

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

CASE 17-E-      & CASE 17-G-

COST OF SERVICE PANEL

SCHEDULE OF EXHIBITS

EMBEDDED COST OF SERVICE STUDY - ELECTRIC	(COSP-1)
EMBEDDED COST OF SERVICE STUDY - GAS	(COSP-2)
HYPOTHETICAL EMBEDDED STUDY	(COSP-3)
MARGINAL COST OF SERVICE STUDY – ELECTRIC	(COSP-4)
MARGINAL COST OF SERVICE STUDY – GAS	(COSP-5)
RATE COMPARISON (MARGINAL VS EMBEDDED)	(COSP-6)

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

ELECTRIC DEPARTMENT

Embedded Cost of Service Studies

Schedule A – Rate of Return Statement for the Historical Year 2015

Schedule B – Rate of Return Statement for the Rate Year, 7/18 – 6/19

Schedule C, Page 1 of 2 – Levelized Revenue Requirements @ 6.99% ROR for  
the Rate Year

Schedule C, Page 2 of 2– Unbundled Revenue Requirements

**Electric Department 2015 Rate of Return Statement**

		Residential			Small General Service			Large General Service			SC5 Area	SC8 Street	SC9 Traffic	
	Rate Base:	Total System	SC1 Non-heat	SC1 Heat	SC6 TOU	SC2 non-dmnd	SC2 sec-dmnd	SC2 pri-dmnd	SC3 Primary	SC13 Subs	SC13 Trans	Lighting	Lighting	Lighting
1	Gross Plant in Service	\$ 1,323,019,936	\$ 770,304,200	\$ 105,675,312	\$ 4,860,338	\$ 84,516,310	\$ 255,837,659	\$ 14,987,295	\$ 18,482,199	\$ 9,469,587	\$ 26,966,874	\$ 14,308,808	\$ 17,065,102	\$ 546,251
2	less: Accum. Provisions for Depr. & Amort.	\$ 365,574,077	\$ 210,416,373	\$ 28,944,019	\$ 1,337,862	\$ 23,052,001	\$ 72,105,796	\$ 4,390,407	\$ 5,437,232	\$ 2,771,570	\$ 8,419,631	\$ 3,799,184	\$ 4,748,583	\$ 151,419
3	Net Plant in Service	\$ 957,445,860	\$ 559,887,827	\$ 76,731,292	\$ 3,522,476	\$ 61,464,310	\$ 183,731,864	\$ 10,596,888	\$ 13,044,968	\$ 6,698,016	\$ 18,547,243	\$ 10,509,624	\$ 12,316,520	\$ 394,832
4	plus: Construction Work in Progress	\$ 21,400,000	\$ 12,414,050	\$ 1,713,375	\$ 78,403	\$ 1,332,583	\$ 4,208,075	\$ 243,544	\$ 304,827	\$ 156,257	\$ 444,784	\$ 235,506	\$ 259,956	\$ 8,641
5	plus: Working Capital	\$ 50,749,000	\$ 28,646,031	\$ 3,934,065	\$ 187,642	\$ 3,344,679	\$ 9,668,293	\$ 756,758	\$ 900,160	\$ 440,823	\$ 1,701,750	\$ 452,224	\$ 686,859	\$ 29,716
6	less: Accumulated Deferred Income Taxes	\$ 225,061,000	\$ 128,998,122	\$ 17,702,774	\$ 826,239	\$ 14,096,267	\$ 44,514,745	\$ 2,811,296	\$ 3,487,964	\$ 1,780,631	\$ 5,311,669	\$ 2,416,830	\$ 3,021,981	\$ 92,483
7	plus: Deferred Charges	\$ 1,620,001	\$ 213,305	\$ 77,669	\$ 6,225	\$ 3,941	\$ 611,340	\$ 115,002	\$ 143,085	\$ 67,422	\$ 399,104	\$ (11,134)	\$ (7,048)	\$ 1,091
8	less: Other Rate Base Deductions	\$ (19,106,000)	\$ (11,142,662)	\$ (1,530,887)	\$ (70,343)	\$ (1,224,882)	\$ (3,679,588)	\$ (213,233)	\$ (262,513)	\$ (135,441)	\$ (382,920)	\$ (207,796)	\$ (247,720)	\$ (8,014)
9	Total Rate Base	\$ 825,259,861	\$ 483,305,753	\$ 66,284,514	\$ 3,038,850	\$ 53,274,127	\$ 157,384,415	\$ 9,114,130	\$ 11,167,588	\$ 5,717,328	\$ 16,164,132	\$ 8,977,186	\$ 10,482,025	\$ 349,812
	Revenues:													
10	Electric Delivery Revenues	\$ 517,072,644	\$ 287,913,147	\$ 50,971,439	\$ 2,649,949	\$ 24,908,835	\$ 107,342,314	\$ 11,025,186	\$ 11,590,297	\$ 2,446,905	\$ 8,748,150	\$ 2,401,897	\$ 6,651,379	\$ 423,147
11	Other Revenues	\$ 24,792,855	\$ 9,969,913	\$ 1,695,296	\$ 94,059	\$ 940,480	\$ 5,627,284	\$ 823,261	\$ 1,017,602	\$ 477,733	\$ 3,812,488	\$ 245,933	\$ 77,405	\$ 11,401
12	Total Operating Revenues	\$ 541,865,499	\$ 297,883,060	\$ 52,666,735	\$ 2,744,008	\$ 25,849,315	\$ 112,969,598	\$ 11,848,447	\$ 12,607,899	\$ 2,924,638	\$ 12,560,638	\$ 2,647,830	\$ 6,728,783	\$ 434,548
	Expenses:													
13	Operation and Maintenance	\$ 388,318,404	\$ 211,336,041	\$ 36,141,021	\$ 1,857,542	\$ 22,156,147	\$ 78,631,195	\$ 8,539,082	\$ 8,639,945	\$ 2,439,273	\$ 11,958,861	\$ 2,226,554	\$ 4,053,229	\$ 339,515
14	Depreciation and Amortization	\$ 34,198,553	\$ 20,008,821	\$ 2,732,625	\$ 126,101	\$ 2,233,667	\$ 6,494,599	\$ 382,302	\$ 465,115	\$ 238,751	\$ 671,057	\$ 368,970	\$ 462,190	\$ 14,355
15	Taxes Other than Income	\$ 44,777,826	\$ 22,708,472	\$ 2,745,857	\$ 125,983	\$ 1,735,936	\$ 12,476,348	\$ 583,878	\$ 1,032,277	\$ 539,794	\$ 2,518,580	\$ 89,788	\$ 205,447	\$ 15,466
16	Federal Income Tax	\$ 18,631,236	\$ 10,966,713	\$ 3,125,033	\$ 184,229	\$ (430,068)	\$ 3,902,413	\$ 696,913	\$ 725,587	\$ (129,021)	\$ (924,090)	\$ (69,222)	\$ 563,893	\$ 18,856
17	NYS Income Tax	\$ 2,970,738	\$ 1,947,371	\$ 455,010	\$ 25,601	\$ 6,736	\$ 551,667	\$ 63,921	\$ 61,834	\$ (30,604)	\$ (227,290)	\$ 4,272	\$ 110,018	\$ 2,204
18	Total Operating Expenses	\$ 488,896,757	\$ 266,967,417	\$ 45,199,547	\$ 2,319,456	\$ 25,702,418	\$ 102,056,222	\$ 10,266,095	\$ 10,924,757	\$ 3,058,193	\$ 13,997,118	\$ 2,620,362	\$ 5,394,777	\$ 390,396
19	Net Operating Income (line 12 less line 18)	\$ 52,968,742	\$ 30,915,642	\$ 7,467,188	\$ 424,552	\$ 146,897	\$ 10,913,376	\$ 1,582,352	\$ 1,683,143	\$ (133,555)	\$ (1,436,480)	\$ 27,468	\$ 1,334,007	\$ 44,152
20	Rate of Return (line 19 divided by line 9)	6.42%	6.40%	11.27%	13.97%	0.28%	6.93%	17.36%	15.07%	-2.34%	-8.89%	0.31%	12.73%	12.62%
21	Index (Class ROR divided by System ROR)	100	100	176	218	4	108	270	235	(36)	(138)	5	198	197

Electric Department RY 7/2018-6/2019 Rate of Return Statement

		Residential			Small General Service			Large General Service			SC5 Area	SC8 Street	SC9 Traffic	
	Rate Base:	Total System	SC1 Non-heat	SC1 Heat	SC6 TOU	SC2 non-dmnd	SC2 sec-dmnd	SC2 pri-dmnd	SC3 Primary	SC13 Subs	SC13 Trans	Lighting	Lighting	Lighting
1	Gross Plant in Service	\$ 1,660,716,202	\$ 961,105,463	\$ 133,284,474	\$ 6,266,966	\$ 106,321,722	\$ 320,830,803	\$ 18,779,512	\$ 23,796,054	\$ 14,888,881	\$ 36,152,427	\$ 17,446,288	\$ 21,355,897	\$ 487,716
2	less: Accum. Provisions for Depr. & Amort.	\$ 430,322,000	\$ 248,133,288	\$ 34,464,582	\$ 1,631,052	\$ 27,792,956	\$ 82,476,788	\$ 5,070,061	\$ 6,357,505	\$ 3,944,115	\$ 10,216,708	\$ 4,408,733	\$ 5,693,681	\$ 132,529
3	Net Plant in Service	\$ 1,230,394,202	\$ 712,972,174	\$ 98,819,892	\$ 4,635,914	\$ 78,528,766	\$ 238,354,015	\$ 13,709,451	\$ 17,438,548	\$ 10,944,766	\$ 25,935,719	\$ 13,037,554	\$ 15,662,216	\$ 355,186
4	plus: Construction Work in Progress	\$ 25,973,000	\$ 14,935,926	\$ 2,088,226	\$ 98,118	\$ 1,617,594	\$ 5,126,358	\$ 299,425	\$ 385,128	\$ 243,737	\$ 584,364	\$ 278,739	\$ 308,574	\$ 6,811
5	plus: Working Capital	\$ 55,047,000	\$ 32,854,297	\$ 4,421,942	\$ 204,818	\$ 3,819,583	\$ 9,750,476	\$ 553,418	\$ 674,483	\$ 400,234	\$ 975,413	\$ 542,376	\$ 820,140	\$ 29,820
6	less: Accumulated Deferred Income Taxes	\$ 332,947,001	\$ 191,702,749	\$ 26,582,322	\$ 1,262,426	\$ 21,332,737	\$ 64,212,690	\$ 3,956,523	\$ 4,988,513	\$ 3,113,372	\$ 7,754,393	\$ 3,507,376	\$ 4,435,011	\$ 98,889
7	plus: Deferred Charges	\$ 5,803,001	\$ 3,299,515	\$ 461,141	\$ 21,681	\$ 350,624	\$ 1,186,818	\$ 68,697	\$ 90,210	\$ 57,093	\$ 141,683	\$ 58,838	\$ 65,248	\$ 1,454
8	less: Other Rate Base Deductions	\$ 880,000	\$ 562,218	\$ 74,979	\$ 3,261	\$ 65,738	\$ 130,926	\$ 7,340	\$ 7,965	\$ 3,625	\$ 8,448	\$ 9,289	\$ 5,853	\$ 359
9	Total Rate Base	\$ 983,390,202	\$ 571,796,945	\$ 79,133,899	\$ 3,694,844	\$ 62,918,092	\$ 190,074,051	\$ 10,667,129	\$ 13,591,891	\$ 8,528,833	\$ 19,874,338	\$ 10,400,842	\$ 12,415,315	\$ 294,022
Revenues:														
10	Electric Delivery Revenues	\$ 299,102,720	\$ 173,669,718	\$ 27,961,860	\$ 1,323,310	\$ 17,322,484	\$ 53,497,265	\$ 4,978,041	\$ 6,036,058	\$ 1,917,008	\$ 5,597,187	\$ 1,776,166	\$ 4,797,379	\$ 226,243
11	Other Revenues	\$ 10,022,615	\$ 5,639,436	\$ 815,145	\$ 38,134	\$ 557,044	\$ 866,536	\$ 71,455	\$ 86,426	\$ 22,868	\$ 1,631,616	\$ 269,630	\$ 19,751	\$ 4,574
12	Total Operating Revenues	\$ 309,125,335	\$ 179,309,154	\$ 28,777,005	\$ 1,361,444	\$ 17,879,529	\$ 54,363,801	\$ 5,049,496	\$ 6,122,484	\$ 1,939,877	\$ 7,228,803	\$ 2,045,796	\$ 4,817,130	\$ 230,817
Expenses:														
13	Operation and Maintenance	\$ 181,009,000	\$ 113,025,164	\$ 14,477,280	\$ 660,141	\$ 14,352,556	\$ 26,929,717	\$ 1,531,508	\$ 1,666,420	\$ 832,971	\$ 2,370,738	\$ 1,521,453	\$ 3,469,243	\$ 171,809
14	Depreciation and Amortization	\$ 46,108,000	\$ 26,961,165	\$ 3,706,437	\$ 174,404	\$ 3,069,026	\$ 8,585,647	\$ 506,574	\$ 625,872	\$ 385,918	\$ 943,998	\$ 480,971	\$ 652,632	\$ 15,358
15	Taxes Other than Income	\$ 48,137,717	\$ 23,671,472	\$ 2,989,325	\$ 149,028	\$ 1,946,025	\$ 13,608,239	\$ 661,559	\$ 1,141,642	\$ 809,041	\$ 2,831,164	\$ 98,584	\$ 223,000	\$ 8,638
16	Federal Income Tax	\$ 3,651,907	\$ (1,815,320)	\$ 6,006,654	\$ 299,878	\$ (3,969,367)	\$ (1,077,751)	\$ 2,248,619	\$ 2,547,790	\$ (427,388)	\$ 316,472	\$ (379,939)	\$ (127,861)	\$ 30,121
17	NYS Income Tax	\$ 453,000	\$ (523,357)	\$ 1,179,272	\$ 58,963	\$ (810,788)	\$ (271,842)	\$ 446,872	\$ 505,693	\$ (88,103)	\$ 57,519	\$ (79,052)	\$ (28,133)	\$ 5,956
18	Total Operating Expenses	\$ 279,359,625	\$ 161,319,123	\$ 28,358,968	\$ 1,342,414	\$ 14,587,451	\$ 47,774,008	\$ 5,395,132	\$ 6,487,416	\$ 1,512,438	\$ 6,519,892	\$ 1,642,018	\$ 4,188,882	\$ 231,882
19	Net Operating Income (line 12 less line 18)	\$ 29,765,710	\$ 17,990,030	\$ 418,037	\$ 19,030	\$ 3,292,078	\$ 6,589,792	\$ (345,636)	\$ (364,933)	\$ 427,439	\$ 708,912	\$ 403,778	\$ 628,248	\$ (1,065)
20	Rate of Return (line 19 divided by line 9)	3.03%	3.15%	0.53%	0.52%	5.23%	3.47%	-3.24%	-2.68%	5.01%	3.57%	3.88%	5.06%	-0.36%
21	Index (Class ROR divided by System ROR)	100	104	17	17	173	115	(107)	(89)	166	118	128	167	(12)

Levelized Electric RY #1 Revenue Requirement @		Target ROR	6.99%												
		Total System	Residential			Small General Service			Large General Service			SC5 Area	SC8 Street	SC9 Traffic	
			SC1 Non-heat	SC1 Heat	SC6 TOU	SC2 non-dmnd	SC2 sec-dmnd	SC2 pri-dmnd	SC3 Primary	SC13 Subs	SC13 Trans	Lighting	Lighting	Lighting	
Production:															
1	Demand - Capacity	DSUWN \$ 4,052,775	\$ 1,852,158	\$ 303,835	\$ 11,396	\$ 111,760	\$ 1,211,609	\$ 47,554	\$ 111,243	\$ 72,702	\$ 317,746	\$ 5,207	\$ 7,290	\$ 274	
2	Demand - Generation	DAVGKW \$ 18,237,149	\$ 6,221,126	\$ 1,170,713	\$ 76,898	\$ 614,540	\$ 5,001,651	\$ 769,876	\$ 982,247	\$ 588,038	\$ 2,690,063	\$ 49,824	\$ 69,746	\$ 2,425	
3	Commodity	COMMOD \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
4	MFC Supply	CUNITS \$ 6,984,531	\$ 5,295,664	\$ 618,303	\$ 23,068	\$ 678,924	\$ 262,163	\$ 3,529	\$ 715	\$ 185	\$ 115	\$ 92,455	\$ 4,844	\$ 4,567	
5	Total Production	\$ 29,274,455	\$ 13,368,948	\$ 2,092,851	\$ 111,362	\$ 1,405,224	\$ 6,475,423	\$ 820,959	\$ 1,094,205	\$ 660,925	\$ 3,007,925	\$ 147,486	\$ 81,880	\$ 7,266	
Transmission & Subtransmission:															
6	Power Supply Trans - Subs	DSUWN1 \$ 19,767,454	\$ 10,004,711	\$ 1,641,212	\$ 61,556	\$ 603,688	\$ 6,544,686	\$ 256,868	\$ 383,113	\$ 172,599	\$ 30,034	\$ 28,128	\$ 39,379	\$ 1,480	
7	Power Supply Trans - Lines	DSPK \$ 47,916,796	\$ 23,590,168	\$ 2,185,936	\$ 96,767	\$ 1,378,480	\$ 14,422,098	\$ 370,627	\$ 1,207,826	\$ 852,457	\$ 3,809,476	\$ -	\$ -	\$ 2,961	
8	Common Trans - Subs	DNCPTS \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
9	Common Trans - Lines	DNCPTL \$ 264,558	\$ 116,090	\$ 23,008	\$ 1,335	\$ 11,343	\$ 93,765	\$ 8,800	\$ 6,931	\$ -	\$ 1,619	\$ 580	\$ 1,027	\$ 60	
10	Specific - Subs	STSUB \$ 2,106,273	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 359,484	\$ 423,572	\$ 1,323,217	\$ -	\$ -	\$ -	
11	Specific - Lines	STLNS \$ 113,930	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 113,930	\$ -	\$ -	\$ -	
12	General Subtrans Lines	DNCPTG \$ 4,834,921	\$ 1,941,492	\$ 395,082	\$ 24,854	\$ 196,312	\$ 1,576,656	\$ 149,629	\$ 120,250	\$ 85,021	\$ 319,268	\$ 10,965	\$ 15,350	\$ 244	
13	Total Transmission & Subtransmission	\$ 75,003,933	\$ 35,652,460	\$ 4,245,239	\$ 184,311	\$ 2,189,823	\$ 22,637,206	\$ 785,924	\$ 2,077,604	\$ 1,533,648	\$ 5,597,543	\$ 39,673	\$ 55,756	\$ 4,744	
Bulk Distribution:															
14	Distribution Substations	DSUBS \$ 33,247,608	\$ 14,294,709	\$ 2,908,890	\$ 181,517	\$ 1,445,397	\$ 11,608,515	\$ 1,101,680	\$ 885,369	\$ 625,986	\$ -	\$ 80,735	\$ 113,015	\$ 1,794	
15	Primary Lines - Demand	DPRM \$ 23,757,040	\$ 10,410,272	\$ 2,118,430	\$ 132,192	\$ 1,052,626	\$ 8,454,024	\$ 802,310	\$ 644,779	\$ -	\$ -	\$ 58,796	\$ 82,305	\$ 1,306	
16	Primary Lines - Customer	CPRM \$ 66,786,980	\$ 50,639,986	\$ 5,912,542	\$ 220,584	\$ 6,492,238	\$ 2,506,941	\$ 33,749	\$ 6,838	\$ -	\$ -	\$ 884,102	\$ 46,323	\$ 43,676	
17	Line Transformers - Demand	DTRNSF \$ 4,804,478	\$ 2,625,558	\$ 473,756	\$ 18,263	\$ 219,193	\$ 1,448,035	\$ -	\$ -	\$ -	\$ -	\$ 8,123	\$ 11,371	\$ 180	
18	Line Transformers - Customer	CSECY \$ 4,042,359	\$ 3,066,908	\$ 358,081	\$ 13,359	\$ 393,189	\$ 151,828	\$ -	\$ -	\$ -	\$ -	\$ 53,544	\$ 2,805	\$ 2,645	
19	Secondary Lines - Demand	DSECY \$ 6,878,120	\$ 4,018,162	\$ 690,095	\$ 19,246	\$ 308,733	\$ 1,821,151	\$ -	\$ -	\$ -	\$ -	\$ 8,560	\$ 11,983	\$ 190	
20	Secondary Lines - Customer	CSECY \$ 35,574,989	\$ 26,990,476	\$ 3,151,311	\$ 117,569	\$ 3,460,281	\$ 1,336,168	\$ -	\$ -	\$ -	\$ -	\$ 471,215	\$ 24,689	\$ 23,279	
21	Services - Demand	DSVCE \$ 2,159,378	\$ 1,722,861	\$ 295,891	\$ 8,252	\$ 132,375	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
22	Services - Customer	CSVCE \$ 1,474,920	\$ 1,193,645	\$ 100,243	\$ 4,696	\$ 176,336	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
23	Total Bulk Distribution	\$ 178,725,872	\$ 114,962,577	\$ 16,009,240	\$ 715,678	\$ 13,680,368	\$ 27,326,662	\$ 1,937,739	\$ 1,536,986	\$ 625,986	\$ -	\$ 1,565,074	\$ 292,491	\$ 73,070	
Meter Installations, CTs & PTs															
24	Meter Installations, CTs & PTs	CMTRS2 \$ 7,988,734	\$ -	\$ -	\$ -	\$ -	\$ 7,530,537	\$ 252,831	\$ 95,667	\$ 51,286	\$ 58,413	\$ -	\$ -	\$ -	
25	Installations on Customer Premises - Plant	CINSTP \$ 512,334	\$ 13,551	\$ 1,582	\$ 59	\$ 1,737	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 495,404	\$ -	\$ -	
26	Installations on Customer Premises - Exp	CINSTX \$ 10,344,424	\$ 7,849,274	\$ 916,453	\$ 34,191	\$ 1,002,665	\$ 387,173	\$ 3,799	\$ -	\$ -	\$ -	\$ 150,869	\$ -	\$ -	
27	Street Lighting	CLGTNG \$ 5,557,451	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,557,451	\$ -	
28	Meter Ownership (re: line 24)	CMTRS \$ 2,634,977	\$ 1,770,721	\$ 199,549	\$ 24,980	\$ 366,344	\$ 256,559	\$ 11,185	\$ 3,011	\$ 991	\$ 1,637	\$ -	\$ -	\$ -	
29	Meter Services / Maintenance (re: line 24)	CMTRS3 \$ 9,443,827	\$ 5,802,453	\$ 652,326	\$ 112,135	\$ 1,323,594	\$ 1,457,729	\$ 63,551	\$ 17,108	\$ 5,629	\$ 9,303	\$ -	\$ -	\$ -	
30	Meter Reading (902)	CMTRS4 \$ 6,930,526	\$ 4,653,350	\$ 543,308	\$ 20,270	\$ 1,193,154	\$ 460,730	\$ 6,203	\$ 37,702	\$ 9,729	\$ 6,081	\$ -	\$ -	\$ -	
31	DS Uncollectibles, Credit & Collections (903, 904, 905)	COBTD \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
32	Bill Printing, Mailing & Receipt Services (903, 905)	CNBL \$ 2,978,601	\$ 2,258,372	\$ 263,679	\$ 9,837	\$ 289,532	\$ 111,801	\$ 1,505	\$ 305	\$ 79	\$ 49	\$ 39,428	\$ 2,066	\$ 1,948	
33	Customer Account Services (901-905)	CUSTAC \$ 28,479,152	\$ 21,592,860	\$ 2,521,105	\$ 94,057	\$ 2,768,286	\$ 1,068,958	\$ 14,391	\$ 2,916	\$ 752	\$ 470	\$ 376,981	\$ 19,752	\$ 18,623	
34	MFC Admin	CUNITS \$ 4,138,166	\$ 3,137,552	\$ 366,329	\$ 13,667	\$ 402,246	\$ 155,325	\$ 2,091	\$ 424	\$ 109	\$ 68	\$ 54,777	\$ 2,870	\$ 2,706	
35	Sales & Customer Services (907-916)	CUSVCS3 \$ 13,099,726	\$ 8,932,070	\$ 1,073,621	\$ 43,317	\$ 1,262,876	\$ 788,600	\$ 61,469	\$ 72,286	\$ 42,796	\$ 194,962	\$ 154,291	\$ 356,180	\$ 117,258	
36	Low Income Program	LIPCOST \$ 6,083,651	\$ 2,916,738	\$ 488,696	\$ 24,429	\$ 230,332	\$ 1,965,604	\$ 119,220	\$ 148,009	\$ 83,353	\$ 85,271	\$ 9,258	\$ 12,457	\$ 284	
37	OTHER Revenues	OSALES \$ (10,022,615)	\$ (5,639,436)	\$ (815,145)	\$ (38,134)	\$ (557,044)	\$ (866,536)	\$ (71,455)	\$ (86,426)	\$ (22,868)	\$ (1,631,616)	\$ (269,630)	\$ (19,751)	\$ (4,574)	
38	Sales Revenues	RSALS \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
39	Total Levelized Electric RY #1 Revenue Requirement @	\$ 371,173,213	\$ 217,271,491	\$ 28,558,835	\$ 1,350,158	\$ 25,559,138	\$ 69,755,772	\$ 4,009,411	\$ 4,999,796	\$ 2,992,415	\$ 7,330,107	\$ 2,763,612	\$ 6,361,152	\$ 221,326	
40	Demand-related	\$ 149,903,332	\$ 70,576,180	\$ 11,036,137	\$ 555,177	\$ 5,459,907	\$ 47,180,540	\$ 2,737,468	\$ 3,718,995	\$ 2,232,337	\$ 5,915,290	\$ 201,093	\$ 281,719	\$ 8,489	
41	Energy-related	\$ 25,221,680	\$ 11,516,790	\$ 1,789,016	\$ 99,966	\$ 1,293,464	\$ 5,263,814	\$ 773,406	\$ 982,962	\$ 588,223	\$ 2,690,178	\$ 142,279	\$ 74,590	\$ 6,992	
42	Commodity-related	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
43	Customer-related	\$ 206,070,816	\$ 140,817,957	\$ 16,548,826	\$ 733,149	\$ 19,362,811	\$ 18,177,954	\$ 569,993	\$ 384,264	\$ 194,724	\$ 356,255	\$ 2,689,869	\$ 6,024,593	\$ 210,419	
44	Revenue	\$ (10,022,615)	\$ (5,639,436)	\$ (815,145)	\$ (38,134)	\$ (557,044)	\$ (866,536)	\$ (71,455)	\$ (86,426)	\$ (22,868)	\$ (1,631,616)	\$ (269,630)	\$ (19,751)	\$ (4,574)	
45	Check	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

		Total System	Residential			Small General Service			Large General Service			SC5 Area	SC8 Street	SC9 Traffic
Revenue Requirements for bundled functions @ ROR on RB = 6.99%			SC1 Non-heat	SC1 Heat	SC6 TOU	SC2 non-dmnd	SC2 sec-dmnd	SC2 pri-dmnd	SC3 Primary	SC13 Subs	SC13 Trans	Lighting	Lighting	Lighting
45	Demand-related functions L 40-144	\$ 146,287,503	\$ 69,393,966	\$ 10,873,975	\$ 546,760	\$ 5,302,865	\$ 46,819,781	\$ 2,702,233	\$ 3,669,199	\$ 2,214,941	\$ 4,298,209	\$ 194,135	\$ 263,943	\$ 7,496
46	Energy-related functions L41 - L49	\$ 18,237,149	\$ 6,221,126	\$ 1,170,713	\$ 76,898	\$ 614,540	\$ 5,001,651	\$ 769,876	\$ 982,247	\$ 588,038	\$ 2,690,063	\$ 49,824	\$ 69,746	\$ 2,425
47	Customer-related functions L43-144-50-55	\$ 173,549,063	\$ 118,744,550	\$ 13,871,556	\$ 522,586	\$ 15,388,558	\$ 449,317	\$ 289,182	\$ 172,741	\$ 326,392	\$ 2,333,292	\$ 6,017,705	\$ 202,189	
48	sub-total	\$ 338,073,715	\$ 194,359,642	\$ 25,916,245	\$ 1,146,245	\$ 21,305,962	\$ 67,052,428	\$ 3,921,426	\$ 4,940,628	\$ 2,975,720	\$ 7,314,664	\$ 2,577,251	\$ 6,351,394	\$ 212,110
Revenue Requirements for Unbundled Functions														
49	MFC Supply L 4	\$ 6,984,531	\$ 5,295,664	\$ 618,303	\$ 23,068	\$ 678,924	\$ 262,163	\$ 3,529	\$ 715	\$ 185	\$ 115	\$ 92,455	\$ 4,844	\$ 4,567
50	Meter Ownership function L 28	\$ 2,634,977	\$ 1,770,721	\$ 199,549	\$ 24,980	\$ 366,344	\$ 256,559	\$ 11,185	\$ 3,011	\$ 991	\$ 1,637	\$ -	\$ -	\$ -
51	Meter Services function L 29	\$ 9,443,827	\$ 5,802,453	\$ 652,326	\$ 112,135	\$ 1,323,594	\$ 1,457,729	\$ 63,551	\$ 17,108	\$ 5,629	\$ 9,303	\$ -	\$ -	\$ -
52	Meter Reading function L 30	\$ 6,930,526	\$ 4,653,350	\$ 543,308	\$ 20,270	\$ 1,193,154	\$ 460,730	\$ 6,203	\$ 37,702	\$ 9,729	\$ 6,081	\$ -	\$ -	\$ -
53	DS Uncollectibles, Credit & Collections function L 31	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54	Bill Printing, Mailing & Receipt function L 32	\$ 2,978,601	\$ 2,258,372	\$ 263,679	\$ 9,837	\$ 289,532	\$ 111,801	\$ 1,505	\$ 305	\$ 79	\$ 49	\$ 39,428	\$ 2,066	\$ 1,948
55	MFC Admin L 34	\$ 4,138,166	\$ 3,137,552	\$ 366,329	\$ 13,667	\$ 402,246	\$ 155,325	\$ 2,091	\$ 424	\$ 109	\$ 68	\$ 54,777	\$ 2,870	\$ 2,706
56	sub-total	\$ 33,110,628	\$ 22,918,112	\$ 2,643,495	\$ 203,956	\$ 4,253,794	\$ 2,704,307	\$ 88,064	\$ 59,264	\$ 16,721	\$ 17,254	\$ 186,660	\$ 9,780	\$ 9,221
57	Total Delivery Service Revenue Requirement L48 + L56	\$ 371,184,343	\$ 217,277,753	\$ 28,559,740	\$ 1,350,200	\$ 25,559,757	\$ 69,756,734	\$ 4,009,490	\$ 4,999,892	\$ 2,992,441	\$ 7,331,918	\$ 2,763,911	\$ 6,361,174	\$ 221,331
Billing Units														
58	Average Monthly Sigma NCPi @ meter, kW	1,824,891	1,054,388	160,717	6,997	66,269	331,958	42,548	45,728	18,335	97,951	0	0	0
59	Deliveries as measured @ meter, MWh	4,577,698	1,539,540	289,716	19,030	152,080	1,237,757	196,938	247,521	153,752	711,174	12,330	17,260	600
60	Number of Customers	302,786	229,572	26,804	1,000	29,432	11,365	153	31	8	5	4,008	210	198
Levelized Full Service DS Rates based on ROR = 6.99%														
61	Demand Rate, \$ / kW / month L45 / L58 / 12	\$ 6.68	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 11.75	\$ 5.29	\$ 6.69	\$ 10.07	\$ 3.66	\$ 0.00	\$ 0.00	\$ 0.00
62	Energy Rate \$ / kWh @ mtr (excluding commodity chgs) L41 / L59	\$ 0.00551	\$ 0.05256	\$ 0.04371	\$ 0.03398	\$ 0.04337	\$ 0.00425	\$ 0.00393	\$ 0.00397	\$ 0.00383	\$ 0.00378	\$ 0.02728	\$ 0.01961	\$ 0.02415
63	Customer Rate, \$ / mo L43-144/L60/12	\$ 54.95	\$ 49.50	\$ 49.42	\$ 58.62	\$ 53.69	\$ 129.59	\$ 290.77	\$ 934.76	\$ 1,971.64	\$ 5,725.51	\$ 50.47	\$ 2,389.94	\$ 87.06
Potential Backout Credits available to Customers														
64	MFC Supply \$ / kWh delivered @ Meter level L49 / L59	\$ 0.00153	\$ 0.00344	\$ 0.00213	\$ 0.00121	\$ 0.00446	\$ 0.00021	\$ 0.00002	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00750	\$ 0.00028	\$ 0.00761
65	Meter Ownership Rate \$ / month L50 / L60 / 12	\$ 0.73	\$ 0.64	\$ 0.62	\$ 2.08	\$ 1.04	\$ 1.88	\$ 6.09	\$ 8.09	\$ 10.32	\$ 27.29	\$ -	\$ -	\$ -
66	Meter Services Rate \$ / month L51 / L60 / 12	\$ 2.60	\$ 2.11	\$ 2.03	\$ 9.34	\$ 3.75	\$ 10.69	\$ 34.61	\$ 45.99	\$ 58.63	\$ 155.05	\$ -	\$ -	\$ -
67	Meter Reading Rate \$ / month L52 / L60 / 12	\$ 1.91	\$ 1.69	\$ 1.69	\$ 1.69	\$ 3.38	\$ 3.38	\$ 101.35	\$ 101.35	\$ 101.35	\$ 101.35	\$ -	\$ -	\$ -
68	Divry Srvc Uncollectibles, Credit & Collections Rate \$ / month L53 / L60 / 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
69	Bill Printing & Receipt Services Rate \$ / month L54 / L60 / 12	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82	\$ 0.82
70	MFC Admin Rate \$ / month L55 / L60 / 12	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14	\$ 1.14
Delivery Service Rates and MFCs @ ROR = 6.99%														
71	Demand Rate, \$ / kW / month L 61	\$ 6.68	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 11.75	\$ 5.29	\$ 6.69	\$ 10.07	\$ 3.66	\$ 0.00	\$ 0.00	\$ 0.00
72	Energy Rate (Net of MFC Supply) in \$ / kWh L62 - L64	\$ 0.00398	\$ 0.00404	\$ 0.00404	\$ 0.00404	\$ 0.00404	\$ 0.00391	\$ 0.00397	\$ 0.00382	\$ 0.00378	\$ 0.00404	\$ 0.00404	\$ 0.00404	\$ 0.00404
73	Customer Rate (Net of MFC Admin) in \$ / month L63- L68- L70	\$ 53.82	\$ 48.36	\$ 48.28	\$ 57.48	\$ 52.55	\$ 128.45	\$ 289.63	\$ 933.62	\$ 1,970.50	\$ 5,724.37	\$ 49.33	\$ 2,388.80	\$ 85.92
74	Supply Charge \$ / kWh L49 / L59	\$ 0.00153	\$ 0.00344	\$ 0.00213	\$ 0.00121	\$ 0.00446	\$ 0.00021	\$ 0.00002	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00750	\$ 0.00028	\$ 0.00761
75	Admin. Charge: \$ / kWh L55 / L59	\$ 0.00090	\$ 0.00204	\$ 0.00126	\$ 0.00072	\$ 0.00264	\$ 0.00013	\$ 0.00001	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00444	\$ 0.00017	\$ 0.00451
Current Delivery Service Rates (7/1/2017)														
76	Demand Rate, \$ / kW / month		\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 9.06	\$ 7.64	\$ 9.84	\$ 7.49	\$ 4.30	\$ 0.00	\$ 0.00	\$ 0.00
77	Energy Rate \$ / kWh (excluding commodity chgs)		\$ 0.06586	\$ 0.06586	\$ .09507/03169	\$ 0.02702	\$ 0.00591	\$ 0.00168	\$ -	\$ -	\$ -	\$ on lamp type	\$ -	\$ -
78	Supply Charge \$ / kWh		\$ 0.00236	\$ 0.00236	\$ 0.00108	\$ 0.00332	\$ 0.00016	\$ 0.00001	\$ -	\$ -	\$ -	\$ 0.00618	\$ 0.00018	\$ 0.00167
79	Admin. Charge: \$ / kWh		\$ 0.00163	\$ 0.00163	\$ 0.00075	\$ 0.00230	\$ 0.00011	\$ 0.00001	\$ -	\$ -	\$ -	\$ 0.00427	\$ 0.00012	\$ 0.00116
80	Customer Rate, \$ / mo		\$ 24.00	\$ 24.00	\$ 27.00	\$ 35.00	\$ 84.00	\$ 310.00	\$ 1,500.00	\$ 3,800.00	\$ 5,020.00			

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MFC<sub>a</sub>

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

GAS DEPARTMENT

Embedded Cost of Service Studies

Schedule A – Rate of Return Statement for the Historical Year 2015

Schedule B – Rate of Return Statement for the Rate Year, 7/18 – 6/19

Schedule C, Page 1 of 2 – Levelized Revenue Requirements at 6.99% ROR for  
the Rate Year

Schedule C, Page 2 of 2 – Unbundled Revenue Requirements

**Gas Department 2015 Rate of Return Statement**

Rate Base:	Total System	Residential		Commercial / Industrial		SC8/9	Firm	Intrdprtmntl	Firm	Firm	
		Heating	Non-heat	Heating	Non-heat	Interruptible	SC11 dlm		SC11 t	SC11 d	
1	Gross Plant in Service	\$ 426,696,396	\$ 235,848,440	\$ 20,261,941	\$ 117,774,409	\$ 17,576,035	\$ 757,854	\$ 3,980,016	\$ 12,775,548	\$ 17,226,375	\$ 495,779
2	less: Accum. Provisions for Depr. & Amort.	\$ 130,159,000	\$ 66,012,268	\$ 5,681,335	\$ 32,939,230	\$ 4,907,697	\$ 226,904	\$ 1,110,622	\$ 14,332,808	\$ 4,809,863	\$ 138,273
3	Net Plant in Service	\$ 296,537,396	\$ 169,836,172	\$ 14,580,606	\$ 84,835,179	\$ 12,668,338	\$ 530,950	\$ 2,869,394	\$ (1,557,260)	\$ 12,416,512	\$ 357,506
4	plus: Construction Work in Progress	\$ 11,205,000	\$ 6,417,451	\$ 550,945	\$ 3,205,593	\$ 478,687	\$ 20,063	\$ 108,423	\$ (58,843)	\$ 469,172	\$ 13,509
5	plus: Working Capital	\$ 12,468,000	\$ 6,943,218	\$ 604,227	\$ 3,545,944	\$ 513,123	\$ 90,733	\$ 117,497	\$ 121,716	\$ 518,159	\$ 13,384
6	less: Accumulated Deferred Income Taxes	\$ 75,671,000	\$ 42,322,988	\$ 3,554,642	\$ 21,864,563	\$ 3,267,080	\$ 158,689	\$ 749,651	\$ 16,694	\$ 3,648,319	\$ 88,374
7	plus: Deferred Charges	\$ 1,059,001	\$ 651,687	\$ 56,004	\$ 328,821	\$ 48,694	\$ 2,817	\$ 11,004	\$ (89,852)	\$ 48,475	\$ 1,351
8	less: Other Rate Base Deductions	\$ (5,414,000)	\$ (3,074,676)	\$ (260,088)	\$ (1,574,713)	\$ (235,209)	\$ (11,345)	\$ (56,126)	\$ 38,429	\$ (233,490)	\$ (6,783)
9	Total Rate Base	\$ 251,012,397	\$ 144,600,216	\$ 12,497,227	\$ 71,625,686	\$ 10,676,971	\$ 497,218	\$ 2,412,793	\$ (1,639,362)	\$ 10,037,489	\$ 304,159
Revenues:											
10	Sales, Transport & Dlvry Srvc Revenues	\$ 130,888,058	\$ 72,937,034	\$ 3,934,269	\$ 35,399,548	\$ 5,049,165	\$ 4,043,436	\$ 883,282	\$ 212,103	\$ 8,327,266	\$ 101,955
11	Miscellaneous Revenues	\$ 15,398,669	\$ 4,094,714	\$ 119,220	\$ 9,476,244	\$ 1,604,351	\$ 271,970	\$ (17,976)	\$ 1,204	\$ (149,504)	\$ (1,555)
12	Total Operating Revenues	\$ 146,286,727	\$ 77,031,748	\$ 4,053,488	\$ 44,875,793	\$ 6,653,516	\$ 4,315,406	\$ 865,307	\$ 213,307	\$ 8,177,762	\$ 100,400
Expenses:											
13	Operation and Maintenance	\$ 100,030,348	\$ 54,089,800	\$ 3,030,896	\$ 32,824,871	\$ 4,874,445	\$ 1,977,987	\$ 473,790	\$ 672,035	\$ 2,039,641	\$ 46,883
14	Depreciation and Amortization	\$ 9,875,600	\$ 5,540,210	\$ 466,615	\$ 2,852,475	\$ 425,944	\$ 20,869	\$ 94,837	\$ 22,794	\$ 440,434	\$ 11,424
15	Taxes Other than Income	\$ 13,115,779	\$ 7,087,216	\$ 588,445	\$ 4,118,311	\$ 625,634	\$ 47,714	\$ 120,308	\$ (9,057)	\$ 522,710	\$ 14,498
16	Federal Income Tax	\$ 6,741,379	\$ 2,679,535	\$ (183,567)	\$ 1,189,269	\$ 168,137	\$ 1,017,705	\$ 25,177	\$ (225,537)	\$ 2,064,075	\$ 6,587
17	NYS Income Tax	\$ 966,117	\$ 850,421	\$ 280,126	\$ 685,396	\$ 100,334	\$ (504,649)	\$ 59,376	\$ 135,037	\$ (644,070)	\$ 4,146
18	Total Operating Expenses	\$ 130,729,223	\$ 70,247,181	\$ 4,182,515	\$ 41,670,322	\$ 6,194,494	\$ 2,559,626	\$ 773,486	\$ 595,272	\$ 4,422,790	\$ 83,538
19	Net Operating Income (line 12 less line 18)	\$ 15,557,504	\$ 6,784,567	\$ (129,026)	\$ 3,205,471	\$ 459,023	\$ 1,755,780	\$ 91,820	\$ (381,965)	\$ 3,754,972	\$ 16,862
20	Rate of Return (line 19 divided by line 9)	6.20%	4.69%	-1.03%	4.48%	4.30%		3.81%		37.41%	5.54%
21	Index (Class ROR divided by System ROR)	100	76	(17)	72	69		61		604	89



Gas Department RY 7/2018-6/2019 Rate of Return Statement

		Residential		Commercial / Industrial		SC8/9	Firm		Firm	Firm	
	Rate Base:	Total System	Heating	Non-heat	Heating	Non-heat	Interruptible	SC11 dlm	Intrdprtmntl	SC11 t	SC11 d
1	Gross Plant in Service	\$ 618,022,000	\$ 356,136,575	\$ 26,563,127	\$ 190,116,607	\$ 18,782,853	\$ -	\$ 5,336,172	\$ 13,940,015	\$ 6,359,465	\$ 787,187
2	less: Accum. Provisions for Depr. & Amort.	\$ 150,859,000	\$ 79,199,892	\$ 5,718,236	\$ 44,456,541	\$ 4,391,828	\$ -	\$ 1,487,515	\$ 13,040,581	\$ 2,377,878	\$ 186,529
3	Net Plant in Service	\$ 467,163,000	\$ 276,936,683	\$ 20,844,891	\$ 145,660,065	\$ 14,391,025	\$ -	\$ 3,848,657	\$ 899,433	\$ 3,981,587	\$ 600,658
4	plus: Construction Work in Progress	\$ 13,478,000	\$ 7,989,829	\$ 601,391	\$ 4,202,401	\$ 415,192	\$ -	\$ 111,037	\$ 25,949	\$ 114,872	\$ 17,329
5	plus: Working Capital	\$ 14,583,000	\$ 8,478,178	\$ 642,439	\$ 4,536,454	\$ 452,064	\$ -	\$ 127,690	\$ 165,115	\$ 163,384	\$ 17,675
6	less: Accumulated Deferred Income Taxes	\$ 116,790,000	\$ 67,216,538	\$ 4,934,445	\$ 36,954,699	\$ 3,655,391	\$ -	\$ 1,141,156	\$ 1,096,797	\$ 1,638,358	\$ 152,615
7	plus: Deferred Charges	\$ 2,430,000	\$ 1,423,145	\$ 105,308	\$ 767,030	\$ 75,716	\$ -	\$ 22,401	\$ 4,718	\$ 28,474	\$ 3,207
8	less: Other Rate Base Deductions	\$ 500,000	\$ 330,828	\$ 29,072	\$ 124,746	\$ 12,599	\$ -	\$ 1,084	\$ 267	\$ 968	\$ 436
9	Total Rate Base	\$ 380,364,000	\$ 227,280,469	\$ 17,230,512	\$ 118,086,507	\$ 11,666,007	\$ -	\$ 2,967,544	\$ (1,847)	\$ 2,648,991	\$ 485,818
	Revenues:										
10	Sales, Transport & Dlvry Srvc Revenues	\$ 93,841,583	\$ 57,340,112	\$ 3,234,523	\$ 27,193,697	\$ 3,618,838	\$ -	\$ 832,270	\$ 67,753	\$ 1,462,180	\$ 92,210
11	Miscellaneous Revenues	\$ 965,340	\$ 645,783	\$ 34,502	\$ 249,947	\$ 35,108	\$ -	\$ -	\$ -	\$ -	\$ -
12	Total Operating Revenues	\$ 94,806,923	\$ 57,985,895	\$ 3,269,025	\$ 27,443,644	\$ 3,653,946	\$ -	\$ 832,270	\$ 67,753	\$ 1,462,180	\$ 92,210
	Expenses:										
13	Operation and Maintenance	\$ 47,512,000	\$ 27,229,798	\$ 2,090,658	\$ 14,948,104	\$ 1,517,637	\$ -	\$ 441,145	\$ 549,640	\$ 683,110	\$ 51,907
14	Depreciation and Amortization	\$ 14,261,000	\$ 8,253,407	\$ 606,704	\$ 4,545,074	\$ 450,038	\$ -	\$ 140,109	\$ 44,207	\$ 202,846	\$ 18,613
15	Taxes Other than Income	\$ 15,343,000	\$ 9,045,430	\$ 682,888	\$ 4,803,387	\$ 477,245	\$ -	\$ 127,883	\$ 42,622	\$ 144,379	\$ 19,167
16	Federal Income Tax	\$ 3,904,000	\$ 5,930,617	\$ (790,575)	\$ (1,543,246)	\$ 854,325	\$ -	\$ (12,519)	\$ (821,727)	\$ 305,561	\$ (18,437)
17	NYS Income Tax	\$ 689,000	\$ 984,563	\$ (125,460)	\$ (227,370)	\$ 139,644	\$ -	\$ (945)	\$ (130,231)	\$ 51,680	\$ (2,881)
18	Total Operating Expenses	\$ 81,709,000	\$ 51,443,816	\$ 2,464,216	\$ 22,525,948	\$ 3,438,889	\$ -	\$ 695,673	\$ (315,488)	\$ 1,387,577	\$ 68,369
19	Net Operating Income (line12 less line 18)	\$ 13,097,923	\$ 6,542,079	\$ 804,809	\$ 4,917,696	\$ 215,057	\$ -	\$ 136,597	\$ 383,241	\$ 74,603	\$ 23,841
20	Rate of Return (line 19 divided by line 9)	3.44%	2.88%	4.67%	4.16%	1.84%		4.60%		2.82%	4.91%
21	Index (Class ROR divided by System ROR)	100	84	136	121	54		134		82	143

Levelized RY Gas Revenue Requirement @ Target ROR = 6.99%

			Residential			Commercial / Industrial		SC8/9	Firm	Firm	Firm	
			Total System	Heating	Non-heat	Heating	Non-heat	Interruptible	SC11 dlm	Intrdprtmntl	SC11 t	SC11 d
Production:												
1	Demand - Capacity	DFWPK	\$ 64,401	\$ 29,162	\$ 623	\$ 31,407	\$ 3,037	\$ -	\$ -	\$ 172	\$ -	\$ -
2	Demand - Generation	DAVGCMCF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	Commodity	COMMOD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Procurement	DAVGCMCF	\$ 2,555,696	\$ 1,098,033	\$ 29,919	\$ 1,243,030	\$ 184,715	\$ -	\$ -	\$ -	\$ -	\$ -
5	Total Production		\$ 2,620,097	\$ 1,127,194	\$ 30,542	\$ 1,274,437	\$ 187,752	\$ -	\$ -	\$ 172	\$ -	\$ -
Transmission & Subtransmission:												
6	Supply Trans - Reg Stations	DWPK	\$ 6,173,750	\$ 2,453,526	\$ 52,405	\$ 2,642,428	\$ 255,536	\$ -	\$ 196,869	\$ 14,481	\$ 544,322	\$ 14,183
7	Supply Trans - Lines	DWPK	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Common Trans - Reg Stations	DWPK	\$ 2,600,678	\$ 1,033,542	\$ 22,076	\$ 1,113,117	\$ 107,644	\$ -	\$ 82,931	\$ 6,100	\$ 229,294	\$ 5,974
9	Common Trans - Lines	DWPK	\$ 360	\$ 143	\$ 3	\$ 154	\$ 15	\$ -	\$ 11	\$ 1	\$ 32	\$ 1
10	T&D Equip for Spfc Cstmrs @ Trans PSI	STSUB	\$ 263,271	\$ 21,390	\$ 521	\$ 20,459	\$ 3,338	\$ -	\$ 58,012	\$ 1,092	\$ 158,459	\$ -
11	Specific Iroquois Lines	STLNS	\$ 1,136,822	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,136,822	\$ -	\$ -
12	General Reg Stations / Lines	DWPK	\$ 5,825,825	\$ 2,315,256	\$ 49,452	\$ 2,493,513	\$ 241,135	\$ -	\$ 185,774	\$ 13,665	\$ 513,647	\$ 13,383
13	Total Transmission & Subtransmission		\$ 16,000,707	\$ 5,823,856	\$ 124,457	\$ 6,269,671	\$ 607,669	\$ -	\$ 523,597	\$ 1,172,162	\$ 1,445,754	\$ 33,541
Bulk Distribution:												
14	Distribution Reg Stations	DMAINS	\$ 3,165,125	\$ 1,407,378	\$ 30,060	\$ 1,515,735	\$ 146,579	\$ -	\$ 48,931	\$ 8,307	\$ -	\$ 8,135
15	Bulk Mains & Mtr Stations - Demand	DMAINS	\$ 29,437,229	\$ 13,089,307	\$ 279,576	\$ 14,097,083	\$ 1,363,260	\$ -	\$ 455,083	\$ 77,257	\$ -	\$ 75,663
16	Bulk Mains & Mtr Stations - Customer	CMAINS	\$ 15,850,815	\$ 12,287,066	\$ 1,320,609	\$ 2,020,356	\$ 222,312	\$ -	\$ 84	\$ 194	\$ -	\$ 194
17	(reserved for future use) - Demand	DSPFC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18	Dist Equip of Spfc Customers (SC8 & SC11)	CORUPT	\$ 130,451	\$ 56,876	\$ 1,733	\$ 61,842	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -
19	Bulk Services Demand	DSRVCS	\$ 4,663,158	\$ 2,106,038	\$ 44,983	\$ 2,268,187	\$ 219,345	\$ -	\$ -	\$ 12,430	\$ -	\$ 12,174
20	Bulk Services Customer	CSECY	\$ 12,320,424	\$ 9,550,583	\$ 1,026,493	\$ 1,570,398	\$ 172,800	\$ -	\$ -	\$ 151	\$ -	\$ -
21	(reserved for future use) - Demand	DSVCEC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22	Specific Services - Customer (SC8 & SC11)	CORUPT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23	Total Bulk Distribution		\$ 65,567,202	\$ 38,497,248	\$ 2,703,455	\$ 21,533,600	\$ 2,134,297	\$ -	\$ 504,098	\$ 98,338	\$ -	\$ 96,166
24	Meters & Regulators	CMTRS	\$ 9,942,665	\$ 5,566,527	\$ 580,764	\$ 3,458,088	\$ 274,367	\$ -	\$ 13,616	\$ 31,557	\$ 13,309	\$ 4,436
25	Industrial Reg Stations	CINSTP	\$ 97,030	\$ -	\$ -	\$ 86,749	\$ 10,281	\$ -	\$ -	\$ -	\$ -	\$ -
26	Firm Customers Mtr / Reg Installations	CINSTX	\$ 3,607,851	\$ 2,796,437	\$ 300,560	\$ 459,817	\$ 50,596	\$ -	\$ 221	\$ 44	\$ 132	\$ 44
27	Miscellaneous Revenues	DRMISC	\$ (965,340)	\$ (645,783)	\$ (34,502)	\$ (249,947)	\$ (35,108)	\$ -	\$ -	\$ -	\$ -	\$ -
28	Uncollectibles, Credit & Collections on Delivery	COBDBT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29	Bill Printing, Mailing & Receipt Services	CNBSL	\$ 749,624	\$ 581,060	\$ 62,452	\$ 95,543	\$ 10,513	\$ -	\$ 9	\$ 9	\$ 28	\$ 9
30	Customer Account Services (901-905)	CUSTAC	\$ 9,351,415	\$ 7,248,453	\$ 779,061	\$ 1,191,860	\$ 131,148	\$ -	\$ 239	\$ 83	\$ 457	\$ 114
31	Competitive Energy Services	DAVGCMCF	\$ 933,806	\$ 401,202	\$ 10,932	\$ 454,181	\$ 67,491	\$ -	\$ -	\$ -	\$ -	\$ -
32	Sales & Customer Service (907-916)	CUSVCS3	\$ 3,727,171	\$ 2,804,310	\$ 294,216	\$ 537,938	\$ 63,105	\$ -	\$ 11,011	\$ 406	\$ 15,382	\$ 803
33	Low Income Program	LIPCOST	\$ 2,962,462	\$ 1,262,894	\$ 26,977	\$ 1,360,009	\$ 131,582	\$ -	\$ 55,983	\$ 41,413	\$ 76,315	\$ 7,288
	Sales, Transport & Dlvry Srvcs Revenues	RSALCS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
34	Total Levelized Revenue Requirement from Rates		\$ 114,594,692	\$ 65,463,399	\$ 4,878,914	\$ 36,471,946	\$ 3,633,693	\$ -	\$ 1,108,775	\$ 1,344,185	\$ 1,551,378	\$ 142,402
35	Demand		\$ 53,330,620	\$ 22,455,741	\$ 479,699	\$ 24,182,083	\$ 2,339,891	\$ -	\$ 1,027,611	\$ 1,270,328	\$ 1,445,754	\$ 129,513
36	Commodity		\$ 2,555,696	\$ 1,098,033	\$ 29,919	\$ 1,243,030	\$ 184,715	\$ -	\$ -	\$ -	\$ -	\$ -
37	Customer		\$ 59,673,716	\$ 42,555,408	\$ 4,403,797	\$ 11,296,780	\$ 1,144,196	\$ -	\$ 81,163	\$ 73,857	\$ 105,624	\$ 12,899
38	Revenue		\$ (965,340)	\$ (645,783)	\$ (34,502)	\$ (249,947)	\$ (35,108)	\$ -	\$ -	\$ -	\$ -	\$ -

		Total System	Residential		Commercial / Industrial		SC8/9	Firm		Firm	Firm	
			Heating	Non-heat	Heating	Non-heat	Interruptible	SC11 dlm	Intrdprtmntl	SC11 t	SC11 d	
	<b>Revenue Requirements for bundled functions @ ROR on RB =</b>	<b>6.99%</b>										
39	Demand-related functions	L 35	\$ 53,330,620	\$ 22,455,741	\$ 479,699	\$ 24,182,083	\$ 2,339,891	\$ -	\$ 1,027,611	\$ 1,270,328	\$ 1,445,754	\$ 129,513
40	Commodity-related functions	L 36-L44	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Customer-related functions	L37+L38-L45:47	\$ 57,024,945	\$ 40,927,363	\$ 4,295,911	\$ 10,497,109	\$ 1,031,083	\$ -	\$ 81,154	\$ 73,848	\$ 105,596	\$ 12,880
42	sub-total		\$ 110,355,565	\$ 63,383,104	\$ 4,775,611	\$ 34,679,192	\$ 3,370,974	\$ -	\$ 1,108,765	\$ 1,344,176	\$ 1,551,350	\$ 142,393
43	Revenue Requirements for Unbundled Functions											
44	MFC Supply	L 4	\$ 2,555,696	\$ 1,098,033	\$ 29,919	\$ 1,243,030	\$ 184,715	\$ -	\$ -	\$ -	\$ -	\$ -
45	DS Uncollectibles, Credit & Collections function	L 28	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
46	Bill Printing, Mailing & Receipt function	L 29	\$ 749,624	\$ 581,060	\$ 62,452	\$ 95,543	\$ 10,513	\$ -	\$ 9	\$ 9	\$ 28	\$ 9
47	MFC Admin	L 31	\$ 933,806	\$ 401,202	\$ 10,932	\$ 454,181	\$ 67,491	\$ -	\$ -	\$ -	\$ -	\$ -
48	sub-total		\$ 4,239,127	\$ 2,080,294	\$ 103,304	\$ 1,792,754	\$ 262,719	\$ -	\$ 9	\$ 9	\$ 28	\$ 9
49	Total Delivery Service Revenue Requirement	L42+L48	\$ 114,594,692	\$ 65,463,399	\$ 4,878,914	\$ 36,471,946	\$ 3,633,693	\$ -	\$ 1,108,775	\$ 1,344,185	\$ 1,551,378	\$ 142,402
	RY Billing Units											
51a	GAS Deliveries @ meter (SC8&9 sales to SC1 & 2), Mcf		15,542,650	5,904,671	160,892	6,684,394	993,303	0	722,757	24,000	1,002,485	50,147
51b	GAS Deliveries @ meter, Mcf		15,542,650	5,243,965	142,889	5,936,441	882,157	1,537,809	722,757	24,000	1,002,485	50,147
52	Number of Customers		81,767	63,380	6,812	10,422	1,147	0	1	1	3	1
	Levelized Full Service DS Rates based on RY @ ROR =	<b>6.99%</b>										
53	for Demand-related functions, Rate, \$ / Mcf	L35 / L51a	\$ 3.43	\$ 3.80	\$ 2.98	\$ 3.62	\$ 2.36	\$ -	\$ 1.42	\$ -	\$ 1.44	\$ 2.58
54	Energy functions \$ / Mcf @ mtr (excluding commodity chgs)	L36 / L51a	\$ 0.1644	\$ 0.1860	\$ 0.1860	\$ 0.1860	\$ 0.1860	\$ -	\$ -	\$ -	\$ -	\$ -
55	Customer Rate, \$ / mo	L37+ L38/L52/12	\$59.83	\$55.10	\$53.45	\$88.33	\$80.60	\$0.00	\$6,763.62	\$0.00	\$2,933.99	\$1,074.08
	Potential MFC Rates /Billing Credit											
56	Procurement \$ / Mcf at meter	L44 / L51b	\$ 0.1644	\$ 0.2094	\$ 0.2094	\$ 0.2094	\$ 0.2094	\$ -	\$ -	\$ -	\$ -	\$ -
57	Dlvry Srvc Uncollectibles, Credit & Collections Rate \$ / month	L45 / L52 / 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
58	Bill Printing & Receipt Services Rate \$ / month	L46 / L52 / 12	\$0.76	\$0.76	\$0.76	\$0.76	\$0.76	\$ -	\$ -	\$ -	\$ -	\$ -
59	Competitive Energy Services Rate \$ / month	L47 / L52 / 12	\$0.95	\$0.53	\$0.13	\$3.63	\$4.90	\$ -	\$ -	\$ -	\$ -	\$ -
	Delivery Service Rates and MFCs @ ROR =	<b>6.99%</b>										
60	Energy Rate (Net of MFC Supply) in \$ / Mcf	L39+L40-L44/ L51b	\$ 3.2668	\$ 4.0728	\$ 3.1478	\$ 3.8641	\$ 2.4431	\$ -	\$ -	\$ -	\$ -	\$ -
61	Customer Rate (Net of MFC Admin) in \$ / month	L55- L57- L59	\$58.88	\$54.58	\$53.32	\$84.70	\$75.69	\$ -	\$ -	\$ -	\$ -	\$ -
62	Supply Charge in \$ / Mcf	L44 / L51b	\$ 0.1644	\$ 0.2094	\$ 0.2094	\$ 0.2094	\$ 0.2094	\$ -	\$ -	\$ -	\$ -	\$ -
63	Admin. Charge in \$ / Mcf	L47 / L51b	\$ 0.0601	\$ 0.0765	\$ 0.0765	\$ 0.0765	\$ 0.0765	\$ -	\$ -	\$ -	\$ -	\$ -
	Current Delivery Service Rates											
64	First Block			First 2 Ccf or less	\$ 26.00	First 2 Ccf or less	\$ 39.00					
65	Second Block			next 48 Ccf	\$ 0.9904	next 98 Ccf	\$ 0.5494					
66	Third Block			additional gas	\$ 0.4542	next 4900 Ccf	\$ 0.3262					
67	Fourth Block					additional gas	\$ 0.2656					
68	MFC Supply Charge in \$ / Mcf				\$ 0.0043		\$ 0.0042					
69	MFC Admin. Charge in \$ / Mcf				\$ 0.0130		\$ 0.0125					

MFC<sub>B</sub>  
MFC<sub>A</sub>

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

Hypothetical Embedded Study – Excluding Commodity & Surcharges

Page 1 of 4: Electric Department Hypothetical Rate of Return Statement

Page 2 of 4: Electric Department Summary of Assumptions

Page 3 of 4: Gas Department Hypothetical Rate of Return Statement

Page 4 of 4: Gas Department Summary of Assumptions

**Electric Department HYPOTHETICAL Rate of Return Statement**

		Residential			Small General Service			Large General Service			SC5 Area	SC8 Street	SC9 Traffic	
Rate Base:	Total System	SC1 Non-heat	SC1 Heat	SC6 TOU	SC2 non-dmnd	SC2 sec-dmnd	SC2 pri-dmnd	SC3 Primary	SC13 Subs	SC13 Trans	Lighting	Lighting	Lighting	
1	Gross Plant in Service	\$ 1,323,019,936	\$ 770,871,432	\$ 105,703,419	\$ 4,859,529	\$ 84,642,489	\$ 255,485,255	\$ 14,912,491	\$ 18,388,285	\$ 9,424,855	\$ 26,704,276	\$ 14,325,526	\$ 17,136,920	\$ 565,460
2	less: Accum. Provisions for Depr. & Amort.	\$ 365,574,076	\$ 210,635,138	\$ 28,954,860	\$ 1,337,550	\$ 23,100,664	\$ 71,969,884	\$ 4,361,557	\$ 5,401,012	\$ 2,754,319	\$ 8,318,355	\$ 3,805,631	\$ 4,776,280	\$ 158,827
3	Net Plant in Service	\$ 957,445,860	\$ 560,236,294	\$ 76,748,560	\$ 3,521,979	\$ 61,541,825	\$ 183,515,372	\$ 10,550,934	\$ 12,987,273	\$ 6,670,536	\$ 18,386,921	\$ 10,519,894	\$ 12,360,639	\$ 406,633
4	plus: Construction Work in Progress	\$ 21,400,000	\$ 12,414,050	\$ 1,713,375	\$ 78,403	\$ 1,332,583	\$ 4,208,075	\$ 243,544	\$ 304,827	\$ 156,257	\$ 444,784	\$ 235,506	\$ 259,956	\$ 8,641
5	plus: Working Capital	\$ 50,318,807	\$ 30,239,896	\$ 3,980,718	\$ 183,393	\$ 3,658,033	\$ 8,682,380	\$ 515,994	\$ 596,839	\$ 302,110	\$ 835,717	\$ 495,197	\$ 791,359	\$ 37,170
6	less: Accumulated Deferred Income Taxes	\$ 223,919,001	\$ 128,706,574	\$ 17,634,704	\$ 821,686	\$ 14,082,334	\$ 44,126,107	\$ 2,748,053	\$ 3,409,721	\$ 1,743,270	\$ 5,102,981	\$ 2,417,215	\$ 3,030,806	\$ 95,550
7	plus: Deferred Charges	\$ (1,233,998)	\$ (788,818)	\$ (106,001)	\$ (4,764)	\$ (91,720)	\$ (189,992)	\$ (6,979)	\$ (7,170)	\$ (4,377)	\$ 4,185	\$ (18,233)	\$ (19,623)	\$ (506)
8	less: Other Rate Base Deductions	\$ (19,106,000)	\$ (11,203,152)	\$ (1,533,816)	\$ (70,263)	\$ (1,235,768)	\$ (3,650,233)	\$ (205,404)	\$ (252,683)	\$ (130,921)	\$ (354,416)	\$ (209,477)	\$ (251,477)	\$ (8,392)
9	Total Rate Base	\$ 823,117,667	\$ 484,598,000	\$ 66,235,764	\$ 3,027,588	\$ 53,594,155	\$ 155,739,961	\$ 8,760,843	\$ 10,724,731	\$ 5,512,176	\$ 14,922,043	\$ 9,024,625	\$ 10,613,002	\$ 364,780
	Revenues:													
10	Electric Delivery Revenues	\$ 290,255,675	\$ 161,618,345	\$ 28,612,516	\$ 1,487,533	\$ 13,982,427	\$ 60,255,974	\$ 6,188,923	\$ 6,506,145	\$ 1,373,556	\$ 4,910,722	\$ 1,348,291	\$ 3,733,712	\$ 237,531
11	Other Revenues	\$ 18,389,496	\$ 7,394,940	\$ 1,257,445	\$ 69,766	\$ 697,578	\$ 4,173,901	\$ 610,634	\$ 754,782	\$ 354,347	\$ 2,827,820	\$ 182,415	\$ 57,413	\$ 8,456
12	Total Operating Revenues	\$ 308,645,171	\$ 169,013,284	\$ 29,869,961	\$ 1,557,299	\$ 14,680,006	\$ 64,429,875	\$ 6,799,557	\$ 7,260,927	\$ 1,727,903	\$ 7,738,542	\$ 1,530,705	\$ 3,791,125	\$ 245,988
	Expenses:													
13	Operation and Maintenance	\$ 148,648,117	\$ 91,469,502	\$ 11,625,839	\$ 538,277	\$ 11,952,820	\$ 23,015,611	\$ 1,426,975	\$ 1,535,994	\$ 763,989	\$ 2,132,845	\$ 1,313,448	\$ 2,721,801	\$ 151,016
14	Depreciation and Amortization	\$ 34,198,553	\$ 20,033,607	\$ 2,733,854	\$ 126,066	\$ 2,239,181	\$ 6,479,200	\$ 379,033	\$ 461,011	\$ 236,796	\$ 659,582	\$ 369,700	\$ 465,329	\$ 15,195
15	Taxes Other than Income	\$ 44,777,826	\$ 22,774,217	\$ 2,749,007	\$ 125,875	\$ 1,749,938	\$ 12,431,629	\$ 575,776	\$ 1,022,368	\$ 535,226	\$ 2,493,237	\$ 91,832	\$ 211,337	\$ 17,383
16	Federal Income Tax	\$ 20,888,721	\$ 8,046,191	\$ 3,727,949	\$ 230,480	\$ (780,954)	\$ 6,282,549	\$ 1,391,762	\$ 1,322,845	\$ 28,761	\$ 721,936	\$ (141,558)	\$ 40,515	\$ 18,244
17	NYS Income Tax	\$ 2,970,738	\$ 1,499,727	\$ 459,341	\$ 26,709	\$ (877)	\$ 752,480	\$ 121,167	\$ 106,850	\$ (10,426)	\$ (30,783)	\$ 1,427	\$ 43,478	\$ 1,646
18	Total Operating Expenses	\$ 251,483,956	\$ 143,823,245	\$ 21,295,990	\$ 1,047,406	\$ 15,160,108	\$ 48,961,468	\$ 3,894,713	\$ 4,449,068	\$ 1,554,347	\$ 5,976,818	\$ 1,634,850	\$ 3,482,459	\$ 203,484
19	Net Operating Income (line 12 less line 18)	\$ 57,161,215	\$ 25,190,040	\$ 8,573,971	\$ 509,893	\$ (480,102)	\$ 15,468,406	\$ 2,904,844	\$ 2,811,859	\$ 173,556	\$ 1,761,725	\$ (104,145)	\$ 308,666	\$ 42,503
20	Rate of Return (line 19 divided by line 9)	6.94%	5.20%	12.94%	16.84%	-0.90%	9.93%	33.16%	26.22%	3.15%	11.81%	-1.15%	2.91%	11.65%
21	Index (Class ROR divided by System ROR)	100	75	186	243	(13)	143	477	378	45	170	(17)	42	168

These results are hypothetical only and do not necessarily depict the results that may have been achieved if Central Hudson operated as a delivery-only company in the absence of the 18-a temporary surcharge and SBC/RPS/EEPS surcharges.

## Electric Department Hypothetical Embedded Study Summary of Assumptions

Changes from historical study (COSP-1):

- 1 Deferred Energy Efficiency Incentives and miscellaneous fuel removed from rate base calculation
- 2 Removed commodity/NYSA/SBC related revenue
- 3 Removed commodity/NYSA/SBC expense
- 4 Adjusted FIT/SIT calculations to remove commodity related Schedule M adjustments

Comparison of impact on system is provided below:

	<u>Total</u>	<u>Delivery Only</u>	<u>Difference</u>
<b>Total Rate Base</b>	\$ 825,259,861	\$ 823,117,667	\$ (2,142,194)
<b>Total Revenues</b>	\$ 541,865,499	\$ 308,645,171	\$ (233,220,328)
<b>Operating Expenses:</b>			
Operation and Maintenance	\$ 388,318,404	\$ 148,648,117	\$ (239,670,287)
Depreciation and Amortization	\$ 34,198,553	\$ 34,198,553	\$ (0)
Taxes Other than Income	\$ 44,777,826	\$ 44,777,826	\$ 0
Federal Income Tax	\$ 18,631,236	\$ 20,888,721	\$ 2,257,485
New York State Income Tax	\$ 2,970,738	\$ 2,970,738	\$ (0)
<b>Total Operating Expenses</b>	\$ 488,896,757	\$ 251,483,956	\$ (237,412,801)
<b>Net Operating Income</b>	\$ 52,968,742	\$ 57,161,215	\$ 4,192,473
<b>Rate of Return by Function</b>	6.418%	6.944%	

These results are hypothetical only and do not necessarily depict the results that may have been achieved if Central Hudson operated as a delivery-only company in the absence of the 18-a temporary surcharge and SBC/RPS/EEPS surcharges.

EXHIBIT COSP-3

Gas Department HYPOTHETICAL Rate of Return Statement

	Total System	Residential		Commercial/Industrial		SC8/9	Firm	Interdepart.	Firm	Firm
		Heating	Non-Heating	Heating	Non-Heating	Interruptible	SC 11 DLM	SC11 T	SC 11 D	
Rate Base:										
1 Gross Plant in Service	\$ 426,696,397	\$ 236,155,629	\$ 20,301,664	\$ 117,795,978	\$ 17,577,362	\$ 672,451	\$ 3,723,393	\$ 12,786,768	\$ 17,187,807	\$ 495,346
2 less: Accum. Provisions for Depr. & Amort.	\$ 130,159,000	\$ 66,115,152	\$ 5,695,633	\$ 32,938,101	\$ 4,906,710	\$ 195,839	\$ 1,037,755	\$ 14,335,911	\$ 4,795,834	\$ 138,065
3 Net Plant in Service	\$ 296,537,397	\$ 170,040,477	\$ 14,606,031	\$ 84,857,877	\$ 12,670,651	\$ 476,612	\$ 2,685,638	\$ (1,549,143)	\$ 12,391,973	\$ 357,281
4 plus: Construction Work in Progress	\$ 11,205,000	\$ 6,425,171	\$ 551,905	\$ 3,206,451	\$ 478,775	\$ 18,009	\$ 101,480	\$ (58,536)	\$ 468,245	\$ 13,500
5 plus: Working Capital	\$ 12,468,000	\$ 6,966,477	\$ 605,846	\$ 3,567,980	\$ 514,991	\$ 36,651	\$ 106,976	\$ 130,432	\$ 525,198	\$ 13,449
6 less: Accumulated Deferred Income Taxes	\$ 75,671,000	\$ 42,409,240	\$ 3,567,716	\$ 21,854,480	\$ 3,264,688	\$ 129,958	\$ 702,894	\$ 18,553	\$ 3,635,343	\$ 88,130
7 plus: Deferred Charges	\$ 1,059,001	\$ 653,423	\$ 56,280	\$ 328,508	\$ 48,627	\$ 2,207	\$ 10,236	\$ (89,823)	\$ 48,199	\$ 1,345
8 less: Other Rate Base Deductions	\$ (5,414,000)	\$ (3,078,282)	\$ (260,452)	\$ (1,576,034)	\$ (235,366)	\$ (9,383)	\$ (52,429)	\$ 38,085	\$ (233,354)	\$ (6,785)
9 Total Rate Base	\$ 251,012,398	\$ 144,754,590	\$ 12,512,799	\$ 71,682,370	\$ 10,683,723	\$ 412,904	\$ 2,253,865	\$ (1,623,708)	\$ 10,031,625	\$ 304,230
Revenues:										
10 Sales, Transport & Dlvry Srvc Revenues	\$ 82,499,386	\$ 45,972,571	\$ 2,479,789	\$ 22,312,509	\$ 3,182,514	\$ 2,548,597	\$ 556,737	\$ 133,689	\$ 5,248,717	\$ 64,263
11 Miscellaneous Revenues	\$ 1,576,530	\$ 1,075,694	\$ 63,134	\$ 882,461	\$ 102,569	\$ (1,348,512)	\$ 66,622	\$ 1,289	\$ 726,788	\$ 6,485
12 Total Operating Revenues	\$ 84,075,916	\$ 47,048,265	\$ 2,542,923	\$ 23,194,970	\$ 3,285,083	\$ 1,200,085	\$ 623,359	\$ 134,979	\$ 5,975,504	\$ 70,748
Expenses:										
13 Operation and Maintenance	\$ 40,630,486	\$ 22,213,489	\$ 1,969,214	\$ 11,848,215	\$ 1,655,721	\$ 142,281	\$ 381,869	\$ 503,611	\$ 1,873,664	\$ 42,422
14 Depreciation and Amortization	\$ 9,875,600	\$ 5,551,555	\$ 468,336	\$ 2,851,143	\$ 425,628	\$ 17,088	\$ 88,695	\$ 23,039	\$ 438,726	\$ 11,391
15 Taxes Other than Income	\$ 13,115,779	\$ 7,547,751	\$ 629,258	\$ 4,025,311	\$ 580,252	\$ (810,193)	\$ 154,457	\$ (8,748)	\$ 979,140	\$ 18,552
16 Federal Income Tax	\$ 5,757,547	\$ 3,395,476	\$ (307,506)	\$ 1,086,831	\$ 147,660	\$ 722,887	\$ (30,471)	\$ (153,382)	\$ 900,138	\$ (4,085)
17 NYS Income Tax	\$ 966,117	\$ 362,534	\$ 174,135	\$ 438,948	\$ 65,009	\$ (174,701)	\$ 46,262	\$ 44,474	\$ 4,298	\$ 5,160
18 Total Operating Expenses	\$ 70,345,529	\$ 39,070,805	\$ 2,933,436	\$ 20,250,447	\$ 2,874,269	\$ (102,639)	\$ 640,812	\$ 408,993	\$ 4,195,965	\$ 73,442
19 Net Operating Income	\$ 13,730,387	\$ 7,977,460	\$ (390,513)	\$ 2,944,523	\$ 410,814	\$ 1,302,725	\$ (17,453)	\$ (274,014)	\$ 1,779,539	\$ (2,693)
20 Rate of Return	5.47%	5.51%	-3.12%	4.11%	3.85%	315.50%	-0.77%	16.88%	17.74%	-0.89%
21 Index	100	101	(57)	75	70	5,768	(14)	309	324	(16)

These results are hypothetical only and do not necessarily depict the results that may have been achieved if Central Hudson operated as a delivery-only company in the absence of the 18-a temporary surcharge and SBC/RPS/EEPS surcharges.

## Gas Department Hypothetical Embedded Study Summary of Assumptions

Changes from historical study (COSP-2):

- 1 Removed commodity/NYSA/SBC related revenue
- 2 Removed commodity/NYSA/SBC expense
- 3 Adjusted FIT/SIT calculations to remove commodity related Schedule M adjustments

Comparison of impact on system is provided below:

	<u>Total</u>	<u>Delivery Only</u>	<u>Difference</u>
<b>Total Rate Base</b>	\$ 251,012,397	\$ 251,012,398	\$ 1
<b>Total Revenues</b>	\$ 146,286,727	\$ 84,075,916	\$ (62,210,811)
<b>Operating Expenses:</b>			
Operation and Maintenance	\$ 100,030,348	\$ 40,630,486	\$ (59,399,862)
Depreciation and Amortization	\$ 9,875,600	\$ 9,875,600	\$ 0
Taxes Other than Income	\$ 13,115,779	\$ 13,115,779	\$ 0
Federal Income Tax	\$ 6,741,379	\$ 5,757,547	\$ (983,832)
New York State Income Tax	<u>\$ 966,117</u>	<u>\$ 966,117</u>	<u>\$ 0</u>
<b>Total Operating Expenses</b>	\$ 130,729,223	\$ 70,345,529	\$ (60,383,694)
<b>Net Operating Income</b>	\$ 15,557,504	\$ 13,730,387	\$ (1,827,117)
<b>Rate of Return by Function</b>	6.198%	5.470%	

These results are hypothetical only and do not necessarily depict the results that may have been achieved if Central Hudson operated as a delivery-only company in the absence of the 18-a temporary surcharge and SBC/RPS/EEPS surcharges.



CENTRAL HUDSON GAS & ELECTRIC CORPORATION

ELECTRIC DEPARTMENT

Marginal Cost of Service Study

Schedule A – Cost per Unit (kWh or kW)

Schedule B – Cost per Customer

Central Hudson Gas & Electric Corporation  
Cases 17-E- & 17-G-  
Electric Marginal Cost - Cost per Unit (kWh or kW)

		SC1 RNH	SC1 RHT Residential	SC6 TOU	SC2 ND	SC2 SD	SC2 PD Commercial & Industrial	SC3 PRI	SC13 SUBS	SC13 TRANS	
<b>Electric Distribution Plant Investment per kW</b>											
[1]	Substation Plant	\$	511.25	\$ 511.25	\$ 511.25	\$ 511.25	\$ 511.25	\$ 511.25	\$ 511.25	\$ 511.25	\$ -
[2]	plus General & Common Plant Loader	12.10%	\$ 573.12	\$ 573.12	\$ 573.12	\$ 573.12	\$ 573.12	\$ 573.12	\$ 573.12	\$ 573.12	\$ -
[3]	Economic Carrying Charge	8.44%	\$ 48.37	\$ 48.37	\$ 48.37	\$ 48.37	\$ 48.37	\$ 48.37	\$ 48.37	\$ 48.37	\$ -
[4]	Plant A&G Loader	0.46%	\$ 2.62	\$ 2.62	\$ 2.62	\$ 2.62	\$ 2.62	\$ 2.62	\$ 2.62	\$ 2.62	\$ -
[5]	<b>Annual Carrying Cost on Substation Plant</b>		<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ 50.99</b>	<b>\$ -</b>
[6]	Demand Related Primary Plant	\$	217.26	\$ 217.26	\$ 217.26	\$ 217.26	\$ 217.26	\$ 217.26	\$ 217.26	\$ -	\$ -
[7]	plus General & Common Plant Loader	12.10%	\$ 243.56	\$ 243.56	\$ 243.56	\$ 243.56	\$ 243.56	\$ 243.56	\$ 243.56	\$ -	\$ -
[8]	Economic Carrying Charge	8.44%	\$ 20.56	\$ 20.56	\$ 20.56	\$ 20.56	\$ 20.56	\$ 20.56	\$ 20.56	\$ -	\$ -
[9]	Plant A&G Loader	0.46%	\$ 1.11	\$ 1.11	\$ 1.11	\$ 1.11	\$ 1.11	\$ 1.11	\$ 1.11	\$ -	\$ -
[10]	<b>Annual Carrying Cost on Dmd-Rltd Primary Plant</b>		<b>\$ 21.67</b>	<b>\$ 21.67</b>	<b>\$ 21.67</b>	<b>\$ 21.67</b>	<b>\$ 21.67</b>	<b>\$ 21.67</b>	<b>\$ 21.67</b>	<b>\$ -</b>	<b>\$ -</b>
[11]	Demand Related Secondary Plant	\$	224.55	\$ 224.55	\$ 224.55	\$ 224.55	\$ -	\$ -	\$ -	\$ -	\$ -
[12]	plus General & Common Plant Loader	12.10%	\$ 251.72	\$ 251.72	\$ 251.72	\$ 251.72	\$ -	\$ -	\$ -	\$ -	\$ -
[13]	Economic Carrying Charge	8.44%	\$ 21.25	\$ 21.25	\$ 21.25	\$ 21.25	\$ -	\$ -	\$ -	\$ -	\$ -
[14]	Plant A&G Loader	0.46%	\$ 1.15	\$ 1.15	\$ 1.15	\$ 1.15	\$ -	\$ -	\$ -	\$ -	\$ -
[15]	<b>Annual Carrying Cost on Dmd-Rltd Secondary Plant</b>		<b>\$ 22.40</b>	<b>\$ 22.40</b>	<b>\$ 22.40</b>	<b>\$ 22.40</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
[16]	Demand Related Services	\$	88.45	\$ 88.45	\$ 88.45	\$ 88.45	\$ -	\$ -	\$ -	\$ -	\$ -
[17]	plus General & Common Plant Loader	12.10%	\$ 99.15	\$ 99.15	\$ 99.15	\$ 99.15	\$ -	\$ -	\$ -	\$ -	\$ -
[18]	Economic Carrying Charge	8.64%	\$ 8.57	\$ 8.57	\$ 8.57	\$ 8.57	\$ -	\$ -	\$ -	\$ -	\$ -
[19]	Plant A&G Loader	0.46%	\$ 0.45	\$ 0.45	\$ 0.45	\$ 0.45	\$ -	\$ -	\$ -	\$ -	\$ -
[20]	<b>Annual Carrying Cost on Dmd-Rltd Services</b>		<b>\$ 9.02</b>	<b>\$ 9.02</b>	<b>\$ 9.02</b>	<b>\$ 9.02</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
[21]	<b>Annual Carrying Cost on Distribution Plant Investment per kW</b>		<b>\$ 104.08</b>	<b>\$ 104.08</b>	<b>\$ 104.08</b>	<b>\$ 104.08</b>	<b>\$ 95.06</b>	<b>\$ 72.66</b>	<b>\$ 72.66</b>	<b>\$ 50.99</b>	<b>\$ -</b>
	line [5] + line [10] + line [15] + line [20]										
<b>Annual O&amp;M Expense per kW</b>											
[22]	Distribution Substations	\$	5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ 5.51	\$ -
[23]	Demand Related Primary Plant	\$	9.85	\$ 9.85	\$ 9.85	\$ 9.85	\$ 9.85	\$ 9.85	\$ 9.85	\$ -	\$ -
[24]	Demand Related Secondary Plant	\$	1.78	\$ 1.78	\$ 1.78	\$ 1.78	\$ -	\$ -	\$ -	\$ -	\$ -
[25]	O&M Expense	\$	17.14	\$ 17.14	\$ 17.14	\$ 17.14	\$ 17.14	\$ 15.36	\$ 15.36	\$ 5.51	\$ -
[26]	<b>Total Annual O&amp;M Expense per kW plus A&amp;G Expense</b>	<b>53.16%</b>	<b>\$ 26.25</b>	<b>\$ 26.25</b>	<b>\$ 26.25</b>	<b>\$ 26.25</b>	<b>\$ 26.25</b>	<b>\$ 23.52</b>	<b>\$ 23.52</b>	<b>\$ 8.44</b>	<b>\$ -</b>
	line [25] * 1.5316										
<b>Annual Working Capital Costs per kW</b>											
[27]	Materials and Supplies	0.77%	\$ 8.94	\$ 8.94	\$ 8.94	\$ 8.94	\$ 8.18	\$ 6.25	\$ 6.25	\$ 4.39	\$ -
	line [2] + line [7] + line [12] + line [17] * 0.77%										
[28]	Prepayments	14.31%	\$ 3.76	\$ 3.76	\$ 3.76	\$ 3.76	\$ 3.76	\$ 3.37	\$ 3.37	\$ 1.21	\$ -
	line [26] * 14.31%										
[29]	Working Capital for Expenses	\$	3.75	\$ 3.75	\$ 3.75	\$ 3.75	\$ 3.75	\$ 3.36	\$ 3.36	\$ 1.21	\$ -
	line [26] * 1/7										
[30]	<b>Total Working Capital Costs</b>		<b>\$ 16.45</b>	<b>\$ 16.45</b>	<b>\$ 16.45</b>	<b>\$ 16.45</b>	<b>\$ 15.69</b>	<b>\$ 12.98</b>	<b>\$ 12.98</b>	<b>\$ 6.80</b>	<b>\$ -</b>
[31]	<b>Annual Working Capital Rev Req</b>	<b>10.06%</b>	<b>\$ 1.65</b>	<b>\$ 1.65</b>	<b>\$ 1.65</b>	<b>\$ 1.65</b>	<b>\$ 1.58</b>	<b>\$ 1.31</b>	<b>\$ 1.31</b>	<b>\$ 0.68</b>	<b>\$ -</b>
	line [31] * 10.06%										
[32]	<b>Annual Marginal Distribution Cost per kW</b>		<b>\$ 131.98</b>	<b>\$ 131.98</b>	<b>\$ 131.98</b>	<b>\$ 131.98</b>	<b>\$ 122.88</b>	<b>\$ 97.49</b>	<b>\$ 97.49</b>	<b>\$ 60.12</b>	<b>\$ -</b>
	line [21] + line [26] + line [31]										
[33]	Approximate Marginal Cost per kW/Month	\$	11.00	\$ 11.00	\$ 11.00	\$ 11.00	\$ 10.24	\$ 8.12	\$ 8.12	\$ 5.01	\$ -
[34]	<b>Marginal Transmission Cost per kWh</b>		<b>\$ 0.003413</b>	<b>\$ 0.003413</b>	<b>\$ 0.003413</b>	<b>\$ 0.003413</b>	<b>\$ 0.003413</b>	<b>\$ 0.003301</b>	<b>\$ 0.003301</b>	<b>\$ 0.003230</b>	<b>\$ 0.003195</b>

Central Hudson Gas & Electric Corporation  
Cases 17-E-\_\_\_\_\_ & 17-G-\_\_\_\_\_  
Electric Marginal Cost - Cost per Customer

		SC1 RNH	SC1 RHT Residential	SC6 TOU	SC2 ND	SC2 SD	SC2 PD Commercial & Industrial	SC3 PRI	SC13 SUBS	SC13 TRANS
<b>Electric Plant Investment</b>										
[1]	Customer Related Distribution Plant	\$	8,464.79	\$ 8,464.79	\$ 8,464.79	\$ 8,464.79	\$ 8,464.79	\$ 4,841.50	\$ 4,841.50	\$ -
[2]	plus General & Common Plant Loader	12.10%	\$ 9,489.19	\$ 9,489.19	\$ 9,489.19	\$ 9,489.19	\$ 9,489.19	\$ 5,427.41	\$ 5,427.41	\$ -
[3]	Economic Carrying Charge	8.44%	\$ 800.89	\$ 800.89	\$ 800.89	\$ 800.89	\$ 800.89	\$ 458.07	\$ 458.07	\$ -
[4]	Plant A&G Loader	0.46%	\$ 43.38	\$ 43.38	\$ 43.38	\$ 43.38	\$ 43.38	\$ 24.81	\$ 24.81	\$ -
[5]	<b>Annual Carrying Cost on Cust-Rtd Dist Plant</b>	<b>\$</b>	<b>844.27</b>	<b>\$ 844.27</b>	<b>\$ 844.27</b>	<b>\$ 844.27</b>	<b>\$ 844.27</b>	<b>\$ 482.89</b>	<b>\$ 482.89</b>	<b>\$ -</b>
[6]	Services Unit Investment	\$	418.69	\$ 418.69	\$ 418.69	\$ 628.03	\$ -	\$ -	\$ -	\$ -
[7]	Meters Unit Investment	\$	432.38	\$ 426.70	\$ 1,361.28	\$ 660.74	\$ 3,247.01	\$ 7,518.86	\$ 16,426.34	\$ 23,502.64
[8]	Combined Service & Meter Investment	\$	851.06	\$ 845.39	\$ 1,779.97	\$ 1,288.77	\$ 3,247.01	\$ 7,518.86	\$ 16,426.34	\$ 23,502.64
[9]	plus General & Common Plant Loader	12.10%	\$ 954.06	\$ 947.69	\$ 1,995.38	\$ 1,444.74	\$ 3,639.96	\$ 8,428.78	\$ 18,414.24	\$ 26,346.91
[10]	Economic Carrying Charge	8.64%	\$ 82.43	\$ 81.88	\$ 172.40	\$ 124.83	\$ 314.49	\$ 728.25	\$ 1,590.99	\$ 2,276.37
[11]	Plant A&G Loader	0.46%	\$ 4.36	\$ 4.33	\$ 9.12	\$ 6.61	\$ 16.64	\$ 38.54	\$ 84.19	\$ 120.46
[12]	<b>Annual Carrying Cost on Services &amp; Meters</b>	<b>\$</b>	<b>86.79</b>	<b>\$ 86.21</b>	<b>\$ 181.52</b>	<b>\$ 131.43</b>	<b>\$ 331.13</b>	<b>\$ 766.78</b>	<b>\$ 1,675.18</b>	<b>\$ 2,396.83</b>
[13]	<b>Annual Carrying Costs on Investments</b>	<b>\$</b>	<b>931.06</b>	<b>\$ 930.48</b>	<b>\$ 1,025.79</b>	<b>\$ 975.70</b>	<b>\$ 1,175.41</b>	<b>\$ 1,249.67</b>	<b>\$ 2,158.07</b>	<b>\$ 2,987.71</b>
	line [5] + line [12]									
<b>Annual O&amp;M Expenses</b>										
[14]	Customer Related Distribution Plant	\$	102.00	\$ 102.00	\$ 102.00	\$ 102.00	\$ 102.00	\$ 58.14	\$ 58.14	\$ -
[15]	Meter Operations & Maintenance	\$	10.54	\$ 10.40	\$ 33.17	\$ 16.10	\$ 79.12	\$ 183.21	\$ 400.27	\$ 572.70
[16]	Meter Reading	\$	8.64	\$ 8.64	\$ 8.64	\$ 1.44	\$ 18.19	\$ 47.21	\$ 74.85	\$ 74.85
[17]	Bill Printing & Receipt Services	\$	3.98	\$ 3.98	\$ 3.98	\$ 3.98	\$ 3.98	\$ 3.98	\$ 3.98	\$ 3.98
[18]	Other Customer Service	\$	39.97	\$ 39.97	\$ 39.97	\$ 39.97	\$ 39.97	\$ 39.97	\$ 39.97	\$ 39.97
[19]	Customer Assistance	\$	13.33	\$ 13.32	\$ 13.61	\$ 14.93	\$ 13.70	\$ 16.68	\$ 27.45	\$ 53.18
[20]	Total O&M Expenses	\$	178.45	\$ 178.29	\$ 201.36	\$ 178.42	\$ 256.96	\$ 349.19	\$ 604.65	\$ 744.67
[21]	<b>Total Annual Gas O&amp;M plus A&amp;G Expenses</b>	<b>53.16%</b>	<b>\$ 273.31</b>	<b>\$ 273.08</b>	<b>\$ 308.41</b>	<b>\$ 273.26</b>	<b>\$ 393.56</b>	<b>\$ 534.83</b>	<b>\$ 926.09</b>	<b>\$ 1,140.55</b>
	line [20] * 1.5316									
			273.31							
<b>Annual Working Capital Costs</b>										
[22]	Materials and Supplies	0.77%	\$ 79.97	\$ 79.92	\$ 87.94	\$ 83.72	\$ 100.53	\$ 106.10	\$ 182.56	\$ 201.74
	line [2] + line [9] * 0.77%									
[23]	Prepayments	14.31%	\$ 39.11	\$ 39.07	\$ 44.13	\$ 39.10	\$ 56.31	\$ 76.53	\$ 132.51	\$ 163.20
	line [21] * 14.31%									
[24]	Working Capital for Expenses	\$	39.04	\$ 39.01	\$ 44.06	\$ 39.04	\$ 56.22	\$ 76.40	\$ 132.30	\$ 162.94
	line [21] * 1/7									
[25]	Total Working Capital Costs	\$	158.12	\$ 158.00	\$ 176.13	\$ 161.86	\$ 213.07	\$ 259.03	\$ 447.37	\$ 527.88
[26]	<b>Annual Working Capital Rev Req</b>	<b>10.06%</b>	<b>\$ 15.90</b>	<b>\$ 15.89</b>	<b>\$ 17.71</b>	<b>\$ 16.28</b>	<b>\$ 21.43</b>	<b>\$ 26.05</b>	<b>\$ 44.99</b>	<b>\$ 53.08</b>
	line [25] * 10.06%									
[27]	<b>Annual Marginal Cost per Electric Customer</b>	<b>\$</b>	<b>1,220.27</b>	<b>\$ 1,219.45</b>	<b>\$ 1,351.92</b>	<b>\$ 1,265.24</b>	<b>\$ 1,590.39</b>	<b>\$ 1,810.55</b>	<b>\$ 3,129.14</b>	<b>\$ 3,590.46</b>
	line [13] + line [21] + line [26]									
[28]	Approximate Monthly Customer Cost	\$	101.69	\$ 101.62	\$ 112.66	\$ 105.44	\$ 132.53	\$ 150.88	\$ 260.76	\$ 299.20

		SC1 RNH	SC1 RHT	SC6 VTOU	SC2 ND	SC2 SD	SC2 PD	SC3 PRI	SC13 SUBS	SC13 TRANS
[1]	Rate Class Allocators									
[1]	avg emb'd meter cost & initial installation	\$107.95	\$106.53	\$339.86	\$164.96	\$810.65	\$1,877.16	\$4,101.01	\$5,867.69	\$7,314.23
[2]	ratio of emb'd COS cost/meter	0.32	0.31	1.00	0.49	2.39	5.52	12.07	17.27	21.52
[3]	Estmtd # rate year customers	229,572	26,804	1,000	29,432	11,365	153	31	8	5
[4]	meter O&M allocator	\$24,781,633	\$2,855,435	\$339,858	\$4,855,130	\$9,213,050	\$287,206	\$127,131	\$46,941	\$36,571
[5]	meter O&M rev req	\$2,418,735	\$278,696	\$33,171	\$473,870	\$899,212	\$28,032	\$12,408	\$4,582	\$3,569
[6]	# meter readings per year	1,377,432	160,824	6,000	29,432	143,654	5,018	1,612	416	260
[7]	approx # bills per year	2,754,864	321,648	12,000	353,184	136,380	1,836	372	96	60
	CUSTAC (PSCs 903-905)	75.82%	8.85%	0.33%	9.72%	3.75%	0.05%	0.01%	0.00%	0.00%
	CUSVCS3 (PSCs907-916)	71.93%	8.39%	0.32%	10.33%	3.66%	0.06%	0.02%	0.01%	0.03%

CENTRAL HUDSON GAS & ELECTRIC CORPORATION

GAS DEPARTMENT

Marginal Cost of Service Study

Schedule A – Cost per Unit (Mcf/Ccf)

Schedule B – Cost per Customer

Schedule C - Transmission Marginal Cost per Mcf of MDQ

Central Hudson Gas & Electric Corporation  
Cases 17-E- & 17-G-  
Gas Marginal Cost - Cost per Mcf/Ccf

		Transmission	Distribution	Regulators & Meters	Combined
<b>Gas Plant Investment</b>					
[1]	Average Plant Investment (2018-2022)	\$ 60,982	\$ 5,815,509	\$ 173	\$ 5,876,665
[2]	plus General & Common Plant Loader	9.81% \$ 66,963	\$ 6,385,846	\$ 190	\$ 6,452,999
[3]	Economic Carrying Charge	7.82% \$ 5,237.00			
[4]		7.58%	\$ 484,047		
		9.71%		\$ 18	
[5]	Plant A&G Loader line [2] * 0.30%	0.30% \$ 201	\$ 19,158	\$ 1	
[6]	<b>Annual Carrying Cost on Plant Investment</b>	<b>\$ 5,438</b>	<b>\$ 503,205</b>	<b>\$ 19</b>	<b>\$ 508,662</b>
[7]	Incremental Annual Sales (2018-2022)	36,148	36,148	36,148	36,148
[8]	<b>Annual Carrying Cost on Plant Investment per Mcf</b> line [6] / line [7]	<b>\$ 0.150</b>	<b>\$ 13.921</b>	<b>\$ 0.001</b>	<b>\$ 14.072</b>
<b>Annual O&amp;M Expense</b>					
[9]	O&M Expense per Mcf	\$ 0.237	\$ 0.467		\$ 0.704
[10]	<b>Annual Gas O&amp;M plus A&amp;G Expenses</b>	<b>56.65% \$ 0.371</b>	<b>\$ 0.732</b>		<b>\$ 1.103</b>
<b>Annual Working Capital Costs</b>					
[11]	Materials and Supplies line [2] / line [7] * 0.77%	0.77%			\$ 1.367
[12]	Prepayments line [10] * 14.31%	14.31%			\$ 0.158
[13]	Working Capital for Expenses line [10] * 1/7	14.29%			\$ 0.158
[14]	Total Working Capital Costs				\$ 1.683
[15]	<b>Annual Working Capital Revenue Requirement</b> line [14] * 10.06%	<b>10.06%</b>			<b>\$ 0.169</b>
[16]	<b>Annual Marginal Cost per Mcf</b>				<b>\$ 15.344</b>
	<b>Annual Marginal Cost per Ccf</b>				<b>\$ 1.5344</b>

**Central Hudson Gas & Electric Corporation**  
**Cases 17-E-\_\_\_\_ & 17-G-\_\_\_\_**  
**Gas Marginal Cost - Cost per Customer**

		Residential	Non-Residential
	<b>Gas Plant Investment (average 2018-2022)</b>		
[1]	Customer Related Distribution Plant	\$ 1,873,513	\$ 1,873,513
[2]	Non-Residential Regulator Installations	\$ -	\$ 312
[3]	Services	\$ 3,248,078	\$ 3,248,078
[4]	Meters	\$ 416,107	\$ 257,205
[5]	Meter Installations	\$ 1,200,201	\$ 1,200,201
[6]	Total Incremental Annual Customers (2015-2019)	674	139
	<b>Gas Plant Investment</b>		
[7]	Customer Related Distribution Plant (2018-2022)	\$ 2,304.44	\$ 2,304.44
	line [1] / sum line [6]		
[8]	plus General & Common Plant Loader	9.81% \$ 2,530.44	\$ 2,530.44
[9]	Economic Carrying Charge	7.58% \$ 191.81	\$ 191.81
[10]	Plant A&G Loader	0.30% \$ 7.59	\$ 7.59
[11]	<b>Annual Carrying Cost on Dist. Plant Investment</b>	<b>\$ 199.40</b>	<b>\$ 199.40</b>
	line [9] + line [10]		
[12]	Non-Residential Regulator Installations	\$ -	\$ 2.24
[13]	plus General & Common Plant Loader	9.81% \$ -	\$ 2.46
[14]	Economic Carrying Charge	9.71% \$ -	\$ 0.24
[15]	Plant A&G Loader	0.30% \$ -	\$ 0.01
[16]	<b>Annual Carrying Cost on Regulators</b>	<b>\$ -</b>	<b>\$ 0.25</b>
	line [14] + line [15]		
[17]	Services	\$ 3,995.18	\$ 3,995.18
[18]	plus General & Common Plant Loader	9.81% \$ 4,386.99	\$ 4,386.99
[19]	Economic Carrying Charge	7.58% \$ 332.53	\$ 332.53
[20]	Plant A&G Loader	0.30% \$ 13.16	\$ 13.16
[21]	<b>Annual Carrying Cost on Services</b>	<b>\$ 345.69</b>	<b>\$ 345.69</b>
	line [19] + line [20]		
[22]	Meters	\$ 2,093.63	\$ 3,326.66
[23]	plus General & Common Plant Loader	9.81% \$ 2,298.96	\$ 3,652.91
[24]	Economic Carrying Charge	9.71% \$ 223.23	\$ 354.70
[25]	Plant A&G Loader	0.30% \$ 6.90	\$ 10.96
[26]	<b>Annual Carrying Cost on Meters</b>	<b>\$ 230.13</b>	<b>\$ 365.66</b>
	line [24] + line [25]		
[27]	<b>Total Annual Carrying Cost on Investment</b>	<b>\$ 775.22</b>	<b>\$ 911.00</b>
	line [11] + line [16] + line [21] + line [26]		
	<b>Annual O&amp;M Expenses</b>		
[28]	Customer Related Distribution Plant	\$ 36.94	\$ 36.94
[29]	Meters & Regulators	\$ 27.77	\$ 92.90
[30]	Installations on Customer Premises	\$ 5.30	\$ 5.30
[31]	Service Laterals	\$ 9.80	\$ 9.80
[32]	Industrial Regulator Stations	\$ -	\$ 1.34
[33]	Meter Reading	\$ 10.91	\$ 21.83
[34]	Bill Printing & Receipt Services	\$ 12.17	\$ 12.17
[35]	Other Customer Service	\$ 38.45	\$ 37.22
[36]	Customer Assistance	\$ 22.58	\$ 23.12
[37]	Total O&M Expenses	\$ 163.92	\$ 240.62
	sum of lines [28] through [36]		
[38]	<b>Total Annual Gas O&amp;M plus A&amp;G Expenses</b>	<b>56.65% \$ 256.78</b>	<b>\$ 376.93</b>
	line [37] * 1.5665%		
	<b>Annual Working Capital Costs</b>		
[39]	Materials and Supplies	0.77% \$ 70.57	\$ 80.96
	line [8] + line [13] + line [18] + line[23] * 0.77%		
[40]	Prepayments	14.31% \$ 36.74	\$ 53.93
	line [38] * 14.31%		
[41]	Working Capital for Expenses	14.29% \$ 36.68	\$ 53.85
	line [38] * 14.29%		
[42]	Total Working Capital Costs	\$ 144.00	\$ 188.74
	line [39] + line [40] + line [41]		
[43]	<b>Annual Working Capital Rev Req</b>	<b>10.06% \$ 14.48</b>	<b>\$ 18.98</b>
	line [42] * 10.06%		
[44]	<b>Annual Marginal Cost per Gas Customer</b>	<b>\$ 1,046.48</b>	<b>\$ 1,306.91</b>
	line [27] + line [38] + line [43]		
	Approximate Monthly Customer Cost	\$ 87.21	\$ 108.91

Central Hudson Gas & Electric Corporation  
Cases 17-E-\_\_\_ & 17-G-\_\_\_  
Gas Transmission Marginal Cost - Cost per Mcf of MDQ

						<u>Transmission</u>	
1	[1]	<b>Gas Plant Investment</b>					
		Long Term Investment at System MDQ				\$ 984.35	
2	[2]	plus General & Common Plant Loader		9.81%		\$ 1,080.88	
3	[3]	Economic Carrying Charge		7.82%	of	\$ 1,080.88	\$ 84.52
4	[4]	Plant A&G Loader		0.30%	of	\$ 84.52	\$ 0.25
5	[5]	<b>Annual Carrying Cost on Plant Investment</b>					<b>\$ 84.77</b>
6	[6]	<b>Annual O&amp;M Expense</b>					
		O&M Expense per Mcf				\$27.23	
7	[7]	<b>Annual Gas O&amp;M plus A&amp;G Expenses</b>		<b>56.65%</b>			<b>\$ 42.65</b>
8	[8]	<b>Annual Working Capital Costs</b>					
		Materials and Supplies		0.77%	of	\$ 1,080.88	\$ 8.28
9	[9]	Prepayments		14.31%	of	\$ 42.65	\$ 6.10
10	[10]	Working Capital for Expenses		14.29%	of	\$ 42.65	\$ 6.09
11	[11]	<b>Annual Working Capital Revenue Requirement</b>		<b>10.06%</b>	of	\$ 20.470	<b>\$ 2.06</b>
12	[12]	<b>Annual Marginal Cost per Mcf of MDQ [5] + [7] + [11]</b>					<b>\$ 129.48</b>
13	[13]	<b>Projected Rate Year Mcf of MDQ</b>					127,762
14	[14]	<b>Projected Transmission Revenue Requirement[12] x [13]</b>					\$ 16,542,615
15	[15]	<b>Projected Rate Year Sales - Mcf</b>					15,542,650
		Load Factor [15] / ([13] x 365)					33.3%
16	[16]	<b>Transmission Revenue Requirement - \$/Mcf[14] / [15]</b>					\$ 1.0643
		<b>Transmission Revenue Requirement at 70% Load Factor - \$/Mcf</b>					\$ 0.5068
		<b>Transmission Revenue Requirement at 70% Load Factor - \$/Ccf</b>					\$ 0.0507

**Central Hudson Gas & Electric Corporation**  
**Cases 17-E-\_\_\_\_ & 17-G-\_\_\_\_**

**Comparison of Electric Rates**

			<b>SC1 RNH</b>	<b>SC1 RHT</b>	<b>SC6 TOU</b>	<b>SC2 ND</b>	<b>SC2 SD</b>	<b>SC2 PD</b>	<b>SC3 PRI</b>	<b>SC13 SUBS</b>	<b>SC13 TRANS</b>
				Residential				Commercial & Industrial			
Marginal	Distribution Cost per kW/Month	Exhibit ____(COSP-4), Schedule A	\$ 11.00	\$ 11.00	\$ 11.00	\$ 11.00	\$ 10.24	\$ 8.12	\$ 8.12	\$ 5.01	\$ -
	Transmission Cost per kWh	Exhibit ____(COSP-4), Schedule A	\$ 0.00341	\$ 0.00341	\$ 0.00341	\$ 0.00341	\$ 0.00341	\$ 0.00330	\$ 0.00330	\$ 0.00323	\$ 0.00320
	Customer Cost per Month	Exhibit ____(COSP-4), Schedule B	\$ 101.69	\$ 101.62	\$ 112.66	\$ 105.44	\$ 132.53	\$ 150.88	\$ 260.76	\$ 299.20	\$ 393.94
	Equivalent Cost per kW/Month		\$ 11.42	\$ 11.51	\$ 11.77	\$ 11.65	\$ 11.30	\$ 9.39	\$ 9.61	\$ 7.27	\$ 1.93
Embedded	Demand Delivery Rate \$/kW/Month	Exhibit ____(COSP-1), Schedule C, Page 2 of 2 <sup>1</sup>	\$ 5.48	\$ 5.64	\$ 6.51	\$ 6.67	\$ 11.75	\$ 5.29	\$ 6.69	\$ 10.07	\$ 3.66
	Energy Delivery Rate \$/kWh	Exhibit ____(COSP-1), Schedule C, Page 2 of 2	\$ 0.00404	\$ 0.00404	\$ 0.00404	\$ 0.00404	\$ 0.00404	\$ 0.00391	\$ 0.00397	\$ 0.00382	\$ 0.00378
	Customer Charge per Month	Exhibit ____(COSP-1), Schedule C, Page 2 of 2	\$ 48.36	\$ 48.28	\$ 57.48	\$ 52.55	\$ 128.45	\$ 289.63	\$ 933.62	\$ 1,970.50	\$ 5,724.37
	Equivalent Cost per kW/Month		\$ 5.98	\$ 6.25	\$ 7.43	\$ 7.44	\$ 13.01	\$ 6.80	\$ 8.48	\$ 12.74	\$ 5.95

**Comparison of Gas Rates**

			<b>SC1 &amp; 12</b>	<b>SC2, 6 &amp; 13</b>
Marginal	Demand Cost per Ccf	Exhibit ____(COSP-5), Schedule A	\$ 1.53440	\$ 1.53440
	Customer Cost per Month	Exhibit ____(COSP-5), Schedule B	\$ 87.21	\$ 108.91
Embedded	Delivery Rate \$/Ccf	Exhibit ____(COSP-2), Schedule C, Page 2 of 2	\$ 0.40483	\$ 0.36803
	Customer Charge per Month	Exhibit ____(COSP-2), Schedule C, Page 2 of 2	\$ 54.45	\$ 83.80