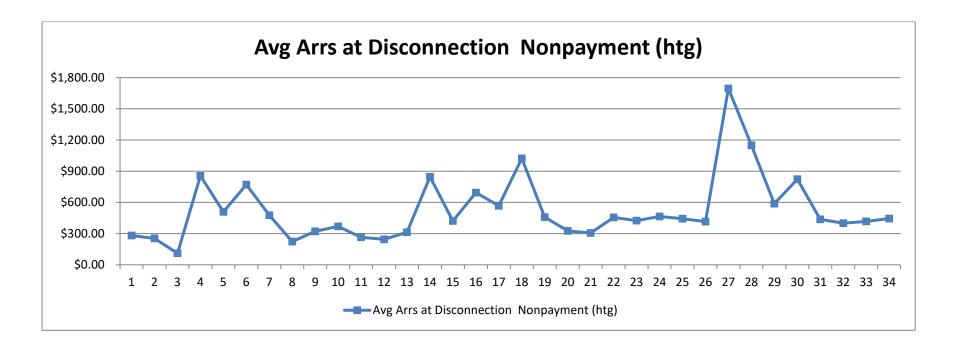
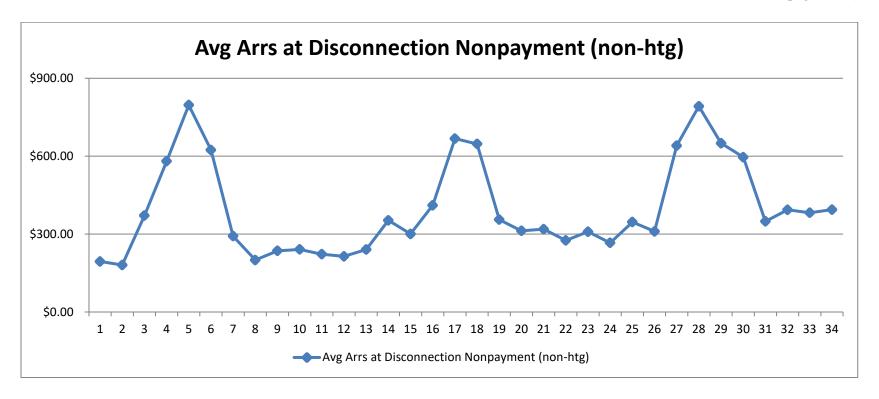
Colton Schedules

TWH-1-068 (heating)	Avg Arrears (b)	Avg Current Bill for Accts in Arrs (c)	Ratio: Arrears to Current Bill
Oct-16	\$300.90	\$105.71	2.85
Nov-16	\$290.04	\$115.72	2.51
Dec-16	\$297.86	\$140.25	2.12
Jan-17	\$337.24	\$189.16	1.78
Feb-17	\$377.11	\$173.13	2.18
Mar-17	\$386.78	\$178.96	2.16
Apr-17	\$398.43	\$165.40	2.41
May-17	\$391.51	\$120.65	3.25
Jun-17	\$361.12	\$119.55	3.02
Jul-17	\$344.01	\$112.24	3.06
Aug-17	\$344.88	\$126.41	2.73
Sep-17	\$330.65	\$117.58	2.81
Oct-17	\$314.65	\$91.60	3.44
Nov-17	\$311.46	\$114.22	2.73
Dec-17	\$316.34	\$146.84	2.15
Jan-18	\$360.03	\$213.66	1.69
Feb-18	\$403.12	\$191.41	2.11
Mar-18	\$424.90	\$173.31	2.45
Apr-18	\$399.96	\$152.04	2.63
May-18	\$405.47	\$111.10	3.65
Jun-18	\$382.51	\$103.91	3.68
Jul-18	\$368.62	\$115.93	3.18
Aug-18	\$380.77	\$132.73	2.87
Sep-18	\$359.57	\$126.21	2.85
Oct-18	\$344.95	\$109.34	3.15
Nov-18	\$321.78	\$111.79	2.88
Dec-18	\$350.88	\$139.47	2.52
Jan-19	\$391.43	\$197.34	1.98
Feb-19	\$412.88	\$204.53	2.02
Mar-19	\$430.34	\$205.63	2.09
Apr-19	\$421.14	\$160.98	2.62
May-19	\$414.09	\$130.69	3.17
Jun-19	\$406.15	\$119.70	3.39
Jul-19	\$380.97	\$128.83	2.96

TWH-1-068 (non-heating)	Avg Arrears (b)	Avg Current Bill for Accts in Arrs (c)	Current Bill + Arrs (3-mo DPA)
Oct-16	\$245.19	\$99.53	\$181.26
Nov-16	\$238.60	\$97.19	\$176.72
Dec-16	\$242.94	\$109.05	\$190.03
Jan-17	\$267.86	\$133.89	\$223.18
Feb-17	\$290.96	\$118.31	\$215.30
Mar-17	\$290.67	\$117.03	\$213.92
Apr-17	\$285.47	\$113.18	\$208.34
May-17	\$287.79	\$92.97	\$188.90
Jun-17	\$273.10	\$102.81	\$193.84
Jul-17	\$266.47	\$105.14	\$193.96
Aug-17	\$272.52	\$118.55	\$209.39
Sep-17	\$261.88	\$107.71	\$195.00
Oct-17	\$253.07	\$88.00	\$172.36
Nov-17	\$250.84	\$96.57	\$180.18
Dec-17	\$248.96	\$111.17	\$194.16
Jan-18	\$276.82	\$143.96	\$236.23
Feb-18	\$304.30	\$126.85	\$228.28
Mar-18	\$310.55	\$119.98	\$223.50
Apr-18	\$289.54	\$102.78	\$199.29
May-18	\$298.82	\$87.58	\$187.19
Jun-18	\$286.74	\$91.83	\$187.41
Jul-18	\$281.17	\$108.42	\$202.14
Aug-18	\$291.58	\$125.37	\$222.56
Sep-18	\$280.79	\$123.18	\$216.78
Oct-18	\$274.99	\$96.41	\$188.07
Nov-18	\$264.13	\$92.04	\$180.08
Dec-18	\$284.09	\$107.03	\$201.73
Jan-19	\$312.16	\$131.74	\$235.79
Feb-19	\$327.56	\$131.83	\$241.02
Mar-19	\$345.12	\$128.84	\$243.88
Apr-19	\$317.64	\$108.04	\$213.92
May-19	\$318.83	\$95.64	\$201.92
Jun-19	\$310.61	\$98.80	\$202.34
Jul-19	\$298.06	\$119.82	\$219.17

	All Arrears	No. \$1 - \$300	No. \$301+	Pct Arrs \$1 - \$300	Pct Arrs \$301+
October-16	9,797	7,932	1,865	81%	19%
November-16	9,961	8,110	1,851	81%	19%
December-16	10,200	7,882	2,318	77%	23%
January-17	10,766	7,833	2,933	73%	27%
February-17	10,181	7,385	2,796	73%	27%
March-17	10,313	7,644	2,669	74%	26%
April-17	10,212	7,582	2,630	74%	26%
May-17	9,644	7,416	2,228	77%	23%
June-17	9,751	7,695	2,056	79%	21%
July-17	9,463	7,442	2,021	79%	21%
August-17	9,633	7,655	1,978	79%	21%
September-17	10,007	8,118	1,889	81%	19%
October-17	9,530	7,774	1,756	82%	18%
November-17	9,766	7,943	1,823	81%	19%
December-17	9,573	7,262	2,311	76%	24%
January-18	9,847	6,874	2,973	70%	30%
February-18	9,307	6,437	2,870	69%	31%
March-18	9,321	6,626	2,695	71%	29%
April-18	9,043	6,489	2,554	72%	28%
May-18	8,977	6,673	2,304	74%	26%
June-18	8,798	6,813	1,985	77%	23%
July-18	8,513	6,552	1,961	77%	23%
August-18	8,662	6,647	2,015	77%	23%
September-18	8,855	6,854	2,001	77%	23%
October-18	8,964	7,160	1,804	80%	20%
November-18	9,436	7,369	2,067	78%	22%
December-18	10,063	7,196	2,867	72%	28%
January-19	10,607	7,213	3,394	68%	32%
February-19	10,246	6,755	3,491	66%	34%
March-19	10,404	7,044	3,360	68%	32%
April-19	10,632	7,495	3,137	70%	30%
May-19	10,496	7,590	2,906	72%	28%
June-19	10,651	7,966	2,685	75%	25%
July-19	10,226	7,713	2,513	75%	25%





Schedule RDC-4

		Number o		l Accounts by Arre WH-1-050(b)	earage Category (b)		duic KDC-4
Year	Month	0-30 Days	31-60 Days	61-90 Days	91-120 Days	120+ Days	61+ Days
2016	10	11,862	5,091	3,180	1,627	1,073	5,880
2016	11	12,230	5,519	3,254	1,980	1,168	6,402
2016	12	12,277	5,905	4,095	2,509	1,650	8,254
2017	1	12,545	5,479	4,421	3,231	2,222	9,874
2017	2	12,542	5,423	4,158	3,038	2,408	9,604
2017	3	12,503	5,678	3,884	2,611	2,268	8,763
2017	4	12,420	5,798	3,684	2,590	2,154	8,428
2017	5	12,288	4,864	3,608	2,413	1,857	7,878
2017	6	11,766	5,300	3,142	2,304	1,677	7,123
2017	7	11,728	5,176	3,112	2,211	1,485	6,808
2017	8	11,667	4,921	2,965	1,980	1,461	6,406
2017	9	11,786	5,175	2,984	1,974	1,350	6,308
2017	10	11,799	5,288	3,404	1,939	1,323	6,666
2017	11	11,509	5,109	3,594	2,304	1,436	7,334
2017	12	11,509	5,666	3,866	2,784	1,827	8,477
2018	1	11,316	5,130	4,241	2,766	2,237	9,244
2018	2	11,199	5,142	3,894	2,818	2,133	8,845
2018	3	11,141	5,320	3,614	2,765	2,125	8,504
2018	4	10,962	5,529	3,838	2,820	1,967	8,625
2018	5	10,885	5,008	3,889	2,876	2,129	8,894
2018	6	10,690	4,960	3,278	2,770	1,987	8,035
2018	7	10,474	4,720	3,340	2,572	1,867	7,779
2018	8	10,451	4,262	2,997	2,086	1,718	6,801
2018	9	10,595	4,655	2,619	1,980	1,447	6,046
2018	10	10,797	4,563	3,056	1,811	1,400	6,267
2018	11	11,794	5,336	3,724	2,398	1,595	7,717
2018	12	12,504	5,870	4,437	3,262	2,161	9,860
2019	1	12,565	5,772	4,137	3,485	2,689	10,311
2019	2	12,779	5,935	4,084	3,195	2,714	9,993
2019	3	13,215	5,669	4,074	3,284	2,554	9,912
2019	4	13,745	6,195	4,282	3,259	2,460	10,001
2019	5	13,394	6,225	4,168	3,259	2,430	9,857
2019	6	13,648	5,910	3,817	3,268	2,240	9,325
2019	7	13,458	5,775	4,081	2,899	2,421	9,401

	A	(red Payments Arrangements by Arrea (TWH-1-073(c))	rage Ranges
Year	Month	Average Down Payment (\$0-\$100)	Average Down Payment (\$101-\$200)	Average Down Payment (\$201 - \$300)
2016	10	\$137.82	\$159.12	\$187.24
2016	11	\$128.46	\$151.49	\$170.56
2016	12	\$140.87	\$142.84	\$154.77
2017	1	\$151.90	\$154.08	\$164.64
2017	2	\$192.89	\$166.01	\$181.15
2017	3	\$172.05	\$172.47	\$182.02
2017	4	\$148.06	\$155.74	\$173.13
2017	5	\$141.56	\$155.89	\$187.87
2017	6	\$140.80	\$158.27	\$189.22
2017	7	\$161.71	\$180.61	\$229.67
2017	8	\$158.61	\$160.64	\$200.87
2017	9	\$151.12	\$163.54	\$187.81
2017	10	\$156.21	\$155.24	\$190.99
2017	11	\$147.59	\$143.42	\$158.12
2017	12	\$129.83	\$141.51	\$153.94
2018	1	\$137.85	\$148.92	\$147.97
2018	2	\$159.75	\$155.40	\$164.23
2018	3	\$168.97	\$176.09	\$174.91
2018	4	\$173.14	\$700.49 ⁵²	\$177.51
2018	5	\$159.81	\$155.54	\$161.24
2018	6	\$162.20	\$155.57	\$157.08
2018	7	\$146.97	\$145.69	\$156.85
2018	8	\$138.19	\$138.92	\$149.56
2018	9	\$114.79	\$143.53	\$142.89
2018	10	\$179.97	\$180.44	\$205.26
2018	11	\$228.03	\$246.36	\$198.13
2018	12	\$156.77	\$182.16	\$166.73
2019	1	\$189.09	\$193.59	\$218.11
2019	2	\$214.63	\$217.49	\$259.92
2019	3	\$176.65	\$159.83	\$158.06
2019	4	\$176.50	\$140.82	\$131.19
2019	5	\$140.02	\$126.17	\$125.86
2019	6	\$127.05	\$97.72	\$115.76
2019	7	\$126.32	\$91.94	\$100.66

⁵² There may be question as to whether there was a data input error for this month in the information provided by the Company in response to discovery.

RDC-6 (page 1 of 2)

				(page 1 of 2
	Income Neede	ed to Pay Arrears Plus Current I		on)
		(non-heating)		
	Avg Arrears (b)	Current Bill + Arrs (3-mo DPA) (25% EAP) ⁵³	Total 3-Month Bill ⁵⁴	N
0+16	Ć24F 10	\$156.38	\$551	Necessary Income \$44,077
Oct-16	\$245.19	\$150.56	\$579	\$46,298
Nov-16	\$238.60			
Dec-16	\$242.94	\$162.77	\$604	\$48,335
Jan-17	\$267.86	\$189.70	\$637	\$50,967
Feb-17	\$290.96	\$185.72	\$639	\$51,158
Mar-17	\$290.67	\$184.66	\$614	\$49,108
Apr-17	\$285.47	\$180.04	\$594	\$47,554
May-17	\$287.79	\$165.66	\$589	\$47,097
Jun-17	\$273.10	\$168.14	\$600	\$47,968
Jul-17	\$266.47	\$167.68	\$598	\$47,830
Aug-17	\$272.52	\$179.75	\$587	\$46,942
Sep-17	\$261.88	\$168.08	\$554	\$44,333
Oct-17	\$253.07	\$150.36	\$549	\$43,905
Nov-17	\$250.84	\$156.04	\$603	\$48,203
Dec-17	\$248.96	\$166.36	\$631	\$50,475
Jan-18	\$276.82	\$200.24	\$668	\$53,409
Feb-18	\$304.30	\$196.57	9999	9999
Mar-18	\$310.55	\$193.50	9999	9999
Apr-18	\$289.54	\$173.60	\$572	\$45,738
May-18	\$298.82	\$165.29	\$587	\$46,932
Jun-18	\$286.74	\$164.45	\$612	\$48,989
Jul-18	\$281.17	\$175.04	\$638	\$51,051
Aug-18	\$291.58	\$191.22	\$637	\$50,923
Sep-18	\$280.79	\$185.98	\$592	\$47,394
Oct-18	\$274.99	\$163.97	\$570	\$45,638
Nov-18	\$264.13	\$157.07	\$595	\$47,595
Dec-18	\$284.09	\$174.97	\$655	\$52,375
Jan-19	\$312.16	\$202.86	9999	9999
Feb-19	\$327.56	\$208.06	9999	9999
Mar-19	\$345.12	\$211.67	9999	9999
Apr-19	\$317.64	\$186.91	9999	9999
May-19	\$318.83	\$178.01	9999	9999
Jun-19	\$310.61	\$177.64	9999	9999
Jul-19	\$298.06	\$189.22	XXX ⁵⁵	XXX

 $^{^{53}}$ The current monthly bill for accounts in arrears was reduced by 25% to qualitatively incorporate the impact of the EAP discount.

⁵⁴ In this Schedule, a month with an average arrears of \$300 or more is marked by "9999," since, on average, customers in such months would qualify for New Start and would not enter into payment plans.

⁵⁵ July 2019 is excluded from these calculations since there were not three months of current bills to include.

RDC-6 (page 2 of 2)

				(page 2 of 2
	Income Needed	d to Pay Arrears Plus Current B	ill (7% affordability definit	ion)
		(non-heating)		
	Avg Arrears (b)	Avg Current Bill for Accts in Arrs (c) ⁵⁶	Total 3-Month Bill ⁵⁷	Necessary Income (5%)
Oct-16	\$245.19	\$99.53	\$551	\$31,483
Nov-16	\$238.60	\$97.19	\$579	\$33,070
Dec-16	\$242.94	\$109.05	\$604	\$34,525
Jan-17	\$267.86	\$133.89	\$637	\$36,405
Feb-17	\$290.96	\$118.31	\$639	\$36,542
Mar-17	\$290.67	\$117.03	\$614	\$35,077
Apr-17	\$285.47	\$113.18	\$594	\$33,967
May-17	\$287.79	\$92.97	\$589	\$33,641
Jun-17	\$273.10	\$102.81	\$600	\$34,263
Jul-17	\$266.47	\$105.14	\$598	\$34,164
Aug-17	\$272.52	\$118.55	\$587	\$33,530
Sep-17	\$261.88	\$107.71	\$554	\$31,666
Oct-17	\$253.07	\$88.00	\$549	\$31,361
Nov-17	\$250.84	\$96.57	\$603	\$34,431
Dec-17	\$248.96	\$111.17	\$631	\$36,054
Jan-18	\$276.82	\$143.96	\$668	\$38,149
Feb-18	\$304.30	\$126.85	9999	9999
Mar-18	\$310.55	\$119.98	9999	9999
Apr-18	\$289.54	\$102.78	\$572	\$32,670
May-18	\$298.82	\$87.58	\$587	\$33,523
Jun-18	\$286.74	\$91.83	\$612	\$34,992
Jul-18	\$281.17	\$108.42	\$638	\$36,465
Aug-18	\$291.58	\$125.37	\$637	\$36,374
Sep-18	\$280.79	\$123.18	\$592	\$33,853
Oct-18	\$274.99	\$96.41	\$570	\$32,598
Nov-18	\$264.13	\$92.04	\$595	\$33,997
Dec-18	\$284.09	\$107.03	\$655	\$37,411
Jan-19	\$312.16	\$131.74	9999	9999
Feb-19	\$327.56	\$131.83	9999	9999
Mar-19	\$345.12	\$128.84	9999	9999
Apr-19	\$317.64	\$108.04	9999	9999
May-19	\$318.83	\$95.64	9999	9999
Jun-19	\$310.61	\$98.80	9999	9999
Jul-19	\$298.06	\$119.82	xxx ⁵⁸	XXX

 $^{^{56}}$ The current monthly bill for accounts in arrears was reduced by 25% to qualitatively incorporate the impact of the EAP discount.

⁵⁷ In this Schedule, a month with an average arrears of \$300 or more is marked by "9999," since, on average, customers in such months would qualify for New Start and would not enter into payment plans.

⁵⁸ July 2019 excluded since there were not three months of current bills to consider.

	A	В	C	D	E
	Total Budget Billing	Removed Credit Reason	Pct Removed— Credit B / A	Removed—Any Reason	Pct of Removed— Credit Reason B / D
Oct-16	11,888	120	1.0%	208	58%
Nov-16	11,928	129	1.1%	256	50%
Dec-16	11,971	178	1.5%	230	77%
Jan-17	12,081	174	1.4%	257	68%
Feb-17	11,418	119	1.0%	172	69%
Mar-17	12,306	58	0.5%	174	33%
Apr-17	10,789	153	1.4%	253	60%
May-17	12,136	174	1.4%	288	60%
Jun-17	12,109	132	1.1%	270	49%
Jul-17	11,473	160	1.4%	296	54%
Aug-17	12,029	192	1.6%	325	59%
Sep-17	11,950	166	1.4%	260	64%
Oct-17	11,298	133	1.2%	248	54%
Nov-17	12,049	114	0.9%	257	44%
Dec-17	11,134	184	1.7%	272	68%
Jan-18	11,975	171	1.4%	276	62%
Feb-18	11,417	25	0.2%	141	18%
Mar-18	12,277	60	0.5%	184	33%
Apr-18	11,925	17	0.1%	144	12%
May-18	12,379	24	0.2%	177	14%
Jun-18	12,347	41	0.3%	214	19%
Jul-18	12,361	52	0.4%	232	22%
Aug-18	12,465	42	0.3%	215	20%
Sep-18	11,692	55	0.5%	188	29%
Oct-18	12,704	65	0.5%	240	27%
Nov-18	11,933	49	0.4%	197	25%
Dec-18	11,921	44	0.4%	176	25%
Jan-19	12,913	86	0.7%	217	40%
Feb-19	12,134	72	0.6%	185	39%
Mar-19	13,177	54	0.4%	188	29%
Apr-19	13,213	52	0.4%	208	25%
May-19	13,168	58	0.4%	264	22%
Jun-19	13,105	58	0.4%	270	21%
Jul-19	13,045	79	0.6%	184	43%

	Percent of Custo		nts (with "Day 1" being [-1-009)	g Day bill issued)			
	% of Residential	Customers Making	-1-009)	% of Residential Customers Ma			
	Pay	ments		Payments			
Days from Bill to Pay	Monthly	Cumulative	Days from Bill to Pay	Monthly	Cumulative		
1	1.39%	1.39%	31	0.67%	68.36%		
2	0.78%	2.17%	32	0.70%	69.06%		
3	0.53%	2.70%	33	0.75%	69.81%		
4	0.65%	3.35%	34	0.58%	70.39%		
5	0.74%	4.09%	35 ⁵⁹	0.56%	70.95%		
6	0.75%	4.84%	36	0.66%	71.61%		
7	1.61%	6.45%	37	0.47%	72.08%		
8	3.53%	9.98%	38	0.31%	72.39%		
9	2.43%	12.41%	39	0.31%	72.70%		
10	1.85%	14.26%	40	0.35%	73.05%		
11	2.01%	16.27%	41	0.30%	73.35%		
12	1.83%	18.10%	42	0.39%	73.74%		
13	1.60%	19.70%	43	0.50%	74.24%		
14	2.03%	21.73%	44	0.41%	74.65%		
15	2.42%	24.15%	45	0.28%	74.93%		
16	1.69%	25.84%	46	0.31%	75.24%		
17	1.31%	27.15%	47	0.33%	75.57%		
18	1.48%	28.63%	48	0.26%	75.83%		
19	1.68%	30.31%	4960	0.31%	76.14%		
20	1.48%	31.79%	50	0.46%	76.60%		
21	2.29%	34.08%	51	0.39%	76.99%		
22	15.72%	49.80%	52	0.32%	77.31%		
23	2.50%	52.30%	53	0.32%	77.63%		
24	2.29%	54.59%	54	0.37%	78.00%		
25	2.73%	57.32%	55	0.32%	78.32%		
26	4.24%	61.56%	56	0.55%	78.87%		
27	1.98%	63.54%	57	0.53%	79.40%		
28	1.86%	65.40%	58	0.38%	79.78%		
29	1.49%	66.89%	59	0.20%	79.98%		
30	0.80%	67.69%	60	0.21%	80.19%		
			Not Paid in Full Within 60 Days	19.81%			

⁵⁹ Day 35 is the day on which a notice of a shutoff for nonpayment is mailed. (TWH-1-009). ⁶⁰ Day 49 is the first day on which a shutoff for nonpayment will be scheduled for field work. (TWH-1-009).

		А	В	С	D	E	F	G	Н	I
Mor	nth ⁶¹	Mailed Disconnect Notices ⁶²	Accts That did not Have Svc. Disconnected by Date on Notice ⁶³	Accts that Did not Have Svc Disconnected Due to Full Payment	Accts That did not Have Svc. Disconnected and Still retained	Accounts Where no Payments were Made Prior to	Pct Not Disconnected by Date on Notice	Pct Not Disconnected Due to Full Payment	Pct Not Disconnected and Retained Arrears Meriting Disconnection	Pct Where No Payment Made
				·	Arrears	Next Bill	B/A	СА	D/A	E/A
2016	10	19,634	17,766	6,215	10,693	7,073	90%	35%	54%	36%
2016	11	11,911	11,853	3,490	7,902	3,951	100%	29%	66%	33%
2016	12	7,931	7,865	1,771	5,777	2,088	99%	23%	73%	26%
2017	1	9,090	8,978	2,132	6,504	2,474	99%	24%	72%	27%
2017	2	13,993	13,753	3,923	9,113	4,640	98%	29%	65%	33%
2017	3	12,294	10,397	2,744	7,071	3,326	85%	26%	58%	27%
2017	4	23,938	20,101	7,217	11,791	8,310	84%	36%	49%	35%
2017	5	17,400	14,994	6,380	7,985	7,009	86%	43%	46%	40%
2017	6	9,778	8,078	2,545	5,053	3,025	83%	32%	52%	31%
2017	7	10,972	9,262	3,215	5,664	3,598	84%	35%	52%	33%
2017	8	12,598	10,704	3,587	6,609	4,095	85%	34%	52%	33%
2017	9	13,347	11,454	3,981	6,879	4,575	86%	35%	52%	34%
2017	10	14,299	13,236	4,521	8,065	5,171	93%	34%	56%	36%
2017	11	10,141	10,089	3,240	6,398	3,691	99%	32%	63%	36%
2017	12	8,435	8,384	2,725	5,287	3,097	99%	33%	63%	37%
2018	1	11,245	11,155	3,614	7,084	4,071	99%	32%	63%	36%
2018	2	11,897	11,711	3,997	7,055	4,656	98%	34%	59%	39%
2018	3	13,324	11,478	3,621	7,215	4,263	86%	32%	54%	32%
2018	4	13,064	11,054	3,885	6,530	4,524	85%	35%	50%	35%

 $^{^{61}}$ It is important to remember the presence of cold weather shutoff restrictions in shaded months.

⁶² TWH-1-024.

⁶³ Columns B/C/D/E: TWH-1-046.

2018	5	15,632	13,332	5,935	6,502	6,830	85%	45%	42%	44%
2018	6	12,038	10,441	4,249	5,530	4,911	87%	41%	46%	41%
2018	7	16,727	14,757	5,458	8,661	6,096	88%	37%	52%	36%
2018	8	23,497	21,359	7,626	13,035	8,324	91%	36%	55%	35%
2018	9	24,668	23,457	9,853	12,817	10,640	95%	42%	52%	43%
2018	10	18,183	16,621	7,808	8,047	8,574	91%	47%	44%	47%
2018	11	5,760	5,719	1,930	3,520	2,199	99%	34%	61%	38%
2018	12	2,697	2,655	339	2,225	430	98%	13%	82%	16%
2019	1	5,515	5,402	950	4,260	1,142	98%	18%	77%	21%
2019	2	5,834	5,643	1,168	4,118	1,525	97%	21%	71%	26%
2019	3	14,938	12,451	4,144	7,244	5,207	83%	33%	48%	35%
2019	4	12,848	10,251	3,468	6,061	4,190	80%	34%	47%	33%
2019	5	15,587	13,568	4,961	7,964	5,604	87%	37%	51%	36%
2019	6	16,229	14,751	5,975	8,126	6,625	91%	41%	50%	41%
2019	7	16,953	16,502	4,793	11,378	5,124	97%	29%	67%	30%

Budget Billing Customers by Month (TWH-1-019)							
	Count	Credits	Pct with Credits	Debits	Pct with Debits		
Oct-16	11,888	8,237	69%	2,981	25%		
Nov-16	11,928	8,550	72%	2,835	24%		
Dec-16	11,971	6,390	53%	4,988	42%		
Jan-17	12,081	4,515	37%	7,623	63%		
Feb-17	11,418	6,388	56%	4,441	39%		
Mar-17	12,306	8,110	66%	5,094	41%		
Apr-17	10,789	6,727	62%	3,619	34%		
May-17	12,136	9,834	81%	1,838	15%		
Jun-17	12,109	8,326	69%	3,720	31%		
Jul-17	11,473	5,121	45%	5,641	49%		
Aug-17	12,029	4,840	40%	5,734	48%		
Sep-17	11,950	6,801	57%	4,451	37%		
Oct-17	11,298	7,672	68%	2,995	27%		
Nov-17	12,049	9,211	76%	2,889	24%		
Dec-17	11,134	5,341	48%	5,199	47%		
Jan-18	11,975	3,530	29%	8,526	71%		
Feb-18	11,417	5,178	45%	5,630	49%		
Mar-18	12,277	6,430	52%	5,334	43%		
Apr-18	11,925	6,579	55%	4,862	41%		
May-18	12,379	10,267	83%	1,967	16%		
Jun-18	12,347	8,529	69%	3,234	26%		
Jul-18	12,361	5,317	43%	6,268	51%		
Aug-18	12,465	4,000	32%	7,328	59%		
Sep-18	11,692	4,364	37%	6,704	57%		
Oct-18	12,704	10,576	83%	3,041	24%		
Nov-18	11,933	7,906	66%	3,549	30%		
Dec-18	11,921	5,348	45%	6,081	51%		
Jan-19	12,913	5,581	43%	7,636	59%		
Feb-19	12,134	5,885	49%	5,722	47%		
Mar-19	13,177	7,626	58%	5,008	38%		
Apr-19	13,213	9,081	69%	3,673	28%		
May-19	13,168	10,482	80%	2,186	17%		
Jun-19	13,105	10,366	79%	2,198	17%		
Jul-19	13,045	6,568	50%	5,772	44%		

Deferred Payment Arrangements (Total Residential)											
Month	Existing	New	Default	DNP	Renegotiated	Complete	Total Pct Default (of New)	Pct Complete (of New)			
Oct-16	8006	4483	2015	142	2722	2468	44.9%	55.1%			
Nov-16	8568	4856	2441	36	2698	2415	50.3%	49.7%			
Dec-16	8531	3984	2224	52	2246	1760	55.8%	44.2%			
Jan-17	9582	4518	2554	126	2608	1964	56.5%	43.5%			
Feb-17	10252	3908	2243	270	2282	1665	57.4%	42.6%			
Mar-17	11648	4973	2814	712	2806	2159	56.6%	43.4%			
Apr-17	13334	6166	3433	968	3188	2733	55.7%	44.3%			
May-17	15787	7097	3747	1018	3719	3350	52.8%	47.2%			
Jun-17	14921	4287	2175	468	2387	2112	50.7%	49.3%			
Jul-17	14355	4165	2096	395	2396	2069	50.3%	49.7%			
Aug-17	14396	4198	1999	382	2366	2199	47.6%	52.4%			
Sep-17	14514	4143	2030	287	2444	2113	49.0%	51.0%			
Oct-17	9266	4672	2268	100	2699	2404	48.5%	51.5%			
Nov-17	8756	4818	2665	26	2712	2153	55.3%	44.7%			
Dec-17	8480	3807	2286	35	2243	1521	60.0%	40.0%			
Jan-18	9527	4696	2717	95	2761	1979	57.9%	42.1%			
Feb-18	10329	4343	2558	224	2439	1785	58.9%	41.1%			
Mar-18	11643	5118	2884	359	2644	2234	56.4%	43.6%			
Apr-18	13186	5428	2469	270	2501	2959	45.5%	54.5%			
May-18	14271	4971	2270	234	2299	2701	45.7%	54.3%			
Jun-18	14576	4231	2212	291	2153	2019	52.3%	47.7%			
Jul-18	14941	4553	2600	355	2466	1953	57.1%	42.9%			
Aug-18	14826	4536	2552	262	2451	1984	56.3%	43.7%			
Sep-18	14016	3362	1864	135	1801	1498	55.4%	44.6%			
Oct-18	12256	4448	2561	35	2185	1887	57.6%	42.4%			
Nov-18	10341	4198	2545	7	1878	1653	60.6%	39.4%			
Dec-18	8077	2720	1722	11	1273	998	63.3%	36.7%			
Jan-19	8108	4064	2572	71	1786	1492	63.3%	36.7%			
Feb-19	9170	3734	2386	258	1555	1348	63.9%	36.1%			
Mar-19	10429	4238	2752	447	1611	1486	64.9%	35.1%			
Apr-19	13321	6693	4053	987	1903	2640	60.6%	39.4%			
May-19	14010	4715	2631	556	1296	2084	55.8%	44.2%			
Jun-19	13393	4440	2209	430	922	2231	49.8%	50.2%			
Jul-19	13091	4290	1254	144	334	3036	29.2%	70.8%			
Total		154853	83801	10188	75774	71052	54.1%	45.9%			

			Deferred P	ayment A	rrangements (EA	AP)		
Month	Existing	New	Default	DNP	Renegotiated	Complete	Pct Default (of New)	Pct Complete (of New)
Oct-16	633	736	347	19	294	389	47.1%	52.9%
Nov-16	1,043	697	361	4	295	336	51.8%	48.2%
Dec-16	1,116	521	300	7	233	221	57.6%	42.4%
Jan-17	1,225	569	317	7	251	252	55.7%	44.3%
Feb-17	1,291	432	239	20	184	193	55.3%	44.7%
Mar-17	1,432	565	340	65	258	225	60.2%	39.8%
Apr-17	1,959	1,137	594	163	449	543	52.2%	47.8%
May-17	2,435	1,199	619	149	456	580	51.6%	48.4%
Jun-17	2,443	814	425	78	345	389	52.2%	47.8%
Jul-17	2,371	678	353	68	284	325	52.1%	47.9%
Aug-17	2,348	644	308	55	262	336	47.8%	52.2%
Sep-17	2,373	615	314	33	264	301	51.1%	48.9%
Oct-17	1,489	691	374	12	316	317	54.1%	45.9%
Nov-17	1,371	703	395	5	305	308	56.2%	43.8%
Dec-17	1,280	516	313	2	239	203	60.7%	39.3%
Jan-18	1,423	664	395	12	321	269	59.5%	40.5%
Feb-18	1,505	598	360	31	255	238	60.2%	39.8%
Mar-18	1,634	665	352	38	259	313	52.9%	47.1%
Apr-18	1,955	870	406	47	271	464	46.7%	53.3%
May-18	2,159	748	361	34	236	387	48.3%	51.7%
Jun-18	2,261	642	354	48	244	288	55.1%	44.9%
Jul-18	2,357	700	407	72	241	293	58.1%	41.9%
Aug-18	2,307	640	365	34	237	275	57.0%	43.0%
Sep-18	2,188	483	288	21	202	195	59.6%	40.4%
Oct-18	1,794	560	334	6	199	226	59.6%	40.4%
Nov-18	1,413	544	331	0	175	213	60.8%	39.2%
Dec-18	1,167	376	235	1	150	141	62.5%	37.5%
Jan-19	1,183	550	327	5	226	223	59.5%	40.5%
Feb-19	1,289	467	305	26	165	162	65.3%	34.7%
Mar-19	1,468	583	376	57	187	207	64.5%	35.5%
Apr-19	2,164	1,267	766	178	288	501	60.5%	39.5%
May-19	2,382	838	491	108	183	347	58.6%	41.4%
Jun-19	2,402	837	420	73	72	417	50.2%	49.8%
Jul-19	2,429	837	269	29	12	568	32.1%	67.9%
Total		23,386	12,741	1,507	8,358	10,645	54.5%	45.5%

	Average of Average Delinquent Balance by Number of Installment Payments By Year (Residential) Number of Installment Payments											
	1 2 3 4 5 6 7 8 9											
2016	\$593	\$484	\$1,046	\$436	\$353	\$692	\$700	\$363	\$395	\$562		
2017	\$594	\$598	\$516	\$688	\$572	\$508	\$528	\$544	\$485	\$559		
2018	\$1,375	\$1,332	\$1,258	\$1,283	\$1,429	\$1,260	\$1,378	\$1,160	\$1,179	\$1,295		
2019	\$2,131	\$2,124	\$2,173	\$2,537	\$2,288	\$2,627	\$2,478	\$2,934	\$2,424	\$2,413		

Average of Average Delinquent Balance by Number of Installment Payments By Year (EAP)											
1 2 3 4 5 6 7 8 9											
2016	\$133	\$481	\$307	\$664	\$1,113	\$1,102	\$1,077	\$2,140	\$1,421	\$938	
2017	\$573	\$404	\$623	\$613	\$1,089	\$1,273	\$1,686	\$2,247	\$2,109	\$1,185	
2018	\$712	\$467	\$675	\$593	\$823	\$1,927	\$2,049	\$2,969	\$3,278	\$1,522	
2019	\$2,197	\$1,654	\$838	\$1,179	\$618	\$1,898	\$1,745	\$1,464	\$2,540	\$1,550	

	Average of Average Installment Amount by Number of Installments (Total Residential) Number of Installments												
	1	2	3	4	5	6	7	8	9	Grand Total			
2016	\$225	\$237	\$228	\$217	\$181	\$210	\$171	\$171	\$186	\$203			
2017	\$237	\$246	\$243	\$226	\$213	\$223	\$215	\$216	\$189	\$223			
2018	\$276	\$240	\$239	\$230	\$230	\$260	\$213	\$210	\$217	\$235			
2019	\$362	\$316	\$254	\$282	\$279	\$269	\$236	\$238	\$229	\$274			
	Average of Average Installment Amount (EAP)												
	1	2	3	4	5	6	7	8	9	Grand Total			
2016	\$153	\$217	\$183	\$190	\$167	\$204	\$108	\$125	\$169	\$168			
2017	\$207	\$213	\$210	\$193	\$202	\$235	\$210	\$203	\$168	\$205			
2018	\$180	\$208	\$199	\$192	\$209	\$253	\$208	\$189	\$194	\$204			
2019	\$246	\$239	\$208	\$251	\$248	\$251	\$181	\$202	\$199	\$224			

Number of New DPAs by Number of Installments (Total Residential) Number of Installments												
	1 2 3 4 5 6 7 8 9 Grand											
2016	64	3,623	1,087	1,685	670	598	91	112	5,393	13,323		
2017	279	15,359	5,121	7,354	7,543	6,078	3,595	3,066	8,357	56,752		
2018	204	13,619	5,862	8,072	7,943	4,464	3,397	2,394	6,649	52,604		
2019	125	1,960	5,360	3,318	14,591	1,678	1,371	1,313	2,458	32,174		

Sum of Number of New Arrangements by Number of Installments (EAP)										
	1	2	3	4	5	6	7	8	9	Grand Total
2016	9	436	192	317	97	114	19	34	736	1,954
2017	51	1,759	795	1,378	1,200	1,176	471	358	1,375	8,563
2018	22	1,419	679	1,359	1,061	843	541	392	1,174	7,490
2019	11	200	846	628	2,257	402	248	219	568	5,379

	Sum of Number of Defaulted Arrangements by Number of Installments (Total Residential Number of Installments												
Row Labels	1 2 3 4 5 6 7 8 9 Grand Total												
2016	9	1,482	570	843	333	284	55	62	3,042	6,680			
2017	50	7,045	2,668	3,932	4,190	3,421	2,086	1,831	5,087	30,310			
2018	32	6,744	3,160	4,681	4,531	2,282	1,868	1,452	4,204	28,954			
2019	34	1,058	3 2,654	1,742	8,120	1,032	909	875	1,433	17,857			

Sum of Number of Defaulted Arrangements by Number of Installments (EAP)											
1 2 3 4 5 6 7 8 9											
2,016	2	203	107	162	42	53	15	17	407	1,008	
2,017	14	844	413	719	635	639	271	205	851	4,591	
2,018	2	722	388	814	581	431	302	222	726	4,188	
2,019	4	99	419	329	1,276	225	159	132	311	2,954	

Appendix A

ROGER D. COLTON

BUSINESS ADDRESS: Fisher Sheehan & Colton

Public Finance and General Economics 34 Warwick Road, Belmont, MA 02478 617-484-0597 (voice) *** 617-484-0594 (fax)

roger@fsconline.com (e-mail)

http://www.fsconline.com (www address)

EDUCATION:

J.D. (Order of the Coif), University of Florida (1981)

M.A. (Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975) (journalism, political science, speech)

PROFESSIONAL EXPERIENCE:

Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 - present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including: regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer), government budgeting, and planning and zoning.

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory and legislative bodies in more than three dozen states. He is particularly noted for creative program design and implementation within tight budget constraints.

Belmont Media Center – Belmont Journal: 2017 - present

Host of *Belmont* Journal, the weekly hyper-local news show for Belmont (MA), produced by the Belmont Media Center. Assistant producer of *Belmont Journal*.

Commentator: Belmont Citizen-Herald: 2014 – present

Author of biweekly "Community Conversations" column for Belmont Citizen-Herald, weekly newspaper (June 2014 to present).

Host of biweekly "Community Conversations" podcast, Belmont Media Center, BMC Podcast Network (October 2016 to present)

National Consumer Law Center (NCLC): 1986 - 1994

As a staff attorney with NCLC, Colton worked on low-income energy and utility issues. He pioneered cost-justifications for low-income affordable energy rates, as well as developing models to quantify the non-energy benefits (*e.g.*, reduced credit and collection costs, reduced working capital) of low-income energy efficiency. He designed and implemented low-income affordable rate and fuel assistance programs across the country. Colton was charged with developing new practical and theoretical underpinnings for solutions to low-income energy problems.

Community Action Research Group (CARG): 1981 - 1985

As staff attorney for this non-profit research and consulting organization, Colton worked primarily on energy and utility issues. He provided legal representation to low-income persons on public utility issues; provided legal and technical assistance to consumer and labor organizations; and provided legal and technical assistance to a variety of state and local governments nationwide on natural gas, electric, and telecommunications issues. He routinely appeared as an expert witness before regulatory agencies and legislative committees regarding energy and telecommunications issues.

PROFESSIONAL AFFILIATIONS:

Chair: Belmont Zoning By-law Review Working Committee (climate change)

Member: Board of Directors, Massachusetts Rivers Alliance

Columnist: Belmont Citizen-Herald

Producer: Belmont Media Center: BMC Podcast Network

Host: Belmont Media Center: Belmont Journal

Member: Belmont Town Meeting

Vice-chair: Belmont Light General Manager Screening Committee

Chair: Belmont Goes Solar

Coordinator: BelmontBudget.org (Belmont's Community Budget Forum)

Coordinator: Belmont Affordable Shelter Fund (BASF)
Chair: Belmont Solar Initiative Oversight Committee

Member: City of Detroit Blue Ribbon Panel on Water Affordability

Chair: Belmont Energy Committee

Member: Massachusetts Municipal Energy Group (Mass Municipal Association)
Past Chair: Housing Work Group, Belmont (MA) Comprehensive Planning Process

Past Member: Board of Directors, Belmont Housing Trust, Inc.

Past Chair: Waverley Square Fire Station Re-use Study Committee (Belmont MA)

Past Member: Belmont (MA) Energy and Facilities Work Group Past Member: Belmont (MA) Uplands Advisory Committee

Past Member: Advisory Board: Fair Housing Center of Greater Boston.

Past Chair: Fair Housing Committee, Town of Belmont (MA)

Past Member: Aggregation Advisory Committee, New York State Energy Research and

Development Authority.

Past Member: Board of Directors, Vermont Energy Investment Corporation.

Past Member: Board of Directors, National Fuel Funds Network
Past Member: Board of Directors, Affordable Comfort, Inc. (ACI)

Past Member: National Advisory Committee, U.S. Department of Health and Human Services,

Administration for Children and Families, Performance Goals for Low-Income

Home Energy Assistance.

Past Member: Editorial Advisory Board, International Library, *Public Utility Law Anthology*.

Past Member: ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort*

HVAC Systems for Multiple Occupancy Buildings

Past Member: National Advisory Committee, U.S. Department of Housing and Urban

Development, Calculation of Utility Allowances for Public Housing.

Past Member: National Advisory Board: Energy Financing Alternatives for Subsidized Housing,

New York State Energy Research and Development Authority.

PROFESSIONAL ASSOCIATIONS:

National Association of Housing and Redevelopment Officials (NAHRO)

National Society of Newspaper Columnists (NSNC)

Association for Enterprise Opportunity (AEO)

Iowa State Bar Association

Energy Bar Association

Association for Institutional Thought (AFIT)

Association for Evolutionary Economics (AEE)

Society for the Study of Social Problems (SSSO)

International Society for Policy Studies

Association for Social Economics

BOOKS

Colton, et al., Access to Utility Service, National Consumer Law Center: Boston (4th edition 2008).

Colton, et al., Tenants' Rights to Utility Service, National Consumer Law Center: Boston (1994).

Colton, The Regulation of Rural Electric Cooperatives, National Consumer Law Center: Boston (1992).

BOOK CHAPTERS

Colton (2018). The equities of efficiency: distributing energy usage reduction dollars, Chapter in Energy Justice: US and International Perspectives (Edited by Raya Salter, Carmen Gonzalez and Elizabeth Ann Kronk Warner), Edward Elgar Publishing (London, England).

JOURNAL PUBLICATIONS

Colton (March 2015). Quality Assurance: Evaluating Glare from Roof-Mounted PV Arrays, *Solar Professional*.

Colton (January 2015). "Assessing Solar PV Glare In Dense Residential Neighborhoods." Solar Industry.

Colton (January 2015). "Owning up to the Problem: Limiting the Use of an Assets Test for Determining Home Energy Assistance Eligibility." *Clearinghouse Review*.

Colton (November 2003). "Winter Weather Payments: The Impact of Iowa's Winter Utility Shutoff Moratorium on Utility Bill Payments by Low-Income Customers." 16(9) *Electricity Journal* 59.

Colton (March 2002). "Energy Consumption and Expenditures by Low-Income Households,"15(3) *Electricity Journal* 70.

Colton, Roger and Stephen Colton (Spring 2002). "An Alternative to Regulation in the Control of Occupational Exposure to Tuberculosis in Homeless Shelters," *New Solutions: Journal of Environmental and Occupational Health Policy*.

Colton (2001). "The Lawfulness of Utility Actions Seeking to Impose as a Condition of Service Liability for a Roommate's Debt Incurred at a Prior Address, *Clearinghouse Review*.

Colton (2001). "Limiting The "Family Necessaries" Doctrine as a Means of Imposing Third Party Liability for Utility Bills," *Clearinghouse Review*.

Colton (2001). "Prepayment Utility Meters and the Low-Income Consumer." *Journal of Housing and Community Development Law* (American Bar Association).

Colton, Brown and Ackermann (June 2000). "Mergers and the Public Interest: Saving the Savings for the Poorest Customers." *Public Utilities Fortnightly*.

Colton. (2000). "Aggregation and the Low-Income Consumer." *LEAP Newsletter*.

Colton. (1999). "Challenging Entrance and Transfer Fees in Mobile Home Park Lot Rentals." *Clearinghouse Review*.

Colton and Adams (1999). "Y2K and Communities of Color," *Media Alert: The Quarterly Publication of the National Black Media Coalition*.

Colton and Sheehan (1999). "The Problem of Mass Evictions in Mobile Home Parks Subject to Conversion." *Journal of Housing and Community Development Law* (American Bar Association).

Colton (1999). "Utility Rate Classifications and Group Homes as "Residential" Customers," *Clearinghouse Review*.

Colton (1998). "Provider of Last Resort: Lessons from the Insurance Industry." The Electricity Journal.

Colton and Adams (1998). "Fingerprints for Check Cashing: Where Lies the Real Fraud," *Media Alert: The Quarterly Publication of the National Black Media Coalition*.

Colton. (1998). "Universal Service: A Performance-Based Measure for a Competitive Industry," *Public Utilities Fortnightly*.

Colton, Roger and Stephen Colton (1998). "Evaluating Hospital Mergers," 17 Health Affairs 5:260.

Colton. (1998). "Supportive Housing Facilities as "Low-Income Residential" Customers for Energy Efficiency Purposes," 7 *Journal of Housing and Community Development Law* 406 (American Bar Association).

Colton, Frisof and King. (1998). "Lessons for the Health Care Industry from America's Experience with Public Utilities." 18 *Journal of Public Health Policy* 389.

Colton (1997). "Fair Housing and Affordable Housing: Availability, Distribution and Quality." 1997 *Colloqui: Cornell Journal of Planning and Urban Issues* 9.

Colton, (1997). "Competition Comes to Electricity: Industry Gains, People and the Environment Lose," *Dollars and Sense*.

Colton (1996). "The Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility And Childhood Education in Missouri." 2 *Journal on Children and Poverty* 23.

Colton and Sheehan. (1995). "Utility Franchise Charges and the Rental of City Property." 72 *New Jersey Municipalities* 9:10.

Colton. (1995). "Arguing Against Utilities' Claims of Federal Preemption of Customer-Service Regulations." 29 *Clearinghouse Review* 772.

Colton and Labella. (1995). "Landlord Failure to Resolve Shared Meter Problems Breaches Tenant's Right to Quiet Enjoyment." 29 *Clearinghouse Review* 536.

Colton and Morrissey. (1995). "Tenants' Rights to Pretermination Notice in Cases of Landlords' Nonpayment of Utilities". 29 *Clearinghouse Review* 277.

Colton. (1995). "The Perverse Incentives of Fair Market Rents." 52 *Journal of Housing and Community Development* 6.

Colton (1994). "Energy Efficiency and Low-Income Housing: Energy Policy Hurts the Poor." XVI *ShelterForce: The Journal of Affordable Housing Strategies* 9.

Colton (1994). "The Use of Consumer Credit Reports in Establishing Creditworthiness for Utility Deposits." *Clearinghouse Review*.

Colton (1994). "Institutional and Regulatory Issues Affecting Bank Product Diversification Into the Sale of Insurance," *Journal of the American Society of CLU and ChFC*.

Colton. (1993). "The Use of State Utility Regulations to Control the 'Unregulated' Utility." 27 *Clearinghouse Review* 443.

Colton and Smith. (1993). "The Duty of a Public Utility to Mitigate 'Damages' from Nonpayment through the Offer of Conservation Programs." 3 *Boston University Public Interest Law Journal* 239.

Colton and Sheehan. (1993). "Cash for Clunkers Program Can Hurt the Poor," 19 *State Legislatures: National Conference of State Legislatures* 5:33.

Colton. (1993). "Consumer Information and Workable Competition in the Telecommunications Industry." XXVII *Journal of Economic Issues* 775.

Colton and Sheehan. (1992). "Mobile Home Rent Control: Protecting Local Regulation," *Land Use Law and Zoning Digest*.

Colton and Smith. (1992 - 1993). "Co-op Membership and Utility Shutoffs: Service Protections that Arise as an Incident of REC 'Membership." 29 *Idaho Law Review* 1, *reprinted*, XV *Public Utilities Law Anthology* 451.

Colton and Smith. (1992). "Protections for the Low-Income Customer of Unregulated Utilities: Federal Fuel Assistance as More than Cash Grants." 13 *Hamline University Journal of Public Law and Policy* 263.

Colton (1992). "CHAS: The Energy Connection," 49 *The Journal of Housing* 35, reprinted, 19 *Current Municipal Problems* 173.

Colton (March 1991). "A Cost-Based Response to Low-Income Energy Problems." *Public Utilities Fortnightly*.

Colton. (1991). "Protecting Against the Harms of the Mistaken Utility Undercharge." 39 Washington University Journal of Urban and Contemporary Law 99, reprinted, XIV Public Utilities Anthology 787.

Colton. (1990). "Customer Consumption Patterns within an Income-Based Energy Assistance Program." 24 *Journal of Economic Issues* 1079

Colton (1990). "Heightening the Burden of Proof in Utility Shutoff Cases Involving Allegations of Fraud." 33 *Howard L. Review* 137.

Colton (1990). "When the Phone Company is not the Phone Company: Credit Reporting in the Post-Divestiture Era." 24 *Clearinghouse Review* 98.

Colton (1990). "Discrimination as a Sword: Use of an `Effects Test' in Utility Litigation." 37 Washington University Journal of Urban and Contemporary Law 97, reprinted, XIII Public Utilities Anthology 813.

Colton (1989). "Statutes of Limitations: Barring the Delinquent Disconnection of Utility Service." 23 *Clearinghouse Review* 2.

Colton & Sheehan. (1989). "Raising Local Revenue through Utility Franchise Fees: When the Fee Fits, Foot It." 21 *The Urban Lawyer* 55, *reprinted*, XII *Public Utilities Anthology* 653, *reprinted*, Freilich and Bushek (1995). *Exactions, Impacts Fees and Dedications: Shaping Land Use Development and Funding Infrastructure in the Dolan Era*, American Bar Association: Chicago.

Colton (1989). "Unlawful Utility Disconnections as a Tort: Gaining Compensation for the Harms of Unlawful Shutoffs." 22 *Clearinghouse Review* 609.

Colton, Sheehan & Uehling. (1987). "Seven cum Eleven: Rolling the Toxic Dice in the U.S. Supreme Court," 14 *Boston College Environmental L. Rev.* 345.

Colton & Sheehan. (1987). "A New Basis for Conservation Programs for the Poor: Expanding the Concept of Avoided Costs," 21 *Clearinghouse Review* 135.

Colton & Fisher. (1987). "Public Inducement of Local Economic Development: Legal Constraints on Government Equity Funding Programs." 31 Washington University J. of Urban and Contemporary Law 45.

Colton & Sheehan. (1986). "The Illinois Review of Natural Gas Procurement Practices: Permissible Regulation or Federally Preempted Activity?" 35 *DePaul Law Review* 317, *reprinted*, IX *Public Utilities Anthology* 221.

Colton (1986). "Utility Involvement in Energy Management: The Role of a State Power Plant Certification Statute." 16 *Environmental Law* 175, *reprinted*, IX *Public Utilities Anthology* 381.

Colton (1986). "Utility Service for Tenants of Delinquent Landlords," 20 Clearinghouse Review 554.

Colton (1985). "Municipal Utility Financing of Energy Conservation: Can Loans only be Made through an IOU?". 64 *Nebraska Law Review* 189.

Colton (1985). "Excess Capacity: A Case Study in Ratemaking Theory and Application." 20 *Tulsa Law Journal* 402, *reprinted*, VIII *Public Utilities Anthology* 739.

Colton (1985). "Conservation, Cost-Containment and Full Energy Service Corporations: Iowa's New Definition of 'Reasonably Adequate Utility Service." 34 *Drake Law Journal* 1.

Colton (1982). "Mandatory Utility Financing of Conservation and Solar Measures." 3 *Solar Law Reporter* 167.

Colton (1982). "The Use of Canons of Statutory Construction: A Case Study from Iowa, or When Does 'GHOTI' Spell 'Fish'?" 5 *Seton Hall Legislative Journal* 149.

Colton (1977). "The Case for a Broad Construction of 'Use' in Section 4(f) of the Department of Transportation Act." 21 *St. Louis Law Journal* 113.

Colton (1984). "Prudence, Planning and Principled Ratemaking." 35 Hastings Law Journal 721.

Colton (1983). "Excess Capacity: Who Gets the Charge from the Power Plant?" 33 *Hastings Law Journal* 1133.

Colton (1983). "Old McDonald (Inc.) Has a Farm. . . Maybe, or Nebraska's Corporate Farm Ban; Is it Constitutional?" 6 *University of Arkansas at Little Rock Law Review* 247.

OTHER PUBLICATIONS

Colton (May 2019). Energy Affordability for Low-Income Natural Gas and Electric Customers in Pennsylvania, prepared for Pennsylvania Office of Consumer Advocate, Docket M-2017-2587711, Energy Affordability in Pennsylvania.

Colton (2019). Responding to Water Unaffordability in Detroit: Lessons from the Mortgage Foreclosure Industry.

Colton (2018). Affordable Water Service for Southeast Michigan, prepared for the Mott Foundation (Flint, MI).

Colton (2017). Baltimore's Conundrum: Charging for Water / Wastewater Services that Community Residents Cannot Afford to Pay, prepared for Food and Water Watch (Baltimore MD).

Colton (2015). *The 2015 Home Energy Affordability Gap: Connecticut*, prepared for Operation Fuel (Bloomfield, CT).

Coltn (2015). Re-Sequencing Posting Utility Bill Payments: A Case Study Involving Philadelphia Gas Works.

Colton (2015). *State Legislative Steps to Implement the Human Right to Water in California*, prepared for the Unitarian Universalist Service Committee (Cambridge MA).

Colton (2014). *The 2014 Home Energy Affordability Gap: Connecticut*, prepared for Operation Fuel, (Bloomfield, CT).

Colton (2014). *The Equity of Efficiency: Distributing Utility Usage Reduction Dollars for Affordable Multi-family Housing*, prepared for the Natural Resources Defense Council (New York, NY).

Colton (2014). Assessing Rooftop Solar PV Glare in Dense Urban Residential Neighborhoods: Determining Whether and How Much of a Problem, submitted to American Planning Association: Chicago (IL).

Colton (2013). White Paper: Utility Communications with Residential Customers and Vulnerable Residential Customers In Response to Severe Weather-Related Outages, prepared for Pennsylvania Office of Consumer Advocate.

Colton (2013). Massachusetts Analysis of Impediments to Fair Housing: Fiscal Zoning and the "Childproofing" of a Community, presented to Massachusetts Department of Housing and Community Development.

Colton (2013). *Home Energy Affordability in New York: The Affordability Gap* (2012), prepared for New York State Energy Research and Development Authority (NYSERDA).

Colton (2013). *Home Energy Affordability in Connecticut: The Affordability Gap (2012)*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2013). Owning up to the Problem: Limiting the Use of an Assets Test for Determining Home Energy Assistance Eligibility.

Colton (2013). *Privacy Protections for Consumer Information Held by Minnesota Rate-Regulated Utilities*, prepared for Legal Services Advocacy Project (St. Paul, MN).

Colton (2013). *Proposal for the Use of Pervious Pavement for Repaving the Belmont High School Parking Lot*, prepared for Sustainable Belmont: Belmont (MA).

Colton (2012). *Home Energy Affordability in New York: 2011*, prepared for the New York State Energy Research and Development Authority (NYSERDA) (Albany NY).

Colton (2012). A Fuel Assistance Tracking Mechanism: Measuring the Impact of Changes in Weather and Prices on the Bill Payment Coverage Capacity of LIHEAP, prepared for Iowa Department of Human Rights: Des Moines (IA).

Colton (2012). *Home Energy Affordability Gap: 2012: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2012). Attributes of Massachusetts Gas/Electric Arrearage Management Programs (AMPS): 2011 Program Year, prepared for Fisher, Sheehan & Colton, Public Finance and General Economics, Belmont (MA).

Colton (2012). Customer and Housing Unit Characteristics in the Fitchburg Gas and Electric Service Territory, prepared for Unitil Corporation, d/b/a Fitchburg Gas and Electric Company (Portsmouth, NH).

Colton (2012). Public Service Company of Colorado's (PSCo) Pilot Energy Assistance Program (PEAP) and Electric Assistance Program (EAP) 2011 Final Evaluation Report, prepared for Xcel Energy (Denver CO).

Colton (2012). *Home Energy Affordability Gap: 2011: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2011). Home Energy Affordability in Idaho: Low-Income Energy Affordability Needs and Resources, prepared for Community Action Partnership of Idaho (Boise, ID).

Colton (2011). *Home Energy Affordability Gap in New York*, prepared for the New York State Energy Research Development Authority (NYSERDA) (Albany, NY).

Colton (2011). *Home Energy Affordability Gap: 2010: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2011). Section 8 Utility Allowances and Changes in Home Energy Prices in Pennsylvania, prepared for Pennsylvania Utility Law Project: Harrisburg (PA).

Colton (2010). *Interim Report on Xcel Energy's Pilot Energy Assistance Program*, prepared for Xcel Energy (Denver, CO).

Colton (2010). *Home Energy Affordability Gap: 2009: Connecticut Legislative Districts*, prepared for Operation Fuel (Bloomfield, CT).

Colton (2010). Home Energy Affordability in Manitoba: A Low-Income Affordability Program for Manitoba Hydro, prepared for Resource Conservation of Manitoba, Winnipeg (MAN).

Colton (2009). *Mirror, Mirror on the Wall: How Well Does Belmont's Town Meeting Reflect the Community at Large*, prepared for Fisher, Sheehan & Colton, Public Finance and General Economics, Belmont (MA).

Colton (2009). *An Outcomes Planning Approach to Serving TPU Low-Income Customers*, prepared for Tacoma Public Utilities, Tacoma (WA).

Colton (2009). An Outcome Evaluation of Indiana's Low-Income Rate Affordability Programs: 2008 – 2009, prepared for Citizens Gas and Coke Utility, Northern Indiana Public Service Company, Vectren Energy Delivery Indianapolis (IN).

Roger Colton (2009). *The Earned Income Tax Credit (EITC) as "Energy Assistance" in Pennsylvania*, prepared for Pennsylvania Utility Law Project (PULP).

Colton (2009). *Energy Efficiency as a Homebuyer Affordability Tool in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *Energy Efficient Utility Allowances as a Usage Reduction Tool in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *Home Energy Consumption Expenditures by Income (Pennsylvania)*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). *The Contribution of Utility Bills to the Unaffordability of Low-Income Rental Housing in Pennsylvania*, prepared for Pennsylvania Utility Law Project, Harrisburg (PA).

Colton (2009). The Integration of Federal LIHEAP Benefits with Ratepayer-Funded Percentage of Income Payment Programs (PIPPs): Legal and Policy Questions Involving the Distribution of Benefits, prepared for Pennsylvania Office of Consumer Advocate, Harrisburg (PA).

Colton (2008). *Home Energy Affordability in Indiana: Current Needs and Future Potentials*, prepared for Indiana Community Action Association.

Colton (2008). Public Health Outcomes Associated with Energy Poverty: An Analysis of Behavioral Risk Factor Surveillance System (BRFSS) Data from Iowa, prepared for Iowa Department of Human Rights.

Colton (2008). *Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2007*, prepared for Coalition to Keep Indiana Warm.

Colton (2008). Inverted Block Tariffs and Universal Lifeline Rates: Their Use and Usability in Delivering Low-Income Electric Rate Relief, prepared for Hydro-Quebec.

Colton (2007). Best Practices: Low-Income Affordability Programs, Articulating and Applying Rating Criteria, prepared for Hydro-Quebec.

Colton (2007). An Outcome Evaluation of Indiana's Low-Income Rate Affordability Programs, performed for Citizens Gas & Coke Utility, Vectren Energy Delivery, Northern Indiana Public Service Company.

Colton (2007). A Multi-state Study of Low-Income Programs, in collaboration with Apprise, Inc., prepared for multiple study sponsors.

Colton (2007). The Law and Economics of Determining Hot Water Energy Use in Calculating Utility Allowances for Public and Assisted Housing.

Colton (2007). Comments of Belmont Housing Trust on Energy Conservation Standards for Residential Furnaces and Boilers, Belmont Housing Trust (Belmont MA).

Colton (2006). *Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2006*, prepared for Coalition to Keep Indiana Warm.

Colton (2006). *Home Energy Affordability in Maryland: Necessary Regulatory and Legislative Actions*, prepared for the Maryland Office of Peoples Counsel.

Colton (2006). A Ratepayer Funded Home Energy Affordability Program for Low-Income Households: A Universal Service Program for Ontario's Energy Utilities, prepared for the Low-Income Energy Network (Toronto).

Colton (2006). *Georgia REACH Project Energize: Final Program Evaluation*, prepared for the Georgia Department of Human Resources.

Colton (2006). Experimental Low-Income Program (ELIP): Empire District Electric Company, Final Program Evaluation, prepared for Empire District Electric Company.

Colton (2006). *Municipal Aggregation for Retail Natural Gas and Electric Service: Potentials, Pitfalls and Policy Implications*, prepared for Maryland Office of Peoples Counsel.

Colton (2005). *Indiana Billing and Collection Reporting: Natural Gas and Electric Utilities: 2005*, prepared for Coalition to Keep Indiana Warm.

Colton (2005). *Impact Evaluation of NIPSCO Winter Warmth Program*, prepared for Northern Indiana Public Service Company.

Colton (2005). *A Water Affordability Program for the Detroit Water and Sewer Department*, prepared for Michigan Poverty Law Center.

Colton (2004). *Paid but Unaffordable: The Consequences of Energy Poverty in Missouri*, prepared for the National Low-Income Home Energy Consortium.

Sheehan and Colton (2004). Fair Housing Plan: An Analysis of Impediments and Strategies on How to Address Them: Washington County/Beaverton (OR), prepared for Washington County Department of Community Development.

Colton (2004). *Controlling Tuberculosis in Fulton County (GA) Homeless Shelters: A Needs Assessment*, prepared for the Georgia Department of Human Resources, Division of Public Health.

Colton (2003). The Impact of Missouri Gas Energy's Experimental Low-Income Rate (ELIR) On Utility Bill Payments by Low-Income Customers: Preliminary Assessment, prepared for Missouri Gas Energy.

Colton (2003). *The Economic Development Impacts of Home Energy Assistance: The Entergy States*, prepared for Entergy Services, Inc.

Colton (2003). *Energy Efficiency as an Affordable Housing Tool in Colorado*, prepared for Colorado Energy Assistance Foundation.

Colton (2003). The Discriminatory Impact of Conditioning Iowa's Winter Utility Shutoff Protections on the Receipt of LIHEAP.

Colton (2003). *The Economic Development Impacts of Home Energy Assistance in Colorado*, Colorado Energy Assistance Foundation.

Colton (2003). *Measuring the Outcomes of Home Energy Assistance through a Home Energy Insecurity Scale*, prepared for the U.S. Department of Health and Human Services, Administration for Children and Families.

Colton (2002). Low-Income Home Energy Affordability in Maryland, prepared for Office of Peoples Counsel.

Colton (2002). Winter Weather Payments: The Impact of Iowa's Winter Utility Shutoff Moratorium On Utility Bill Payments by Low-Income Customer, prepared for Iowa Department of Human Rights.

Colton (2002). A Fragile Income: Deferred Payment Plans and the Ability-to-Pay of Working Poor Utility Customers, prepared for National Fuel Funds Network.

Colton (2002). Credit where Credit is Due: Public Utilities and the Earned Income Tax Credit for Working Poor Utility Customers, prepared for National Fuel Funds Network.

Colton (2002). Payments Problems, Income Status, Weather and Prices: Costs and Savings of a Capped Bill Program, prepared for WeatherWise.

Colton (2001). *Integrating Government-Funded and Ratepayer-Funded Low-Income Energy Assistance Programs*, prepared for U.S. Department of Health and Human Services (HHS) and Oak Ridge National Laboratory.

Colton (2001). *In Harm's Way: Home Heating, Fire Hazards, and Low-Income Households*, prepared for National Fuel Funds Network.

Colton (2001). Structuring Low-income Affordability Programs Funded through System Benefits Charges: A Case Study from New Hampshire, prepared for Oak Ridge National Laboratory.

Colton (2001). System Benefits Charges: Why All Customer Classes Should Pay.

Colton (2001). *Reducing Energy Distress: "Seeing RED" Project Evaluation* (evaluation of Iowa REACH project), prepared for Iowa Department of Human Rights.

Colton (2001). Group Buying of Propane and Fuel Oil in New York State: A Feasibility Study, prepared for New York State Community Action Association.

Colton (2000). Establishing Telecommunications Lifeline Eligibility: The Use of Public Benefit Programs and its Impact on Lawful Immigrants, prepared for Dayton (OH) Legal Aide.

Colton (2000). *Outreach Strategies for Iowa's LIHEAP Program Innovation in Improved Targeting*, prepared for Iowa Department of Human Rights.

Colton (1999). Integration of LIHEAP with Energy Assistance Programs Created through Electric and/or Natural Gas Restructuring, prepared for U.S. Department of Health and Human Services, Administration for Children and Families (Nov. 1999).

Colton (1999). Fair Housing in the Suburbs: The Role of a Merged Fleet Boston in The Diversification of the Suburbs: Report to the Federal Reserve Board Concerning the Merger of BankBoston Corp. and Fleet Financial Group, prepared for Belmont Fair Housing Committee/Belmont Housing Partnership.

Colton (1999). *Measuring LIHEAP's Results: Responding to Home Energy Unaffordability*, prepared for Iowa Department of Human Resources.

Colton (1999). Monitoring the Impact of Electric Restructuring on Low-Income Consumers: The What, How and Why of Data Collection, prepared for U.S. Department of Health and Human Services, Administration for Children and Families.

Colton (1999). *Developing Consumer Education Programs in a Restructured Electric Industry*, prepared for Central Missouri Counties Community Development Corporation.

Colton (1999). *Electric Restructuring and the Low-Income Consumer: Legislative Implications for Colorado*, prepared for Colorado General Assembly.

Colton (1998). Low-Income Electric Rate Affordability in Virginia: Funding Low-Income Assistance, prepared for Virginia Council Against Poverty.

Colton and Alexander (1998). The Implications of an Increased Federal Role in the Regulation of Electricity on State Regulation of Consumer Protection and Universal Service Programs.

R. Colton and S. Colton (1998). *The Occupational Control of Tuberculosis in Homeless Shelters*, prepared for the U.S. Occupational Safety and Health Administration.

Colton (1998). Consumer Aggregation and Sophisticated Purchasing: Electric Restructuring Lessons from the Health Care Industry.

Colton (1998). *The Connection Between Affordable Housing and Educational Excellence in Belmont*, prepared for Belmont Fair Housing Committee.

Colton (1998). Serving the Affordable Housing Needs of Belmont's Older Residents, prepared for Belmont Fair Housing Committee.

Colton (1998). *The Costs of a Universal Service Fund in Minnesota: Electric and Natural Gas*, prepared for the Energy Cents Coalition.

Colton (1998). Controlling the Occupational Exposure to Tuberculosis in Homeless Shelters: Applying Federal OSHA Standards to Volunteers, prepared for the U.S. Occupational Safety and Health Administration.

Colton (1998). Natural Gas Prices by Customer Class Pre- and Post-Deregulation: A State-by-State Briefing Guide.

Colton (1997). Public Housing Utility Allowances for the Metro Dade Housing Agency, prepared for Legal Services Corporation of Greater Miami.

Colton (1997). Low-Income Energy Needs in Maryland: An Overview, prepared for Maryland Office of Peoples Counsel.

Colton (1997). Non-Energy Benefits from Low-Income Fuel Assistance.

Colton (1997). *Structuring a Public Purpose Distribution Fee for Missouri*, prepared for Missouri Department of Natural Resources.

Colton (1997). The Low-Income Interest in Utility Mergers and Acquisitions.

Colton (1997). *The Obligation to Serve and a Restructured Electric Industry*, prepared for U.S. Department of Energy, Oak Ridge National Laboratory.

Colton (1997). Structuring and Evaluating a Direct Vendor Payment Shadow Billing Program for Publicly Assisted Housing in Houston, prepared under contract to Gulf Coast Legal Foundation (with funding by Houston Lighting Company).

Colton (1997). The For-Profit Conversion of the New England Education Loan Marketing Corporation: Lessons from Non-Profit Hospital Conversions.

Colton (1997). Rental Housing Affordability in Burlington, Vermont: A Report to the Burlington City Council..

Colton (1997). Structuring a "Wires Charge" for New Hampshire: A Framework for Administration and Operation, prepared under contract to the New Hampshire Community Action Association.

Colton (1997). Electric Industry Restructuring the Regulation of Electric Service Providers: The Role of the Fair Housing Act.

Colton (1996). Mountains States Legal Foundation: Leading Light or Flickering Flame?.

Colton (1996). Wrong Way Street: Reversing the Subsidy Flowing From Low-Income Customers in a Competitive Electric Industry.

Colton (1996). Setting Income Eligibility for Fuel Assistance and Energy Efficiency Programs in a Competitive Electric Industry: The Marginal Impacts of Increasing Household Income.

Colton (1996). Fair Housing and Affordable Housing in Belmont, Massachusetts: Data on Availability, Distribution and Quality.

Colton (1996). Accounting for Utility Allowances for Heating Costs in Setting LIHEAP Benefits in Washington State.

Colton (1996). Determining Household Energy Consumption in Washington State in the Absence of 12 Months of Usage Data.

Colton (1996). Allocating Undesignated Utility Allowances to Heat in Washington State Subsidized Housing Units.

Colton (1996). The Implications of Minimum and Maximum Benefits in Washington State's LIHEAP Program.

Colton (1996). Targeting Impacts of Proposed Washington State LIHEAP Distribution Formula.

Colton and Sheehan (1996). Fair Housing Analysis of Impediments Study for Washington County (Oregon)..

Colton (1996). *Structuring a Low-Income ''Wires Charge'' for New Jersey*, prepared for Citizens Against Rate Escalation (CARE).

Colton (1996). *Structuring a Low-Income "Wires Charge" for Kentucky*, prepared for Louisville Legal Aide Association.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Iowa*, prepared for Iowa Bureau of Human Resources, Office of Weatherization.

Colton (1996). *Structuring a Low-Income ''Wires Charge'' for Montana*, prepared for Energy Share of Montana.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Oklahoma*, prepared for Oklahoma State Association of Community Action Agencies.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Ohio*, prepared for Ohio Legal Services Corporation.

Colton (1996). *Structuring a Low-Income "Wires Charge" for Indiana*, prepared for Indiana Citizen Action Campaign.

Colton (1996). Changing Paradigms for Delivering Energy Efficiency to the Low-Income Consumer by Competitive Utilities: The Need for a Shelter-Based Approach.

Colton (1996). Shawmut Bank and Community Reinvestment in Boston: Community Credit Needs and Affordable Housing.

Colton (1995). Addressing Residential Collections Problems through the Offer of New Services in a Competitive Electric Industry.

Colton and Elwood (1995). *Affordable Payment Plans: Can they be Justified?*, prepared for 1995 Affordable Comfort Tutorial.

Colton (1995). Understanding "Redlining" in a Competitive Electric Utility Industry).

Colton (1995). Energy Efficiency as a Credit Enhancement: Public Utilities and the Affordability of First-Time Homeownership.

Colton (1995). Competition in the Electric Industry: Assessing the Impacts on Residential, Commercial and Low-Income Customers, prepared under contract to the National Association of Regulatory Utility Commissioners.

Colton (1995). Performance-Based Evaluation of Customer Collections in a Competitive Electric Utility Industry.

Colton (1995). *Poverty Law and Economics: Calculating the Household Budget*, prepared for presentation to National Legal Aid and Defender Association, Substantive Law Training.

Colton (1995). The Need for Regulation in a Competitive Electric Utility Industry.

Colton (1995). Rewriting the Social Compact: A Competitive Electric Industry and its Core Customer.

Colton (1995). The Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility, and Childhood Education in Missouri, prepared for the Missouri Association of Head Start Directors.

Colton (revised 1995). *Models of Low-Income Utility Rates*, prepared under contract to Washington Gas Company.

Colton (1995). Beyond Social Welfare: Promoting the Earned Income Tax Credit (EITC) as an Economic Development Strategy by Public Utilities.

Colton (1995). Should Regulation of Electricity Depend on the Absence of Competition?.

Colton (1995). *Comprehensive Credit and Collection Strategies in a Competitive Electric Utility Industry*, prepared under contract to Hydro-Quebec.

Colton (1995). Economically Stranded Investment in a Competitive Electric Industry: A Primer for Cities, Consumers and Small Business Advocates.

Colton (1995). Funding Minority and Low-Income Energy Efficiency in a Competitive Electric Industry.

Colton (1995). Competitive Solicitation as an Integrated Resource Planning Model: Its Competitive Impacts on Small Businesses Serving Low-Income Households, prepared under contract to the Arkansas State Weatherization

Colton (1995). Reviewing Utility Low-Income DSM Programs: A Suggested Framework for Analysis.

Colton (1995). Least-Cost Integrated Resource Planning in Arkansas: The Role of Low-Income Energy Efficiency prepared under contract to the Arkansas State Weatherization Assistance Program.

Colton (1995). *Home Energy Assistance Review and Reform in Colorado*, prepared for Colorado Energy Assistance Foundation (CEAF).

Colton, et al. (1995). An Assessment of Low-Income Energy Needs in Washington State. Prepared under contract to the Washington state Department of Community Development.

Colton (1994). Addressing Low-Income Inability-to-Pay Utility Bills During the Winter Months On Tribal Lands Served By Electric Co-ops: A Model Tribal Winter Utility Shutoff Regulation.

Colton (1994). An Earned Income Tax Credit Utility Intervention Kit.

Colton (1994). *Telecommunications Credit and Collections and Controlling SNET Uncollectibles*, prepared under contract to the Connecticut Office of Consumer Counsel.

Colton (1994). Customer Deposit Demands by U.S. West: Reasonable Rationales and the Proper Assessment of Risk, prepared on behalf of the Staff of the Washington Utilities and Transportation Commission.

Colton (1994). Credit and Collection Fees and Low-Income Households: Ensuring Effectiveness and Cost-Effectiveness, prepared on behalf of the Missouri Office of Public Counsel.

Colton (1994). Determining the Cost-Effectiveness of Utility Late Payment Charges.

Colton (1994). Determining the Cost-Effectiveness of Imposing Customer Deposits for Utility Service.

Colton (1994). Weatherization Assistance Program Evaluations: Assessing the Impact on Low-Income Ability-to-Pay.

Colton (1994). DSM Planning in a Restrictive Environment.

Part 1: Why Ramping Down DSM Expenditures Can Be "Pro" DSM

Part 2: Low-Income Opposition to DSM: Ill-Defined and Misguided

Part 3: Low-Income DSM Expenditures as a Non-Resource Acquisition Strategy: The Potential for Niche Marketing

Colton (1994). Loan Guarantees as a Utility Investment in Energy Efficiency for Low-Income Housing.

Colton and Sheehan.(1994). "Linked Deposits" as a Utility Investment in Energy Efficiency for Low-Income Housing.

Colton (1994). Securitizing Utility Avoided Costs: Creating an Energy Efficiency "Product" for Private Investment in WAP.

Colton and Sheehan (1994). *Economic Development Utility Rates: Targeting, Justifying, Enforcing*, prepared under contract to Texas ROSE.

Colton and Sheehan (1993). Affordable Housing and Section 8 Utility Allowances: An Evaluation and a Proposal for Action:

Part I: Adequacy of Annual Allowances.

Part II: Adequacy of Monthly Allowances.

Colton (1993). Methods of Measuring Energy Needs of the Poor: An Introduction.

Colton and Sheehan (1993). *Identifying Savings Arising From Low-Income Programs*.

Colton (1993). Low-Income Programs And Their Impact on Reducing Utility Working Capital Allowances.

Colton, et al. (1993). Funding Social Services Through Voluntary Contribution Programs: A Proposal for SNET Participation in Funding INFOLINE's Information and Referral Services in Connecticut. Prepared under contract with United Way of Connecticut.

Colton (1993). *Universal Residential Telephone Service: Needs and Strategies*. Prepared for National Association of State Regulatory Utility Commissioners (NARUC).

Colton et al. (1992). The Impact of Rising Water and Sewer Rates on the Poor: The Case of Eastern Massachusetts, prepared for National Consumer Law Center.

Colton. (1994). Public Utility Credit and Collection Activities: Establishing Standards and Applying them to Low-Income Utility Programs. Prepared under contract to the national office of the American Association of Retired Persons.

Colton (1992). *Filling the Gaps: Financing Low-Income Energy Assistance in Connecticut*. Prepared under contract to the Connecticut State Department of Human Resources.

Colton and Quinn. (1992). The Impact on Low-Income People of the Increased Cost for Basic Telephone Service: A Study of Low-income Massachusetts Resident's Telephone Usage Patterns and Their Perceptions of Telephone Service Quality. Prepared under contract to the Massachusetts Office of the Attorney General.

Colton and Quinn. (1991). *The ABC's of Arrearage Forgiveness*. Prepared with a grant from the Mary Reynolds Babcock Foundation.

Colton and Sable (1991). *A California Advocate's Guide to Telephone Customer Service Issues*. Prepared with funding from the California Telecommunications Education Trust Fund.

Colton and Levinson. (1991). Poverty and Energy in North Carolina: Combining Public and Private Resources to Solve a Public and Private Problem. Prepared under contract to the North Carolina General Assembly.

Colton. (1991). The Percentage of Income Payment Plan in Jefferson County, Kentucky: One Alternative to Distributing LIHEAP Benefits. Prepared with funds provided by the City of Louisville, Kentucky and the Louisville Community Foundation.

Colton. (1991). *The Energy Assurance Program for Ohio: A Cost-Based Response to Low-Income Energy Problems*. Prepared for Cincinnati Legal Aid Society, Dayton Legal Society, and Cleveland Legal Aid Society.

Colton. (1991). *Utility-Financed Low-Income DSM: Winning for Everybody*. Prepared with funds provided by the Public Welfare Foundation and the Mary Reynolds Babcock Foundation.

Colton (1991). Percentage of Income Payment Plans as an Alternative Distribution of LIHEAP Benefits: Good Business, Good Government, Good Social Policy. Prepared under contract to the New England Electric System (NEES).

Colton (1991). The Forced Mobility of Low-Income Customers: The Indirect Impacts of Shutoffs on Utilities and their Customers.

Colton (1990). *Controlling Uncollectible Accounts in Pennsylvania: A Blueprint for Action*. Prepared under contract to the Pennsylvania Office of Consumer Advocate.

Colton (1990). Nonparticipation in Public Benefit Programs: Lessons for Fuel Assistance.

Colton (1990). *Understanding Why Customers Don't Pay: The Need for Flexible Collection Techniques*. Prepared under contract to the Philadelphia Public Advocate.

Colton (1990). A Regulatory Response to Low-income Energy Needs in Colorado: A Proposal. Prepared for the Legal Aid Society of Metro Denver.

Colton (1990). *Determining the Cost-Effectiveness of Utility Credit and Collection Techniques*. Prepared with funds provided by the Mary Reynolds Babcock Foundation.

Colton (1990). Energy Use and the Poor: The Association of Consumption with Income.

Colton (1989). *Identifying Consumer Characteristics Which are Important to Determining the Existence of Workable Competition in the Interexchange Telecommunications Industry*. Prepared under contract to the Office of Public Counsel of the Florida Legislature.

Colton (1989). The Interexchange Telecommunications Industry: Should Regulation Depend on the Absence of Competition. Prepared under contract to the Office of Public Counsel of the Florida Legislature.

Colton (1989). *Fuel Assistance Alternatives for Utah*. Prepared under contract to the Utah State Energy Office.

Colton (1989). *Losing the Fight in Utah: High Energy Bills and Low-Income Consumers*. Prepared under contract with the Utah State Energy Office.

Colton (1989). The Denial of Local Telephone Service for Nonpayment of Toll Bills: A Review and Assessment of Regulatory Litigation (2d ed.).

Colton (1988). Customer Service Regulations for Residential Telephone Customers in the Post-Divestiture Era: A Study of Michigan Bell Telephone Company. Prepared under contract to the Michigan Divestiture Research Fund.

Colton (1988). *Low-Income Utility Protections in Maine*. (3 volumes). Prepared under contract to the Maine Public Utilities Commission.

- a. <u>Volume 1</u>: An Evaluation of Low-Income Utility Protections in Maine: Winter Requests for Disconnect Permission.
- b. <u>Volume 2</u>: An Evaluation of Low-Income Utility Protections in Maine: Payment Arrangements for Maine's Electric Utilities.
- c. <u>Volume 3</u>: An Evaluation of Low-Income Utility Protections in Maine: Fuel Assistance and Family Crisis Benefits.

Colton (1988). The Recapture of Interest on LIHEAP Payments to Unregulated Fuel Vendors: An Evaluation of the 1987 Maine Program. Prepared with a grant from the Jessie B. Cox Charitable Trust.

Colton (1988). An Evaluation of the Warwick (Rhode Island) Percentage of Income Payment Plan. Prepared under contract to the Rhode Island Governor's Office of Energy Assistance.

Colton, Hill & Fox (1986). The Crisis Continues: Addressing the Energy Plight of Low-Income Pennsylvanians Through Percentage of Income Plans. Prepared under contract to the Pennsylvania Utility Law Project.

Fisher, Sheehan and Colton (1986). *Public/Private Enterprise as an Economic Development Strategy for States and Cities*. Prepared under contract to the United States Department of Commerce, Economic Development Administration.

Colton (1985). Creative Financing for Local Energy Projects: A Manual for City and County Government in Iowa. Prepared under contract to the Iowa Energy Policy Council.

Colton (1985). *The Great Rate Debate: Rate Design for the Omaha Public Power District*. Prepared under contract to the Omaha Public Power District.

Grenier and Colton (1984). *Utility Conservation Financing Programs for Nebraska's Publicly Owned Utilities: Legal Issues and Considerations*. Prepared under contract to the Nebraska Energy Office.

Colton (1984). The Financial Implications to the Utility Industry of Pursuing Energy Management Strategies. Prepared under contract to the Nebraska Energy Office.

COLTON EXPERIENCE AS EXPERT WITNESS

1988 - PRESENT

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O DTE (electric) rates	Michigan Office of Attorney General, et al.	U-20561	Low-income program design	Michigan	19
I/M/O DTE Energy Waste Reduction (EWR) Plan (gas)	Natural Resources Defense Council, et al.	U-20429	Low-income program design	Michigan	19
I/M/O DTE Energy Waste Reduction (EWR) Plan (electric)	Natural Resources Defense Council, et al.	U-20373	Low-income program design	Michigan	19
I/M/O Ameren Energy	Illinois Office of Attorney General	18-1486	Minimization of uncollectible accounts	Illinois	19
I/M/O Commonwealth Edison Company	Illinois Office of Attorney General	18-1456	Minimization of uncollectible accounts	Illinois	19
I/M/O NICOR Illinois	Illinois Office of Attorney General	18-1437	Minimization of uncollectible accounts	Illinois	19
I/M/O Peoples Gas	Office of Consumer Advocate	R-2018-3006818	Customer service / Low-income cost recovery	Pennsylvania	19
I/M/O UGI Electric	Office of Consumer Advocate	R-2018-3006814	Customer service / Low-income cost recovery	Pennsylvania	19
I/M/O Pittsburgh Water Authority	Office of Consumer Advocate	M-2640802	Customer service / Low-income cost recovery	Pennsylvania	19
I/M/O Ameren Prepayment Meter	Illinois Office of Attorney General	Docket 18-1008 – 18-1009 (cons)	Prepayment meters	Illinois	18
I/M/O Pittsburgh Water and Sewer Authority	Office of Consumer Advocate	R-2018-3002645/3002647 (cons)	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O National Grid (electric)	Division of Public Utility Control	Docket No. 4770	Customer service / Low-income cost recovery	Rhode Island	18
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2018-2647577	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O PECO (electric)	Office of Consumer Advocate	R-2018-3000164	Customer service / Low-income cost recovery	Pennsylvania	18
i/N/O Duquesne Light Company	Office of Consumer Advocate	R-2018-3000124	Customer service / Low-income cost recovery	Pennsylvania	18

Colton Vitae—December 2019 23 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O UGI-Electric	Office of Consumer Advocate	R-2017-2640058	Customer service / Low-income cost recovery	Pennsylvania	18
I/M/O Philadelphia Water Department requested rates for 2019 - 2021	Philadelphia Public Advocate	None	Water rate:: low-income program cost recovery / public fire protection / storm water charge exemptions	Philadelphia	18
I/M/O Commonwealth Edison Prepayment Meters	Illinois Office of Attorney General	17-0837	Electric customer service	Illinois	18
I/M/O 2018/2020 Statewide Energy Efficiency Plan	The Way Home / New Hampshire Legal Assistance	DE 17-136	Non-energy impacts / Low-income energy efficiency	New Hampshire	17
I/M/O DTE (electric) / gas EWR (energy waste reduction) plan	Sierra Club / Natural Resources Defense Council	Case No. U-18262	Low-income energy efficiency	Michigan	17
I/M/O DTE (electric)	Sierra Club / Natural Resources Defense Council	Case No. U-18255	Low-income energy efficiency	Michigan	17
I/M/O Merger of AltaGas and WGL Holdings	Office of People's Counsel	Case No. 9449	Low-income / charitable contributions / community impacts	Maryland	17
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2017-2587783	Low-income / rate design	Pennsylvania	17
I/M/O UGI-Peoples Natural Gas	Office of Consumer Advocate	R-2016-2580030	Low-income	Pennsylvania	17
I/M/O Peoples Natural Gas	Office of Attorney General	16-0376	Low-income	Illinois	17
I/M/O UGI-PNG	Office of Consumer Advocate	R-2016-2580030	Rate deisgn/EE&CP/Low-Inocme	Pennsylvania	17
I/M/O Pacific Gas and Electric Company	TURN	15-09-001	Electric bill affordability	California	16
I/M/O FirstEnergy Companies (Met Ed, Penelec, PennPower, West Penn Power)	Office of Consumer Advocate	R-2016-2537349, R-2016-2537352, R- 2016-2537355, R-2016-2537359 (consolidated)	Rate design / low-income program cost recovery	Pennsylvania	16
I/M/O PGW Demand Side Management	Office of Consumer Advocate	P-2014-2459362	Demand Side Manaement	Pennsylvania	16
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2016-2529660	Rate deisgn / customer service / Low-income	Pennsylvania	16

Colton Vitae—December 2019 24 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
			program cost recovery		
I/M/O Philadelphia Water Department	Public Advocate, City of Philadelphia	N/A	Low-income program design	Philadelphia	16
I/M/O UGI Gas	Office of Consumer Advocate	M-2015-2518438	Rate design, energy efficiency, customer service	Pennsylvania	16
Keener v. Consumers Energy	Keener (plaintiff)	15-146908-NO	Collections	State District CtMI	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, PECO Energy	Office of Consumer Advocate	M-2015-2515691	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, Duquesne Light Company	Office of Consumer Advocate	M-2015-2515375	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, FirstEnergy Companies (Metropolitan Edison, Penelec, Penn Power, West Penn Power)	Office of Consumer Advocate	M-2015-2514767; M-2015-2514768; M-2015-2514769; M-2015-2514772	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O Energy Efficiency and Conservation Plan, Phase III, PPL Electric Corporation	Office of Consumer Advocate	M-2015-251-2515642	Multi-Family Energy Efficiency	Pennsylvania	16
I/M/O BC Hydro	Public Interest Action Centre	N/A	Rate design / terms and conditions / energy efficiency	British Columbia	15 - 16
Augustin v. Philadelphia Gas Works	Augustin (Plaintiffs)	2:14—cv-04238	Constitutional notice issues	U.S. District Court (E.D. PA)	15
I/M/O PPL Utilities	Office of Consumer Advocate	R-2015-2469275	Rate design / customer service	Pennsylvania	15
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2015-2468056	Rate design / customer service	Pennsylvania	15
I/M/O PECO Energy Company	Office of Consumer Advocate	R-2015-2468981	Rate design / customer service	Pennsylvania	15
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P-2014-2459362	Demand Side Management	Pennsylvania	15
I/M/O SBG Management v. Philadelphia Gas Works	SBG Management	C-2012-2308454	Customer service	Pennsylvania	15

Colton Vitae—December 2019 25 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Manitoba Hydro	Resource Action Centre		Low-income affordability	Manitoba	15
I/M/O FirstEnergy Companies (Met Ed, WPP, Penelec, Penn Power)	Office of Consumer Advocate	R-2014-2428742 (8743, 8744, 8745)	Rate design / customer service / storm communications	Pennsylvania	14
I/M/O Xcel Energy Company	Energy CENTS Coalition	E002/GR-13-868	Rate design / energy conservation	Minnesota	14
I/M/O Peoples Gas Light and Coke Company / North Shore Gas	Office of Attorney General	14-0224 / 140225	Rate design / customer service	Illinois	14
I/M/O Columbia Gas of Pennsylvania	Office of Consumer Advocate	R-2014-2406274	Rate design / customer service	Pennsylvania	14
I/M/O Duquesne Light Company Rates	Office of Consumer Advocate	R-2013-2372129	Rate design / customer service / storm communications	Pennsylvania	13
I/M/O Duquesne Light Company Universal Service	Office of Consumer Advocate	M-2013-2350946	Low-income program design	Pennsylvania	13
I/M/O Peoples-TWP	Office of Consumer Advocate	P-2013-2355886	Low-income program design / rate design	Pennsylvania	13
I/M/O PECO CAP Shopping Plan	Office of Consumer Advocate	P-2013-2283641	Retail shopping	Pennsylvania	13
I/M/O PECO Universal Service Programs	Office of Consumer Advocate	M-201202290911	Low-income program design	Pennsylvania	13
I/M/O Privacy of Consumer Information	Legal Services Advocacy Project	CI-12-1344	Privacy of SSNs & consumer information	Minnesota	13
I/M/O Atlantic City Electric Company	Division of Rate Counsel	BPU-12121071	Customer service / Storm communications	New Jersey	13
I/M/O Jersey Central Power and Light Company	Division of Rate counsel	BPU-12111052	Customer service / Storm communications	New Jersey	13
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2012-2321748	Universal service	Pennsylvania	13
I/M/O Public Service Company of Colorado Low-Income Program Design	Xcel Energy d/b/a PSCo	12AEG	Low-income program design / cost recovery	Colorado	12
I/M/O Philadelphia Water Department.	Philadelphia Public Advocate	No. Docket No.	Customer service	Philadelphia	12
I/M/O PPL Electric Power Corporation	Office of Consumer Advocate	R-2012-2290597	Rate design / low-income programs	Pennsylvania	12
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-2012-2285985	Rate design / low-income programs	Pennsylvania	12
I/M/O Merger of Constellation/Exelon	Office of Peoples Counsel	CASE 9271	Customer Service	Maryland	11
I/M/O Duke Energy Carolinas	North Carolina Justice Center	E-7, SUB-989	Customer service/low-income rates	North Carolina	11

Colton Vitae—December 2019 26 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Re. Duke Energy/Progress Energy merger	NC Equal Justice foundation	E-2, SUB 998	Low-income merger impacts	North Carolina	11
Re. Atlantic City Electric Company	Division of Rate Counsel	ER1186469	Customer Service	New Jersey	11
Re. Camelot Utilities	Office of Attorney General	11-0549	Rate shock	Illinois	11
Re. UGI—Central Penn Gas	Office of Consumer Advocate	R-2010-2214415	Low-income program design/cost recovery	Pennsylvania	11
Re. National Fuel Gas	Office of Consumer Advocate	M-2010-2192210	Low-income program cost recovery	Pennsylvania	11
Re. Philadelphia Gas Works	Office of Consumer Advocate	P-2010-2178610	Program design	Pennsylvania	11
Re. PPL	Office of Consumer Advocate	M-2010-2179796	Low-income program cost recovery	Pennsylvania	11
Re. Columbia Gas Company	Office of Consumer Advocate	R-2010-2215623	Rate design/Low-income program cost recovery	Pennsylvania	11
Crowder et al. v. Village of Kauffman	Crowder (plaintiffs)	3:09-CV-02181-M	Section 8 utility allowances	Texas Fed Court	11
I/M/O Peoples Natural Gas Company.	Office of Consumer Advocate	T-2010-220172	Low-income program design/cost recovery	Pennsylvania	11
I/M/O Commonwealth Edison	Office of Attorney General	10-0467	Rate design/revenue requirement	Illinois	10
I/M/O National Grid d/b/a Energy North	NH Legal Assistance	DG-10-017	Rate design/revenue requirement	New Hampshire	10
I/M/O Duquesne Light Company	Office of Consumer Advocate	R-2010-2179522	Low-income program cost recovery	Pennsylvania	10
I/M/O Avista Natural Gas Corporation	The Opportunity Council	UE-100467	Low-income assistance/rate design	Washington	10
I/M/O Manitoba Hydro	Resource Conservation Manitoba (RCM)	CASE NO. 17/10	Low-income program design	Manitoba	10
I/M/O TW Phillips	Office of Consumer Advocate	R-2010-2167797	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Gas Division	Office of Consumer Advocate	R-2010-2161592	Low-income program cost recovery	Pennsylvania	10
I/M/O PECO Energy—Electric Division	Office of Consumer Advocate	R-2010-2161575	Low-income program cost recovery	Pennsylvania	10
I/M/O PPL Energy	Office of Consumer Advocate	R-2010-2161694	Low-income program cost recovery	Pennsylvania	10
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2009-2149262	Low-income program design/cost recovery	Pennsylvania	10
I/M/O Atlantic City Electric Company	Office of Rate Council	R09080664	Customer service	New Jersey	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-2009-2139884	Low-income program cost recovery	Pennsylvania	10
I/M/O Philadelphia Gas Works	Office of Consumer Advocates	R-2009-2097639	Low-income program design	Pennsylvania	10

Colton Vitae—December 2019 27 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Xcel Energy Company	Xcel Energy Company (PSCo)	085-146G	Low-income program design	Colorado	09
I/M/O Atmos Energy Company	Atmos Energy Company	09AL-507G	Low-income program funding	Colorado	09
I/M/O New Hampshire CORE Energy Efficiency Programs	New Hampshire Legal Assistance	D-09-170	Low-income efficiency funding	New Hampshire	09
I/M/O Public Service Company of New Mexico (electric)	Community Action of New Mexico	08-00273-UT	Rate Design	New Mexico	09
I/M/O UGI Pennsylvania Natural Gas Company (PNG)	Office of Consumer Advocate	R-2008-2079675	Low-income program	Pennsylvania	09
I/M/O UGI Central Penn Gas Company (CPG)	Office of Consumer Advocate	R-2008-2079660	Low-income program	Pennsylvania	09
I/M/O PECO Electric (provider of last resort)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-2008-2029325	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Ohio Consumers' Counsel	08-072-GA-AIR	Rate design	Ohio	08
I/M/O Dominion East Ohio Gas Company	Office of Ohio Consumers' Counsel	07-829-GA-AIR	Rate design	Ohio	08
I/M/O Vectren Energy Delivery Company	Office of Ohio Consumers' Counsel	07-1080-GA-AIR	Rate design	Ohio	08
I/M/O Public Service Company of North Carolina	NC Department of Justice	G-5, SUB 495	Rate design	North Carolina	08
I/M/O Piedmont Natural Gas Company	NC Department of Justice	G-9, SUB 550	Rate design	North Carolina	08
I/M/O National Grid	New Hampshire Legal Assistance	DG-08-009	Low-income rate assistance	New Hampshire	08
I/M/O EmPower Maryland	Office of Peoples Counsel	PC-12	Low-income energy efficiency	Maryland	08
I/M/O Duke Energy Carolinas Save-a-Watt Program	NC Equal Justice Foundation	E-7, SUB 831	Low-income energy efficiency	North Carolina	08
I/M/O Zia Natural Gas Company	Community Action New Mexico	08-00036-UT	Low-income/low-use rate design	New Mexico	08
I/M/O Universal Service Fund Support for the Affordability of Local Rural Telecomm Service	Office of Consumer Advocate	I-0004010	Telecomm service affordability	Pennsylvania	08
I/M/O Philadelphia Water Department	Public Advocate	No Docket No.	Credit and Collections	Philadelphia	08
I/M/O Portland General Electric Company	Community ActionOregon	UE-197	General rate case	Oregon	08
I/M/O Philadelphia Electric Company (electric)	Office of Consumer Advocate	M-00061945	Low-income program	Pennsylvania	08
I/M/O Philadelphia Electric Company (gas)	Office of Consumer Advocate	R-2008-2028394	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-2008-2011621	Low-income program	Pennsylvania	08

Colton Vitae—December 2019 28 | P a g e

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Public Service Company of New Mexico	Community Action New Mexico	08-00092-UT	Fuel adjustment clause	New Mexico	08
I/M/O Petition of Direct Energy for Low-Income Aggregation	Office of Peoples Counsel	CASE 9117	Low-income electricity aggregation	Maryland	07
I/M/O Office of Consumer Advocate et al. v. Verizon and Verizon North	Office of Consumer Advocate	C-20077197	Lifeline telecommunications rates	Pennsylvania	07
I/M/O Pennsylvania Power Company	Office of Consumer Advocate	P-00072437	Low-income program	Pennsylvania	07
I/M/O National Fuel Gas Distribution Corporation	Office of Consumer Advocate	M-00072019	Low-income program	Pennsylvania	07
I/M/O Public Service of New MexicoElectric	Community Action New Mexico	07-00077-UT	Low-income programs	New Mexico	07
I/M/O Citizens Gas/NIPSCO/Vectren for Universal Service Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	CASE 43077	Low-income program design	Indiana	07
I/M/O PPL Electric	Office of Consumer Advocate	R-00072155	Low-income program	Pennsylvania	07
I/M/O Section 15 Challenge to NSPI Rates	Energy Affordability Coalition	P-886	Discrimination in utility regulation	Nova Scotia	07
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	R-00061931	Low-income programs / credit and collections	Pennsylvania	07
I/M/O Equitable Gas Company	Office of Consumer Advocate	M-00061959	Low-income program	Pennsylvania	07
I/M/O Public Service Company of New Mexico	Community Action of New Mexico	Case No. 06-000210-UT	Late charges / winter moratorium / decoupling	New Mexico	06
I/M?O Verizon Massachusetts	ABCD	Case NO. DTE 06-26	Late charges	Massachusetts	06
I/M/O Section 11 Proceeding, Energy Restructuring	Office of Peoples Counsel	PC9074	Low-income needs and responses	Maryland	06
I/M/O Citizens Gas/NIPSCO/Vectren for Univ. Svc. Program	Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy	Case No. 43077	Low-income program design	Indiana	06
I/M/O Public Service Co. of North Carolina	North Carolina Attorney General/Dept. of Justice	G-5, Sub 481	Low-income energy usage	North Carolina	06
I/M/O Electric Assistance Program	New Hampshire Legal Assistance	DE 06-079	Electric low-income program design	New Hampshire	06
I/M/O Verizon Petition for Alternative Regulation	New Hampshire Legal Assistance	DM-06-072	Basic local telephone service	New Hampshire	06
I/M/O Pennsylvania Electric Co/Metropolitan Edison Co.	Office of Consumer Advocate	N/A	Universal service cost recovery	Pennsylvania	06
I/M/O Duquesne Light Company	Office of Consumer Advocates	R-00061346	Universal service cost recovery	Pennsylvania	06

Colton Vitae—December 2019 29 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Natural Gas DSM Planning	Low-Income Energy Network	EB-2006-0021	Low-income gas DSM program.	Ontario	06
I/M/O Union Gas Co.	Action Centre for Tenants Ontario (ACTO)	EB-2005-0520	Low-income program design	Ontario	06
I/M/O Public Service of New Mexico merchant plant	Community Action New Mexico	05-00275-UT	Low-income energy usage	New Mexico	06
I/M/O Customer Assistance Program design and cost recovery	Office of Consumer Advocate	M-00051923	Low-income program design	Pennsylvania	06
I/M/O NIPSCO Proposal to Extend Winter Warmth Program	Northern Indiana Public Service Company	Case 42927	Low-income energy program evaluation	Indiana	05
I/M/O Piedmont Natural Gas	North Carolina Attorney General/Dept. of Justice	G-9, Sub 499	Low-income energy usage	North Carolina	05
I/M/O PSEG merger with Exelon Corp.	Division of Ratepayer Advocate	EM05020106	Low-income issues	New Jersey	05
Re. Philadelphia Water Department	Public Advocate	No docket number	Water collection factors	Philadelphia	05
I/M/O statewide natural gas universal service program	New Hampshire Legal Assistance	N/A	Universal service	New Hampshire	05
I/M/O Sub-metering requirements for residential rental properties	Tenants Advocacy Centre of Ontario	EB-2005-0252	Sub-metering consumer protections	Ontario	05
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00049656	Universal service	Pennsylvania	05
I/M/O Philadelphia Gas Works (PGW)	Office of Consumer Advocate	R-00049157	Low-income and residential collections	Pennsylvania	04
I/M/O Nova Scotia Power, Inc.	Dalhousie Legal Aid Service	NSUARB-P-881	Universal service	Nova Scotia	04
I/M/O Lifeline Telephone Service	National Ass'n State Consumer Advocates (NASUCA)	WC 03-109	Lifeline rate eligibility	FCC	04
Mackay v. Verizon North	Office of Consumer Advocate	C20042544	Lifeline rates—vertical services	Pennsylvania	04
I/M/O PECO Energy	Office of Consumer Advocate	N/A	Low-income rates	Pennsylvania	04
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	P00042090	Credit and collections	Pennsylvania	04
I/M/O Citizens Gas & Coke/Vectren	Citizens Action Coalition of Indiana	Case 42590	Universal service	Indiana	04
I/M/O PPL Electric Corporation	Office of Consumer Advocate	R00049255	Universal service	Pennsylvania	04
I/M/O Consumers New Jersey Water Company	Division of Ratepayer Advocate	N/A	Low-income water rate	New Jersey	04
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8982	Low-income gas rate	Maryland	04

Colton Vitae—December 2019 30 | P a g e

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O National Fuel Gas	Office of Consumer Advocate	R-00038168	Low-income program design	Pennsylvania	03
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8959	Low-income gas rate	Maryland	03
Golden v. City of Columbus	Helen Golden	C2-01-710	ECOA disparate impacts	Ohio	02
Huegel v. City of Easton	Phyllis Huegel	00-CV-5077	Credit and collection	Pennsylvania	02
I/M/O Universal Service Fund	Public Utility Commission staff	N/A	Universal service funding	New Hampshire	02
I/M/O Philadelphia Gas Works	Office of Consumer Advocate	M-00021612	Universal service	Pennsylvania	02
I/M/O Washington Gas Light Company	Office of Peoples Counsel	Case 8920	Rate design	Maryland	02
I/M/O Consumers Illinois Water Company	Illinois Citizens Utility Board	02-155	Credit and collection	Illinois	02
I/M/O Public Service Electric & Gas Rates	Division of Ratepayer Advocate	GR01050328	Universal service	New Jersey	01
I/M/O Pennsylvania-American Water Company	Office of Consumer Advocate	R-00016339	Low-income rates and water conservation	Pennsylvania	01
I/M/O Louisville Gas & Electric Prepayment Meters	Kentucky Community Action Association	200-548	Low-income energy	Kentucky	01
I/M/O NICOR Budget Billing Plan Interest Charge	Cook County State's Attorney	01-0175	Rate Design	Illinois	01
I/M/O Rules Re. Payment Plans for High Natural Gas Prices	Cook County State's Attorney	01-0789	Budget Billing Plans	Illinois	01
I/M/O Philadelphia Water Department	Office of Public Advocate	No docket number	Credit and collections	Philadelphia	01
I/M/O Missouri Gas Energy	Office of Peoples Counsel	GR-2001-292	Low-income rate relief	Missouri	01
I/M/O Bell AtlanticNew Jersey Alternative Regulation	Division of Ratepayer Advocate	T001020095	Telecommunications universal service	New Jersey	01
I/M/O Entergy Merger	Low-Income Intervenors	2000-UA925	Consumer protections	Mississippi	01
I/M/O T.W. Phillips Gas and Oil Co.	Office of Consumer Advocate	R00994790	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O Peoples Natural Gas Company	Office of Consumer Advocate	R-00994782	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O UGI Gas Company	Office of Consumer Advocate	R-00994786	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O PFG Gas Company	Office of Consumer Advocate	R00994788	Ratemaking of universal service costs.	Pennsylvania	00
Armstrong v. Gallia Metropolitan Housing Authority	Equal Justice Foundation	2:98-CV-373	Public housing utility allowances	Ohio	00
I/M/O Bell AtlanticNew Jersey Alternative Regulation	Division of Ratepayer Advocate	T099120934	Telecommunications universal service	New Jersey	00

Colton Vitae—December 2019 31 | P a g e

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
I/M/O Universal Service Fund for Gas and Electric Utilities	Division of Ratepayer Advocate	EX00200091	Design and funding of low-income programs	New Jersey	00
I/M/O Consolidated Edison Merger with Northeast Utilities	Save Our Homes Organization	DE 00-009	Merger impacts on low-income	New Hampshire	00
I/M/O UtiliCorp Merger with St. Joseph Light & Power	Missouri Dept. of Natural Resources	EM2000-292	Merger impacts on low-income	Missouri	00
I/M/O UtiliCorp Merger with Empire District Electric	Missouri Dept. of Natural Resources	EM2000-369	Merger impacts on low-income	Missouri	00
I/M/O PacifiCorp	The Opportunity Council	UE-991832	Low-income energy affordability	Washington	00
I/M/O Public Service Co. of Colorado	Colorado Energy Assistance Foundation	99S-609G	Natural gas rate design	Colorado	00
I/M/O Avista Energy Corp.	Spokane Neighborhood Action Program	UE9911606	Low-income energy affordability	Washington	00
I/M/O TW Phillips Energy Co.	Office of Consumer Advocate	R-00994790	Universal service	Pennsylvania	00
I/M/O PECO Energy Company	Office of Consumer Advocate	R-00994787	Universal service	Pennsylvania	00
I/M/O National Fuel Gas Distribution Corp.	Office of Consumer Advocate	R-00994785	Universal service	Pennsylvania	00
I/M/O PFG Gas Company/Northern Penn Gas	Office of Consumer Advocate	R-00005277	Universal service	Pennsylvania	00
I/M/O UGI Energy Company	Office of Consumer Advocate	R-00994786	Universal service	Pennsylvania	00
Re. PSCO/NSP Merger	Colorado Energy Assistance Foundation	99A-377EG	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Office of Consumer Advocate	R-00994782	Universal service	Pennsylvania	99
I/M/O Columbia Gas Company	Office of Consumer Advocate	R-00994781	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Office of Consumer Advocate	R-00994783	Universal service	Pennsylvania	99
I/M/O Equitable Gas Company	Office of Consumer Advocate	R-00994784	Universal service	Pennsylvania	99
Allerruzzo v. Klarchek	Barlow Allerruzzo	N/A	Mobile home fees and sales	Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Division of Ratepayer Advocate	GO99030123	Universal service	New Jersey	99
I/M/O Bell Atlantic Local Competition	Public Utility Law Project	P-00991648	Lifeline telecommunications rates	Pennsylvania	99
I/M/O Merger Application for SBC and Ameritech Ohio	Edgemont Neighborhood	N/A	Merger impacts on low-income consumers	Ohio	98 - 99

Colton Vitae—December 2019 32 | P a g e

CASE NAME	CLIENT NAME Association	Docket No. (if available)	ТОРІС	JURIS.	YEAR
Davis v. American General Finance	Thomas Davis	N/A	Damages in "loan flipping" case	Ohio	98 - 99
Griffin v. Associates Financial Service Corp.	Earlie Griffin	N/A	Damages in "loan flipping" case	Ohio	98 - 99
I/M/O Baltimore Gas and Electric Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8794	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Delmarva Power and Light Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8795	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Electric Power Co. Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8796	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Edison Restructuring Plan	Maryland Office of Peoples Counsel	Case No. 8797	Consumer protection/basic generation service	Maryland	98 - 99
VMHOA v. LaPierre	Vermont Mobile Home Owners Association	N/A	Mobile home tying	Vermont	98
Re. Restructuring Plan of Virginia Electric Power	VMH Energy Services, Inc.	PUE960296	Consumer protection/basic generation service	Virginia	98
Mackey v. Spring Lake Mobile Home Estates	Timothy Mackey	N/A	Mobile home fees	State ct: Illinois	98
Re. Restructuring Plan of Atlantic City Electric	New Jersey Division of Ratepayer Advocate	E097070457	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Jersey Central Power & Light	New Jersey Division of Ratepayer Advocate	E097070466	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Public Service Electric & Gas	New Jersey Division of Ratepayer Advocate	E097070463	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Rockland Electric	New Jersey Division of Ratepayer Advocate	E09707466	Low-income issues	New Jersey	97-98
Appleby v. Metropolitan Dade County Housing Agency	Legal Services of Greater Miami	N/A	HUD utility allowances	Fed. court: So. Florida	97 - 98
Re. Restructuring Plan of PECO Energy Company	Energy Coordinating Agency of Philadelphia	R-00973953	Universal service	Pennsylvania	97
Re. IES Industries Merger	Iowa Community Action Association	SPU-96-6	Low-income issues	lowa	97

Colton Vitae—December 2019 33 | P a g e

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Re. New Hampshire Electric Restructuring	NH Comm. Action Ass'n	N/A	Wires charge	New Hampshire	97
Re. Merger of Atlantic City Electric and Connectiv	Division of Ratepayer Advocate	EM97020103	Low-income	New Jersey	97
Re. Connecticut Power and Light	City of Hartford	92-11-11	Low-income	Connecticut	97
Re. Comprehensive Review of RI Telecomm Industry	Consumer Intervenors	1997	Consumer protections	Rhode Island	97
Re. Natural Gas Competition in Wisconsin	Wisconsin Community Action Association	N/A	Universal service	Wisconsin	96
Re. Baltimore Gas and Electric Merger	Maryland Office of Peoples Counsel	CASE NO. 8725	Low-income issues	Maryland	96
Re. Northern States Power Merger	Energy Cents Coalition	E-002/PA-95-500	Low-income issues	Minnesota	96
Re. Public Service Co. of Colorado Merger	Colorado Energy Assistance Foundation	N/A	Low-income issues	Colorado	96
Re. Massachusetts Restructuring Regulations	Fisher, Sheehan & Colton	DPU-96-100	Low-income issues/energy efficiency	Massachusetts	96
I/M/O PGW FY1996 Tariff Revisions	Philadelphia Public Advocate	No Docket No.	Credit and collection / customer service	Philadelphia	96
Re. FERC Merger Guidelines	National Coalition of Low-Income Groups	RM-96-6-000	Low-income interests in mergers	Washington D.C.	96
Re. Joseph Keliikuli III	Joseph Keliikuli III	N/A	Damages from lack of homestead	Honolulu	96
Re. Theresa Mahaulu	Theresa Mahaulu	N/A	Damages from lack of homestead	Honolulu	95
Re. Joseph Ching, Sr.	Re. Joseph Ching, Sr.	N/A	Damages from lack of homestead	Honolulu	95
Joseph Keaulana, Jr.	Joseph Keaulana, Jr.	N/A	Damages from lack of homestead	Honolulu	95
Re. Utility Allowances for Section 8 Housing	National Coalition of Low-Income Groups	N/A	Fair Market Rent Setting	Washington D.C.	95
Re. PGW Customer Service Tariff Revisions	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Customer Responsibility Program	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	95
Re. Houston Lighting and Power Co.	Gulf Coast Legal Services	12065	Low-Income Rates	Texas	95

Colton Vitae—December 2019 34 | Page

CASE NAME	CLIENT NAME	Docket No. (if available)	ТОРІС	JURIS.	YEAR
I/M/O Petition to Stay PGW's Suspension of CRP customers who did Not Assign LIHEAP Grant to PGW	Philadelphia Public Advocate	No Docket No.	Low-Income rates	Philadelphia	95
Re. PGW Tariff Changes, Programs and Information Systems	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Request for Modification of Winter Moratorium	Philadelphia Public Advocate	No Docket No.	Credit and collection	Philadelphia	95
Re. Dept of Hawaii Homelands Trust Homestead Production	Native Hawaiian Legal Corporation	N/A	Prudence of trust management	Honolulu	94
Re. SNET Request for Modified Shutoff Procedures	Office of Consumer Counsel	94-06-73	Credit and collection	Connecticut	94
Re. Central Light and Power Co.	United Farm Workers	128280	Low-income rates/DSM	Texas	94
Blackwell v. Philadelphia Electric Co.	Gloria Blackwell	N/A	Role of shutoff regulations	Penn. courts	94
U.S. West Request for Waiver of Rules	Wash. Util. & Transp. Comm'n Staff	UT-930482	Telecommunications regulation	Washington	94
Re. U.S. West Request for Full Toll Denial	Colorado Office of Consumer Counsel	93A-6113	Telecommunications regulation	Colorado	94
Washington Gas Light Company	Community Family Life Services	Case 934	Low-income rates & energy efficiency	Washington D.C.	94
Clark v. Peterborough Electric Utility	Peterborough Community Legal Centre	6900/91	Discrimination of tenant deposits	Ontario, Canada	94
Dorsey v. Housing Auth. of Baltimore	Baltimore Legal Aide	N/A	Public housing utility allowances	Federal district court	93
Penn Bell Telephone Co.	Penn. Utility Law Project	P00930715	Low-income phone rates	Pennsylvania	93
Philadelphia Gas Works	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	93
Central Maine Power Co.	Maine Assn Ind. Neighborhoods	Docket No. 91-151-C	Low-income rates	Maine	92
New England Telephone Company	Mass Attorney General	92-100	Low-income phone rates	Massachusetts	92
Philadelphia Gas Works	Philadelphia Public Advocate	No Docket No.	Low-income DSM	Philadelphia	92
Philadelphia Water Dept.	Philadelphia Public Advocate	No Docket No.	Low-income rates	Philadelphia	92
Public Service Co. of Colorado	Land and Water Fund	91A-783EG	Low-income DSM	Colorado	92
Sierra Pacific Power Co.	Washoe Legal Services	N/A	Low-income DSM	Nevada	92

Colton Vitae—December 2019 35 | P a g e

CASE NAME	CLIENT NAME	Docket No. (if available)	TOPIC	JURIS.	YEAR
Consumers Power Co.	Michigan Legal Services	No Docket No.	Low-income rates	Michigan	92
Columbia Gas	Office of Consumer Advocate (OCA)	R9013873	Energy Assurance Program	Pennsylvania	91
Mass. Elec. Co.	Mass Elec Co.	N/A	Percentage of Income Plan	Massachusetts	91
AT&T	TURN	90-07-5015	Inter-LATA competition	California	91
Generic Investigation into Uncollectibles	Office of Consumer Advocate	1-900002	Controlling uncollectibles	Pennsylvania	91
Union Heat Light & Power	Kentucky Legal Services (KLS)	90-041	Energy Assurance Program	Kentucky	90
Philadelphia Water	Philadelphia Public Advocate (PPA)	No Docket No.	Controlling accounts receivable	Philadelphia	90
Philadelphia Gas Works	PPA	No Docket No.	Controlling accounts receivable	Philadelphia	90
Mississippi Power Co.	Southeast Mississippi Legal Services Corp.	90-UN-0287	Formula ratemaking	Mississippi	90
West Kentucky Gas	KLS	90-013	Energy Assurance Program	Kentucky	90
Philadelphia Electric Co.	PPA	N/A	Low-income rate program	Philadelphia	90
Montana Power Co.	Montana Ass'n of Human Res. Council Directors	N/A	Low-income rate proposals	Montana	90
Columbia Gas Co.	Office of Consumer Advocate	R-891468	Energy Assurance Program	Pennsylvania	90
Philadelphia Gas Works	PPA	No Docket No.	Energy Assurance Program	Philadelphia	89
Southwestern Bell Telephone Co.	SEMLSC	NF-89749	Formula ratemaking	Mississippi	90
Generic Investigation into Low-income Programs	Vermont State Department of Public Service	Case No. 5308	Low-income rate proposals	Vermont	89
Generic Investigation into Dmnd Side Management Measures	Vermont DPS	N/A	Low-income conservation programs	Vermont	89
National Fuel Gas	Office of Consumer Advocate	N/A	Low-income fuel funds	Pennsylvania	89
Montana Power Co.	Human Resource Develop. Council District XI	N/A	Low-income conservation	Montana	88
Washington Water Power Co.	Idaho Legal Service Corp.	N/A	Rate base, rate design, cost-allocations	Idaho	88

Colton Vitae—December 2019 36 | Page

Colton Vitae—December 2019

| Page