

A PHI Company

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March 29, 2016

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 this filing, submitted via DelaFile, is 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. This filing computes rates based on the forecasted QFCP June operations which will be utilized in the May customer billing.

Summary:

The average monthly net impact over the life of the fuel cell project is \$1.81, which remains consistent with what was projected by the PSC staff at the outset (\$1.39) 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 customer with the actual net monthly impact through June 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 kilowatthour 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 June 2016 forecast for the typical residential customer, was expected to be \$3.26. The original PSC staff estimated QFCP Project Charge for the same period was expected to be \$3.51. The actual monthly QFCP Project Charge was \$3.22.

Therefore, for the period through June 2016, customers have been paying, on average, \$0.04 less per month as projected by ICF and \$0.29 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 June 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 \$1.41.3

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 June 2016, the costs the average residential customer was able to avoid paying were \$1.30 less than projected by ICF and \$0.71 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 June 2016 forecast period was \$0.55 for the average residential customer. The original PSC Staff projected monthly Net Impact over the same period was \$1.39 for the average residential customer. The actual average monthly Net Impact to date was \$1.81.

Therefore, for the period from the first QFCP filing in 2012 through the attached June2016 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 \$1.39.

Average Cost & Benefits Through June 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)	\$3.22	\$3.26	\$0.04 under	\$3.51	\$0.29 under		
Avoided Cost Benefit (per month)	\$1.41	\$2.71	\$1.30 under	\$2.12	\$0.71 under		
Net Impact for Typical Delmarva Residential Customer (per month) Line 1 minus line 2	\$1.81	\$0.55	\$1.26 over	\$1.39	\$0.42 over		

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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 is made at least 30 days prior to applying the QFCP-RC charges to customer bills effective billing month May, which is scheduled to begin with customer meter read and billing cycle #1 on May 1st and finish with cycle #21 on May 31st. 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 May bill of a 975 KWH residential customer will be \$2.39 per month; comprised of the QFCP cost at \$4.61 and the avoided cost of (\$2.22).

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

Sincerely,

Todd L. Goodman

STATE OF DELAWARE)
COUNTY OF NEW CASTLE)

On this 23 Day of _________, 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

Notary Public Notered Officer

My Commission expires:

- Todal Goodman (Bar # 3096, DE)

RJC-1 **Delmarva Power & Light Company** Fuel Cell – Renewable Capable Power Production - Monthly Rate Calculation

	1 461 5611		2016 Projection (_	ne outoutation							
Line	Line												
1	Table 1 F	orecasted	QFCP Revenues and	l Costs									
2													
3			June 2016										
4 5	Contract Cost		\$ 3,360,130										
6	less Market -Based Revenue		\$ 616,095										
7	Above Market QFCP Costs (Margin)		\$ 2,744,035	•									
8	There mainer at an esse (margin)		Ψ 2,7 4 1,000										
9	Administrative and Other O&M charges		\$ 9,000										
10	_												
11	(Less) Plus Carrying Charge		\$ 31										
12													
13	Net QFCP Project Charge		\$ 2,753,066										
14 15	(Less) plus prior month(s) true-up Monthly QFCP Project Charge		\$ (116,499) \$ 2,636,566		Chookeum	rs Forecast Tab sho	uld bo 0>		\$ -				
15	Monthly QFCF Project Charge				Checksum	's Forecast rab sno	uid be 0 ===>		Φ -				
		Voltage	Level Loss (DPL Zon	e Loss Factors) -									
	Table 2	· shage	tor										
16	RESIDENTIAL		1.07820										
17	RES SPACE HEAT		1.07820										
18	Res TOU ND		1.07820										
19	SGS		1.07820										
20	MGS		1.07820										
21	LGS		1.07820										
22	GSP		1.05669										
23	GST		1.03193										
24													
25		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8				
					= Col. 3								
					Lines 28-			RCF/(1-					
00	Table 0. Bate Oalanderian		M 0040	0.1.40.1.0	41 / Col. 3	0.1.41	= Col. 5 / Col.		= Col. 6 x Col.				
26	Table 3 Rate Calculation		May 2016	= Col. 1 x Col. 2	Line 42	= Col. 4 x Line 15	2	Factor)					
								Revenue					
								Conversio					
				Calaa @ D"				n Factor					
		Loss	Sales @ Customer	Sales @ Bulk	Allocation	Allocated Revenue	QFCP Rate	Inc Uncollecta	Final QFCP				
27	Rate Class	Factor	(kWh) (BD)	Losses	Factor	Requirements	(\$/kWh)	ble	Rate (\$/kWh)				
28	Residential	1.07820	110,374,461	119,005,743	0.1954		\$ 0.004668	1.013223	\$ 0.004730				
29	Residential- Space Heating	1.07820	55,207,629	59,524,866	0.0977		\$ 0.004668	1.013223	\$ 0.004730				
30	Residential Time-of-Use "R-TOU" (Deleted 5/1/2014)		, - ,	,- ,			,		,				
31	Residential Time-of-Use NON-Demand "R-TOU-ND"	1.07820	78,897	85,066	0.0001	\$ 368	\$ 0.004668	1.013223	\$ 0.004730				
32	Small General Service - Sec Non-Demand "SGS-ND"	1.07820	8,561,699	9,231,224	0.0152		\$ 0.004668	1.013223	\$ 0.004730				
33	Space Heating Sec Serv "SGS-ND" and "MGS-S"	1.07820	1,177,803	1,269,907	0.0021		\$ 0.004668	1.013223	\$ 0.004730				
34	Water Heating Sec Serv "SGS-ND" and "MGS-S"	1.07820	79,560	85,782	0.0001		\$ 0.004668	1.013223	\$ 0.004730				
35	Outdoor Recreational Lighting Svc - Sec "ORL"	1.07820	68,051	73,372	0.0001		\$ 0.004668	1.013223	\$ 0.004730				
36 37	Medium General Service - Secondary "MGS-S" Large General Service - Secondary "LGS-S"	1.07820	83,491,559	90,020,599	0.1478		\$ 0.004668 \$ 0.004668	1.013223 1.013223	\$ 0.004730 \$ 0.004730				
38	General Service - Secondary "LGS-S" General Service - Primary "GS-P"	1.07820 1.05669	46,690,104 184,612,510	50,341,271 195,078,194	0.0827 0.3203		\$ 0.004668	1.013223	\$ 0.004730 \$ 0.004636				
39	General Service - Fransmission "GS-T"	1.03069	77,396,016	79,867,271	0.3203		\$ 0.004575	1.013223	\$ 0.004527				
40	PL	1.07820	1,073,235	1,157,161	0.0019			1.013223	\$ 0.004730				
41	SL	1.07820	2,980,014	3,213,051	0.0053			1.013223	\$ 0.004730				
42	Total kWh		571,791,538	608,953,507	1.0000		•	-					
43			, , , , , , , , , , , , , , , , , , , ,			\$ -	<=Checksum v	e Enrocaet e	hould be zero				

RJC-2 Delmarva Power & Light Company Fuel Cell – Renewable Capable Power Production

June 2016 Projection (To be billed in May 2016)													
	ounc 20				Projected	Projected Projected				Projected			
		Jan-16			Feb-16 Mar-16		Apr-16		May-16		Jun-16		
1 C	Costs										•		
	FCP – Renewable Capable Power Production												
	ontract Price	\$	166.87	\$	166.87	\$	166.87	\$	166.87	\$	166.87	\$	166.87
	rojected Output Rate (MW)	Ť	26.4	ľ	25.8	ľ	25.8	ľ	25.8	ľ	25.8	T .	25.8
	laximum Monthly Hours of Production		744		696		744		720		744		720
	otal Contract Costs	\$	3,277,594	\$	2,996,451	\$	3,203,103	\$	3,099,777	\$	3,203,103	\$	3,099,777
7		Ť		Ť	, ,	Ť		÷		Ť		_	
	as Supply Costs												
	as Monthly Fixed Costs	\$	44,855	\$	44,855	\$	44,855	\$	44,855	\$	44,855	\$	44,877
	as Cost per Dt	\$	6.10	\$	6.13	\$	2.14	\$	1.91	\$	1.57	\$	1.46
	eat rate	ľ	7.61	ľ	7.61	ľ	7.61	ľ	7.61	ľ	7.53	ľ	7.53
	Ionthly Gas Requirements (Dt) (=Line 4 x Line 5 x Line 11)		149,473		136,633		146,056		141,345		144,597		139,933
	Ionthly Cost of Gas= (Line 10 x Line 12)+Line 9+Tax	\$	996,749	\$	919,564	\$	372,682	\$	327,835	\$	283,427	\$	260,353
14	ionally cost of Gas= (Line to X Line 12)+Line 5+14X	Ψ	990,749	Ψ	919,504	Ψ	372,002	Ψ	327,033	Ψ	203,421	Ψ	200,333
	as Tracking - Banking Penalty	\$		\$		\$		\$		\$		\$	
16	as Hacking - Banking Fenalty	φ	-	Φ	-	Φ	-	Φ	-	Φ	-	φ	-
	dministrative and Other O&M charges	\$	9,000	\$	9,000	\$	9,000	\$	9,000	\$	9,000	\$	9,000
	ther Indirect Costs	\$	9,000	\$	9,000	\$	3,000	\$	9,000	\$	3,000	\$	9,000
	otal Administrative and Other O&M costs	\$	9,000	\$	9,000	\$	9,000	\$	9,000	\$	9,000	\$	9,000
20	otal Administrative and Other Oxivi costs	Ψ	9,000	Ψ	9,000	Ψ	9,000	Ψ	9,000	Ψ	9,000	Ψ	9,000
	devenues												
	JM Energy Revenue												
	stimated Max Monthly Output (MWh)		22,320		20,880		22,320		21,600		22,320		21,600
	stimated Unit Capacity Factor		0.880		0.860		0.860		0.860		0.860		0.860
	orecasted Monthly Output (=Line 23 x Line 24)	١.	19,642		17,957	١.	19,195		18,576		19,195		18,576
	MP @ DPL N Zone (assumed)	\$	55.47	\$	44.52	\$	33.70	\$	30.79	\$	27.13	\$	27.04
	otal PJM Energy Revenue per month (Line 25 x Line 26)	\$	1,089,446	\$	799,497	\$	646,887	\$	571,867	\$	520,857	\$	502,227
28													
	JM Capacity Revenue												
	ontract Capacity from PJM	\$	128,247	\$	119,973	\$	128,247	\$	124,110	\$	128,247	\$	102,928
	ther PJM Revenue and Expenses	\$	10,940	\$	10,940	\$	10,940	\$	10,940	\$	10,940	\$	10,940
	otal Capacity Revenue per Month	\$	139,187	\$	130,913	\$	139,187	\$	135,050	\$	139,187	\$	113,868
33													
34 <u>(l</u>	Less) plus prior month(s) true-up												
35 R	etail Revenue Deferral+Actual vs Forecast	\$	253,168	\$	(417,959)	\$	305,544	\$	(221,300)	\$	112,497	\$	(116,499)
36													
37 (L	Less) Plus Carrying Charge	\$	105	\$	(160)	\$	122	\$	(30)	\$	91	\$	31
38		Ψ	100	Ψ	(100)	Ψ	122	Ψ	(00)	Ψ	- 01	Ψ	01
	Ionthly QFCP Project Charge		0.007.000	_	0.570.400		0.404.077		0.500.004		0.040.074	_	0.000.500
		\$	3,307,983	\$	2,576,486	\$	3,104,377	\$	2,508,364	\$	2,948,074	\$	2,636,566
								
41			Rates		Rates		Rates		Rates		Rates		Rates
	FCP-RC Rates	_	Dec-15	_	Jan-16	_	Feb-16	_	Mar-16	_	Apr-16		May-16
	esidential	\$	0.005250	\$	0.003512	\$	0.004611	\$	0.004065	\$	0.004558	\$	0.004730
	esidential- Space Heating	\$	0.005250	\$ \$	0.003512	\$ \$	0.004611	\$	0.004065	\$ \$	0.004558	\$ \$	0.004730
	esidential Time-of-Use "R-TOU" (Deleted 5/1/2014)	\$	0.005350		0.002512		0.004614		0.004065		0.004559	\$	0.004720
	esidential Time-of-Use NON-Demand "R-TOU-ND" mall General Service - Sec Non-Demand "SGS-ND"	\$	0.005250	\$ \$	0.003512	\$ \$	0.004611 0.004611	\$	0.004065 0.004065	\$ \$	0.004558 0.004558	\$	0.004730
		\$	0.005250		0.003512								0.004730
	pace Heating Sec Service "SGS-ND" and "MGS-S" /ater Heating Sec Service "SGS-ND" and "MGS-S"	\$	0.005250 0.005250	\$ \$	0.003512 0.003512	\$ \$	0.004611 0.004611	\$	0.004065 0.004065	\$ \$	0.004558 0.004558	\$ \$	0.004730 0.004730
	lutdoor Recreational Lighting Svc - Secondary "ORL"	\$	0.005250	\$	0.003512	\$	0.004611	\$	0.004065	\$	0.004558	\$	0.004730
	ledium General Service - Secondary "MGS-S"	\$	0.005250	\$	0.003512	\$	0.004611	\$	0.004065	\$	0.004558	\$	0.004730
	arge General Service - Secondary "LGS-S"	\$	0.005250	\$	0.003512	\$	0.004611	\$	0.004065	\$	0.004558	\$	0.004730
	eneral Service - Primary "GS-P"	\$	0.005250	\$	0.003512	\$	0.004611	\$	0.004065	\$	0.004336	\$	0.004730
	eneral Service - Frimary GS-P	\$	0.005108	\$	0.003417	\$	0.004466	\$	0.003933	\$	0.004433	\$	0.004636
	outdoor Lighting PL	\$	0.005027	\$	0.003562	\$	0.004415	\$	0.003692	\$	0.004364	\$	0.004527
	outdoor Lighting PL outdoor Lighting SL	\$	0.005250	\$	0.003512	\$	0.004611	\$	0.004065	\$	0.004558	\$	0.004730
JJ U	addor Eighting OL	Ψ	0.000200	Ψ	0.000012	Ψ	0.00-1011	Ψ	0.004003	Ψ	0.004000	Ψ	3.007130