	2015	425.6	0.2	0.2	0	0	0	0	0
July	2015	398.2	0	0	0	0	0	0	0
August	2015	398.4	0	0	0	0	0	0	0
September	2015	403.9	0	0	0	0	0	0	0
October	2015	330.4	0	0	0	0	0	0	0
November	2015	404.4	0	0	0	0	0	0	0
December	2015	400.8	0	0	0	0	0	0	0
January	2016	396	0	0	0	0	0	0	0
Feruary	2016	398.8	0	0	0	0	0	0	0
March	2016	396.8	0	0	0	0	0	0	0
April	2016	227.1	0	0	0	0	0	0	0

May	2016	**0	0	0	0	0	0	0	0
June	2016	421.2	1.2	0	0	0	0	0	0
July	2016	418.8	0	0	0	0	0	0	0
August	2016	422.4	0.7	0	0	0	0	0	0
September	2016	431.8	71.3	39	16.7	0	0	0	0
October	2016	431.1	4.3	4.2	0.8	0	0	0	0
November	2016	0	0	0	0	0	0	0	0
December	2016	402.1	0	0	0	0	0	0	0
January	2017	389.2	0	0	0	0	0	0	0
Feruary	2017	386.5	0	0	0	0	0	0	0
March	2017	309.5	0	0	0	0	0	0	0
April	2017	365.2	0	0	0	0	0	0	0
May	2017	372.1	0	0	0	0	0	0	0
June	2017	373.4	0	0	0	0	0	0	0
July	2017	372.8	0	0	0	0	0	0	0
August	2017	370.9	0	0	0	0	0	0	0
September	2017	369.6	0	0	0	0	0	0	0
October	2017	377.6	0	0	0	0	0	0	0
November	2017	366.5	0	0	0	0	0	0	0
December	2017	370.9	0	0	0	0	0	0	0
January	2018	358.9	0	0	0	0	0	0	0
Feruary	2018	341.9	0	0	0	0	0	0	0
March	2018	355.8	0	0	0	0	0	0	0
April	2018	354.7	0	0	0	0	0	0	0
May	2018	344.5	0	0	0	0	0	0	0
June	2018	319.8	0	0	0	0	0	0	0
July	2018	320.2	0	0	0	0	0	0	0
August	2018	349.3	0	0	0	0	0	0	0
September	2018	359.9	0	0	0	0	0	0	0
October	2018	370.6	0	0	0	0	0	0	0
November	2018	367.8	0	0	0	0	0	0	0
December	2018	308.3	0	0	0	0	0	0	0
January	2019	290.8	0	0	0	0	0	0	0
Feruary	2019	325.5	0	0	0	0	0	0	0
March	2019	272.9	0	0	0	0	0	0	0
April	2019	354.4	0	0	0	0	0	0	0
May	2019	347.9	0	0	0	0	0	0	0
June	2019	373.6	0	0	0	0	0	0	0
July	2019	365.5	0	0	0	0	0	0	0
August	2019	363.4	0	0		0	0	0	0
TOTALS ---------->			3068.5	2740.4	2330.2	2075.8	1559.3	251.3	3.9

REPLACEMENT POWER COSTS
FOR BCC 40 MW DERATE

Line	Year	Month	Replacement Power Costs	Replacement MWh
	(a)	(b)	©	(d)
1	2017	4	$166,279	12,080
2	2017	5	$218,202	16,320
3	2017	6	$161,352	14,440
4	2017	7	$259,475	19,560
5	2017	8	$190,655	18,400
6	2017	9	$336,487	18,840
7	2017	10	$238,338	21,040
8	2017	11	$198,637	20,400
9	2017	12	$236,112	20,960
10	2018	1	$301,026	12,080
11	2018	2	$103,196	16,960
12	2018	3	$319,840	24,880
13	2018	4	$209,139	18,360
14	2018	5	$195,795	14,200
15	2018	6	$154,945	13,440
16	2018	7	$235,202	23,240
17	2018	8	$162,273	15,880
18	2018	9	$209,104	20,480
19	2018	10	$262,358	22,520
20	2018	11	$223,721	15,680
21	2018	12	$168,450	15,560
22	2019	1	$119,348	15,920
23	2019	2	$71,018	10,080
24	2019	3	$122,114	17,600
25	2019	4	$183,359	18,080
26	2019	5	$174,136	18,280
27	2019	6	$189,686	17,240
28	2019	7	$143,261	15,200
29	2019	8	$186,630	16,080
			Annual Totals	
30		2017	$2,005,536	162,040
31		2018	$2,545,049	213,280
32		2019	$1,189,552	128,480
33		2017 Outage	$11,100,000	
34		**Total**	**$16,840,136**	**503,800**