



A PHI Company

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February 29, 2016 REVISED

Via DelaFile Submission

Ms. Donna Nickerson, Secretary
Delaware Public Service Commission
861 Silver Lake Boulevard
Cannon Building, Suite 100
Dover, DE 19904

**RE: MONTHLY FILING - IN THE MATTER OF THE APPLICATION OF DELMARVA
POWER AND LIGHT COMPANY FOR APPROVAL OF QUALIFIED FUEL
CELL PROVIDER PROJECT TARIFFS**

Dear Ms. Nickerson:

Included with the filing, submitted via DelaFile on February 25, 2016, was Delmarva Power's monthly computation of the Service Classification QFCP-RC charges, including current factors and reconciliation factors as required in Order No. 8136, dated April 17, 2012 in Docket 11-362 and outlined in Tariff Leaf No. 74d. The filing computes rates based on the forecasted QFCP May operations which will be utilized in the April customer billing.

Summary:

The average monthly net impact over the life of the fuel cell project is \$1.79, which remains consistent with what was projected by the PSC staff at the outset (\$1.37) of the project. Included below is a comparison of the projected net monthly impact of the Qualified Fuel Cell Provider project (the "QFCP Project") to the typical residential customer¹ with the actual net monthly impact through May 2016. The analysis compares the projections from the original ICF report and the original PSC Staff report with the actual monthly QFCP filings through this forecast period, respectively. The Net Impact of the QFCP Project to the average residential customer is determined by subtracting the costs ratepayers were able to avoid because of the project (the "Avoided Cost Benefit"), from the monthly charges ratepayers paid to support the project (the "QFCP Project Charge"), and dividing the result by Delmarva's monthly kilowatt-hour sales.²

¹ Typical residential customer is defined as having average monthly usage of 975 kwh.

² All numbers are cumulative from the beginning to respective forecasted month.

QFCP Project Charge:

The monthly QFCP Project Charge is set forth in the monthly QFCP filings with the Delaware Public Service Commission. There are three major factors in computing the monthly charge to ratepayers. The fixed disbursement rate to the QFCP provider represents the largest component of the monthly charge. Because the disbursement rate was set as a fixed and known rate in the original QFCP legislation (*\$166.87 per megawatt-hour for the first 15 years; \$102.00 for years 16-20; \$30 for year 21*), it has the effect of keeping the actual costs relatively close to the estimated costs contained in both the ICF report and the Staff report.

The other two main variables in the monthly charge calculation are 1) the fuel cost of the natural gas and 2) the revenues derived from PJM energy and capacity sales. Fluctuations in PJM energy pricing and natural gas costs will fundamentally offset each other and create a natural hedge. For example, if natural gas prices increase, the revenue resulting from the QFCP Provider selling energy to PJM should also increase and offset the higher gas commodity cost. As long as the gas and the energy markets are correlated, customers should be largely insulated from commodity volatility. This effect should serve to keep the actual costs closely aligned with the model estimated costs throughout the life of the project.

The QFCP Project Charge is shown on Line 1 of the table on page 3. The original ICF estimated QFCP Project Charge, averaged monthly from inception through the May 2016 forecast for the typical residential customer, was expected to be \$3.24. The original PSC staff estimated QFCP Project Charge for the same period was expected to be \$3.49. The actual monthly QFCP Project Charge was \$3.19.

Therefore, for the period through May 2016, customers have been paying, on average, \$0.05 less per month as projected by ICF and \$0.30 less than projected by PSC staff.

Avoided Cost Benefit:

An Avoided Cost Benefit was estimated in both the original ICF report and the original Staff report. In order to estimate the Avoided Cost Benefit, it was necessary to estimate what Delmarva's procurement costs for the Renewable Energy Credits (RECs/SRECs) necessary to comply with the RPS law would have been without the QFCP Project. To develop the estimate, it was assumed that Delmarva would have purchased 50% of its REC/SREC portfolio ahead of need and 50% on the spot market as required to meet RPS requirements.

The Avoided Cost Benefit is shown on Line 2 of the table on page 3. The original ICF estimated avoided cost benefit through the May 2016 forecast period was \$2.71 for the average residential customer. The original PSC Staff estimated avoided cost benefit over the same period was \$2.12. The actual monthly Avoided Cost Benefit through this filing is \$1.40.³

³ While the actual avoided cost benefit is less than the original estimates, it is a conservative estimate of benefits to ratepayers as it does not take into account any benefit related to the reduction in regional capacity pricing as a result of the 30 MW of additional in-state generation and the reduction in the need to import power from elsewhere in the PJM region. It also does not reflect the avoided cost benefits from reduced line losses and any reduced need for future transmission upgrades resulting from the Project's close proximity to population centers, which ultimately translates into lower overall electricity prices.

Therefore, for the period through May 2016, the costs the average residential customer was able to avoid paying were \$1.31 less than projected by ICF and \$0.72 less than projected by the PSC Staff. The difference is driven primarily by actual REC and SREC prices being lower than originally anticipated.

Net Impact:

To determine the average monthly Net Impact to the residential customer, and provide a comparison between the original ICF and PSC Staff projections and the actual QFCP Project results, it is necessary to subtract the Avoided Cost Benefit (Line 2) from the QFCP Project Charge (Line 1).

The Net Impact is shown on Line 3 of the table below. The original ICF projected monthly Net Impact through the May 2016 forecast period was \$0.53 for the average residential customer.⁴ The original PSC Staff projected monthly Net Impact over the same period was \$1.37 for the average residential customer. The actual average monthly Net Impact to date was \$1.79.

Therefore, for the period from the first QFCP filing in 2012 through the attached May2016 QFCP rate forecast, the actual monthly Net Impact on the average ratepayer has been \$1.26 higher than the 2011 ICF Model's projected monthly Net Impact, and \$0.42 more than the PSC Staff's projected monthly Net Impact of \$1.37.

Average Cost & Benefits Through May 2016	QFCP Filings	2011 ICF Model Projections	ICF Model Variance Actual to Model	2011 PSC Staff Projections	PSC Staff Variance Actual to Model
QFCP Project Charge (per month)	\$3.19	\$3.24	\$0.05 under	\$3.49	\$0.30 under
Avoided Cost Benefit (per month)	\$1.40	\$2.71	\$1.31 under	\$2.12	\$0.72 under
Net Impact for Typical Delmarva Residential Customer (per month) Line 1 minus line 2	\$1.79	\$0.53	\$1.26 over	\$1.37	\$0.42 over

⁴ It is important to note that the forecast by ICF was provided as an estimate over the 21-year life of the QFCP project. The results described in this letter and as shown in the chart reflect only the results from the project inception to date, which is only a small segment of the 21 year term of the QFCP project.

As required in the Order, this filing was made at least 30 days prior to applying the QFCP-RC charges to customer bills effective billing month April, which is scheduled to begin with customer meter read and billing cycle #1 on April 1st and finish with cycle #21 on April 30th. The approved monthly rates can be found on the Delmarva Power Website at "<http://www.delmarva.com/my-home/choices-and-rates/delaware/tariffs>" in the RPCR Table. Once this filing is approved by the Commission, the estimated Net cost for the April bill of a 975 KWH residential customer will be \$2.42 per month; comprised of the QFCP cost at \$4.44 and the avoided cost of (\$2.02).

Please contact me or Robert Coan at (302) 283-5724 with any questions related to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Todd L. Goodman', with a long horizontal flourish extending to the right.

Todd L. Goodman



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Supplementary project-to-date and monthly Avoided Cost data, which we have been supplying for informational purposes in each filing cover letter, was not available at this time. We anticipate filing a supplemental letter with that information by Wednesday, March 2, 2016.

As required in the Order, this filing is made at least 30 days prior to applying the QFCP-RC charges to customer bills effective billing month April, which is scheduled to begin with customer meter read and billing cycle #1 on April 1st and finish with cycle #21 on April 30th. The approved monthly rates can be found on the Delmarva Power Website at "<http://www.delmarva.com/my-home/choices-and-rates/delaware/tariffs>" in the RPCR Table.

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Todd L. Goodman

STATE OF DELAWARE)
) SS.
COUNTY OF NEW CASTLE)

On this 21st Day of February, 2016, personally came before me, the subscriber, a Notary Public in and for the State and County aforesaid Gary R. Stockbridge, Vice President, Delmarva Power & Light Company, a corporation existing under the laws of the State of Delaware, party to this Application, known to me personally to be such, and acknowledged this Application to be his act and deed and the act and deed of such Corporation, that the signature of such Vice President is in his own proper handwriting, and that the facts set forth in this Application are true and correct to the best of his knowledge and belief.



Gary R. Stockbridge
President – Delmarva Power

SWORN TO AND SUBSCRIBED before me this 21st day of February 2016,



Notary Public Robert L. Goodmont #3096

My Commission expires: N.S.

RJC-1
Delmarva Power & Light Company
Fuel Cell – Renewable Capable Power Production - Monthly Rate Calculation
May 2016 Projection (To be billed in April 2016)

Line	Forecasted QFCP Revenues and Costs		
1	Table 1		
2			
3	May 2016		
4			
5	Contract Cost	\$ 3,486,530	
6	less Market -Based Revenue	\$ 660,044	
7	Above Market QFCP Costs (Margin)	\$ 2,826,486	
8			
9	Administrative and Other O&M charges	\$ 9,000	
10			
11	(Less) Plus Carrying Charge	\$ 91	
12			
13	Net QFCP Project Charge	\$ 2,835,577	
14	(Less) plus prior month(s) true-up	\$ 112,497	
15	Monthly QFCP Project Charge	\$ 2,948,074	
			Checksum vs Forecast Tab should be 0 ==> \$ -

Line	Voltage Level Loss (Energy & Capacity) - Adjustment Factor	
16	RESIDENTIAL	1.07438
17	RES SPACE HEAT	1.07438
18	Res TOU ND	1.07438
19	SGS	1.07438
20	MGS	1.07438
21	LGS	1.07438
22	GSP	1.04532
23	GST	1.02861

Line	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	
25				= Col. 3 Lines 28- 41 / Col. 3			RCF/(1- RCF*UNC Factor)	= Col. 6 x Col. 7	
26	Table 3 Rate Calculation	April 2016	= Col. 1 x Col. 2	Line 42	= Col. 4 x Line 15	= Col. 5 / Col. 2			
27	Rate Class	Loss Factor	Sales @ Customer (kWh) (BD)	Sales @ Bulk System - Including Losses	Allocation Factor	Allocated Revenue Requirements	QFCP Rate (\$/kWh)	Revenue Conversion Factor Inc Uncollectable	Final QFCP Rate (\$/kWh)
28	Residential	1.07438	135,612,058	145,698,883	0.2073	\$ 611,070	\$ 0.004506	1.011562	\$ 0.004558
29	Residential- Space Heating	1.07438	83,162,099	89,347,695	0.1271	\$ 374,730	\$ 0.004506	1.011562	\$ 0.004558
30	Residential Time-of-Use "R-TOU" (Deleted 5/1/2014)								
31	Residential Time-of-Use NON-Demand "R-TOU-ND"	1.07438	109,981	118,162	0.0002	\$ 496	\$ 0.004506	1.011562	\$ 0.004558
32	Small General Service - Sec Non-Demand "SGS-ND"	1.07438	13,043,043	14,013,184	0.0199	\$ 58,772	\$ 0.004506	1.011562	\$ 0.004558
33	Space Heating Sec Serv "SGS-ND" and "MGS-S"	1.07438	2,085,223	2,240,322	0.0032	\$ 9,396	\$ 0.004506	1.011562	\$ 0.004558
34	Water Heating Sec Serv "SGS-ND" and "MGS-S"	1.07438	107,426	115,416	0.0002	\$ 484	\$ 0.004506	1.011562	\$ 0.004558
35	Outdoor Recreational Lighting Svc - Sec "ORL"	1.07438	36,746	39,479	0.0001	\$ 166	\$ 0.004506	1.011562	\$ 0.004558
36	Medium General Service - Secondary "MGS-S"	1.07438	95,879,541	103,011,062	0.1465	\$ 432,035	\$ 0.004506	1.011562	\$ 0.004558
37	Large General Service - Secondary "LGS-S"	1.07438	53,365,409	57,334,728	0.0816	\$ 240,465	\$ 0.004506	1.011562	\$ 0.004558
38	General Service - Primary "GS-P"	1.04532	213,794,449	223,483,614	0.3179	\$ 937,304	\$ 0.004384	1.011562	\$ 0.004435
39	General Service - Transmission "GS-T"	1.02861	61,511,403	63,271,244	0.0900	\$ 265,363	\$ 0.004314	1.011562	\$ 0.004364
40	PL	1.07438	1,168,267	1,255,162	0.0018	\$ 5,264	\$ 0.004506	1.011562	\$ 0.004558
41	SL	1.07438	2,780,723	2,987,553	0.0043	\$ 12,530	\$ 0.004506	1.011562	\$ 0.004558
42	Total kWh		662,656,368	702,916,505	1.0000	\$ 2,948,074			
43						\$ -	<=Checksum vs Forecast should be zero		

RJC-2
Delmarva Power & Light Company
Fuel Cell – Renewable Capable Power Production
May 2016 Projection (To be billed in April 2016)

	Projected Dec-15	Projected Jan-16	Projected Feb-16	Projected Mar-16	Projected Apr-16	Projected May-16
1 Costs						
2 QFCP – Renewable Capable Power Production						
3 Contract Price	\$ 166.87	\$ 166.87	\$ 166.87	\$ 166.87	\$ 166.87	\$ 166.87
4 Projected Output Rate (MW)	26.4	26.4	25.8	25.8	25.8	25.8
5 Maximum Monthly Hours of Production	744	744	696	744	720	744
6 Total Contract Costs	\$ 3,277,594	\$ 3,277,594	\$ 2,996,451	\$ 3,203,103	\$ 3,099,777	\$ 3,203,103
7						
8 Gas Supply Costs						
9 Gas Monthly Fixed Costs	\$ 44,855	\$ 44,855	\$ 44,855	\$ 44,855	\$ 44,855	\$ 44,855
10 Gas Cost per Dt	\$ 3.89	\$ 6.10	\$ 6.13	\$ 2.14	\$ 1.91	\$ 1.57
11 Heat rate	7.69	7.61	7.61	7.61	7.61	7.53
12 Monthly Gas Requirements (Dt) (=Line 4 x Line 5 x Line 11)	150,985	149,473	136,633	146,056	141,345	144,597
13 Monthly Cost of Gas= (Line 10 x Line 12)+Line 9+Tax	\$ 658,818	\$ 996,749	\$ 919,564	\$ 372,682	\$ 327,835	\$ 283,427
14						
15 Gas Tracking - Banking Penalty	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16						
17 Administrative and Other O&M charges	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000
18 Other Indirect Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19 Total Administrative and Other O&M costs	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000
20						
21 Revenues						
22 PJM Energy Revenue						
23 Estimated Max Monthly Output (MWh)	22,320	22,320	20,880	22,320	21,600	22,320
24 Estimated Unit Capacity Factor	0.880	0.880	0.860	0.860	0.860	0.860
25 Forecasted Monthly Output (=Line 23 x Line 24)	19,642	19,642	17,957	19,195	18,576	19,195
26 LMP @ DPL N Zone (assumed)	\$ 39.29	\$ 55.47	\$ 44.52	\$ 33.70	\$ 30.79	\$ 27.13
27 Total PJM Energy Revenue per month (Line 25 x Line 26)	\$ 771,685	\$ 1,089,446	\$ 799,497	\$ 646,887	\$ 571,867	\$ 520,857
28						
29 PJM Capacity Revenue						
30 Contract Capacity from PJM	\$ 128,247	\$ 128,247	\$ 119,973	\$ 128,247	\$ 124,110	\$ 128,247
31 Other PJM Revenue and Expenses	\$ 10,940	\$ 10,940	\$ 10,940	\$ 10,940	\$ 10,940	\$ 10,940
32 Total Capacity Revenue per Month	\$ 139,187	\$ 139,187	\$ 130,913	\$ 139,187	\$ 135,050	\$ 139,187
33						
34 (Less) plus prior month(s) true-up						
35 Retail Revenue Deferral+Actual vs Forecast	\$ 68,888	\$ 253,168	\$ (417,959)	\$ 305,544	\$ (221,300)	\$ 112,497
36						
37 (Less) Plus Carrying Charge	\$ (10)	\$ 105	\$ (160)	\$ 122	\$ (30)	\$ 91
38						
39 Monthly QFCP Project Charge	\$ 3,103,418	\$ 3,307,983	\$ 2,576,486	\$ 3,104,377	\$ 2,508,364	\$ 2,948,074
40 Contract+Gas Cost-Banking+Admin-Revenue+/- True Up+/- Interest						
41						
42 QFCP-RC Rates	Rates Nov-15	Rates Dec-15	Rates Jan-16	Rates Feb-16	Rates Mar-16	Rates Apr-16
43 Residential	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
44 Residential- Space Heating	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
45 Residential Time-of-Use "R-TOU" (Deleted 5/1/2014)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46 Residential Time-of-Use NON-Demand "R-TOU-ND"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
47 Small General Service - Sec Non-Demand "SGS-ND"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
48 Space Heating Sec Service "SGS-ND" and "MGS-S"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
49 Water Heating Sec Service "SGS-ND" and "MGS-S"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
50 Outdoor Recreational Lighting Svc - Secondary "ORL"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
51 Medium General Service - Secondary "MGS-S"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
52 Large General Service - Secondary "LGS-S"	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
53 General Service - Primary "GS-P"	\$ 0.005380	\$ 0.005108	\$ 0.003417	\$ 0.004486	\$ 0.003955	\$ 0.004435
54 General Service - Transmission "GS-T"	\$ 0.005294	\$ 0.005027	\$ 0.003362	\$ 0.004415	\$ 0.003892	\$ 0.004364
55 Outdoor Lighting PL	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558
56 Outdoor Lighting SL	\$ 0.005529	\$ 0.005250	\$ 0.003512	\$ 0.004611	\$ 0.004065	\$ 0.004558