

- Q. IV-B-1 Provide a Cost of Service Study showing the rate of return under the present and proposed tariffs for all customer classifications. The study should include a summary of the allocated measures of value, operating revenues, operating expenses and net return for each year of the customer classifications at original cost and at the 5-year original trended cost.
- A. IV-B-1 Refer to PECO Statement No. 6, the direct testimony of Jiang Ding, and PECO Exhibit JD-1 attached thereto for information about PECO's Cost of Service Study.

Q. IV-B-2 Provide a statement of testimony describing the complete methodology of the cost of service study.

A. IV-B-2 Refer to PECO Statement No. 6, the direct testimony of Jiang Ding.

Q. IV-B-3 Provide a complete description and back-up calculations for all allocation factors.

A. IV-B-3 Refer to PECO Exhibit JD-6 for development of external allocation factors. Refer to PECO Exhibit JD-2, pages 19 to 21, for internally developed allocation factors.

- Q. IV-B-4 Provide an exhibit for each customer classification showing the following data for the test year and the four previous years:
- a. The maximum coincident peak day demand.
 - b. The maximum coincident 3-day peak day demand.
 - c. The average monthly consumption in MCF during the Primary Heating Season (November-March).
 - d. The average monthly consumption in MCF during the Non-heating season (April-October).
 - e. The average daily consumption in MCF for each 12-month period.

A. IV-B-4

- a. Refer to Attachment IV-B-4(a).
- b. Refer to Attachment IV-B-4(b).
- c. Refer to Attachment IV-B-4(c).
- d. Refer to Attachment IV-B-4(c).
- e. Refer to Attachment IV-B-4(c).

Company Name: PECO Energy Company (Gas Services Group)
Maximum Coincident Peak Day Demand
Millions of Cubic Feet (MMCF)

Actual Year	2016	2017	2018	2019	2020	2021
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FIRM REQUIREMENTS

01	Retail Residential	426	477	481	465	296	547
02	Retail Commercial	202	229	236	233	159	293
03	Retail Industrial	0	1	0	0	0	0
04	Electric Power Generation	0	0	0	0	0	0
05	Exchange w/other utilities	0	0	0	0	0	0
06	Unaccounted for	0	0	0	0	0	0
07	Company use	1	1	1	1	1	1
08	Other - Interdepartmental	0	0	0	0	0	0
09	Subtotal Firm	629	708	718	699	456	841

INTERRUPTIBLE REQUIREMENTS

10	Large C&I	0	0	2	2	0	0
11	Electric Power Generation	0	0	0	0	0	0
12	Company own plant	0	0	0	0	0	0
13	Subtotal Interruptible	0	0	2	2	0	0
14	Subtotal Firm & Interruptible	629	708	720	701	456	841

TRANSPORTATION SERVICE

15	Firm	64	64	51	52	167	68
16	Interruptible	4	4	30	27	0	0
17	Electric Power Generation	0	0	0	0	0	0
18	Subtotal Transportation	68	68	81	79	167	68
19	Total Gas Requirements	697	776	801	780	623	910

Attachment IV-B-4(b)
PECO Energy Company (Gas Division)

Data for the consecutive three-day peak periods over the last five years are shown below. PECO's send out year begins September 1 and ends August 31 of the following year. "Int" means the rate was interrupted for some portion or all of the day. "Avail" means the rate was available for use the entire day.

Date	Mcf	Avg. Tem	Max. Tem	Min. Tem	Status Rate TSI	Status Rate IS	Status Rate TCS	Status Rate CGS
2/11/2016	674,232	22	25	21	Avail	Avail	Avail	Avail
2/12/2016	613,273	23	26	16	Avail	Avail	Avail	Avail
2/13/2016	717,966	15	14	24	Int	Int	Avail	Int
TOTAL	2,005,471							
01/07/17	617,691	20	24	19	Avail	Int	Avail	Int
01/08/17	658,061	19	24	15	Avail	Int	Avail	Int
01/09/17	657,113	21	23	12	Avail	Int	Avail	Int
TOTAL	1,932,288							
1/04/2018	748,059	19	26	12	Avail	Avail	Avail	Avail
1/05/2018	790,627	12	17	8	Int	Int	Int	Int
1/06/2018	800,927	11	16	7	Int	Int	Int	Int
TOTAL	2,339,613							
1/30/2019	766,103	14	35	6	Int	Int	Avail	Int
1/31/2019	779,550	15	18	10	Int	Int	Avail	Int
2/01/2019	770,605	15	18	11	Avail	Avail	Avail	Avail
TOTAL	2,316,258							
12/18/2019	610,969	28	39	19	Avail	Avail	Avail	Avail
12/19/2019	633,077	26	29	22	Avail	Avail	Avail	Avail
12/20/2019	569,245	29	36	22	Avail	Avail	Avail	Avail
TOTAL	1,813,291							
1/20/2020	622,698	26	32	26	Avail	Avail	Avail	Avail
1/21/2020	600,993	29	34	26	Avail	Avail	Avail	Avail
1/22/2020	544,898	31	39	29	Avail	Avail	Avail	Avail
TOTAL	1,768,589							

Attachment IV-B-4(b)
PECO Energy Company (Gas Division)

Only partial information is available by rate class for the three-day peaks since some rate classes are not metered on a daily basis. A tabulation by rate class is shown below.

Rate Class	Description	Frequency of Meter Reading
TSI & IS	Interruptible transportation & sales	Daily
TSF & L	Firm transportation & sales	Daily
TCS	Interruptible by temperature	Daily
CGS	City Gate Sales	Daily
GC	Commercial firm sales	Monthly
GR	Residential firm sales	Monthly
MV-F	Motor vehicle-firm sales	Monthly
MV-I	Motor vehicle-interruptible sales	Monthly
OL	Outdoor lighting	Monthly

The usage by rate class for the three-day peaks for the last five send out years appears below. All figures are in Mcf.

Date	TSI/IS	TSF/L	TCS	GC	GR	Others*	Total Mcf
2/11/2016	61,991	43,403	1532	187,950	377,999	1,357	674,232
2/12/2016	52,662	47,278	1382	169,566	341,027	1,357	613,273
2/13/2016	24,716	51,741	1728	212,018	426,405	1,357	717,966
01/07/17	53,017	46,578	1,395	171,229	344,374	1,098	617,691
01/08/17	52,689	48,276	1,501	184,146	370,351	1,098	658,061
01/09/17	60,105	50,654	1,472	180,588	363,196	1,098	657,113
1/04/2018	62,487	52,488	1,704	209,013	420,360	2,007	748,059
1/05/2018	30,361	55,779	1,897	232,661	467,922	2,007	790,627
1/06/2018	28,925	51,001	1,941	238,131	478,922	2,007	800,927
1/30/2019	26,254	52,217	1,851	227,081	456,699	2,000	766,103
1/31/2019	27,015	52,490	1,885	231,193	464,968	2,000	779,550
2/01/2019	50,504	43,494	1,823	223,572	449,641	1,571	770,605

Attachment IV-B-4(b)
PECO Energy Company (Gas Division)

Date	TS/IS	TSF/L	TCS	GC	GR	Others*	Total Mcf
12/18/2019	53,823	45,249	1,379	169,119	340,127	1,272	610,969
12/19/2019	54,249	46,513	1,434	175,881	353,728	1,272	633,077
12/20/2019	50,678	45,266	1,274	156,336	314,419	1,272	569,245
1/20/2020	48033	46544	1,422	174,483	350,915	1,301	622,698
1/21/2020	49386	45686	1,362	167,130	336,128	1,301	600,993
1/22/2020	50462	45983	1,207	148,097	297,848	1,301	544,898

* Rates MV-F, MV-I, OL, CGS, L, IS, Interdepartmental

Note:

Some of the information presented here is an excerpt from the Company's most recent Section 1307(f) filing PGC 37 Sec 16 at Docket No. R-2020-3019661.

The two entries for 2019 are the result of weather patterns for the Sendout year. The final entries for 2020 are to address the Test Year for this filing.

LEGEND:

- (a.) Avg. Monthly Consumption Nov-Mar
- (b.) Avg. Monthly Consumption Apr-Oct
- (c.) Avg. Daily Consumption 12 Month Period

Customer Classification	Jul-21 to Jun-22 Forecast Mcf delivered			Jul-20 to Jun-21 Forecast Mcf delivered			Jul-19 to Jun-20 Actual Mcf delivered			Jul-18 to Jun-19 Actual Mcf delivered			Jul-17 to Jun-18 Actual Mcf delivered			Jul-16 to Jun-17 Actual Mcf delivered		
	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)
Total Residential	13	3	0.23	13	3	0.24	12	3	0.22	14	2	0.24	14	3	0.24	12	2	0.21
Small C&I																		
TCS	720	309	16	691	297	15	465	229	11	551	215	12	531	273	13	486	132	9
GC	73	20	1	70	19	1	66	15	1	70	21	1	72	20	1	63	18	1
Large C&I																		
L	3,262	531	55	3,103	504	52	500	286	10	3,600	929	59	8400	714	129	3400	429	55
IS	558	193	11	531	182	11	N/A	N/A	30	N/A	N/A	N/A	683	N/A	14	133	190	5
Other	2,117	2,093	69	2,018	1,968	65	2,396	2,006	71	2,241	2236	74	1,899	1,731	59	1,643	1,321	48
Transportation	3,708	2,643	101	3,490	2,456	95	3,301	2,414	91	3,516	2,580	98	3,294	2,568	94	3,211	2,697	96

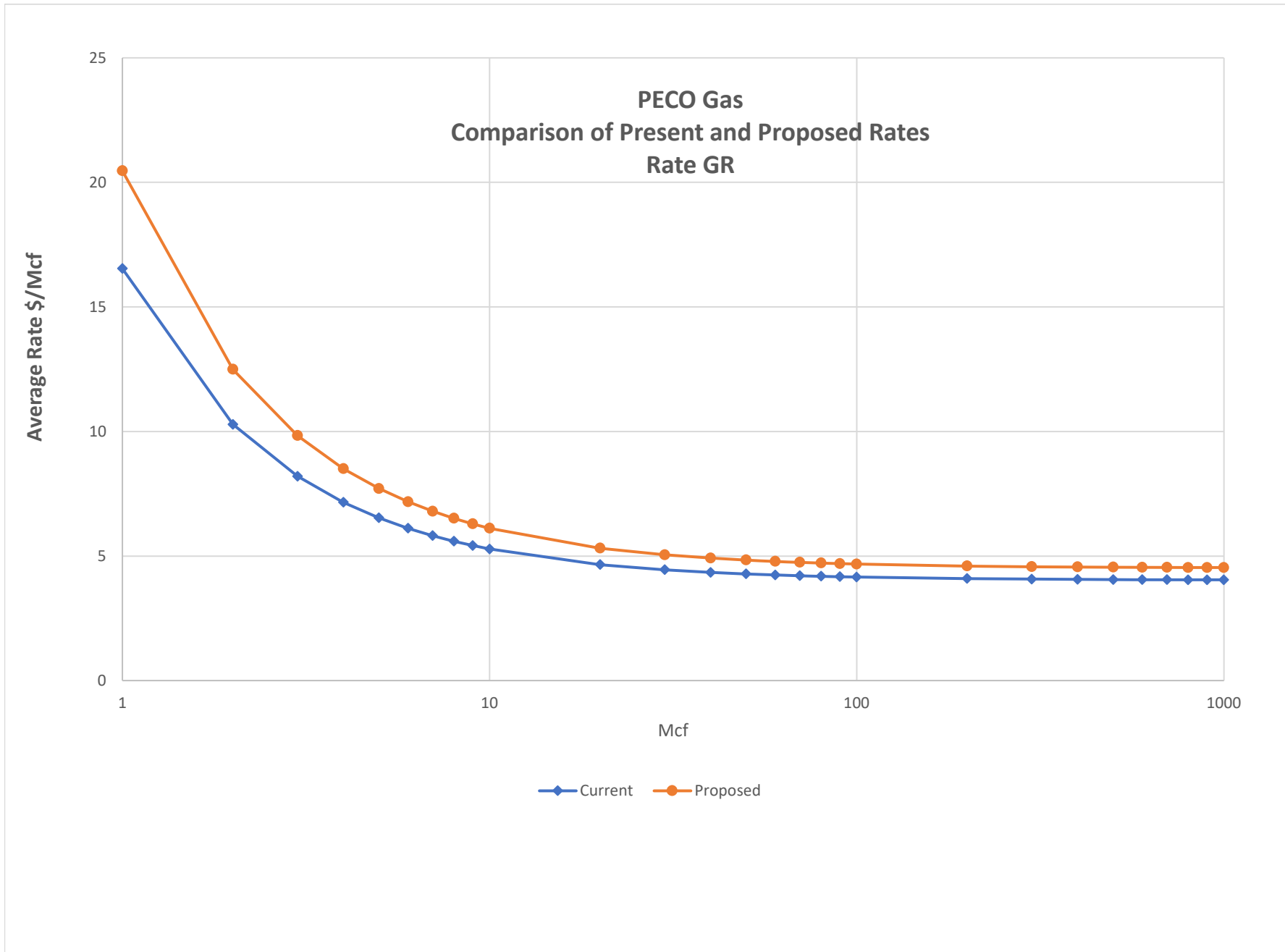
- Q. IV-B-5 Submit a Bill Frequency Analysis for each rate. The analysis should include the rate schedule and block interval, the number of bills at each interval, the cumulative number of bills at each interval, the Mcf or therms at each interval, the cumulative Mcf or therms at each interval, the accumulation of Mcf or therms passing through each interval, and the revenue at each interval for both the present rate and the proposed rates. The Analysis should show only those revenues collected from the basic tariff.
- A. IV-B-5 Refer to Attachment IV-B-12(a) for a Bill Frequency Analysis for each rate.

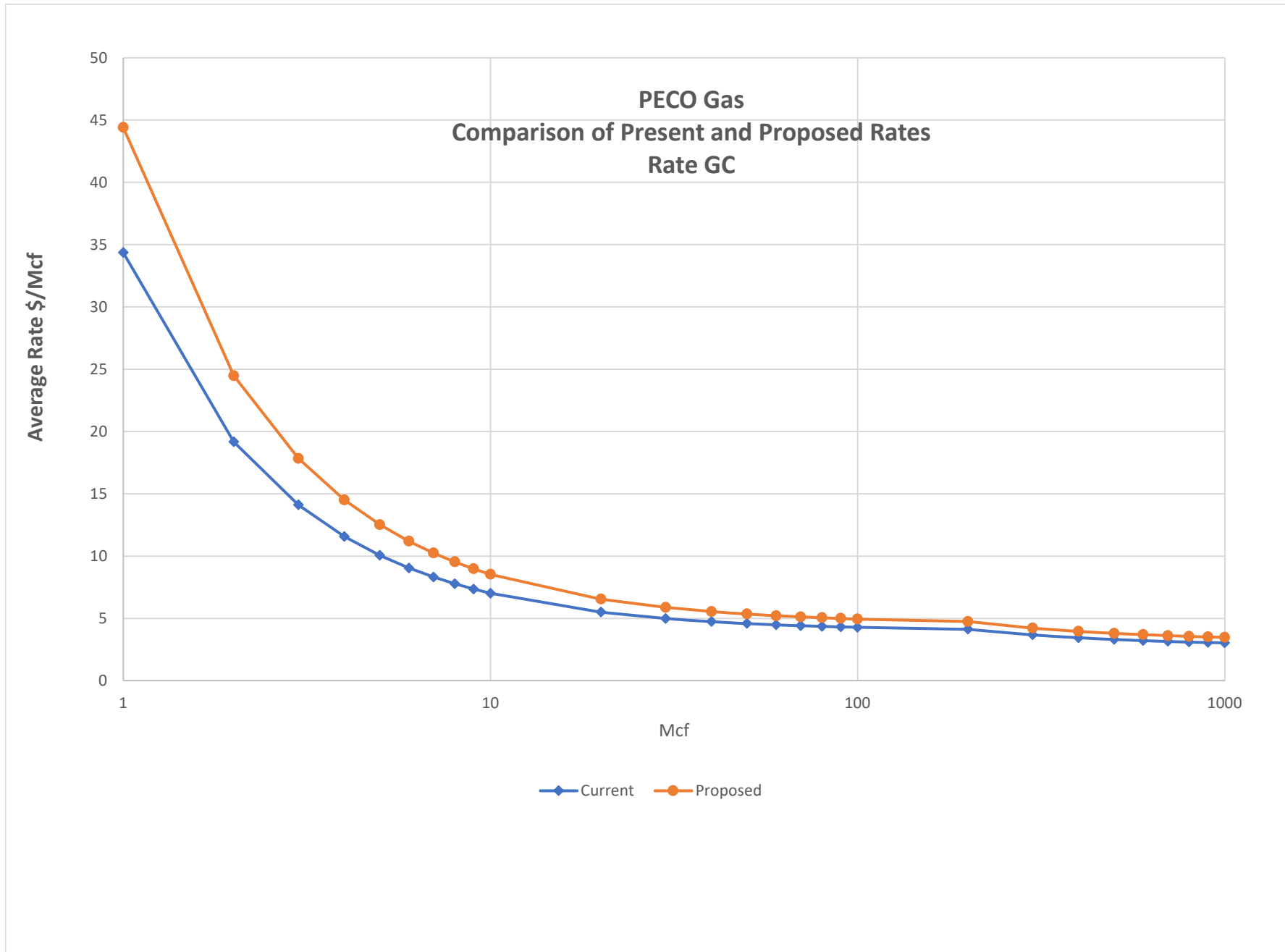
Q. IV-B-6 Supply copies of all present and proposed Gas Tariffs.

A. IV-B-6 Refer to Volume II, PECO Exhibit 1 (proposed tariff) and PECO Exhibit 2
(present tariff).

Q. IV-B-7 Supply a graph of present and proposed base rates on hyperbolic cross section paper.

A. IV-B-7 Refer to Attachment IV-B-7(a). Graphs are presented for Rates GR and GC.





Q. IV-B-8 Supply a map showing the Gas System Facilities and Gas Service Areas. The map should include transmission lines, distribution lines, other companies' lines interconnecting with the interconnecting points clearly designated, major compressor stations, gas storage areas and gas storage lines. The normal direction of gas flow within the transmission system should be indicated by arrows. Separate service areas within the system should be clearly designated.

A. IV-B-8 Refer to the Company's response to I-C-2.

Q. IV-B-9 Supply a cost analysis supporting minimum charges for all rate schedules.

A. IV-B-9 Refer to PECO Exhibit JD-4 and PECO Exhibit JD-5.

Q. IV-B-10 Supply a cost analysis supporting demand charges for all tariffs which contain demand charges.

A. IV-B-10 Other than the Standby Sales Service Demand Charge for the rate class Transportation Service (TS), there are no demand-based charges in the proposed Tariff. The Standby Sales Service Demand Charge is established annually in the Company's Section 1307 (f) filing and is not part of base rates.

- Q. IV-B-11 Supply the net fuel clause adjustment by month for the test year.
- A. IV-B-11 Not applicable. All fuel costs for PECO's Gas Division are recovered through PECO's Section 1307(f) Purchased Gas Cost adjustment clause (PGC). PECO's purchase gas costs are reviewed and approved for recovery in the Company's annual Section 1307(f) purchased gas cost recovery proceeding. The Company's presentation of base rate revenues and expenses in its supporting data for this case assumes its PGC revenues equal its purchased gas costs.

- Q. IV-B-12 Supply a tabulation of base rate bills for each rate schedule comparing the existing rates to proposed rates. The tabulation should show the dollar difference and the per cent increase or decrease.
- A. IV-B-12 Refer to Attachment IV-B-12(a).

Comparison of Present and Proposed Base Tariff Rates *

	Units	Present	Proposed	\$ Change	% Change
Rate GR					
Fixed Distribution charge	monthly	\$ 11.75	\$ 16.00	\$ 4.25	36.2%
Variable Distribution rate	mcf	\$3.7869	\$4.5360	\$0.7491	19.8%
Rate GC					
Fixed Distribution charge	monthly	\$ 28.55	\$ 40.00	\$ 11.45	40.1%
Variable Distribution rate- up to the first 200 mcf	mcf	\$3.7319	\$4.5625	\$0.8306	22.3%
Variable Distribution rate- additional use over 200 mcf	mcf	\$2.5924	\$3.1694	\$0.5770	22.3%
Rate L					
Fixed Distribution charge	monthly	\$ 260.00	\$ 260.00	\$0.00	0.0%
Variable Distribution rate- first block	mcf	\$5.3835	\$9.0400	\$3.6565	67.9%
Variable Distribution rate- second block	mcf	\$1.6352	\$2.7458	\$1.1106	67.9%
Rate MV-F					
Fixed Distribution charge	monthly	\$ 34.00	\$ 40.00	\$6.00	17.6%
Variable Distribution rate	mcf	\$0.9797	\$1.2764	\$0.2967	30.3%
Rate TS-F - Under 18,000 mcf / year					
Fixed Distribution charge	monthly	\$ 166.00	\$ 208.00	\$42.00	25.3%
Variable Distribution rate	mcf	\$1.7384	\$2.4847	\$0.7463	42.9%
Rate TS-F - At or Over 18,000 mcf / year					
Fixed Distribution charge	monthly	\$ 199.00	\$ 249.00	\$50.00	25.1%
Variable Distribution rate	mcf	\$0.8297	\$1.1859	\$0.3562	42.9%

* Does not include the flexible interruptible rates of MV-I, IS, TCS or TS-I.

Q. IV-B-13 Submit the projected demands for all customer classes for both purchased and produced gas for the three years following the test year filing.

A. IV-B-13 Refer to Public Attachment IV-B-13(a) for the projected demands for all customer classes for both purchased and produced gas for July 2020 through June 2022. Confidential Attachment IV-B-13(a) provides the requested information from July 2022 through June 2025 and will be **SUBMITTED ONLY TO THE COMMISSION.**

PECO Energy Company
Projected Demand by Rate Class (1000 mcf)

Year	Month	G	GH	TCS	GC	IS	L	Other	Transportation	Total
2020	7	84	653	0	507	1	1	29	1,670	2,944
2020	8	81	661	10	504	1	1	32	1,526	2,814
2020	9	98	774	2	557	0	1	34	1,543	3,010
2020	10	230	1,938	1	1,166	1	1	37	1,908	5,282
2020	11	440	4,086	7	2,042	8	3	37	2,172	8,794
2020	12	723	6,460	19	3,339	8	1	37	2,592	13,179
2021	1	845	7,569	25	3,977	6	2	33	2,566	15,023
2021	2	712	6,252	29	3,404	6	2	32	2,499	12,936
2021	3	577	4,964	28	2,769	4	2	32	2,508	10,883
2021	4	295	2,547	25	1,503	2	2	32	2,059	6,464
2021	5	158	1,422	15	996	1	1	34	1,783	4,409
2021	6	92	716	12	599	1	0	36	1,717	3,174
		4,335	38,041	172	21,364	38	16	406	24,542	88,913

PECO Energy Company
Projected Demand by Rate Class (1000 mcf)

Year	Month	G	GH	TCS	GC	IS	L	Other	Transportation	Total
2021	7	80	613	0	552	1	1	31	1,819	3,099
2021	8	78	620	11	551	1	1	35	1,671	2,968
2021	9	94	731	2	606	1	1	37	1,678	3,149
2021	10	223	1,844	1	1,247	1	1	40	2,040	5,395
2021	11	433	3,947	8	2,165	8	3	40	2,303	8,907
2021	12	721	6,335	21	3,499	9	1	39	2,716	13,341
2022	1	856	7,596	25	4,169	6	2	35	2,689	15,378
2022	2	721	6,271	30	3,551	6	2	33	2,606	13,221
2022	3	584	4,977	28	2,866	4	2	34	2,595	11,090
2022	4	298	2,552	25	1,553	2	2	33	2,127	6,592
2022	5	160	1,425	15	1,027	1	1	35	1,837	4,500
2022	6	93	717	12	615	1	0	37	1,763	3,239
		4,342	37,627	179	22,401	40	17	429	25,845	90,879

Q. IV-B-14 Supply an exhibit showing the gas deliveries to each customer class for the most recent 24 month period. The exhibit should identify the source of the gas, such as “purchased” (pipeline), “production” (includes purchases from local producers), “storage withdrawal,” “propane/air,” and “unaccounted for.”

A. IV-B-14 Refer to Attachment IV-B-14(a) for annual deliveries by customer class for 2018 and 2019.

Refer to the Company’s response to III-E-36 for information regarding the source of gas supplies for 2018 and 2019.

Refer to the Company’s response to III-E-30 for information regarding unaccounted for gas.

June '19

GAS SALES AND REVENUE

PECO ENERGY Company

SALES AND TRANSPORTED (1000MCF)

Jul 2018 to Jun 2019

	<u>Quantity</u>
RESIDENTIAL SALES	4,230
HOUSE HEATING SALES	37,323
SMALL COMMERCIAL AND INDUSTRIAL SALES	22,113
TEMPERATURE CONTROLLED SERVICE	146
MOTOR VEHICLE SERVICE	430
LARGE COMMERCIAL AND INDUSTRIAL SALES	24
INTERRUPTIBLE SALES	25
TOTAL SALES OF GAS	<hr/> 64,291 <hr/>
TOTAL GAS TRANSPORTED **	<hr/> 26,784 <hr/>
**billed and unbilled combined	
TOTAL GAS SALES AND TRANSPORTED	<hr/> 91,075 <hr/>
On FERC Account Sheet - Difference due to Rounding	

June '20

GAS SALES AND REVENUE

PECO ENERGY

SALES AND TRANSPORTED (1000MCF)

Jul 2019 to Jun 2020

	<u>Quantity</u>
RESIDENTIAL SALES	4,069
HOUSE HEATING SALES	35,306
SMALL COMMERCIAL AND INDUSTRIAL SALES	19,471
TEMPERATURE CONTROLLED SERVICE	122
MOTOR VEHICLE SERVICE	416
LARGE COMMERCIAL AND INDUSTRIAL SALES	18
INTERRUPTIBLE SALES	7
TOTAL SALES OF GAS	<hr/> 59,409 <hr/>
TOTAL GAS TRANSPORTED **	<hr/> 24,367 <hr/>
**billed and unbilled combined	
TOTAL GAS SALES AND TRANSPORTED	<hr/> 83,776 <hr/>
On FERC Account Sheet - Difference due to Rounding	