Q **PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.**

A I earned the designation of Chartered Financial Analyst ("CFA") from the CFA Institute. The CFA charter was awarded after successfully competing three examinations which covered the subject areas of financial accounting, economics, fixed income and equity valuation and professional and ethical conduct. I am a member of the CFA Institute's Financial Analyst Society.

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CenterPoint Energy Houston Electric

Rate of Return
(December 31, 2018)

Line	Description		Amount (1)	Weight (2)	Cost (3)	Weighted Cost (4)
1	Long-Term Debt	$	3,536,738	60.00%	4.38%	2.63%
2	Common Equity	$	2,357,825	40.00%	**9.25%**	3.70%
3	Total	$	5,894,563	100.00%		6.33%

Source:
Schedule II-C 2.1.

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

Line	Company	17-Year Average (1)	2018[2] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)	2005 (15)	2004 (16)	2003 (17)	2002 (18)
			Price to Earnings (P/E) Ratio[1]																
1	ALLETE	17 72	22 20	23 05	18 63	15 06	17 23	18 59	15 88	14 66	15 98	16 08	13 95	14 78	16 55	17 91	25 21	N/A	N/A
2	Alliant Energy	15 99	19 10	20 60	22 30	18 07	16 60	15 28	14 50	14 45	12 47	13 86	13 43	15 08	16 82	12 59	14 00	12 69	19 93
3	Ameren Corp	15 62	18 30	20 60	18 29	17 55	16 71	16 52	13 35	11 93	9 66	9 26	14 21	17 45	19 39	16 72	16 28	13 51	15 78
4	American Electric Power	14 09	18 00	19 33	15 16	15 77	15 88	14 49	13 77	11 92	13 42	10 03	13 06	16 27	12 91	13 70	12 42	10 66	12 68
5	Avangrid, Inc	27 85	22 70	27 27	20 49	40 94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	18 48	26 70	23 37	18 80	17 60	17 28	14 64	19 30	14 08	12 74	11 42	14 97	30 88	15 39	19 45	24 43	13 84	19 27
7	Black Hills	17 64	17 20	19 48	22 29	16 14	19 03	18 24	17 13	31 13	18 10	9 93	N/A	15 02	15 77	17 27	17 13	15 95	12 52
8	CenterPoint Energy	14 61	NMF	17 91	21 91	18 10	16 96	18 75	14 85	14 58	13 78	11 81	11 27	15 00	10 27	19 06	17 84	6 05	5 59
9	CMS Energy Corp	16 94	20 30	21 32	20 94	18 29	17 30	16 32	15 07	13 62	12 46	13 56	10 87	26 84	22 18	12 60	12 39	N/A	N/A
10	Consol Edison	15 28	16 20	19 77	18 80	15 59	15 90	14 72	15 39	15 08	13 30	12 55	12 29	13 78	15 49	15 13	18 21	14 30	13 28
11	Dominion Resources	18 24	21 40	22 17	21 33	22 14	22 97	19 25	18 91	17 27	14 35	12 74	13 78	20 63	15 98	24 89	15 07	15 24	12 05
12	DTE Energy	15 43	17 40	18 59	18 97	18 11	14 91	17 92	14 89	13 51	12 27	10 41	14 81	18 27	17 43	13 80	16 04	13 69	11 28
13	Duke Energy	16 95	18 00	19 93	21 25	18 22	17 91	17 45	17 46	13 76	12 69	13 32	17 28	16 13	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	13 96	14 70	17 23	17 92	14 77	13 05	12 70	9 71	11 81	10 32	9 72	12 36	16 03	12 99	11 74	37 59	6 97	7 78
15	El Paso Electric	17 52	24 20	21 78	18 66	18 33	16 38	15 88	14 47	12 60	10 72	10 79	11 89	15 26	16 92	26 72	22 03	18 26	22 99
16	Entergy Corp	13 47	13 80	15 01	10 92	12 53	12 89	13 21	11 22	9 06	11 57	11 98	16 56	19 30	14 28	16 28	15 09	13 77	11 53
17	Eversource Energy	17 64	18 70	19 47	18 69	18 11	17 92	16 94	19 86	15 35	13 42	11 96	13 66	18 75	27 07	19 76	20 77	13 35	16 07
18	Evergy, Inc	22 70	22 70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	14 73	20 10	13 41	18 68	12 58	16 02	13 43	19 08	11 30	10 97	11 49	17 97	18 22	16 53	15 37	12 99	11 77	10 46
20	FirstEnergy Corp	17 28	NMF	11 41	15 91	17 02	39 79	13 06	21 10	22 39	11 75	13 02	15 64	15 59	14 23	16 07	14 13	22 47	12 95
21	Fortis Inc	19 04	17 10	16 81	21 60	18 00	24 29	19 97	20 12	18 79	18 22	16 36	17 48	21 14	17 68	N/A	N/A	N/A	N/A
22	Great Plains Energy	15 52	N/A	NMF	17 98	19 37	16 47	14 19	15 53	16 11	12 10	16 03	20 55	16 35	18 30	13 96	12 59	12 23	11 09
23	Hawaiian Elec	18 01	18 40	20 69	13 56	20 40	15 88	16 21	15 81	17 09	18 59	19 79	23 16	21 57	20 33	18 27	19 18	13 76	13 47
24	IDACORP, Inc	16 19	20 50	20 60	19 06	16 22	14 67	13 45	12 41	11 54	11 83	10 20	13 93	18 19	15 07	16 70	15 49	26 51	18 88
25	MGE Energy	18 59	25 10	29 36	24 90	20 28	17 19	17 01	17 23	15 82	14 98	15 14	14 22	15 01	15 88	22 40	17 98	17 55	15 96
26	NextEra Energy, Inc	16 36	24 80	21 65	20 71	16 89	17 25	16 57	14 43	11 54	10 83	13 42	14 48	18 90	13 65	17 88	13 65	17 88	13 60
27	NorthWestern Corp	16 76	16 80	17 85	17 19	18 36	16 24	16 86	15 72	12 62	12 90	11 54	13 87	21 74	25 95	17 09	N/A	N/A	N/A
28	OGE Energy	14 98	16 50	18 32	17 68	17 69	18 27	17 69	15 16	14 37	13 31	10 83	12 41	13 75	13 68	14 95	14 13	11 84	14 12
29	Otter Tail Corp	24 18	22 20	22 06	20 19	18 20	18 84	21 12	21 75	47 48	55 10	31 16	30 06	19 02	17 35	15 40	17 34	17 77	16 01
30	PG&E Corp	16 79	N/A	18 28	21 13	26 40	15 00	23 67	20 70	15 46	15 80	13 01	12 08	16 85	14 84	15 37	13 81	9 50	N/A
31	Pinnacle West Capital	15 71	18 40	19 28	18 74	16 04	15 89	15 27	14 35	14 60	12 57	13 74	16 07	14 93	13 69	19 24	15 80	13 96	14 43
32	PNM Resources	17 93	19 90	20 43	19 83	16 85	18 68	16 13	14 97	14 53	14 05	18 09	N/A	35 65	15 57	17 38	15 02	14 73	15 08
33	Portland General	16 27	18 20	20 03	19 06	17 71	15 32	16 88	13 98	12 37	12 00	14 40	16 30	11 94	23 35	N/A	N/A	N/A	N/A
34	PPL Corp	14 14	11 70	17 65	12 83	13 92	14 08	12 84	10 88	10 52	11 93	25 69	17 64	17 26	14 10	15 12	12 51	10 59	11 06
35	Public Serv Enterprise	13 56	17 20	16 31	15 35	12 41	12 61	13 50	12 79	10 40	10 37	10 04	13 65	16 54	17 81	16 74	14 26	10 58	10 00
36	SCANA Corp	13 96	N/A	14 46	16 80	14 67	13 68	14 43	14 80	13 67	12 93	11 63	12 67	14 96	15 42	14 44	13 57	13 05	12 17
37	Sempra Energy	14 97	20 30	24 33	24 37	19 73	21 87	19 68	14 89	11 77	12 60	10 09	11 80	14 01	11 50	11 79	8 65	8 96	8 19
38	Southern Co	15 68	15 60	15 48	17 76	15 85	16 04	16 19	16 97	15 85	14 90	13 52	16 13	15 95	16 19	15 92	14 68	14 83	14 63
39	Vectren Corp	17 05	N/A	23 54	19 18	17 92	19 98	20 66	15 02	15 83	15 10	12 89	16 79	15 33	18 92	15 11	17 57	14 80	14 16
40	WEC Energy Group	16 15	19 60	20 01	19 95	21 33	17 71	16 50	15 76	14 25	14 01	13 35	14 77	16 47	15 97	14 46	17 51	12 43	10 46
41	Westar Energy	15 58	N/A	23 40	21 59	18 45	15 36	14 04	13 43	14 78	12 96	14 95	16 96	14 10	12 18	14 79	17 44	10 78	14 02
42	Xcel Energy Inc	16 89	19 10	20 20	18 48	16 54	15 44	15 04	14 82	14 24	14 13	12 66	13 69	16 65	14 80	15 36	13 65	11 62	40 80
43	Average	16 42	19 23	19 81	18 97	18 00	17 39	16 38	15 69	15 30	14 28	13 56	15 18	17 74	16 47	16 52	16 57	13 70	14 31
44	Median	15 76	18 70	19 97	18 80	17 71	16 54	16 27	15 04	14 31	12 91	12 82	14 21	16 41	15 88	15 92	15 29	13 60	13 47

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15, 2019

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

Line	Company	17-Year Average (1)	2018 [2/a] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)	2005 (15)	2004 (16)	2003 (17)	2002 (18)
		Market Price to Cash Flow (MP/CF) Ratio [1]																	
1	ALLETE	9 41	10 14	10 95	8 26	7 49	8 80	9 15	8 18	7 91	8 04	8 51	9 29	10 30	11 06	11 54	11 46	N/A	N/A
2	Alliant Energy	7 64	9 65	13 21	10 67	8 86	8 40	7 52	7 50	7 21	6 59	6 23	7 49	7 92	8 00	5 09	5 52	4 76	5 20
3	Ameren Corp	6 91	8 04	8 38	7 44	6 87	6 95	6 61	5 48	5 02	4 23	4 25	6 35	7 69	8 57	8 57	8 24	6 74	7 96
4	American Electric Power	6 26	8 20	8 81	7 57	7 09	7 00	6 57	5 93	5 46	5 54	4 71	5 71	6 84	5 54	6 07	5 50	4 69	5 19
5	Avangrid, Inc	9 95	9 78	10 14	8 56	11 30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	6 66	9 48	9 35	7 63	6 76	7 30	6 21	6 88	6 40	5 80	4 06	5 12	7 58	5 30	6 58	7 58	5 36	5 90
7	Black Hills	7 62	8 99	9 20	9 33	8 06	8 81	8 03	6 04	7 85	6 16	4 25	11 26	7 62	6 92	7 57	6 69	6 89	5 92
8	CenterPoint Energy	5 05	8 40	6 97	5 96	5 75	6 25	6 56	5 15	5 39	4 70	4 05	4 29	5 17	3 94	4 70	4 26	2 08	2 16
9	CMS Energy Corp	5 63	8 40	8 75	8 50	7 53	7 13	6 68	6 03	5 41	4 48	3 64	3 45	5 57	4 40	4 04	3 20	2 88	NMF
10	Consol Edison	8 18	8 62	9 64	9 39	7 96	7 89	7 77	8 31	8 15	7 39	6 72	6 89	8 31	8 65	8 59	9 31	7 90	7 64
11	Dominion Resources	9 40	10 93	11 35	11 59	11 84	12 27	10 88	9 92	9 45	8 12	6 98	8 27	8 65	7 81	10 09	7 68	7 51	6 53
12	DTE Energy	6 20	8 56	9 05	8 64	8 52	6 42	6 65	5 91	5 18	4 69	3 59	4 90	5 73	5 21	5 54	6 00	5 62	5 20
13	Duke Energy	7 59	7 56	8 40	8 57	7 95	8 12	8 11	9 53	6 56	6 01	5 96	7 13	7 16	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	5 28	5 27	7 05	6 77	5 92	5 68	5 46	4 59	4 22	4 11	3 95	5 63	7 01	5 87	5 61	6 84	2 82	2 96
15	El Paso Electric	5 91	9 07	8 54	7 46	6 47	6 33	6 19	5 78	5 16	4 31	3 98	4 95	6 44	6 25	6 67	4 65	3 90	4 39
16	Entergy Corp	5 71	4 93	4 66	4 01	4 11	4 21	4 03	4 23	3 90	4 66	5 68	7 96	9 21	7 16	8 76	7 12	6 84	5 57
17	Eversource Energy	6 66	9 34	10 36	10 14	10 12	10 14	8 08	9 30	6 99	4 97	4 61	4 12	6 18	6 02	3 55	3 78	2 85	2 75
18	Evergy, Inc	11 45	11 45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	6 13	5 03	4 45	4 80	4 70	5 09	4 61	5 54	5 86	5 10	5 98	9 65	9 89	8 62	7 97	6 29	5 71	4 97
20	FirstEnergy Corp	6 36	8 99	4 76	5 12	5 38	7 43	6 15	7 42	7 33	4 49	4 91	7 58	7 89	7 53	6 04	5 15	6 90	5 10
21	Fortis Inc	8 19	8 04	8 23	10 46	7 29	9 25	7 93	8 09	8 38	7 40	6 76	7 58	9 18	7 89	N/A	N/A	N/A	N/A
22	Great Plains Energy	6 89	N/A	14 62	8 63	6 66	6 45	5 73	6 09	5 74	4 49	5 06	7 71	7 13	7 68	6 70	6 52	5 92	5 14
23	Hawaiian Elec	7 98	8 88	9 21	7 44	9 25	7 64	8 15	8 05	7 73	7 81	6 95	9 10	7 95	8 47	8 29	8 44	6 12	6 20
24	IDACORP, Inc	8 11	11 52	11 56	10 95	9 37	8 59	7 78	7 05	6 64	6 52	5 31	7 10	8 23	7 73	7 55	7 15	7 27	7 53
25	MGE Energy	11 10	14 78	17 33	15 66	12 53	11 42	11 20	10 77	9 48	9 05	8 40	8 42	9 23	9 30	11 73	11 04	10 20	8 09
26	NextEra Energy, Inc	7 57	11 24	11 62	9 23	7 93	7 98	7 60	7 58	5 98	5 33	6 09	7 34	9 02	6 51	6 71	6 71	5 97	5 77
27	NorthWestern Corp	7 59	8 38	8 82	8 65	8 99	9 01	7 61	6 85	5 89	5 79	5 05	5 57	8 45	9 39	7 31	8 13	N/A	N/A
28	OGE Energy	7 77	9 55	10 52	9 03	9 25	10 65	9 93	7 35	7 48	6 61	5 37	6 43	7 58	7 50	7 04	6 73	5 62	5 39
29	Otter Tail Corp	9 24	11 48	11 09	9 38	9 04	9 45	9 58	8 43	9 04	8 07	8 01	11 65	9 53	8 66	8 18	9 01	8 13	8 33
30	PG&E Corp	6 25	N/A	7 09	7 26	7 24	5 65	6 84	5 86	5 32	5 42	4 71	4 61	5 84	5 28	5 07	5 13	4 05	14 69
31	Pinnacle West Capital	6 13	8 30	8 73	7 89	6 91	7 03	6 85	6 34	5 80	5 65	3 84	4 19	4 76	4 48	7 48	5 88	4 80	5 21
32	PNM Resources	6 71	7 32	7 40	7 64	6 95	7 48	6 47	5 80	4 94	4 58	4 53	7 10	10 67	7 50	7 62	6 84	5 55	5 72
33	Portland General	5 71	6 77	7 45	7 12	6 73	5 49	6 06	5 08	4 86	4 13	4 63	4 81	5 34	5 74	N/A	N/A	N/A	N/A
34	PPL Corp	7 45	7 05	10 11	8 37	8 73	7 32	6 59	5 87	5 98	7 46	8 82	9 17	8 90	7 58	7 57	6 49	5 41	5 30
35	Public Serv Enterprise	7 41	9 03	8 67	8 56	6 66	6 48	6 40	6 40	6 03	6 04	6 20	8 46	9 83	8 41	8 59	7 17	6 79	6 24
36	SCANA Corp	7 09		8 26	9 59	8 33	7 50	7 49	7 40	6 75	6 52	5 88	6 38	7 15	7 03	5 40	6 86	6 59	6 36
37	Sempra Energy	7 77	10 64	10 65	10 88	9 99	10 77	9 37	7 26	6 13	6 53	6 07	7 07	8 61	7 22	6 96	5 16	4 85	4 00
38	Southern Co	8 14	7 17	7 49	8 83	8 23	8 42	8 30	8 75	8 22	7 79	7 08	8 18	8 62	8 47	8 41	8 28	8 28	7 83
39	Vectren Corp	7 08		10 32	8 60	7 82	7 57	6 82	5 79	5 81	5 58	5 24	6 90	6 53	7 37	7 06	7 63	7 27	6 92
40	WEC Energy Group	8 42	11 09	11 04	10 95	12 90	10 27	9 58	9 24	8 43	8 15	6 87	7 57	7 84	7 27	6 40	6 27	4 91	4 27
41	Westar Energy	6 91	N/A	10 87	10 86	9 05	7 93	7 23	6 71	6 67	5 51	5 32	7 09	6 88	5 81	7 00	6 54	4 24	2 94
42	Xcel Energy Inc	6 48	8 17	8 50	8 10	7 62	7 31	7 00	6 85	6 47	6 28	5 43	5 71	6 51	5 54	5 62	5 31	4 27	5 46
43	Average	7 21	8 93	9 36	8 65	8 05	7 85	7 39	6 98	6 53	6 00	5 59	6 95	7 72	7 12	7 13	6 77	5 70	5 85
44	Median	7 09	8 88	9 05	8 57	7 93	7 54	7 12	6 85	6 27	5 80	5 35	7 09	7 76	7 37	7 04	6 71	5 62	5 52

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15, 2019
Note
[a] Based on the average of the high and low price for 2018 and the projected 2018 Cash Flow per share, published in The Value Line Investment Survey, January 25, February 15, and March 15, 2019

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

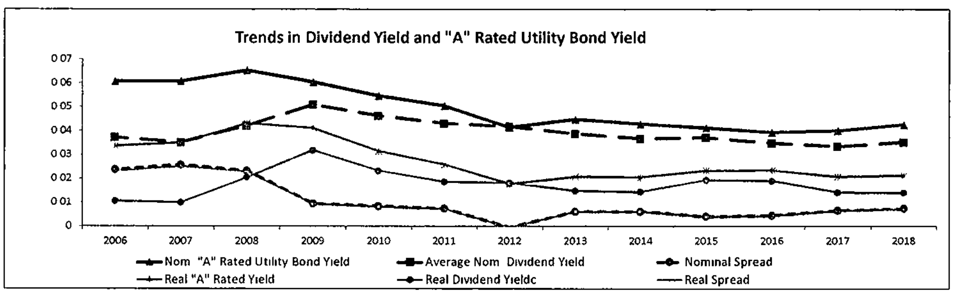
Line	Company	14-Year Average (1)	2018 [2/b] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)	2005 (15)
		Market Price to Book Value (MP/BV) Ratio [1]														
1	ALLETE	1.59	1.78	1.78	1.53	1.37	1.42	1.51	1.34	1.35	1.28	1.15	1.55	1.89	2.09	2.22
2	Alliant Energy	1.67	2.15	2.38	2.17	1.86	1.86	1.70	1.57	1.46	1.31	1.04	1.33	1.67	1.52	1.33
3	Ameren Corp	1.40	1.97	1.93	1.67	1.46	1.45	1.29	1.18	0.90	0.83	0.78	1.25	1.60	1.62	1.68
4	American Electric Power	1.53	1.86	1.88	1.81	1.55	1.54	1.40	1.31	1.23	1.23	1.08	1.48	1.85	1.56	1.57
5	Avangrid, Inc	0.87	1.01	0.93	0.83	0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	1.30	1.74	1.73	1.57	1.36	1.33	1.25	1.21	1.19	1.07	0.94	1.11	1.29	1.30	1.13
7	Black Hills	1.49	1.67	2.06	1.94	1.59	1.79	1.62	1.21	1.14	1.07	0.83	1.22	1.57	1.47	1.63
8	CenterPoint Energy	2.39	2.17	2.59	2.73	2.43	2.27	2.30	1.99	1.87	1.96	1.77	2.49	3.13	2.75	3.06
9	CMS Energy Corp	1.94	2.81	2.93	2.72	2.43	2.26	2.09	1.91	1.66	1.48	1.10	1.23	1.82	1.42	1.32
10	Consol Edison	1.40	1.48	1.63	1.58	1.42	1.34	1.38	1.47	1.38	1.22	1.08	1.17	1.47	1.47	1.52
11	Dominion Resources	2.65	2.41	2.94	3.15	3.34	3.55	2.97	2.84	2.37	2.01	1.80	2.42	2.69	2.07	2.50
12	DTE Energy	1.45	1.91	2.01	1.82	1.65	1.62	1.51	1.35	1.20	1.16	0.89	1.10	1.35	1.29	1.39
13	Duke Energy	1.18	1.35	1.41	1.35	1.29	1.28	1.19	1.12	1.11	1.00	0.91	1.06	1.15	N/A	N/A
14	Edison Int'l	1.63	1.57	2.17	1.92	1.76	1.68	1.57	1.53	1.24	1.07	1.04	1.56	2.05	1.80	1.93
15	El Paso Electric	1.56	1.94	1.87	1.68	1.48	1.52	1.49	1.59	1.64	1.17	0.98	1.33	1.69	1.71	1.76
16	Entergy Corp	1.72	1.74	1.76	1.67	1.40	1.33	1.21	1.31	1.35	1.62	1.66	2.44	2.65	1.89	2.01
17	Eversource Energy	1.42	1.70	1.73	1.64	1.53	1.47	1.38	1.28	1.50	1.31	1.12	1.31	1.60	1.22	1.05
18	Evergy, Inc	1.43	1.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	2.29	1.31	1.20	1.20	1.14	1.28	1.17	1.46	1.95	2.07	2.57	4.39	4.79	3.89	3.60
20	FirstEnergy Corp	1.89	2.96	3.53	2.37	1.16	1.15	1.28	1.44	1.33	1.36	1.54	2.52	2.23	1.92	1.64
21	Fortis Inc	1.48	1.25	1.41	1.26	1.33	1.35	1.45	1.59	1.59	1.56	1.33	1.48	1.63	1.96	N/A
22	Great Plains Energy	1.21	N/A	1.33	1.17	1.12	1.11	1.02	0.96	0.93	0.87	0.80	1.11	1.66	1.77	1.86
23	Hawaiian Elec	1.62	1.78	1.76	1.63	1.71	1.49	1.54	1.62	1.54	1.44	1.16	1.61	1.57	2.01	1.78
24	IDACORP, Inc	1.38	1.95	1.94	1.76	1.54	1.45	1.33	1.19	1.17	1.13	0.92	1.09	1.26	1.37	1.22
25	MGE Energy	2.03	2.55	2.88	2.60	2.10	2.10	2.06	1.92	1.75	1.65	1.54	1.62	1.75	1.83	2.09
26	NextEra Energy, Inc	1.99	2.41	2.35	2.30	2.09	2.15	1.93	1.74	1.55	1.49	1.70	2.06	2.34	1.80	1.93
27	NorthWestern Corp	1.45	1.52	1.64	1.68	1.60	1.54	1.56	1.42	1.35	1.22	1.07	1.15	1.48	1.65	1.42
28	OGE Energy	1.84	1.78	1.82	1.73	1.79	2.22	2.24	1.94	1.90	1.70	1.37	1.52	1.98	1.91	1.80
29	Otter Tail Corp	1.77	2.47	2.33	1.90	1.78	1.90	1.96	1.58	1.35	1.19	1.18	1.71	1.93	1.76	1.74
30	PG&E Corp	1.59	N/A	1.71	1.69	1.57	1.39	1.38	1.41	1.46	1.56	1.41	1.50	1.94	1.83	1.84
31	Pinnacle West Capital	1.38	1.80	1.91	1.72	1.52	1.44	1.47	1.39	1.25	1.14	0.95	1.00	1.26	1.26	1.25
32	PNM Resources	1.18	1.84	1.84	1.56	1.33	1.21	1.09	0.98	0.80	0.69	0.56	0.66	1.23	1.21	1.45
33	Portland General	1.29	1.59	1.69	1.56	1.42	1.37	1.28	1.14	1.09	0.94	0.92	1.05	1.32	1.36	N/A
34	PPL Corp	2.14	1.73	2.40	2.46	2.24	1.64	1.55	1.58	1.47	1.61	2.10	3.19	3.05	2.43	2.50
35	Public Serv Enterprise	1.91	1.80	1.68	1.67	1.58	1.57	1.44	1.46	1.59	1.67	1.78	2.58	2.99	2.46	2.45
36	SCANA Corp	1.51		1.65	1.74	1.47	1.48	1.48	1.48	1.36	1.33	1.20	1.45	1.62	1.64	1.72
37	Sempra Energy	1.78	2.08	2.24	2.00	2.17	2.20	1.84	1.53	1.28	1.35	1.32	1.60	1.87	1.70	1.73
38	Southern Co	2.05	1.89	2.07	2.01	1.99	2.02	2.04	2.15	1.99	1.83	1.73	2.12	2.24	2.23	2.35
39	Vectren Corp	1.83		2.75	2.29	2.11	2.08	1.82	1.57	1.53	1.41	1.34	1.64	1.74	1.77	1.82
40	WEC Energy Group	1.88	2.16	2.10	2.09	1.82	2.34	2.21	2.05	1.81	1.65	1.40	1.57	1.77	1.71	1.62
41	Westar Energy	1.37	N/A	1.94	1.95	1.49	1.44	1.33	1.26	1.20	1.10	0.93	1.10	1.36	1.30	1.41
42	Xcel Energy Inc	1.55	2.00	2.06	1.88	1.66	1.55	1.50	1.51	1.41	1.32	1.19	1.30	1.53	1.40	1.38
43	Average	1.67	1.88	2.00	1.85	1.67	1.68	1.60	1.51	1.43	1.35	1.25	1.63	1.90	1.78	1.80
44	Median	1.57	1.80	1.91	1.74	1.57	1.53	1.49	1.47	1.37	1.31	1.15	1.48	1.71	1.71	1.73

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15, 2019
Notes
[b] Based on the average of the high and low price for 2018 and the projected 2018 Book Value per share, published in The Value Line Investment Survey, January 25, February 15, and March 15, 2019

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

Line	Company	Dividend Yield[1]													
		13-Year Average (1)	2018 [2/a] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
1	ALLETE	4.03%	3.00%	2.97%	3.56%	3.97%	3.92%	3.89%	4.49%	4.58%	5.03%	5.79%	4.37%	3.60%	3.16%
2	Alliant Energy	3.82%	3.21%	3.07%	3.21%	3.60%	3.53%	3.74%	4.07%	4.28%	4.61%	5.73%	4.10%	3.13%	3.32%
3	Ameren Corp	4.63%	3.01%	3.12%	3.50%	3.96%	4.02%	4.61%	4.97%	5.28%	5.76%	5.98%	6.21%	4.88%	4.93%
4	American Electric Power	4.15%	3.52%	3.42%	3.54%	3.80%	3.83%	4.23%	4.58%	4.96%	4.90%	5.50%	4.20%	3.40%	4.06%
5	Avangrid, Inc	3.85%	3.49%	3.79%	4.26%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	3.77%	3.14%	3.14%	3.39%	3.97%	3.99%	4.51%	4.55%	4.54%	4.76%	4.49%	3.39%	2.68%	2.52%
7	Black Hills	3.83%	3.25%	2.75%	2.87%	3.55%	2.84%	3.19%	4.39%	4.64%	4.79%	6.17%	4.21%	3.40%	3.79%
8	CenterPoint Energy	4.57%	4.12%	4.79%	4.70%	5.06%	3.94%	3.57%	4.04%	4.27%	5.29%	6.37%	4.98%	3.87%	4.39%
9	CMS Energy Corp	3.32%	3.03%	2.88%	2.99%	3.36%	3.59%	3.76%	4.16%	4.25%	3.98%	3.97%	2.69%	1.16%	N/A
10	Consol Edison	4.51%	3.67%	3.40%	3.62%	4.12%	4.38%	4.25%	4.07%	4.46%	5.16%	5.99%	5.67%	4.84%	5.04%
11	Dominion Resources	3.98%	4.66%	3.88%	3.82%	3.66%	3.43%	3.78%	4.06%	4.13%	4.41%	5.20%	3.77%	3.32%	3.60%
12	DTE Energy	4.24%	3.33%	3.15%	3.34%	3.53%	3.54%	3.84%	4.19%	4.68%	4.75%	6.29%	5.24%	4.36%	4.86%
13	Duke Energy	4.78%	4.46%	4.15%	4.26%	4.34%	4.26%	4.45%	4.68%	5.21%	5.71%	6.25%	5.16%	4.44%	N/A
14	Edison Int'l	3.05%	4.17%	2.87%	2.81%	2.83%	2.62%	2.85%	2.97%	3.37%	3.66%	3.95%	2.69%	2.21%	2.58%
15	El Paso Electric	2.74%	2.52%	2.49%	2.75%	3.13%	2.97%	2.99%	2.97%	2.11%	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp	4.13%	4.40%	4.49%	4.55%	4.59%	4.47%	5.07%	4.91%	4.85%	4.20%	3.97%	2.92%	2.39%	2.82%
17	Eversource Energy	3.35%	3.28%	3.14%	3.22%	3.34%	3.40%	3.48%	3.52%	3.23%	3.64%	4.16%	3.25%	2.60%	3.27%
18	Evergy, Inc	3.11%	3.11%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	3.91%	3.33%	3.51%	3.75%	3.88%	3.69%	4.69%	5.73%	4.96%	4.95%	4.26%	2.78%	2.48%	2.83%
20	FirstEnergy Corp	4.35%	4.16%	4.62%	4.31%	4.23%	4.26%	4.26%	4.90%	5.23%	5.76%	5.09%	3.21%	3.12%	3.40%
21	Fortis Inc	3.68%	4.03%	3.69%	3.80%	3.76%	3.88%	3.84%	3.64%	3.58%	3.80%	4.21%	3.76%	3.01%	2.79%
22	Great Plains Energy	4.52%	N/A	3.58%	3.64%	3.76%	3.62%	3.84%	4.08%	4.15%	4.49%	5.03%	6.96%	5.49%	5.60%
23	Hawaiian Elec	4.74%	3.49%	3.65%	3.99%	4.05%	4.76%	4.72%	4.70%	5.04%	5.51%	6.89%	5.00%	5.18%	4.59%
24	IDACORP, Inc	3.27%	2.64%	2.58%	2.77%	3.06%	3.12%	3.21%	3.28%	3.10%	3.44%	4.46%	3.95%	3.55%	3.39%
25	MGE Energy	3.28%	2.20%	1.95%	2.23%	2.78%	2.78%	2.91%	3.25%	3.63%	3.98%	4.36%	4.24%	4.14%	4.25%
26	NextEra Energy, Inc	3.22%	2.70%	2.79%	2.91%	3.01%	3.00%	3.30%	3.65%	3.96%	3.90%	3.55%	3.02%	2.65%	3.40%
27	NorthWestern Corp	4.14%	3.80%	3.52%	3.43%	3.61%	3.30%	3.66%	4.17%	4.51%	4.93%	5.75%	5.38%	4.09%	3.65%
28	OGE Energy	3.61%	3.92%	3.61%	3.87%	3.51%	2.63%	2.48%	2.94%	3.06%	3.68%	4.96%	4.52%	3.77%	3.99%
29	Otter Tail Corp	4.26%	2.95%	3.12%	3.87%	4.33%	4.14%	4.11%	5.21%	5.57%	5.68%	5.38%	3.63%	3.46%	3.92%
30	PG&E Corp	3.70%	N/A	2.42%	3.22%	3.45%	3.96%	4.20%	4.25%	4.24%	4.08%	4.26%	4.01%	3.07%	3.22%
31	Pinnacle West Capital	4.61%	3.46%	3.16%	3.46%	3.88%	4.09%	3.98%	5.32%	4.81%	5.43%	6.76%	6.17%	4.75%	4.67%
32	PNM Resources	3.31%	2.76%	2.53%	2.69%	2.90%	2.79%	2.99%	2.96%	3.19%	4.09%	4.76%	4.85%	3.36%	3.21%
33	Portland General	3.74%	3.20%	2.92%	3.06%	3.27%	3.34%	3.67%	4.11%	4.37%	5.20%	5.36%	4.28%	3.34%	2.54%
34	PPL Corp	4.38%	5.67%	4.24%	4.25%	4.55%	4.45%	4.81%	5.07%	5.10%	5.12%	4.51%	3.10%	2.69%	3.41%
35	Public Serv Enterprise	3.84%	3.50%	3.74%	3.78%	3.81%	3.92%	4.35%	4.55%	4.24%	4.30%	4.30%	3.26%	2.73%	3.47%
36	SCANA Corp	4.37%		4.03%	3.29%	3.90%	4.05%	4.15%	4.25%	4.78%	4.93%	5.67%	4.92%	4.29%	4.21%
37	Sempra Energy	2.94%	3.14%	2.92%	2.92%	2.71%	2.61%	3.03%	3.71%	3.65%	3.08%	3.23%	2.62%	2.08%	2.47%
38	Southern Co	4.72%	5.19%	4.63%	4.42%	4.78%	4.69%	4.61%	4.29%	4.63%	5.13%	5.52%	4.58%	4.39%	4.52%
39	Vectren Corp	4.38%		2.79%	3.31%	3.60%	3.62%	4.15%	4.82%	5.06%	5.53%	5.85%	4.79%	4.53%	4.52%
40	WEC Energy Group	3.06%	3.30%	3.31%	3.35%	3.49%	3.40%	3.49%	3.24%	3.35%	2.97%	3.16%	2.41%	2.14%	2.18%
41	Westar Energy	4.37%	N/A	3.00%	2.90%	3.73%	3.88%	4.27%	4.57%	4.84%	5.32%	6.27%	5.22%	4.16%	4.28%
42	Xcel Energy Inc	3.99%	3.18%	3.10%	3.33%	3.69%	3.83%	3.86%	3.90%	4.20%	4.54%	5.14%	4.70%	4.05%	4.40%
43	**Average**	**3.94%**	**3.51%**	**3.34%**	**3.49%**	**3.71%**	**3.66%**	**3.87%**	**4.18%**	**4.30%**	**4.63%**	**5.09%**	**4.21%**	**3.51%**	**3.71%**
44	Median	3.92%	3.33%	3.15%	3.43%	3.71%	3.76%	3.85%	4.18%	4.42%	4.76%	5.14%	4.21%	3.40%	3.60%
45	20-Yr Treasury Yields[3]	3.48%	3.02%	2.65%	2.23%	2.55%	3.07%	3.12%	2.54%	3.62%	4.03%	4.11%	4.36%	4.91%	4.99%
46	20-Yr TIPS[3]	1.30%	0.92%	0.75%	0.66%	0.78%	0.87%	0.75%	0.21%	1.19%	1.73%	2.21%	2.19%	2.36%	2.31%
47	Implied Inflation[b]	2.15%	2.08%	1.89%	1.56%	1.75%	2.19%	2.35%	2.33%	2.40%	2.26%	1.85%	2.13%	2.49%	2.62%
48	**Real Dividend Yield[c]**	**1.75%**	**1.40%**	**1.42%**	**1.90%**	**1.93%**	**1.44%**	**1.49%**	**1.81%**	**1.86%**	**2.32%**	**3.18%**	**2.04%**	**0.99%**	**1.06%**
	Utility														
49	**Nominal "A" Rated Yield[4]**	**4.95%**	**4.25%**	**4.00%**	**3.93%**	**4.12%**	**4.28%**	**4.48%**	**4.13%**	**5.04%**	**5.46%**	**6.04%**	**6.53%**	**6.07%**	**6.07%**
50	**Real "A" Rated Yield**	**2.75%**	**2.12%**	**2.07%**	**2.34%**	**2.33%**	**2.04%**	**2.08%**	**1.76%**	**2.58%**	**3.13%**	**4.11%**	**4.31%**	**3.49%**	**3.36%**
	Spreads (Utility Bond - Stock)														
51	**Nominal Spread[d]**	**1.01%**	**0.74%**	**0.66%**	**0.44%**	**0.40%**	**0.61%**	**0.61%**	**-0.05%**	**0.74%**	**0.84%**	**0.95%**	**2.32%**	**2.57%**	**2.36%**
52	**Real Spread[e]**	**0.99%**	**0.72%**	**0.65%**	**0.44%**	**0.40%**	**0.60%**	**0.59%**	**-0.05%**	**0.72%**	**0.82%**	**0.93%**	**2.27%**	**2.50%**	**2.30%**
	Spreads (Treasury Bond - Stock)														
53	**Nominal[f]**	**-0.46%**	**-0.49%**	**-0.69%**	**-1.26%**	**-1.17%**	**-0.59%**	**-0.75%**	**-1.64%**	**-0.68%**	**-0.60%**	**-0.98%**	**0.15%**	**1.40%**	**1.28%**
54	**Real[g]**	**-0.45%**	**-0.48%**	**-0.68%**	**-1.24%**	**-1.15%**	**-0.58%**	**-0.73%**	**-1.60%**	**-0.67%**	**-0.58%**	**-0.97%**	**0.15%**	**1.37%**	**1.25%**



Sources
[1] The Value Line Investment Survey Investment Analyzer Software downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15 2019
[3] St Louis Federal Reserve Economic Research, http //research stlouisfed org
[4] www moodys com Bond Yields and Key Indicators through December 31, 2018

Notes
[a] Based on the average of the high and low price for 2017 and the projected 2017 Dividends Declared per share, published in the Value Line Investment Survey, January 25, February 15, and March 15, 2019
[b] Line 47 = (1 + Line 45) / (1 + Line 46) - 1
[c] Line 48 = (1 + Line 43) / (1 +Line 47) - 1
[d] The spread being measured here is the nominal A-rated utility bond yield over the average nominal utility dividend yield, (Line 49 - Line 43)
[e] The spread being measured here is the real A-rated utility bond yield over the average real utility dividend yield, Line 50 - Line 48)
[f] The spread being measured here is the nominal 20-Year Treasury yield over the average nominal utility dividend yield, (Line 45 - Line 43)
[g] The spread being measured here is the real 20 Year TIPS yield over the average real utility dividend yield Line 48 - Line 46)

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

Line	Company	13-Year Average (1)	2018[2] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
			Dividend per Share[1]												
1	ALLETE	1 87	2 24	2 14	2 08	2 02	1 96	1 90	1 84	1 78	1 76	1 76	1 72	1 64	1 45
2	Alliant Energy	0 93	1 34	1 26	1 18	1 10	1 02	0 94	0 90	0 85	0 79	0 75	0 70	0 64	0 58
3	Ameren Corp	1 85	1 85	1 78	1 72	1 66	1 61	1 60	1 60	1 56	1 54	1 54	2 54	2 54	2 54
4	American Electric Power	1 93	2 53	2 39	2 27	2 15	2 03	1 95	1 88	1 85	1 71	1 64	1 64	1 58	1 50
5	Avangrid, Inc	1 73	1 74	1 73	1 73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	1 08	1 49	1 43	1 37	1 32	1 27	1 22	1 16	1 10	1 00	0 81	0 69	0 60	0 57
7	Black Hills	1 54	1 93	1 81	1 68	1 62	1 56	1 52	1 48	1 46	1 44	1 42	1 40	1 37	1 32
8	CenterPoint Energy	0 88	1 12	1 35	1 03	0 99	0 95	0 83	0 81	0 79	0 78	0 76	0 73	0 68	0 60
9	CMS Energy Corp	0 90	1 43	1 33	1 24	1 16	1 08	1 02	0 96	0 84	0 66	0 50	0 36	0 20	N/A
10	Consol Edison	2 49	2 86	2 76	2 68	2 60	2 52	2 46	2 42	2 40	2 38	2 36	2 34	2 32	2 30
11	Dominion Resources	2 19	3 34	3 04	2 80	2 59	2 40	2 25	2 11	1 97	1 83	1 75	1 58	1 46	1 38
12	DTE Energy	2 58	3 59	3 36	3 06	2 84	2 69	2 59	2 42	2 32	2 18	2 12	2 12	2 12	2 08
13	Duke Energy	3 08	3 64	3 49	3 36	3 24	3 15	3 09	3 03	2 97	2 91	2 82	2 70	2 58	N/A
14	Edison Int'l	1 53	2 43	2 23	1 98	1 73	1 48	1 37	1 31	1 29	1 27	1 25	1 23	1 18	1 10
15	El Paso Electric	1 11	1 42	1 32	1 23	1 17	1 11	1 05	0 97	0 66	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp	3 16	3 58	3 50	3 42	3 34	3 32	3 32	3 32	3 32	3 24	3 00	3 00	2 58	2 16
17	Eversource Energy	1 32	2 02	1 90	1 78	1 67	1 57	1 47	1 32	1 10	1 03	0 95	0 83	0 78	0 73
18	Evergy, Inc	1 74	1 74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	Exelon Corp	1 68	1 38	1 31	1 26	1 24	1 24	1 46	2 10	2 10	2 10	2 10	2 05	1 82	1 64
19	FirstEnergy Corp	1 83	1 44	1 44	1 44	1 44	1 44	1 65	2 20	2 20	2 20	2 20	2 20	2 05	1 85
20	Fortis Inc	1 23	1 75	1 65	1 55	1 43	1 30	1 25	1 21	1 17	1 12	1 04	1 00	0 82	0 67
21	Great Plains Energy	1 11	N/A	1 10	1 06	1 00	0 94	0 88	0 86	0 84	0 83	0 83	1 66	1 66	1 66
22	Hawaiian Elec	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24
23	IDACORP, Inc	1 58	2 40	2 24	2 08	1 92	1 76	1 57	1 37	1 20	1 20	1 20	1 20	1 20	1 20
24	MGE Energy	1 07	1 32	1 26	1 21	1 16	1 11	1 07	1 04	1 01	0 99	0 97	0 96	0 94	0 93
25	NextEra Energy, Inc	2 61	4 44	3 93	3 48	3 08	2 90	2 64	2 40	2 20	2 00	1 89	1 78	1 64	1 50
26	NorthWestern Corp	1 60	2 20	2 10	2 00	1 92	1 60	1 52	1 48	1 44	1 36	1 34	1 32	1 28	1 24
27	OGE Energy	0 90	1 40	1 27	1 16	1 05	0 95	0 85	0 80	0 76	0 73	0 71	0 70	0 68	0 67
28	Otter Tail Corp	1 21	1 34	1 28	1 25	1 23	1 21	1 19	1 19	1 19	1 19	1 19	1 19	1 17	1 15
29	PG&E Corp	1 70	N/A	1 55	1 93	1 82	1 82	1 82	1 82	1 82	1 82	1 68	1 56	1 44	1 32
30	Pinnacle West Capital	2 33	2 87	2 70	2 56	2 44	2 33	2 23	2 67	2 10	2 10	2 10	2 10	2 10	2 03
31	PNM Resources	0 74	1 09	0 99	0 88	0 80	0 76	0 68	0 58	0 50	0 50	0 50	0 61	0 91	0 86
32	Portland General	1 09	1 43	1 34	1 26	1 18	1 12	1 10	1 08	1 06	1 04	1 01	0 97	0 93	0 68
33	PPL Corp	1 42	1 64	1 58	1 52	1 50	1 49	1 47	1 44	1 40	1 40	1 38	1 34	1 22	1 10
34	Public Serv Enterprise	1 44	1 80	1 72	1 64	1 56	1 48	1 44	1 42	1 37	1 37	1 33	1 29	1 17	1 14
35	SCANA Corp	2 00	N/A	2 45	2 30	2 18	2 10	2 03	1 98	1 94	1 90	1 88	1 84	1 76	1 68
36	Sempra Energy	2 24	3 58	3 29	3 02	2 80	2 64	2 52	2 40	1 92	1 56	1 56	1 37	1 24	1 20
37	Southern Co	1 95	2 38	2 30	2 22	2 15	2 08	2 01	1 94	1 87	1 80	1 73	1 66	1 60	1 54
38	Vectren Corp	1 42	N/A	1 71	1 62	1 54	1 46	1 43	1 41	1 39	1 37	1 35	1 31	1 27	1 23
39	WEC Energy Group	1 25	2 21	2 08	1 98	1 74	1 56	1 45	1 20	1 04	0 80	0 68	0 54	0 50	0 46
40	Westar Energy	1 30	N/A	1 60	1 52	1 44	1 40	1 36	1 32	1 28	1 24	1 20	1 16	1 08	0 98
41	Xcel Energy Inc	1 13	1 52	1 44	1 36	1 28	1 20	1 11	1 07	1 03	1 00	0 97	0 94	0 91	0 88
42	**Average**	**1.62**	**2.10**	**1.97**	**1.86**	**1.76**	**1.67**	**1.61**	**1.59**	**1.51**	**1 47**	**1.42**	**1.42**	**1.36**	**1 27**
43	**Industry Average Growth**	**4.28%**	**6.59%**	**6 14%**	**5.60%**	**5 24%**	**3.58%**	**1 23%**	**5.69%**	**2.49%**	**3.36%**	**-0.08%**	**5.06%**	**6 45%**	

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15, 2019
Notes
PG&E is excluded from 2017 and 2018 average calculations due to their Dividend Suspension

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

Line	Company	13-Year Average (1)	2018[2] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
		Earnings per Share[1]													
1	ALLETE	2.81	3.38	3.13	3.14	3.38	2.90	2.63	2.58	2.65	2.19	1.89	2.82	3.08	2.77
2	Alliant Energy	1.52	2.19	1.99	1.65	1.69	1.74	1.65	1.53	1.38	1.38	0.95	1.27	1.35	1.03
3	Ameren Corp	2.66	3.32	2.77	2.68	2.38	2.40	2.10	2.41	2.47	2.77	2.78	2.88	2.98	2.66
4	American Electric Power	3.25	3.90	3.62	4.23	3.59	3.34	3.18	2.98	3.13	2.60	2.97	2.99	2.86	2.86
5	Avangrid, Inc	1.68	2.20	1.67	1.98	0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	1.65	1.90	1.95	2.15	1.89	1.84	1.85	1.32	1.72	1.65	1.58	1.36	0.72	1.47
7	Black Hills	2.29	3.40	3.38	2.63	2.83	2.89	2.61	1.97	1.01	1.66	2.32	0.18	2.68	2.21
8	CenterPoint Energy	1.20	0.74	1.57	1.00	1.08	1.42	1.24	1.35	1.27	1.07	1.01	1.30	1.17	1.33
9	CMS Energy Corp	1.50	2.32	2.17	1.98	1.89	1.74	1.66	1.53	1.45	1.33	0.93	1.23	0.64	0.64
10	Consol Edison	3.71	4.80	4.10	3.94	4.05	3.62	3.93	3.86	3.57	3.47	3.14	3.36	3.48	2.95
11	Dominion Resources	2.94	3.31	3.53	3.44	3.20	3.05	3.09	2.75	2.76	2.89	2.64	3.04	2.13	2.40
12	DTE Energy	4.03	6.17	5.73	4.83	4.44	5.10	3.76	3.88	3.67	3.74	3.24	2.73	2.66	2.45
13	Duke Energy	3.79	4.45	4.22	3.71	4.10	4.13	3.98	3.71	4.14	4.02	3.39	3.03	3.60	2.73
14	Edison Int'l	3.82	4.30	4.51	3.94	4.15	4.33	3.78	4.55	3.23	3.35	3.24	3.68	3.32	3.28
15	El Paso Electric	2.04	2.30	2.42	2.39	2.03	2.27	2.20	2.26	2.48	2.07	1.50	1.73	1.63	1.27
16	Entergy Corp	6.01	5.88	5.19	6.88	5.81	5.77	4.96	6.02	7.55	6.66	6.30	6.20	5.60	5.36
17	Eversource Energy	2.27	3.25	3.11	2.96	2.76	2.58	2.49	1.89	2.22	2.10	1.91	1.86	1.59	0.82
18	Evergy, Inc	2.50	2.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	3.00	2.07	2.78	1.80	2.54	2.10	2.31	1.92	3.75	3.87	4.29	4.10	4.03	3.50
20	FirstEnergy Corp	2.68	1.15	2.73	2.10	2.00	0.85	2.97	2.13	1.88	3.25	3.32	4.38	4.22	3.82
21	Fortis Inc	1.76	2.52	2.66	1.89	2.11	1.38	1.63	1.65	1.74	1.62	1.51	1.52	1.29	1.36
22	Great Plains Energy	1.33	N/A	-0.06	1.61	1.37	1.57	1.62	1.35	1.25	1.53	1.03	1.16	1.85	1.62
23	Hawaiian Elec	1.49	1.90	1.64	2.29	1.50	1.64	1.62	1.67	1.44	1.21	0.91	1.07	1.11	1.33
24	IDACORP, Inc	3.29	4.50	4.21	3.94	3.87	3.85	3.64	3.37	3.36	2.95	2.64	2.18	1.86	2.35
25	MGE Energy	1.89	2.43	2.20	2.18	2.06	2.32	2.16	1.86	1.76	1.67	1.47	1.59	1.51	1.37
26	NextEra Energy, Inc	4.93	6.68	6.50	5.78	6.06	5.60	4.83	4.56	4.82	4.74	3.97	4.07	3.27	3.23
27	NorthWestern Corp	2.46	3.40	3.34	3.39	2.90	2.99	2.46	2.26	2.53	2.14	2.02	1.77	1.44	1.31
28	OGE Energy	1.65	2.12	1.92	1.69	1.69	1.98	1.94	1.79	1.73	1.50	1.33	1.25	1.32	1.23
29	Otter Tail Corp	1.32	2.06	1.86	1.60	1.56	1.55	1.37	1.05	0.45	0.38	0.71	1.09	1.78	1.69
30	PG&E Corp	2.72	N/A	3.50	2.83	2.00	3.06	1.83	2.07	2.78	2.82	3.03	3.22	2.78	2.76
31	Pinnacle West Capital	3.39	4.40	4.43	3.95	3.92	3.58	3.66	3.50	2.99	3.08	2.26	2.12	2.96	3.17
32	PNM Resources	1.27	1.95	1.92	1.65	1.64	1.45	1.41	1.31	1.08	0.87	0.58	0.11	0.76	1.72
33	Portland General	1.88	2.40	2.29	2.16	2.04	2.18	1.77	1.87	1.95	1.66	1.31	1.39	2.33	1.14
34	PPL Corp	2.35	2.50	2.11	2.79	2.37	2.38	2.38	2.61	2.61	2.29	1.19	2.45	2.63	2.29
35	Public Serv Enterprise	2.80	3.00	2.82	2.83	3.30	2.99	2.45	2.44	3.11	3.07	3.08	2.90	2.59	1.85
36	SCANA Corp	3.30	N/A	4.20	4.16	3.81	3.79	3.39	3.15	2.97	2.98	2.85	2.95	2.74	2.59
37	Sempra Energy	4.54	5.50	4.63	4.24	5.23	4.63	4.22	4.35	4.47	4.02	4.78	4.43	4.26	4.23
38	Southern Co	2.60	2.90	3.21	2.83	2.84	2.77	2.70	2.67	2.55	2.36	2.32	2.25	2.28	2.10
39	Vectren Corp	1.94	N/A	2.60	2.55	2.39	2.02	1.66	1.94	1.73	1.64	1.79	1.63	1.83	1.44
40	WEC Energy Group	2.25	3.34	3.14	2.96	2.34	2.59	2.51	2.35	2.18	1.92	1.60	1.52	1.42	1.32
41	Westar Energy	1.96	N/A	2.27	2.43	2.09	2.35	2.27	2.15	1.79	1.80	1.28	1.31	1.84	1.88
42	Xcel Energy Inc	1.83	2.45	2.30	2.21	2.10	2.03	1.91	1.85	1.72	1.56	1.49	1.46	1.35	1.35
43	**Average**	**2.60**	**3.18**	**3.02**	**2.91**	**2.78**	**2.77**	**2.60**	**2.51**	**2.53**	**2.45**	**2.26**	**2.29**	**2.32**	**2.17**
44	**Industry Average Growth**	**3.27%**	**5.26%**	**3.68%**	**4.86%**	**0.28%**	**6.70%**	**3.34%**	**-0.86%**	**3.54%**	**8.08%**	**-1.11%**	**-1.47%**	**6.98%**	

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15, 2019
Notes
PG&E is excluded from 2017 and 2018 average calculations due to their Dividend Suspension

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

Line	Company	Cash Flow / Capital Spending 2017 (1)	2018 (2)	2019 (3)	3 - 5 yr Projection (4)
1	ALLETE	1.61x	1.21x	0.73x	1.76x
2	Alliant Energy	0.49x	0.65x	0.65x	0.85x
3	Ameren Corp	0.75x	0.80x	0 80x	0.98x
4	American Electric Power	0.67x	0.68x	0.68x	0.88x
5	Avangrid, Inc.	0.57x	0.66x	0 72x	0.94x
6	Avista Corp.	0.77x	0.76x	0.88x	1.04x
7	Black Hills	1.17x	0.80x	0.64x	1.14x
8	CenterPoint Energy	1.22x	0.98x	0.97x	1 15x
9	CMS Energy Corp.	0.89x	0.77x	0.78x	1.00x
10	Consol. Edison	0.76x	0 74x	0.38x	1.02x
11	Dominion Resources	0.81x	1 04x	1.04x	1 18x
12	DTE Energy	0.94x	0 84x	0.67x	1 21x
13	Duke Energy	0.87x	0.72x	0.78x	1.17x
14	Edison Int'l	0.94x	0.83x	0.78x	0 89x
15	El Paso Electric	1.04x	0.82x	0.95x	1.03x
16	Entergy Corp.	0.76x	0 73x	0.63x	1.04x
17	Eversource Energy	0 79x	0.69x	0 65x	1.25x
18	Evergy, Inc	N/A	1.17x	1 27x	1.65x
19	Exelon Corp.	1.06x	1.05x	1.29x	1 69x
20	FirstEnergy Corp	1.03x	0.71x	0.98x	1.29x
21	Fortis Inc	0.76x	0.72x	0.67x	0.87x
22	Hawaiian Elec.	0.81x	1.08x	1.02x	1.06x
23	IDACORP, Inc.	1.33x	1 26x	1.27x	1.37x
24	MGE Energy	1 19x	0.66x	0 67x	0.69x
25	NextEra Energy, Inc.	0 53x	0.56x	0.85x	1 11x
26	NorthWestern Corp	1.21x	1.21x	1.07x	1.28x
27	OGE Energy	0.81x	1.30x	1.29x	1.67x
28	Otter Tail Corp.	1.10x	1 49x	0 80x	1.73x
29	PG&E Corp	0.82x	N/A	N/A	N/A
30	Pinnacle West Capital	0.76x	0.89x	0.99x	1.16x
31	PNM Resources	0.84x	0.83x	0.76x	1 35x
32	Portland General	1.07x	0 89x	1.36x	1.65x
33	PPL Corp.	0.82x	0.83x	0.92x	1.54x
34	Public Serv. Enterprise	0.64x	0.80x	1.10x	1.45x
35	SCANA Corp.	0.86x			
36	Sempra Energy	0.67x	0 78x	0.93x	1.58x
37	Southern Co.	0.90x	0.77x	0 94x	1.48x
38	Vectren Corp	0 82x			
39	WEC Energy Group	0.92x	0.90x	0.67x	1 06x
40	Xcel Energy Inc.	0.84x	0.72x	0.73x	1.07x
41	Average	0 89x	0.87x	0.87x	1.22x
42	Median	0 84x	0.80x	0 80x	1.16x

Sources.
The Value Line Investment Survey Investment Analyzer Software, downloaded on July 9, 2018.
The Value Line Investment Survey, January 25, February 15, and March 15, 2019.

Notes:
Based on the projected Cash Flow per share and Capital Spending per share.

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

		Percent Dividends to Book Value [1]													
Line	**Company**	**13-Year Average (1)**	**2018 [2/a] (2)**	**2017 (3)**	**2016 (4)**	**2015 (5)**	**2014 (6)**	**2013 (7)**	**2012 (8)**	**2011 (9)**	**2010 (10)**	**2009 (11)**	**2008 (12)**	**2007 (13)**	**2006 (14)**
1	ALLETE	6.04%	5.35%	5.29%	5.45%	5.45%	5.59%	5.86%	6.04%	6.18%	6.46%	6.67%	6.78%	6.80%	6.62%
2	Alliant Energy	6.25%	6.90%	7.32%	6.96%	6.70%	6.56%	6.36%	6.37%	6.26%	6.06%	5.98%	5.48%	5.23%	5.04%
3	Ameren Corp	6.07%	5.93%	6.01%	5.86%	5.78%	5.82%	5.93%	5.87%	4.76%	4.79%	4.66%	7.74%	7.84%	7.97%
4	American Electric Power	6.16%	6.56%	6.43%	6.42%	5.90%	5.91%	5.91%	5.99%	6.10%	6.04%	5.97%	6.23%	6.28%	6.32%
5	Avangrid, Inc	2.65%	3.53%	3.54%	3.53%	0.00%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	4.87%	5.46%	5.41%	5.33%	5.38%	5.33%	5.65%	5.51%	5.42%	5.07%	4.23%	3.77%	3.44%	3.26%
7	Black Hills	5.34%	5.42%	5.67%	5.55%	5.66%	5.06%	5.17%	5.31%	5.30%	5.14%	5.10%	5.15%	5.34%	5.58%
8	CenterPoint Energy	10.61%	8.94%	12.39%	12.82%	12.30%	8.96%	8.23%	8.05%	7.97%	10.36%	11.28%	12.40%	12.12%	12.09%
9	CMS Energy Corp	6.15%	8.52%	8.43%	8.14%	8.16%	8.10%	7.86%	7.94%	7.05%	5.90%	4.38%	3.31%	2.11%	0.00%
10	Consol. Edison	6.17%	5.43%	5.55%	5.72%	5.84%	5.87%	5.88%	5.97%	6.15%	6.27%	6.47%	6.60%	7.12%	7.40%
11	Dominion Resources	10.41%	11.25%	11.41%	12.04%	12.20%	12.16%	11.24%	11.50%	9.81%	8.86%	9.38%	9.14%	8.95%	7.46%
12	DTE Energy	5.88%	6.38%	6.34%	6.09%	5.81%	5.72%	5.79%	5.66%	5.60%	5.49%	5.59%	5.76%	5.91%	6.28%
13	Duke Energy	5.15%	6.03%	5.85%	5.73%	5.61%	5.45%	5.28%	5.22%	5.81%	5.72%	5.66%	5.45%	5.12%	0.00%
14	Edison Int'l	4.78%	6.57%	6.23%	5.39%	4.97%	4.41%	4.48%	4.54%	4.16%	3.90%	4.12%	4.19%	4.53%	4.65%
15	El Paso Electric	2.77%	4.89%	4.67%	4.62%	4.63%	4.53%	4.46%	4.72%	3.47%	0.00%	0.00%	0.00%	0.00%	0.00%
16	Entergy Corp	6.68%	7.65%	7.90%	7.58%	6.44%	5.95%	6.15%	6.42%	6.53%	6.82%	6.59%	7.13%	6.34%	5.34%
17	Eversource Energy	4.80%	5.57%	5.43%	5.27%	5.12%	4.99%	4.82%	4.49%	4.86%	4.75%	4.66%	4.26%	4.16%	4.00%
18	Evergy, Inc	4.43%	4.43%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	7.85%	4.34%	4.23%	4.51%	4.42%	4.72%	5.49%	8.38%	9.68%	10.25%	10.96%	12.21%	11.87%	11.02%
20	FirstEnergy Corp	8.10%	12.31%	16.34%	10.21%	4.91%	4.88%	5.44%	7.03%	6.93%	7.85%	7.84%	8.10%	6.96%	6.54%
21	Fortis Inc	5.37%	5.03%	5.19%	4.80%	5.00%	5.22%	5.58%	5.81%	5.70%	5.91%	5.60%	5.55%	4.90%	5.47%
22	Great Plains Energy	5.31%	N/A	4.78%	4.27%	4.21%	4.02%	3.91%	3.93%	3.84%	3.90%	4.03%	7.76%	9.13%	9.94%
23	Hawaiian Elec	7.47%	6.22%	6.43%	6.51%	6.91%	7.10%	7.27%	7.62%	7.77%	7.91%	7.96%	8.08%	8.11%	9.22%
24	IDACORP, Inc	4.42%	5.14%	5.02%	4.87%	4.70%	4.53%	4.26%	3.91%	3.62%	3.87%	4.11%	4.32%	4.48%	4.66%
25	MGE Energy	6.34%	5.60%	5.61%	5.79%	5.82%	5.84%	6.01%	6.22%	6.36%	6.56%	6.72%	6.87%	7.24%	7.77%
26	NextEra Energy, Inc	6.29%	6.50%	6.56%	6.69%	6.29%	6.45%	6.37%	6.33%	6.12%	5.82%	6.03%	6.23%	6.22%	6.12%
27	NorthWestern Corp	5.87%	5.77%	5.76%	5.77%	5.78%	5.08%	5.71%	5.90%	6.08%	6.01%	6.13%	6.21%	6.06%	6.00%
28	OGE Energy	6.50%	6.98%	6.59%	6.70%	6.30%	5.84%	5.56%	5.70%	5.81%	6.24%	6.79%	6.89%	7.47%	7.61%
29	Otter Tail Corp	7.24%	7.29%	7.27%	7.34%	7.70%	7.86%	8.07%	8.25%	7.52%	6.77%	6.33%	6.22%	6.67%	6.90%
30	PG&E Corp	5.73%	N/A	4.15%	5.44%	5.40%	5.50%	5.80%	6.00%	6.20%	6.38%	6.03%	6.01%	5.96%	5.88%
31	Pinnacle West Capital	6.14%	6.21%	6.03%	5.93%	5.91%	5.89%	5.84%	7.38%	6.00%	6.20%	6.42%	6.15%	5.98%	5.87%
32	PNM Resources	3.58%	5.08%	4.67%	4.18%	3.85%	3.37%	3.26%	2.89%	2.55%	2.84%	2.65%	3.20%	4.13%	3.89%
33	Portland General	4.64%	5.10%	4.94%	4.78%	4.64%	4.56%	4.70%	4.70%	4.78%	4.90%	4.93%	4.48%	4.42%	3.45%
34	PPL Corp	8.83%	9.79%	10.18%	10.44%	10.19%	7.28%	7.43%	8.00%	7.48%	8.24%	9.47%	9.89%	8.20%	8.27%
35	Public Serv. Enterprise	6.97%	6.28%	6.27%	6.31%	6.03%	6.14%	6.28%	6.66%	6.75%	7.20%	7.66%	8.40%	8.15%	8.54%
36	SCANA Corp	6.44%		6.67%	5.74%	5.72%	6.01%	6.14%	6.29%	6.48%	6.54%	6.80%	7.12%	6.94%	6.89%
37	Sempra Energy	5.17%	6.55%	6.53%	5.83%	5.89%	5.74%	5.60%	5.66%	4.68%	4.16%	4.27%	4.18%	3.89%	4.19%
38	Southern Co	9.51%	9.77%	9.59%	8.89%	9.53%	9.48%	9.39%	9.22%	9.22%	9.38%	9.55%	9.74%	9.83%	10.07%
39	Vectren Corp	7.71%		7.67%	7.60%	7.57%	7.51%	7.55%	7.57%	7.74%	7.78%	7.84%	7.85%	7.86%	7.97%
40	WEC Energy Group	5.88%	7.12%	6.94%	7.00%	6.35%	7.96%	7.71%	6.65%	6.05%	4.92%	4.42%	3.78%	3.77%	3.72%
41	Westar Energy	5.71%	N/A	5.82%	5.66%	5.57%	5.60%	5.70%	5.77%	5.81%	5.84%	5.83%	5.75%	5.64%	5.56%
42	Xcel Energy Inc	6.09%	6.37%	6.38%	6.26%	6.13%	5.94%	5.78%	5.88%	5.91%	5.97%	6.09%	6.13%	6.19%	6.16%
43	Average	6.25%	6.55%	6.67%	6.44%	6.12%	6.07%	6.10%	6.28%	6.11%	6.08%	6.13%	6.36%	6.28%	6.09%
44	Median	6.03%	6.22%	6.23%	5.83%	5.81%	5.83%	5.82%	5.99%	6.09%	6.02%	6.03%	6.21%	6.21%	6.14%

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, January 25, February 15, and March 15, 2019
[a] Based on the projected 2018 Dividend Declared per share and Book Value per share, published in The Value Line Investment Survey, January 25, February 15, and March 15, 2019

CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

		Dividends to Earnings Ratio [1]													
Line	Company	13-Year Average (1)	2018 [2/b] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
1	ALLETE	0 68	0 66	0 68	0 66	0 60	0 68	0.72	0 71	0 67	0 80	0.93	0 61	0 53	0 52
2	Alliant Energy	0 61	0 61	0 63	0 72	0 65	0.59	0 57	0 59	0 62	0 57	0 79	0 55	0 47	0 56
3	Ameren Corp	0.70	0 56	0.64	0 64	0 70	0 67	0 76	0 66	0 63	0 56	0 55	0 88	0.85	0 95
4	American Electric Power	0 59	0 65	0 66	0.54	0 60	0 61	0 61	0 63	0.59	0 66	0 55	0 55	0 55	0 52
5	Avangrid, Inc	0.90	0 79	1 03	0.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	0 66	0 78	0 73	0 64	0 70	0 69	0 66	0 88	0.64	0 61	0 51	0 51	0 83	0 39
7	Black Hills	1 23	0 57	0 54	0 64	0 57	0 54	0 58	0 75	1 45	0 87	0 61	7 78	0 51	0 60
8	CenterPoint Energy	0 77	1 51	0 86	1 03	0 92	0 67	0 67	0 60	0 62	0 73	0 75	0 56	0 58	0.45
9	CMS Energy Corp	0 55	0 62	0 61	0.63	0 61	0 62	0 61	0 63	0 58	0 50	0 54	0 29	0 31	N/A
10	Consol. Edison	0 68	0 60	0 67	0 68	0.64	0 70	0 63	0 63	0 67	0 69	0 75	0 70	0 67	0 78
11	Dominion Resources	0 74	1 01	0.86	0 81	0 81	0 79	0.73	0 77	0 71	0 63	0 66	0.52	0 69	0 58
12	DTE Energy	0 66	0 58	0 59	0 63	0 64	0 53	0 69	0 62	0 63	0 58	0 65	0 78	0 80	0.85
13	Duke Energy	0 80	0 82	0 83	0.91	0 79	0 76	0 78	0 82	0.72	0 72	0 83	0 89	0 72	N/A
14	Edison Int'l	0 40	0 57	0 50	0 50	0 42	0 34	0 36	0 29	0.40	0 38	0 38	0 33	0 35	0.34
15	El Paso Electric	0.49	0 62	0 54	0 51	0 57	0 49	0 48	0 43	0 27	N/A	N/A	N/A	N/A	N/A
16	Entergy Corp	0 53	0 61	0 67	0 50	0 57	0 58	0 67	0 55	0 44	0 49	0 48	0 48	0 46	0 40
17	Eversource Energy	0 59	0 62	0.61	0 60	0 61	0 61	0.59	0 70	0 50	0 49	0 50	0.44	0 49	0 88
18	Evergy, Inc	0 70	0 70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	0 59	0 67	0 47	0 70	0 49	0 59	0 63	1 09	0 56	0.54	0 49	0 50	0 45	0 47
20	FirstEnergy Corp	0 80	1 25	0 53	0 69	0 72	1 69	0 56	1 03	1 17	0 68	0 66	0 50	0 49	0 48
21	Fortis Inc	0 70	0 69	0.62	0 82	0 68	0 94	0.77	0 73	0 67	0 69	0 69	0 66	0 64	0 49
22	Great Plains Energy	- 0 82	N/A	-18 33	0 66	0 73	0 60	0 54	0 63	0 67	0 54	0 81	1 43	0 90	1 02
23	Hawaiian Elec	0 88	0 65	0 76	0 54	0 83	0 76	0 77	0 74	0 86	1 02	1 36	1.16	1.12	0 93
24	IDACORP, Inc	0 49	0 53	0 53	0 53	0 50	0 46	0 43	0 41	0 36	0 41	0 45	0 55	0 65	0 51
25	MGE Energy	0 58	0 54	0 57	0 56	0 56	0 48	0 50	0 56	0.57	0 60	0 66	0 60	0 62	0 68
26	NextEra Energy, Inc.	0 52	0 66	0 60	0 60	0 51	0 52	0.55	0.53	0 46	0 42	0 48	0.44	0 50	0 46
27	NorthWestern Corp	0 68	0 65	0 63	0.59	0 66	0 54	0 62	0 65	0 57	0 64	0 66	0 75	0.89	0.95
28	OGE Energy	0 54	0 66	0 66	0 68	0 62	0 48	0 44	0.45	0 44	0 49	0 54	0 56	0 52	0 55
29	Otter Tail Corp	1 20	0 65	0 69	0 78	0 79	0 78	0 87	1 13	2.64	3 13	1 68	1 09	0 66	0 68
30	PG&E Corp	0 65	N/A	0 44	0 68	0 91	0 59	0 99	0 88	0 65	0 65	0 55	0.48	0 52	0.48
31	Pinnacle West Capital	0 71	0 65	0 61	0 65	0 62	0 65	0 61	0 76	0 70	0 68	0 93	0 99	0 71	0 64
32	PNM Resources	0 97	0 56	0 52	0.53	0 49	0 52	0 48	0 44	0 46	0 57	0 86	5 50	1 20	0.50
33	Portland General	0 59	0 60	0 59	0 58	0 58	0 51	0 62	0 57	0 54	0 62	0.77	0.70	0 40	0 59
34	PPL Corp	0 63	0 66	0 75	0 54	0 63	0 63	0.62	0 55	0 54	0 61	1.16	0 55	0 46	0 48
35	Public Serv Enterprise	0 52	0 60	0 61	0 58	0 47	0 49	0 59	0 58	0 44	0 45	0 43	0.44	0 45	0 62
36	SCANA Corp	0 61		0 58	0 55	0 57	0 55	0 60	0 63	0 65	0 64	0 66	0.62	0 64	0 65
37	Sempra Energy	0 49	0 65	0 71	0 71	0 54	0 57	0 60	0 55	0 43	0 39	0 33	0 31	0 29	0.28
38	Southern Co	0 75	0 82	0 72	0 79	0 76	0 75	0 75	0 73	0 73	0 76	0 75	0 74	0 70	0 73
39	Vectren Corp	0 75		0 66	0 64	0 64	0 72	0 86	0 72	0 80	0 84	0.75	0 80	0 69	0 85
40	WEC Energy Group	0.52	0 66	0 66	0 67	0 74	0 60	0 58	0 51	0 48	0 42	0 42	0 36	0 35	0 35
41	Westar Energy	0 68	N/A	0 70	0 63	0 69	0 60	0.60	0 61	0 72	0 69	0 94	0 89	0 59	0 52
42	Xcel Energy Inc	0 62	0 62	0 63	0.62	0 61	0 59	0 58	0 58	0 60	0 64	0 65	0 64	0.67	0 65
43	Average	0 64	0 69	0 18	0 65	0 64	0 64	0 63	0.66	0 67	0 68	0 70	0 95	0 61	0 61
44	Median	0 62	0 65	0.63	0 64	0 63	0 60	0.61	0 63	0 62	0 62	0 66	0 60	0 59	0 56

Sources
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Note
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CenterPoint Energy Houston Electric

Electric Utilities
(Valuation Metrics)

		Cash Flow to Capital Spending Ratio [1]													
Line	Company	13-Year Average (1)	2018 [2/c] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
1	ALLETE	0.85	1.21	1.61	1.32	1.16	0.45	0.67	0.49	0.77	0.63	0.39	0.46	0.65	1.23
2	Alliant Energy	0.77	0.65	0.49	N/A	0.81	0.91	1.01	0.57	0.91	0.67	0.39	0.57	1.04	1.27
3	Ameren Corp	0.93	0.80	0.75	0.75	0.75	0.75	0.89	1.07	1.31	1.36	0.81	0.66	0.97	1.21
4	American Electric Power	0.89	0.68	0.67	0.85	0.85	0.87	0.91	1.07	1.19	1.24	1.02	0.70	0.77	0.75
5	Avangrid, Inc	0.74	0.66	0.57	0.86	0.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp	0.90	0.76	0.77	0.84	0.76	0.80	0.86	0.80	0.90	0.99	1.15	0.97	0.73	1.36
7	Black Hills	0.66	0.80	1.17	0.71	0.64	0.70	0.74	0.71	0.40	0.41	0.61	0.35	0.76	0.55
8	CenterPoint Energy	1.09	0.98	1.22	1.12	0.92	1.20	1.18	1.37	1.12	0.88	0.99	1.16	0.98	1.08
9	CMS Energy Corp.	0.89	0.77	0.89	0.81	0.81	0.74	0.82	0.82	1.05	1.13	0.97	1.11	0.55	1.07
10	Consol Edison	0.81	0.74	0.76	0.65	0.76	0.88	0.86	1.01	0.98	0.90	0.75	0.70	0.81	0.74
11	Dominion Resources	0.78	1.04	0.81	0.65	0.64	0.63	0.77	0.73	0.79	0.87	0.75	0.83	0.74	0.85
12	DTE Energy	1.05	0.84	0.94	0.93	0.84	1.02	0.96	0.93	1.09	1.51	1.50	0.98	1.07	1.03
13	Duke Energy	0.90	0.72	0.87	0.82	0.96	1.20	1.09	0.87	0.89	0.78	0.77	0.71	1.09	0.97
14	Edison Int'l	0.82	0.83	0.94	0.91	0.80	0.83	0.80	0.76	0.61	0.60	0.79	0.93	0.88	0.93
15	El Paso Electric	0.87	0.82	1.04	0.85	0.67	0.69	0.79	0.85	1.03	0.98	0.68	0.78	0.84	1.26
16	Entergy Corp	1.03	0.73	0.76	1.08	1.05	1.19	1.03	0.88	1.15	1.24	1.02	0.93	1.14	1.13
17	Eversource Energy	0.85	0.69	0.79	0.87	0.91	0.90	1.13	0.86	0.80	1.05	0.96	0.77	0.68	0.67
18	Evergy, Inc	1.17	1.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	Exelon Corp	1.27	1.05	1.06	0.76	0.82	0.93	1.07	0.98	1.19	1.66	1.66	1.61	1.84	1.86
20	FirstEnergy Corp	1.06	0.71	1.03	0.94	0.93	0.54	0.91	0.85	1.05	1.32	1.22	0.95	1.56	1.75
21	Fortis Inc	0.68	0.72	0.76	0.76	0.65	0.60	0.77	0.72	0.66	0.68	0.63	0.66	0.57	0.63
22	Great Plains Energy	0.79	N/A	0.78	1.17	0.90	0.79	0.91	0.86	1.03	0.86	0.50	0.35	0.69	0.64
23	Hawaiian Elec	1.08	1.08	0.81	1.37	0.98	1.03	0.92	0.99	1.30	1.50	0.79	0.87	1.15	1.23
24	IDACORP, Inc	1.05	1.26	1.33	1.16	1.15	1.21	1.34	1.24	0.86	0.78	0.96	0.82	0.64	0.89
25	MGE Energy	1.13	0.66	1.19	1.44	1.60	1.31	0.96	1.05	1.56	1.57	1.13	0.87	0.59	0.80
26	NextEra Energy, Inc	0.62	0.56	0.53	0.63	0.71	0.76	0.69	0.39	0.58	0.69	0.60	0.63	0.56	0.73
27	NorthWestern Corp	1.06	1.21	1.21	1.13	1.01	0.93	0.92	0.88	1.04	0.76	0.88	1.27	1.23	1.29
28	OGE Energy	0.83	1.30	0.81	1.00	1.18	1.19	0.69	0.63	0.51	0.69	0.61	0.60	0.79	0.84
29	Otter Tail Corp	0.90	1.49	1.10	0.84	0.74	0.70	0.67	0.85	1.16	1.09	0.56	0.37	0.65	1.44
30	PG&E Corp	0.81	N/A	0.82	0.73	0.69	0.80	0.56	0.68	0.83	0.85	0.78	0.84	1.02	1.12
31	Pinnacle West Capital	0.94	0.89	0.76	0.81	0.92	0.97	0.87	0.96	0.91	0.97	1.06	0.86	0.99	1.28
32	PNM Resources	0.70	0.83	0.84	0.57	0.57	0.63	0.80	0.87	0.77	0.82	0.70	0.44	0.43	0.89
33	Portland General	0.83	0.89	1.07	0.88	0.80	0.47	0.59	1.28	1.25	0.81	0.44	0.77	0.72	0.78
34	PPL Corp.	0.96	0.83	0.82	1.00	0.72	0.75	0.69	0.91	1.07	1.11	1.07	1.25	1.13	1.18
35	Public Serv Enterprise	1.13	0.80	0.64	0.61	0.80	1.04	0.93	0.96	1.30	1.23	1.41	1.34	1.64	1.94
36	SCANA Corp	0.86		0.86	0.66	0.83	0.90	0.83	0.77	0.88	0.86	0.76	0.76	0.92	1.26
37	Sempra Energy	0.81	0.78	0.67	0.56	0.81	0.74	0.84	0.73	0.72	0.90	1.02	0.87	0.90	0.93
38	Southern Co	0.87	0.77	0.90	0.77	0.88	0.80	0.86	0.93	0.94	0.93	0.78	0.87	0.91	1.00
39	Vectren Corp	1.00		0.82	0.87	0.95	0.98	1.05	1.13	1.20	1.31	0.83	0.82	0.98	1.00
40	WEC Energy Group	0.99	0.90	0.92	1.20	0.97	1.37	1.42	1.30	1.02	0.97	0.89	0.61	0.56	0.69
41	Westar Energy	0.72	N/A	0.91	0.63	0.86	0.70	0.72	0.67	0.71	0.88	0.68	0.36	0.48	1.00
42	Xcel Energy Inc	0.76	0.72	0.84	0.79	0.63	0.68	0.60	0.76	0.83	0.76	0.89	0.75	0.71	0.90
43	Average	0.90	0.87	0.89	0.88	0.86	0.87	0.88	0.88	0.96	0.98	0.86	0.80	0.88	1.05
44	Median	0.86	0.80	0.84	0.84	0.83	0.82	0.86	0.87	0.96	0.90	0.80	0.80	0.82	1.00

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Notes
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CenterPoint Energy Houston Electric

Natural Gas Utilities
(Valuation Metrics)

Line	Company	13-Year Average (1)	2018[2] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
		Price to Earnings (P/E) Ratio[1]													
1	Atmos Energy	16.39	21.70	22.04	20.80	17.50	16.09	15.87	15.93	14.36	13.21	12.54	13.59	15.87	13.52
2	Chesapeake Utilities	17.82	25.50	27.84	21.77	19.15	17.70	15.62	14.81	14.16	12.21	14.20	14.15	16.72	17.85
3	New Jersey Resources	16.69	15.50	22.38	21.25	16.61	11.73	15.98	16.83	16.76	14.98	14.93	12.27	21.61	16.13
4	NiSource Inc	19.88	19.50	NMF	23.18	37.34	22.74	18.89	17.87	19.36	15.33	14.34	12.07	18.82	19.16
5	Northwest Nat Gas	20.15	28.20	NMF	26.92	23.69	20.69	19.38	21.08	19.02	16.97	15.17	18.08	16.74	15.85
6	ONE Gas Inc	21.38	23.10	23.47	22.74	19.79	17.83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds	18.15	19.30	27.92	21.71	17.95	18.03	18.90	16.94	18.48	16.81	14.96	15.90	17.18	11.86
8	Southwest Gas	17.41	19.20	22.21	21.64	19.35	17.86	15.76	15.00	15.69	13.97	12.20	20.27	17.26	15.94
9	Spire Inc	16.19	16.70	19.82	19.61	16.49	19.80	21.25	14.46	13.05	13.74	13.39	14.31	14.19	13.60
10	UGI Corp	15.57	18.36	20.84	19.33	17.71	15.81	15.44	16.38	15.03	10.86	10.30	13.30	15.14	13.97
11	WGL Holdings Inc	16.71	N/A	25.40	20.05	16.99	15.15	18.25	15.27	16.97	15.11	12.58	13.66	15.60	15.46
12	Average	17.60	20.71	23.55	21.73	20.23	17.58	17.53	16.46	16.29	14.32	13.46	14.76	16.91	15.33
13	Median	17.17	19.40	22.38	21.64	17.95	17.83	17.11	16.15	16.22	14.48	13.80	13.91	16.73	15.66

Line	Company	13-Year Average (1)	2018[2/a] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
		Market Price to Cash Flow (MP/CF) Ratio[1]													
14	Atmos Energy	8.27	12.24	11.99	11.36	9.30	8.79	7.72	7.02	6.87	6.15	5.76	6.48	7.44	6.36
15	Chesapeake Utilities	9.45	12.99	13.78	12.06	10.16	9.25	8.12	7.46	7.35	6.36	9.48	7.88	8.58	9.40
16	New Jersey Resources	11.82	11.68	14.45	13.94	11.71	8.95	11.29	12.29	12.71	11.32	11.34	9.15	13.76	11.01
17	NiSource Inc	7.80	8.86	12.11	8.56	10.38	10.56	8.71	7.81	6.81	5.09	4.06	4.87	6.69	6.87
18	Northwest Nat Gas	13.24	12.98	59.72	11.57	9.46	8.84	8.61	9.48	9.08	8.94	8.26	8.75	8.54	7.83
19	ONE Gas Inc	10.43	11.81	11.89	11.10	9.19	8.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	South Jersey Inds	10.87	12.06	12.33	10.88	10.70	10.57	11.57	10.95	11.98	10.78	9.57	10.38	11.23	8.32
21	Southwest Gas	6.12	8.74	9.10	7.41	6.56	6.35	5.94	5.55	5.60	4.91	3.84	4.89	5.42	5.28
22	Spire Inc	9.52	9.35	10.39	10.32	8.47	12.03	13.76	8.80	8.08	8.12	8.58	8.95	8.46	8.46
23	UGI Corp	7.62	9.43	10.09	9.02	8.47	7.49	6.55	6.30	7.51	6.02	5.74	7.11	7.92	7.48
24	WGL Holdings Inc	9.17	N/A	12.92	11.36	9.59	8.46	9.83	9.03	9.52	8.34	7.17	7.68	8.39	7.81
25	Average	9.37	11.01	16.25	10.69	9.45	9.04	9.21	8.47	8.55	7.60	7.38	7.62	8.64	7.88
26	Median	9.00	11.75	12.11	11.10	9.46	8.84	8.66	8.31	7.80	7.24	7.71	7.78	8.42	7.82

Line	Company	13-Year Average (1)	2018[2/b] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
		Market Price to Book Value (MP/BV) Ratio[1]													
27	Atmos Energy	1.52	2.07	2.16	2.11	1.72	1.55	1.39	1.28	1.30	1.18	1.05	1.20	1.40	1.34
28	Chesapeake Utilities	1.91	2.51	2.51	2.28	2.19	2.12	1.83	1.66	1.61	1.40	1.37	1.64	1.84	1.85
29	New Jersey Resources	2.26	2.70	2.70	2.52	2.28	2.13	2.05	2.33	2.31	2.09	2.16	1.92	2.17	2.01
30	NiSource Inc	1.41	1.64	1.96	1.84	1.95	1.94	1.58	1.37	1.15	0.92	0.69	0.94	1.16	1.19
31	Northwest Nat Gas	1.85	2.34	2.41	1.92	1.63	1.59	1.56	1.72	1.70	1.78	1.73	1.96	2.05	1.69
32	ONE Gas Inc	1.56	1.93	1.89	1.67	1.26	1.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	South Jersey Inds	2.12	2.07	2.29	1.79	1.77	2.07	2.27	2.21	2.59	2.38	1.95	2.08	2.21	1.93
34	Southwest Gas	1.55	1.75	2.13	1.96	1.68	1.68	1.61	1.51	1.43	1.24	0.97	1.20	1.46	1.46
35	Spire Inc	1.55	1.59	1.65	1.64	1.44	1.33	1.34	1.51	1.46	1.39	1.68	1.71	1.66	1.71
36	UGI Corp	2.01	2.41	2.62	2.41	2.29	1.97	1.69	1.45	1.75	1.55	1.66	2.01	2.16	2.21
37	WGL Holdings Inc	1.81	N/A	2.69	2.45	2.15	1.69	1.71	1.66	1.63	1.50	1.45	1.59	1.64	1.59
38	Average	1.78	2.10	2.27	2.05	1.85	1.74	1.70	1.67	1.69	1.54	1.47	1.62	1.78	1.70
39	Median	1.75	2.07	2.29	1.96	1.77	1.69	1.65	1.58	1.62	1.45	1.56	1.67	1.75	1.70

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, March 1, 2019
Notes
[a] Based on the average of the high and low price for 2018 and the projected 2018 Cash Flow per share, published in The Value Line Investment Survey, March 1, 2019
[b] Based on the average of the high and low price for 2018 and the projected 2018 Book Value per share, published in The Value Line Investment Survey, March 1, 2019

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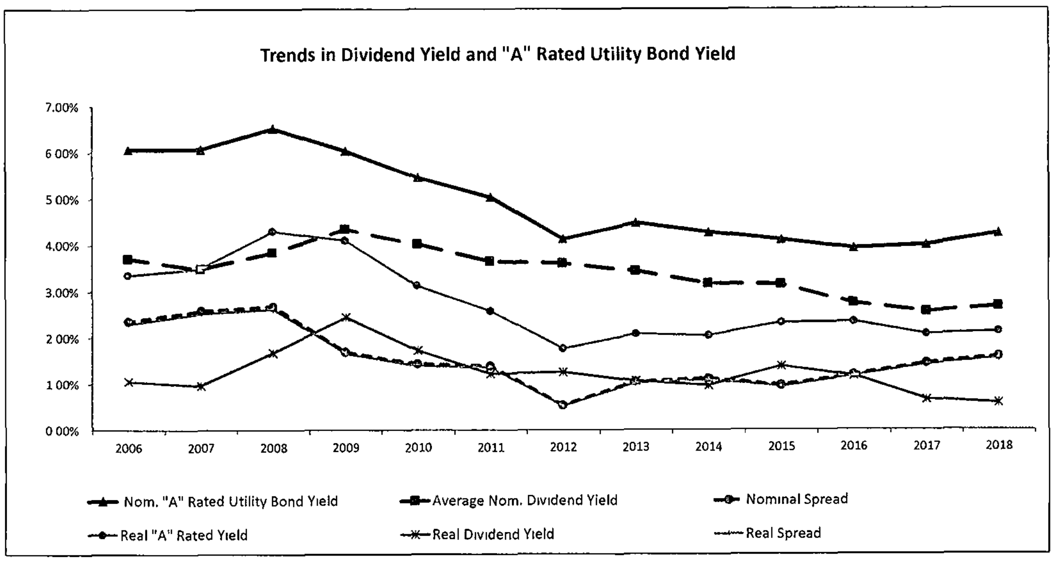
Line	Company	13-Year Average (1)	2018 [2/a] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
		Dividend Yield[1]													
1	Atmos Energy	3 72%	2 19%	2 27%	2 39%	2 88%	3 11%	3 53%	4 13%	4 19%	4.70%	5 34%	4 78%	4 16%	4 66%
2	Chesapeake Utilities	2 99%	1 74%	1 69%	1 91%	2 18%	2 44%	2 87%	3 25%	3 36%	3 91%	4 09%	4 10%	3 62%	3,76%
3	New Jersey Resources	3 22%	2 54%	2 69%	2 86%	3.14%	3 50%	3 71%	3 38%	3 33%	3 69%	3 46%	3 35%	3 02%	3 19%
4	NiSource Inc	4 16%	3 09%	2 79%	2.76%	3 53%	2 69%	3 30%	3 84%	4 53%	5 66%	7 64%	5 69%	4 29%	4 21%
5	Northwest Nat. Gas	3 61%	3 07%	3 02%	3 28%	4 01%	4 14%	4 22%	3 83%	3 85%	3 63%	3 73%	3 27%	3 12%	3 73%
6	ONE Gas Inc	2 43%	2 45%	2 37%	2 32%	2 71%	2 28%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds	3 26%	3 60%	3 20%	3 64%	3 95%	3 40%	3 14%	3.22%	2 81%	3 00%	3 43%	3 08%	2 81%	3 15%
8	Southwest Gas	2 86%	2 80%	2 46%	2 62%	2 87%	2 72%	2 69%	2,75%	2 78%	3 15%	4 01%	3 19%	2 56%	2 60%
9	Spire Inc	3 88%	3 19%	3 09%	3 08%	3 53%	3 78%	3 96%	4 11%	4 31%	4 70%	3 91%	3,94%	4 43%	4 34%
10	UGI Corp	2 82%	2 00%	2 01%	2 35%	2 50%	2 61%	3 01%	3 68%	3 30%	3 48%	3 23%	2 85%	2 69%	2 96%
11	WGL Holdings Inc	3 91%	N/A	2 56%	2 94%	3.41%	4 24%	3 94%	3 89%	4 06%	4 37%	4 62%	4.22%	4 19%	4 48%
12	**Average**	3 42%	2 67%	2 56%	2 74%	3.16%	3 17%	3.44%	3 61%	3.65%	4 03%	4 35%	3.85%	3.49%	3.71%
13	Median	3 35%	2 67%	2 56%	2 76%	3 14%	3 11%	3 42%	3.75%	3 60%	3 80%	3 96%	3 65%	3 37%	3 75%
14	20-Yr Treasury Yields[3]	3 48%	3 02%	2 65%	2 23%	2,55%	3 07%	3 12%	2 54%	3 62%	4 03%	4 11%	4 36%	4 91%	4 99%
15	20-Yr TIPS[3]	1 30%	0.92%	0 75%	0 66%	0.78%	0 87%	0.75%	0 21%	1 19%	1.73%	2 21%	2 19%	2 36%	2 31%
16	Implied Inflation[b]	2 15%	2.08%	1 89%	1 56%	1 75%	2 19%	2 35%	2 33%	2 40%	2.26%	1 85%	2.13%	2 49%	2 62%
17	**Real Dividend Yield[c]**	1 24%	0 57%	0 65%	1 17%	1.38%	0 96%	1.06%	1 25%	1 22%	1 73%	2 45%	1 68%	0 97%	1.06%
	Utility														
18	**Nominal "A" Rated Yield[4]**	4 95%	4.25%	4.00%	3 93%	4.12%	4 28%	4 48%	4.13%	5.04%	5.46%	6.04%	6 53%	6 07%	6 07%
19	**Real "A" Rated Yield**	2 75%	2 12%	2 07%	2 34%	2.33%	2.04%	2 08%	1.76%	2 58%	3 13%	4 11%	4 31%	3.49%	3.36%
	Spreads (Utility Bond - Stock)														
20	**Nominal[d]**	1.54%	1.58%	1 44%	1 19%	0 96%	1.11%	1.04%	0.52%	1 39%	1 43%	1 69%	2 68%	2 59%	2 36%
21	**Real[e]**	1 50%	1.55%	1 41%	1 17%	0 94%	1.08%	1 01%	0.51%	1.36%	1.40%	1.66%	2 62%	2 52%	2 30%
	Spreads (Treasury Bond - Stock)														
22	**Nominal[f]**	0 06%	0.35%	0.09%	-0.52%	-0 61%	-0.10%	-0 32%	-1 06%	-0 03%	0 00%	-0.24%	0.51%	1.42%	1.28%
23	**Real[g]**	0.06%	0 35%	0 09%	-0.51%	-0 60%	-0 10%	-0.31%	-1 04%	-0 03%	0 00%	-0.23%	0.50%	1 39%	1 25%



Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, March 1, 2019
[3] St Louis Federal Reserve Economic Research, http //research stlouisfed org
[4] www moodys com, Bond Yields and Key Indicators, through December 31, 2018

Notes
[a] Based on the average of the high and low price for 2017 and the projected 2017 Dividends Declared per share, published in The Value Line Investment Survey, March 1, 2019
[b] Line 16 = (1 + Line 14) / (1 + Line 15) - 1
[c] Line 17 = (1 + Line 12) / (1 +Line 16) - 1
[d] The spread being measured here is the nominal A-rated utility bond yield over the average nominal utility dividend yield, (Line 18 - Line 12)
[e] The spread being measured here is the real A-rated utility bond yield over the average real utility dividend yield, Line 19 - Line 17)
[f] The spread being measured here is the nominal 20-Year Treasury yield over the average nominal utility dividend yield, (Line 14 - Line 12)
[g] The spread being measured here is the real 20-Year TIPS yield over the average real utility dividend yield, Line 15 - Line 17)

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		Dividend per Share[1]													
Line	**Company**	**13-Year Average** (1)	**2018[2]** (2)	**2017** (3)	**2016** (4)	**2015** (5)	**2014** (6)	**2013** (7)	**2012** (8)	**2011** (9)	**2010** (10)	**2009** (11)	**2008** (12)	**2007** (13)	**2006** (14)
1	Atmos Energy	1 47	1 94	1 80	1 68	1 56	1 48	1 40	1 38	1 36	1 34	1 32	1 30	1 28	1 26
2	Chesapeake Utilities	1 00	1 39	1 26	1 19	1 12	1 07	1 01	0 96	0 91	0 87	0 83	0 81	0 78	0 77
3	New Jersey Resources	0 77	1 11	1 04	0 98	0 93	0 86	0 81	0 77	0 72	0 68	0 62	0 56	0 51	0 48
4	NiSource Inc	0 88	0 78	0 70	0 64	0 83	1 02	0 98	0 94	0 92	0 92	0 92	0 92	0 92	0 92
5	Northwest Nat Gas	1 72	1 89	1 88	1 87	1 86	1 85	1 83	1 79	1 75	1 68	1 60	1 52	1 44	1 39
6	ONE Gas Inc	1 39	1 84	1 68	1 40	1 20	0 84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds	0 81	1 13	1 10	1 06	1 02	0 96	0 90	0 83	0 75	0 68	0 61	0 56	0 51	0 46
8	Southwest Gas	1 31	2 08	1 98	1 80	1 62	1 46	1 32	1 18	1 06	1 00	0 95	0 90	0 86	0 82
9	Spire Inc	1 72	2 25	2 10	1 96	1 84	1 76	1 70	1 66	1 61	1 57	1 53	1 49	1 45	1 40
10	UGI Corp	0 71	1 02	0 96	0 93	0 89	0 79	0 74	0 71	0 68	0 60	0 52	0 50	0 48	0 46
11	WGL Holdings Inc	1 62	N/A	2 02	1 93	1 83	1 72	1 66	1 59	1 55	1 50	1 47	1 41	1 37	1 35
12	**Average**	**1.20**	**1.54**	**1.50**	**1.40**	**1.34**	**1 25**	**1.24**	**1.18**	**1.13**	**1.08**	**1.04**	**1 00**	**0.96**	**0.93**
13	**Industry Average Growth**	**4.32%**	**2.74%**	**6 99%**	**5 03%**	**6.50%**	**1.58%**	**4.67%**	**4 35%**	**4.34%**	**4.47%**	**4.20%**	**3.83%**	**3.13%**	

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, March 1, 2019

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Line	Company	Cash Flow / Capital Spending 2017 (1)	2018 (2)	2019 (3)	3 - 5 yr Projection (4)
1	Atmos Energy	0.62x	0.55x	0.52x	0.67x
2	Chesapeake Utilities	0.50x	0.45x	0.69x	0.76x
3	New Jersey Resources	0.70x	0.85x	1.39x	1.57x
4	NiSource Inc.	0.41x	0.59x	0.57x	0.58x
5	Northwest Nat. Gas	0.14x	0.70x	0.79x	1.02x
6	ONE Gas Inc.	0.87x	0.85x	0.81x	1.01x
7	South Jersey Inds.	0.81x	0.91x	0.87x	0.79x
8	Southwest Gas	0.68x	0.62x	0.63x	0.74x
9	Spire Inc.	0.72x	0.77x	0.65x	0.75x
10	UGI Corp.	1.29x	1.64x	1.41x	1.52x
11	WGL Holdings Inc.	0.61x	N/A	N/A	N/A
12	Average	0.67x	0.79x	0.83x	0.94x
13	Median	0.68x	0.73x	0.74x	0.77x

Sources:
The Value Line Investment Survey Investment Analyzer Software, downloaded on July 9, 2018.
The Value Line Investment Survey, March 1, 2019.
Notes:
Based on the projected Cash Flow per share and Capital Spending per share.

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		Earnings per Share[1]													
Line	Company	13-Year Average (1)	2018[2] (2)	2017 (3)	2016 (4)	2015 (5)	2014 (6)	2013 (7)	2012 (8)	2011 (9)	2010 (10)	2009 (11)	2008 (12)	2007 (13)	2006 (14)
1	Atmos Energy	2.61	4 00	3.60	3.38	3.09	2.96	2.50	2.10	2.26	2.16	1.97	2.00	1.94	2.00
2	Chesapeake Utilities	2.08	3.10	2.68	2.86	2.68	2.47	2.26	1 99	1.91	1.82	1.43	1.39	1.29	1 15
3	New Jersey Resources	1 50	2.74	1.73	1.61	1.78	2 08	1.37	1 36	1.29	1.23	1.20	1.35	0 78	0.93
4	NiSource Inc.	1.12	1 30	0.39	1.00	0.63	1 67	1.57	1 37	1 05	1.06	0 84	1.34	1 14	1.14
5	Northwest Nat. Gas	2 05	2.20	-1.94	2 12	1.96	2 16	2.24	2 22	2 39	2.73	2.83	2.57	2.76	2.35
6	ONE Gas Inc.	2.65	3.25	3.02	2 65	2.24	2.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	1.36	1.62	1.23	1.34	1.44	1.57	1 52	1.52	1 45	1.35	1.19	1.14	1.05	1.23
8	Southwest Gas	2.66	3.95	3.62	3.18	2 92	3.01	3 11	2.86	2.43	2 27	1.94	1.39	1.95	1.98
9	Spire Inc.	2.83	4.33	3 43	3.24	3 16	2.35	2 02	2.79	2.86	2.43	2.92	2.64	2.31	2.37
10	UGI Corp	1.69	2.74	2.29	2.05	2 01	1.92	1.59	1.17	1.37	1.59	1.57	1.33	1.18	1.10
11	WGL Holdings Inc.	2.56	N/A	3.11	3.27	3 16	2.68	2.31	2.68	2.25	2.27	2.53	2.44	2.09	1.94
12	**Average**	**2.06**	**2.92**	**2.11**	**2.43**	**2.28**	**2.27**	**2.05**	**2.01**	**1.93**	**1.89**	**1.84**	**1.76**	**1.65**	**1.62**
13	**Industry Average Growth**	**5.61%**	**38.83%**	**-13.26%**	**6.50%**	**0.54%**	**10.67%**	**2.13%**	**4.13%**	**1.87%**	**2.61%**	**4.79%**	**6.67%**	**1.82%**	

Sources.
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018.
[2] The Value Line Investment Survey, March 1, 2019.

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Line	Company	Percent Dividends to Book Value [1]													
		13-Year Average	2018 [2/a]	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Atmos Energy	5 30%	4.53%	4 90%	5 04%	4 96%	4 81%	4 92%	5 28%	5.44%	5 55%	5.61%	5 75%	5 82%	6.25%
2	Chesapeake Utilities	5 41%	4 37%	4.23%	4 35%	4 78%	5 18%	5 25%	5 39%	5 42%	5 49%	5 60%	6.71%	6 66%	6 95%
3	New Jersey Resources	7 20%	6 86%	7.26%	7 21%	7 16%	7 45%	7 60%	7 86%	7 69%	7 72%	7 48%	6 42%	6 54%	6 40%
4	NiSource Inc	5.32%	5 05%	5 46%	5.08%	6 89%	5 22%	5.22%	5.25%	5 19%	5 22%	5 25%	5 34%	4 97%	5 02%
5	Northwest Nat Gas	6 58%	7 19%	7 27%	6 30%	6 53%	6 58%	6 59%	6 57%	6 55%	6 44%	6 43%	6.41%	6 39%	6 32%
6	ONE Gas Inc	3 79%	4 74%	4.48%	3 88%	3 41%	2 44%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds.	6 87%	7.46%	7 34%	6 53%	6 98%	7 04%	7 12%	7 09%	7 26%	7 13%	6 69%	6 40%	6 22%	6 09%
8	Southwest Gas	4 33%	4 91%	5 25%	5 14%	4.82%	4 57%	4 33%	4 16%	3 98%	3 90%	3 89%	3 83%	3 74%	3 80%
9	Spire Inc.	5 98%	5 06%	5 09%	5 06%	5 07%	5.04%	5 31%	6 22%	6 30%	6 53%	6.56%	6 74%	7 33%	7 43%
10	UGI Corp	5.51%	4 82%	5 28%	5 65%	5.72%	5 14%	5 07%	5 35%	5 77%	5 41%	5 35%	5 72%	5 82%	6 54%
11	WGL Holdings Inc	6 86%	N/A	6.88%	7 21%	7 33%	7 14%	6 73%	6 45%	6 60%	6 57%	6 72%	6 71%	6 88%	7 13%
12	Average	5 86%	5 50%	5 77%	5 59%	5 78%	5.51%	5 82%	5 96%	6 02%	6 00%	5 96%	6 00%	6 04%	6 19%
13	Median	5 73%	4 98%	5 28%	5 14%	5 72%	5 18%	5 28%	5 80%	6 03%	5 99%	6 02%	6 41%	6.30%	6 36%

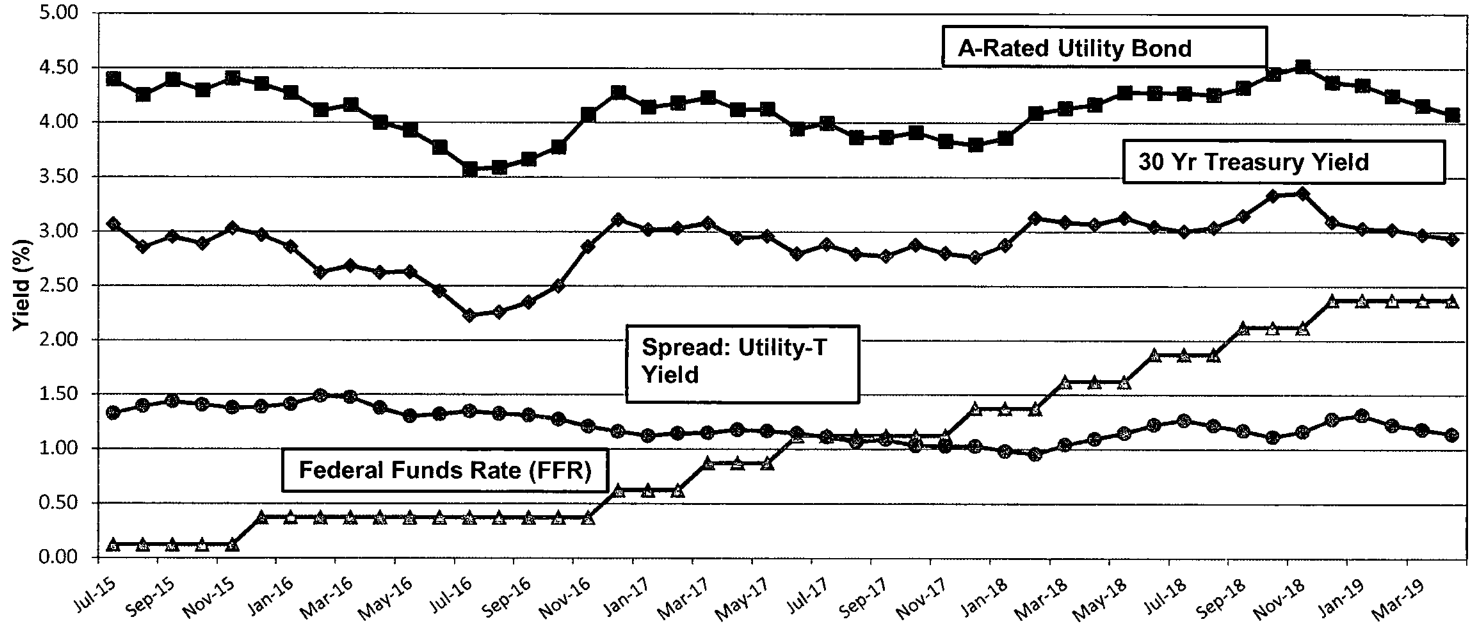
Line	Company	Dividends to Earnings Ratio [1]													
		13-Year Average	2018 [2/b]	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Atmos Energy	0 58	0 49	0 50	0 50	0 50	0.50	0 56	0 66	0 60	0 62	0.67	0.65	0 66	0 63
2	Chesapeake Utilities	0 50	0 45	0 47	0 42	0 42	0 43	0 45	0 48	0 48	0 48	0 58	0 58	0 61	0 67
3	New Jersey Resources	0 53	0 41	0 60	0 61	0 52	0 41	0.59	0 57	0 56	0 55	0 52	0 41	0 65	0 51
4	NiSource Inc	0 88	0 60	1 79	0 64	1 32	0 61	0 62	0 69	0 88	0 87	1 10	0 69	0 81	0.81
5	Northwest Nat Gas	0 60	0 86	- 0 97	0 88	0 95	0 86	0 82	0 81	0 73	0 62	0 57	0 59	0 52	0 59
6	ONE Gas Inc	0 52	0 57	0 56	0 53	0 54	0 41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds	0 59	0 70	0 89	0.79	0 71	0 61	0 59	0 54	0 52	0 50	0 51	0 49	0 48	0 37
8	Southwest Gas	0 49	0 53	0 55	0 57	0 55	0 49	0 42	0 41	0 44	0 44	0 49	0 65	0 44	0 41
9	Spire Inc	0 62	0 52	0 61	0 60	0 58	0 75	0 84	0 59	0 56	0 65	0 52	0 56	0 63	0 59
10	UGI Corp	0.43	0 37	0 42	0 45	0 44	0 41	0 46	0 60	0.50	0 38	0 33	0 38	0 41	0 41
11	WGL Holdings Inc	0 64	N/A	0 65	0 59	0 58	0 64	0 72	0 59	0 69	0 66	0 58	0.58	0 65	0 69
12	Average	0 58	0 55	0 55	0 60	0 65	0 56	0 61	0 59	0 59	0 58	0 59	0.56	0 59	0 57
13	Median	0 57	0.52	0 56	0 59	0.55	0.50	0 59	0 59	0 56	0 58	0 54	0 58	0 62	0 59

Line	Company	Cash Flow to Capital Spending Ratio [1]													
		13-Year Average	2018 [2/c]	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Atmos Energy	0 69	0 55	0 62	0.59	0.60	0 65	0 55	0 59	0 68	0 77	0 78	0 81	0 94	0 82
2	Chesapeake Utilities	0 74	0.45	0 50	0.50	0 53	0.71	0 65	0 79	1 12	1 10	1 14	0 83	0.82	0 45
3	New Jersey Resources	1 40	0 85	0 70	0 59	0 67	1 79	1 46	1 48	1.51	1 55	1.75	2 11	1 67	2 14
4	NiSource Inc	0 79	0 59	0 41	0 59	0 53	0 56	0 57	0 65	0 75	1 11	1 06	0 94	1 11	1.37
5	Northwest Nat Gas	0 99	0 70	0 14	1 01	1 12	1 15	0 98	1 01	1 33	0 55	1.02	1.35	1 21	1 34
6	ONE Gas Inc	0 86	0 85	0 87	0 92	0 86	0 79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	South Jersey Inds	0 91	0 91	0.81	0 76	0 50	0 53	0.51	0 58	0 70	0 75	1.01	1.67	1 70	1 40
8	Southwest Gas	0 90	0 62	0.68	0 83	0 84	0.99	1 05	0 90	0 82	1 37	1.28	0 85	0 78	0 72
9	Spire Inc	1 19	0 77	0 72	0 96	0 92	0 98	0 78	0 95	1 53	1 61	1 93	1 64	1 42	1.28
10	UGI Corp	1 49	1 64	1.29	1 35	1 48	1 53	1 32	1 52	1 28	1 36	1 52	1 72	1.62	1.69
11	WGL Holdings Inc	1 02	N/A	0 61	0 56	0 60	0 63	0 71	0 93	1 02	1 60	1 60	1.60	1 17	1 18
12	Average	1 01	0 79	0 67	0 79	0 79	0 94	0 86	0 94	1 07	1 18	1.31	1 35	1 24	1 24
13	Median	0 98	0 73	0 68	0 76	0.67	0 79	0 74	0.92	1 07	1 23	1 21	1 48	1 19	1 31

Sources
[1] The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018
[2] The Value Line Investment Survey, March 1, 2019
Notes
[a] Based on the projected 2018 Dividends Declared per share and Book Value per share, published in The Value Line Investment Survey, March 1, 2019
[b] Based on the projected 2018 Dividends Declared per share and Earnings per share, published in The Value Line Investment Survey, March 1, 2019
[c] Based on the projected 2018 Cash Flow per share and Capital Spending per share, published in The Value Line Investment Survey, March 1, 2019

CenterPoint Energy Houston Electric

Timeline of Federal Funds Rate Increases



Fed FFR Actions:

1	December 2015	0.25	→	0.50
2	December 2016	0.50	→	0.75
3	March 2017	0.75	→	1.00
4	June 2017	1.00	→	1.25
5	December 2017	1.25	→	1.50
6	March 2018	1.50	→	1.75
7	June 2018	1.75	→	2.00
8	September 2018	2.00	→	2.25
9	December 2018	2.25	→	2.50

Sources:
Federal Reserve Bank of New York, https://apps.newyorkfed.org/markets/autorates/fed-funds-search-page
Board of Governors of the Federal Reserve System, https://www.federalreserve.gov/datadownload/
Moody's Credit Trends, https://credittrends.moodys.com/

CenterPoint Energy Houston Electric

Revenue Increase

Proposed Capital Structure[1]

Line	Description	Weight (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
1	Long-Term Debt	55.00%	4.38%	2.41%	2.41%
2	Common Equity*	45.00%	10.40%	4.68%	6.37%
3	Total	100.00%		7.09%	**8.78%**
4	Conversion factor				26.58%

Line	Description	Weight (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
5	Long-Term Debt*	50.00%	**4.61%**	2.31%	2.31%
6	Common Equity	**50.00%**	10.40%	5.20%	7.08%
7	**Total**	**100.00%**		**7.51%**	**9.39%**
8	Change in Rate of Return				0.60%
9	CEHE Rate Base ($ 000)[2]				$6,482,512
	Revenue Increase				
10	Debt				$ (6,742)
11	Equity				$ 45,914
12	**Total revenue Increase ($ 000)**				**$ 39,172**

Sources:
[1]Schedule II-C 2.1.
[2]Schedule II-B.
*The embedded cost of debt was increased by 23 basis points:
McRae Direct Testimony at 38-39.

CenterPoint Energy Houston Electric

S&P Methodology

(For the Year Ended or As of December 31, Dollars in Millions)

Line	Description	2019	2020	2021	2022	2023
	DEBT:					
1	Balance Sheet Debt	5,525.3	5,689.1	5,763.3	6,004.0	6,304.2
2	Less Securitization Debt	(1,171.8)	(995.9)	(814.7)	(645.6)	(497.0)
3	**Adjusted Debt (GAAP)**	4,353.5	4,693.2	4,948.6	5,358.4	5,807.2
4	Plus Pension & Postretirement Underfunded Amount (After Tax)	45.2	42.5	39.9	37.5	35.2
5	Plus Asset Retirement Obligations (After Tax)	27.7	27.7	27.7	27.7	27.7
6	Plus Interest Accrued	77.3	81.4	86.4	92.1	92.2
7	Plus Unamortized Issuance Cost (Excluding Securitization)	15.6	13.7	12.2	10.9	9.9
8	Adjusted Debt (S&P)	4,519.3	4,858.5	5,114.7	5,526.6	5,972.1
9	**INTEREST EXPENSE:**					
10	Income Statement Interest	219.7	220.6	225.0	236.6	240.2
11	Less Securitization Interest (Cash and Non-Cash)	(39.7)	(28.0)	(20.8)	(13.4)	(7.6)
12	Adjusted Interest Expense (GAAP)	180.1	192.6	204.1	223.2	232.6
13	Plus Capitalized Interest	6.1	7.0	8.7	8.2	7.2
14	Plus Interest on Pension & Postretirement Underfunded Amounts	2.7	2.6	2.4	2.3	2.1
15	Plus. Asset Retirement Obligations	1.0	1.0	1.0	1.0	1.0
16	Adjusted Interest Expense (S&P)	189.9	203.2	216.3	234.7	243.0
17	**EBITDA:**					
18	Unadjusted EBITDA	1,213.6	1,167.1	1,223.1	1,289.6	1,335.9
19	Less Securitization EBITDA	(303.2)	(203.9)	(202.1)	(182.4)	(156.2)
20	Adjusted EBITDA	910.4	963.2	1,021.0	1,107.1	1,179.7
21	Plus Interest on Pension & Postretirement Underfunded Amounts	5.7	5.4	5.1	4.8	4.5
22	Plus. Asset Retirement Obligations	1.0	1.0	1.0	1.0	1.0
23	Adjusted EBITDA	917.2	969.6	1,027.1	1,112.9	1,185.2
24	**FUNDS FROM OPERATIONS:**					
25	Adjusted EBITDA (S&P)	917.2	969.6	1,027.1	1,112.9	1,185.2
26	Less Adjusted Interest Expense, net (S&P)	(189.9)	(203.2)	(216.3)	(234.7)	(243.0)
27	Less Current Taxes	(133.1)	(135.1)	(130.8)	(129.9)	(128.8)
28	Plus. Pension & Postretirement Adjustment	1.4	1.3	1.2	1.1	1.1
29	Plus Asset Retirement Obligations	0.2	0.2	0.2	0.2	0.2
30	Adjusted Funds from Operations (S&P)	595.8	632.8	681.5	749.6	814.7
31	**OCF, FOCF & DCF:**					
32	Operating Cash Flow	873.8	858.5	876.9	923.4	954.8
33	Less Securitization OCF	(264.3)	(176.4)	(181.6)	(169.3)	(148.7)
34	Adjusted Operating Cash Flow	609.5	682.0	695.3	754.1	806.1
35	Plus Pension & Postretirement Adjustment	(2.5)	(2.3)	(2.2)	(2.1)	(1.9)
36	Less Capitalized Interest	(6.1)	(7.0)	(8.7)	(8.2)	(7.2)
37	Plus Asset Retirement Obligations	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)
38	Adjusted Operating Cash Flow (S&P)	600.2	671.9	683.6	743.0	796.2
39	Less Capital Expenditures	(979.1)	(1,027.9)	(1,177.9)	(978.8)	(980.0)
40	Plus Capitalized Interest	6.1	7.0	8.7	8.2	7.2
41	Free Operating Cash Flow (S&P)	(372.9)	(349.0)	(485.6)	(227.6)	(176.6)
42	Less Dividends	259.4	(77.9)	(218.7)	(152.5)	(246.4)
43	Discretionary Operating Cash Flow (S&P)	(113.5)	(426.9)	(704.3)	(380.0)	(423.0)
44	**Core Ratios**					
45	**FFO / Total Debt**	**13.2%**	**13.0%**	**13.3%**	**13.6%**	**13.6%**
46	**Total Debt / EBITDA**	**4.93**	**5.01**	**4.98**	**4.97**	**5.04**
47	**Supplemental Ratios**					
48	OCF / Total Debt	13.3%	13.8%	13.4%	13.4%	13.3%
49	FOCF / Total Debt	-8.3%	-7.2%	-9.5%	-4.1%	-3.0%
50	DCF / Total Debt	-2.5%	-8.8%	-13.8%	-6.9%	-7.1%
51	EBITDA Interest Coverage	4.83	4.77	4.75	4.74	4.88
52	FFO Interest Coverage	4.14	4.11	4.15	4.19	4.35

Source
TIEC03-13 Financial Metrics - Excel

CenterPoint Energy Houston Electric

Financials (2019-2023)

(For the Year Ended or As of December 31, Dollars in Millions)

Line	Income Statement	2018	2019	2020	2021	2022	2023
1	Revenues		$ 3,004 0	$ 2,984 9	$ 3,135 4	$ 3,275 6	$ 3,441.7
2	Revenues Adjusted		($35)	($24)	($44)	($46)	($51)
3	Total Revenues		$ 2,969 1	$ 2,961.2	$ 3,091.9	$ 3,229 1	$ 3,390 9
4	Operating and Administrative		1,503 4	1,532 3	1,599.5	1,662 6	1,770 5
5	Taxes Other Than Income		252.0	261 8	269 3	277 0	284.5
6	Depreciation and Amortization		650.9	592.3	622.7	640.0	652 3
7	Operating Income		562.7	574 8	600.4	649 6	683 5
8	Interest Income (intercompany)		20 5	14 5	7 7	2 6	0 1
9	Other Income		(9.9)	(9 2)	(5 8)	(6 6)	(8 5)
10	EBIT		573 2	580 0	602.4	645 6	675 2
11	Securitization Interest		39.7	28.0	20.8	13 4	7 6
12	Int External		163 5	174 4	185.2	203 0	211.2
13	Additional						
14	Other Interest (external)		163 5	174 4	185.2	203.0	211.2
15	Additional Long-term Debt Interest		16 6	18 2	18 9	20 3	21.4
16	Other Interest (intercompany)		-	-	0 1	2.2	5.3
17	EBT		353 5	359 5	377 4	406.8	429 7
18	Tax Adjustment		(10 8)	(8 8)	(13 1)	(14.0)	(15 2)
19	Tax Expense		74 7	60 7	61 2	70.1	77.9
20	Net Income before Non-Recurring Items		267 9	290 0	303 0	322 8	336.7
21	Non-Recurring Items		-	-	-	-	-
22	Net Income		$ 267.9	$ 290 0	$ 303 0	$ 322 8	$ 336 7
23	Credit Metrics						
24	S&P						
25	**Funds From Operations / Total Debt**		**13.2%**	**13.0%**	**13.3%**	**13.6%**	**13.6%**
26	Total Debt / EBITDA		4.93	5.01	4.98	4.97	5 04
27	Operating Cash Flow / Total Debt		13.3%	13.8%	13 4%	13.4%	13.3%
28	**ROE**		**9.23%**	**9.27%**	**9.26%**	**9.24%**	**9.23%**
29	CEHE Model ROE		10 1%	9.6%	10.2%	10 2%	10 3%
30	ROE Change		-0.9%	-0.4%	-1.0%	-1 0%	-1 1%

Line	Cash Flows	2018	2019	2020	2021	2022	2023
31	Net Income		$ 330 2	$ 340 8	$ 378.6	$ 403.5	$ 424.0
32	Non-Recurring Items, net of tax		-	-	-	-	-
33	Net Income before Non-Recurring Items		330 2	340 8	378.6	403 5	424 0
34	Depreciation and Amortization		650.9	592.3	622 7	640 0	652 3
35	Amortization of Deferred Financing Costs		10 5	10.2	9.9	8 6	6 9
36	Deferred Taxes		(69 2)	(61.3)	(65 3)	(54 2)	(43 8)
37	Funds From Operations		922.5	882.0	945.8	997.8	1,039.4
38	Changes in Working Capital		(48.7)	(23.5)	(68.9)	(74.4)	(84.6)
39	Operating Cash Flow		873.8	858.5	876.9	923 4	954 8
40	Capital Expenditures		(979 1)	(1,027 9)	(1,177 9)	(978 8)	(980 0)
41	Other Investing Activities		-	-	-	-	-
42	Investing Cash Flow		(979.1)	(1,027.9)	(1,177.9)	(978 8)	(980 0)
43	Increase (decrease) in Intercompany Notes Payable		(589.8)	123 8	503 7	77 2	220 3
44	Increase (decrease) in Securitization Debt		(264.3)	(176.4)	(181.6)	(169 3)	(148.7)
45	Increase (decrease) in Other Long Term Debt		700.0	300.0	197 6	300 0	200.0
46	Dividends		259 4	(77.9)	(218.7)	(152 5)	(246.4)
47	Other Financing Activities		-	-	-	-	-
48	Financing Cash Flow		105 3	169 4	301 0	55.4	25.1
49	Total Cash Flow		$ -	$ -	$ -	$ 0 0	$ 0 0

CenterPoint Energy Houston Electric

Financials (2019-2023)

(For the Year Ended or As of December 31, Dollars in Millions)

Line	Balance Sheet	2018	2019	2020	2021	2022	2023
50	**ASSETS**						
51	Cash/Temporary Investments	$ (0 2)	$ 588 4	$ 464 6	$ (0 2)	$ (0 2)	$ (0 2)
52	Current Assets	949 5	998 1	1,021 3	1,045 2	1,070 4	1,096 8
53	**PP&E, net**	8,401.7	8,993.4	9,604.9	10,341 4	10,849 4	11,325 6
54	Other Assets	1,156 1	928.5	771 4	625.4	493.2	388.5
55	Total Assets	$ 10,507 1	$ 11,508 4	$ 11,862 2	$ 12,011.8	$ 12,412 8	$ 12,810.8
56	**LIABILITIES AND EQUITY**						
57	Facility/Intercompany Debt	$ 1 2	$ -	$ -	$ 38 9	$ 116 1	$ 336 4
58	Other Current Liabilities	630 3	655.6	679.8	696.2	715.6	731.4
59	Total Current Liabilities	631 5	655.6	679 8	735.1	831.7	1,067.8
60	Non-Recourse Securitization Debt	**1,435.4**	**1,171.8**	**995.9**	**814.7**	**645.6**	**497.0**
61	Other Long Term Debt (external)	**3,577.8**	**4,353.5**	**4,693.2**	**4,909.7**	**5,242.3**	**5,470.8**
62	Other Long-Term Debt	**3,281.5**	**3,984.7**	**4,288.0**	**4,489.0**	**4,792.2**	**4,995.6**
63	Additional LTD	**296.3**	**368.8**	**405.2**	**420.8**	**450.1**	**475 3**
64	Deferred Income Taxes	1,022 9	953 7	892.4	827 1	772.9	729.1
65	Other Liabilities	1,454.4	1,471.5	1,472.1	1,452 1	1,425.5	1,398.8
66	Total Liabilities	8,121.9	8,606 1	8,733 4	8,738.7	8,918.0	9,163.5
67	Common Equity Adjustment	(296 3)	(368 8)	(405.2)	(420 8)	(450.1)	(475.3)
68	Common Equity	2,681	3,271.1	3,534.0	3,693.9	3,944.9	4,122 5
69	Common Equity, Adjusted	2,385	2,902	3,129	3,273	3,495	3,647
70	Total Equity	2,385	2,902 3	3,128 8	3,273 1	3,494.9	3,647 2
71	Total Liabilities and Equity	$ 10,507.1	$ 11,508.4	$ 11,862.2	$ 12,011.8	$ 12,412.8	$ 12,810.8
72	*Balance check*	*(0.0)*	*(0.0)*	*(0 0)*	*(0 0)*	*(0 0)*	*(0.0)*
73	Equity	2,385.2	2,902 3	3,128.8	3,273 1	3,494 9	3,647 2
74	Long-Term Debt	3,577.8	4,353.5	4,693.2	4,909 7	5,242.3	5,470.8
75	Total	5,963.00	7,255.76	7,821.98	8,182 85	8,737.17	9,118.06
76	Debt Ratio	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**

CenterPoint Energy Houston Electric

Revenue Impact

1. Proposed Capital Structure[1]

Line	Description	Weight (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
1	Long-Term Debt	50.00%	4.38%	2.19%	2.19%
2	Common Equity*	50.00%	10.40%	5.20%	7.08%
3	Total	100.00%		7.39%	9.27%
4	Conversion factor[2]				26.58%

2. Change in Return on Equity

Line	Description	Weight (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
5	Long-Term Debt	50.00%	4.38%	2.19%	2.19%
6	Common Equity	50.00%	**9.25%**	4.63%	6.30%
7	**Total**	**100.00%**		**6.82%**	**8.49%**

3. Change in Capital Structure[3]

Line	Description	Weight (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
8	Long-Term Debt	60.00%	4.38%	2.63%	2.63%
9	Common Equity	40.00%	**9.25%**	3.70%	5.04%
10	**Total**	**100.00%**		**6.33%**	**7.67%**
11	Rate Base ($ 000)[4]				$6,482,512
	Change Rate of Return				
12	Return on Equity			0.78%	$ 50,770
13	Capital Structure			0.82%	$ 53,281
14	**Total Revenue Requirement Descrease**			**1.61%**	**$ 104,051**

Sources:
[1]Schedule II-C 2.1.
[2]Schedule II-E-3.
[3]Exhibit MPG-1.
[4]Schedule II-B.

CenterPoint Energy Houston Electric

Proxy Group

Line	Company	Credit Ratings[1] S&P (1)	Credit Ratings[1] Moody's (2)	Common Equity Ratios MI[1] (3)	Common Equity Ratios Value Line[2] (4)
1	ALLETE, Inc.	BBB+	Baa1	59.2%	60.1%
2	Alliant Energy Corporation	A-	Baa1	42.5%	46.7%
3	Ameren Corporation	BBB+	Baa1	45.4%	48.8%
4	American Electric Power Company, Inc.	A-	Baa1	42.6%	46.8%
5	Black Hills Corporation	BBB+	Baa2	40.2%	42.5%
6	CMS Energy Corporation	BBB+	Baa1	28.7%	30.7%
7	Consolidated Edison, Inc.	A-	Baa1	44.5%	48.5%
8	DTE Energy Company	BBB+	Baa1	41.0%	45.8%
9	Duke Energy Corporation	A-	Baa1	43.1%	46.0%
10	El Paso Electric Company	BBB	Baa1	44.8%	47.5%
11	Evergy, Inc.	A-	Baa2	54.0%	60.0%
12	Eversource Energy	A+	Baa1	43.7%	47.0%
13	Hawaiian Electric Industries, Inc.	BBB-	N/A	51.5%	51.7%
14	NextEra Energy, Inc.	A-	Baa1	45.0%	56.0%
15	NorthWestern Corporation	BBB	A3	47.8%	47.8%
16	OGE Energy Corp.	BBB+	Baa1	56.0%	58.0%
17	Otter Tail Corporation	BBB	Baa2	54.5%	55.3%
18	Pinnacle West Capital Corporation	A-	A3	49.4%	53.0%
19	PNM Resources, Inc.	BBB+	Baa3	36.2%	38.6%
20	Portland General Electric Company	BBB+	A3	50.3%	53.5%
21	Southern Company	A-	Baa2	32.5%	36.5%
22	WEC Energy Group, Inc.	A-	Baa1	45.2%	49.4%
23	Xcel Energy Inc.	A-	Baa1	41.5%	43.6%
24	**Average**	**BBB+**	**Baa1**	**45.2%**	**48.4%**
25	**CenterPoint Energy Houston Electric**	**BBB+[3]**	**A3[3]**	**45%[4]**	

Sources:

[1] S&P Global Market Intelligence, Downloaded on May 6, 2019.

[2] *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019.

[3] McRae Direct Testimony at 11.

[4] Exhibit MPG-1.

CenterPoint Energy Houston Electric

Consensus Analysts' Growth Rates

Line	Company	Zacks Estimated Growth %[1] (1)	Zacks Number of Estimates (2)	MI Estimated Growth %[2] (3)	MI Number of Estimates (4)	Reuters Estimated Growth %[3] (5)	Reuters Number of Estimates (6)	Average of Growth Rates (7)
1	ALLETE, Inc.	7.20%	N/A	7.00%	3	N/A	N/A	7.10%
2	Alliant Energy Corporation	5.40%	N/A	5.37%	3	5.85%	2	5.54%
3	Ameren Corporation	6 20%	N/A	6 42%	6	6.65%	2	6.42%
4	American Electric Power Company, Inc.	5.60%	N/A	5.86%	9	5.93%	3	5.80%
5	Black Hills Corporation	4.80%	N/A	4.50%	2	3.63%	1	4.31%
6	CMS Energy Corporation	6.40%	N/A	6.64%	8	7.08%	4	6.71%
7	Consolidated Edison, Inc.	2.00%	N/A	3.20%	5	3.04%	4	2.75%
8	DTE Energy Company	6.00%	N/A	5.73%	7	4.16%	3	5.30%
9	Duke Energy Corporation	5 00%	N/A	4.98%	7	4.86%	2	4.95%
10	El Paso Electric Company	4.70%	N/A	5.44%	3	3 80%	1	4 65%
11	Evergy, Inc.	6.60%	N/A	6.18%	4	6 15%	2	6.31%
12	Eversource Energy	5.50%	N/A	5.83%	6	5.62%	3	5 65%
13	Hawaiian Electric Industries, Inc.	5.40%	N/A	5.43%	2	5.90%	1	5.58%
14	NextEra Energy, Inc.	7.80%	N/A	7.81%	5	7.14%	4	7.58%
15	NorthWestern Corporation	2.60%	N/A	3.08%	3	3.22%	2	2.97%
16	OGE Energy Corp.	4.60%	N/A	5 38%	2	- 3 10%	2	4 99%
17	Otter Tail Corporation	7.00%	N/A	7.00%	1	N/A	N/A	7 00%
18	Pinnacle West Capital Corporation	5.00%	N/A	5.28%	7	5.01%	2	5.10%
19	PNM Resources, Inc.	4.80%	N/A	5.11%	6	3.90%	1	4.60%
20	Portland General Electric Company	4.90%	N/A	4.67%	4	5.20%	1	4.92%
21	Southern Company	4.50%	N/A	4.04%	6	3.08%	4	3.87%
22	WEC Energy Group, Inc.	5.60%	N/A	5.75%	6	5.82%	3	5.72%
23	Xcel Energy Inc	5.70%	N/A	5.73%	5	6.24%	2	5 89%
24	**Average**	**5.36%**	**N/A**	**5.50%**	**5**	**5.11%**	**2**	**5.38%**

Sources:
[1] Zacks, http://www.zacks.com/, downloaded on May 3, 2019.
[2] S&P Global Market Intelligence, https://platform.mi spglobal.com, downloaded on May 3, 2019.
[3] Reuters, http://www.reuters.com/, downloaded on May 3, 2019.
Note· Negative Growth Rates Excluded from Average

CenterPoint Energy Houston Electric

Constant Growth DCF Model
(Consensus Analysts' Growth Rates)

Line	Company	13-Week AVG Stock Price[1] (1)	Analysts' Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	ALLETE, Inc.	$71.16	7.10%	$2.35	3.54%	10 64%
2	Alliant Energy Corporation	$40 10	5.54%	$1.42	3.74%	9.28%
3	Ameren Corporation	$55.76	6.42%	$1.90	3.63%	10.05%
4	American Electric Power Company, Inc	$67.40	5.80%	$2 68	4.21%	10.00%
5	Black Hills Corporation	$53.35	4.31%	$2.02	3.95%	8.26%
6	CMS Energy Corporation	$44.23	6.71%	$1.53	3.69%	10.40%
7	Consolidated Edison, Inc.	$77.20	2.75%	$2.96	3.94%	6.69%
8	DTE Energy Company	$102.95	5.30%	$3.78	3.87%	9.16%
9	Duke Energy Corporation	$77 15	4.95%	$3.71	5.05%	9.99%
10	El Paso Electric Company	$50.09	4.65%	$1.44	3.01%	7.65%
11	Evergy, Inc.	$57.09	6.31%	$1.90	3.54%	9.85%
12	Eversource Energy	$58.49	5 65%	$2.14	3.87%	9.52%
13	Hawaiian Electric Industries, Inc.	$33.85	5.58%	$1.28	3.99%	9.57%
14	NextEra Energy, Inc.	$158.30	7.58%	$4.44	3 02%	10 60%
15	NorthWestern Corporation	$52.74	2.97%	$2.30	4.49%	7.46%
16	OGE Energy Corp.	$31.96	4 99%	$1.46	4.80%	9.79%
17	Otter Tail Corporation	$42 55	7.00%	$1.40	3.52%	10.52%
18	Pinnacle West Capital Corporation	$78.35	5.10%	$2.95	3.96%	9.05%
19	PNM Resources, Inc	$37.10	4.60%	$1.16	3.27%	7.87%
20	Portland General Electric Company	$40.43	4.92%	$1.45	3.76%	8.69%
21	Southern Company	$44.40	3.87%	$2.40	5.61%	9.49%
22	WEC Energy Group, Inc.	$61.83	5.72%	$2.36	4 04%	9 76%
23	Xcel Energy Inc.	$44 59	5.89%	$1 62	3.85%	9.74%
24	**Average**	**$60.05**	**5.38%**	**$2.20**	**3.93%**	**9.31%**
25	**Median**					**9.57%**

Sources:
[1] S&P Global Market Intelligence, Downloaded on May 6, 2019.
[2] Exhibit MPG-8.
[3] *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019.

CenterPoint Energy Houston Electric

Payout Ratios

Line	Company	Dividends Per Share		Earnings Per Share		Payout Ratio	
		2018	Projected	2018	Projected	2018	Projected
		(1)	(2)	(3)	(4)	(5)	(6)
1	ALLETE, Inc.	$2 24	$2 85	$3 38	$4.25	66.27%	67 06%
2	Alliant Energy Corporation	$1.34	$1.74	$2.19	$2.80	61.19%	62 14%
3	Ameren Corporation	$1.85	$2.55	$3.32	$4 25	55.72%	60.00%
4	American Electric Power Company, Inc.	$2.53	$3.40	$3 90	$5.00	64.87%	68.00%
5	Black Hills Corporation	$1.93	$2.60	$3.47	$4.50	55.62%	57.78%
6	CMS Energy Corporation	$1.43	$2.00	$2.32	$3.25	61.64%	61.54%
7	Consolidated Edison, Inc	$2.86	$3.40	$4.80	$5.00	59.58%	68.00%
8	DTE Energy Company	$3.59	$4.80	$6.17	$7 50	58 18%	64.00%
9	Duke Energy Corporation	$3 64	$4.50	$4.45	$5.75	81 80%	78.26%
10	El Paso Electric Company	$1.42	$1.95	$2.07	$3.00	68.60%	65 00%
11	Evergy, Inc.	$1.74	$2 50	$2.50	$3.50	69.60%	71.43%
12	Eversource Energy	$2.02	$2.65	$3.25	$4.25	62.15%	62.35%
13	Hawaiian Electric Industries, Inc.	$1.24	$1.50	$1.85	$2.50	67.03%	60.00%
14	NextEra Energy, Inc.	$4.44	$7.00	$6.68	$11 00	66.47%	63.64%
15	NorthWestern Corporation	$2.20	$2 70	$3 40	$4.00	64.71%	67.50%
16	OGE Energy Corp	$1.40	$1.95	$2 12	$2 75	66.04%	70.91%
17	Otter Tail Corporation	$1.34	$1.65	$2.06	$2 50	65.05%	66.00%
18	Pinnacle West Capital Corporation	$2.87	$3.80	$4.54	$5.75	63 22%	66.09%
19	PNM Resources, Inc.	$1.09	$1.50	$1.66	$2.75	65 66%	54.55%
20	Portland General Electric Company	$1 43	$1.95	$2.37	$3.00	60 34%	65.00%
21	Southern Company	$2.38	$2.78	$2.90	$3 75	82.07%	74.13%
22	WEC Energy Group, Inc.	$2.21	$3.00	$3.34	$4.50	66.17%	66.67%
23	Xcel Energy Inc.	$1.52	$2.05	$2 47	$3.25	61.54%	63.08%
24	**Average**	**$2.12**	**$2.82**	**$3.27**	**$4.30**	**64.94%**	**65.35%**

Source:
The Value Line Investment Survey, February 15, March 15, and April 26, 2019.

CenterPoint Energy Houston Electric

Sustainable Growth Rate

		3 to 5 Year Projections										Sustainable
		Dividends	Earnings	Book Value	Book Value		Adjustment	Adjusted	Payout	Retention	Internal	Growth
Line	Company	Per Share	Per Share	Per Share	Growth	ROE	Factor	ROE	Ratio	Rate	Growth Rate	Rate
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	ALLETE, Inc.	$2 85	$4.25	$48.25	2 88%	8.81%	1 01	8.93%	67.06%	32 94%	2 94%	2.94%
2	Alliant Energy Corporation	$1.74	$2 80	$27.55	7 23%	10.16%	1.03	10.52%	62 14%	37.86%	3.98%	5.21%
3	Ameren Corporation	$2 55	$4 25	$40.25	5 22%	10 56%	1 03	10 83%	60 00%	40 00%	4 33%	4 87%
4	American Electric Power Company, Inc.	$3 40	$5.00	$48.00	4 47%	10 42%	1.02	10 64%	68.00%	32.00%	3.41%	4 20%
5	Black Hills Corporation	$2.60	$4.50	$45 00	4.36%	10.00%	1 02	10.21%	57.78%	42.22%	4.31%	4.47%
6	CMS Energy Corporation	$2 00	$3 25	$24 50	7 86%	13 27%	1 04	13 77%	61.54%	38.46%	5.30%	6.84%
7	Consolidated Edison, Inc	$3 40	$5 00	$60.50	2 80%	8 26%	1 01	8.38%	68 00%	32.00%	2 68%	2 82%
8	DTE Energy Company	$4.80	$7.50	$73.50	5 49%	10 20%	1 03	10.48%	64.00%	36 00%	3 77%	5.36%
9	Duke Energy Corporation	$4.50	$5 75	$67.00	2.10%	8 58%	1 01	8.67%	78.26%	21 74%	1.89%	2.06%
10	El Paso Electric Company	$1 95	$3 00	$35.25	4 26%	8 51%	1 02	8 69%	65.00%	35 00%	3.04%	4 05%
11	Evergy, Inc	$2 50	$3 50	$41.50	1 11%	8 43%	1 01	8 48%	71.43%	28.57%	2 42%	2 42%
12	Eversource Energy	$2 65	$4 25	$43.75	3.83%	9 71%	1.02	9 90%	62.35%	37 65%	3 73%	3 73%
13	Hawaiian Electric Industries, Inc	$1.50	$2.50	$24 50	4.29%	10.20%	1 02	10.42%	60.00%	40.00%	4.17%	4.69%
14	NextEra Energy, Inc	$7 00	$11 00	$85 00	4.47%	12 94%	1 02	13 22%	63.64%	36.36%	4.81%	6 60%
15	NorthWestern Corporation	$2 70	$4 00	$44 00	2 65%	9 09%	1 01	9.21%	67 50%	32 50%	2.99%	3.11%
16	OGE Energy Corp	$1.95	$2.75	$23 50	3 22%	11 70%	1 02	11.89%	70 91%	29 09%	3 46%	3 46%
17	Otter Tail Corporation	$1.65	$2.50	$23.25	4 81%	10.75%	1 02	11.01%	66.00%	34 00%	3 74%	5.10%
18	Pinnacle West Capital Corporation	$3.80	$5 75	$55.50	3.56%	10.36%	1.02	10 54%	66.09%	33.91%	3.57%	3.86%
19	PNM Resources, Inc	$1 50	$2.75	$27 50	5.34%	10 00%	1.03	10 26%	54 55%	45.45%	4.66%	5 47%
20	Portland General Electric Company	$1.95	$3 00	$32 75	3.13%	9 16%	1 02	9 30%	65.00%	35.00%	3.26%	3 33%
21	Southern Company	$2.78	$3 75	$29 50	3.91%	12 71%	1.02	12 96%	74.13%	25.87%	3.35%	4 13%
22	WEC Energy Group, Inc.	$3.00	$4 50	$36 75	3.45%	12 24%	1.02	12.45%	66 67%	33.33%	4.15%	4 15%
23	Xcel Energy Inc.	$2 05	$3 25	$29 50	4 41%	11 02%	1 02	11.25%	63 08%	36 92%	4.16%	4.41%
24	**Average**	**$2.82**	**$4.30**	**$42.03**	**4.12%**	**10.31%**	**1.02**	**10.52%**	**65.35%**	**34.65%**	**3.66%**	**4.23%**

Sources and Notes·
Cols. (1), (2) and (3)· *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019
Col (4): [Col (3) / Page 2 Col. (2)] ^ (1/number of years projected) - 1
Col. (5): Col (2) / Col (3)
Col. (6): [2 * (1 + Col (4))] / (2 + Col. (4)).
Col. (7): Col (6) * Col. (5)
Col. (8): Col (1) / Col (2).
Col. (9) 1 - Col. (8)
Col. (10) Col (9) * Col. (7).
Col. (11)· Col (10) + Page 2 Col (9)

CenterPoint Energy Houston Electric

Sustainable Growth Rate

Line	Company	13-Week Average Stock Price[1] (1)	2018 Book Value Per Share[2] (2)	Market to Book Ratio (3)	Common Shares Outstanding (in Millions)[2] 2018 (4)	3-5 Years (5)	Growth (6)	S Factor[3] (7)	V Factor[4] (8)	S * V (9)
1	ALLETE, Inc.	$71.16	$41.86	1.70	51.50	51.50	0.00%	0.00%	41.17%	0.00%
2	Alliant Energy Corporation	$40.10	$19.43	2.06	236.06	250.00	1.15%	2.38%	51.55%	1.23%
3	Ameren Corporation	$55.76	$31.21	1.79	244.50	253.00	0.69%	1.23%	44.02%	0.54%
4	American Electric Power Company, Inc.	$67.40	$38.58	1.75	493.25	520.00	1.06%	1.85%	42.76%	0.79%
5	Black Hills Corporation	$53.35	$36.36	1.47	60.00	61.00	0.33%	0.49%	31.84%	0.15%
6	CMS Energy Corporation	$44.23	$16.78	2.64	283.37	297.00	0.94%	2.49%	62.06%	1.54%
7	Consolidated Edison, Inc	$77.20	$52.70	1.46	327.00	332.00	0.30%	0.45%	31.74%	0.14%
8	DTE Energy Company	$102.95	$56.27	1.83	181.93	200.00	1.91%	3.50%	45.34%	1.59%
9	Duke Energy Corporation	$77.15	$60.40	1.28	727.00	750.00	0.62%	0.80%	21.71%	0.17%
10	El Paso Electric Company	$50.09	$28.62	1.75	40.68	43.50	1.35%	2.36%	42.87%	1.01%
11	Evergy, Inc	$57.09	$39.28	1.45	255.33	212.00	- 3.65%	- 5.31%	31.19%	- 1.66%
12	Eversource Energy	$58.49	$36.25	1.61	316.89	316.89	0.00%	0.00%	38.03%	0.00%
13	Hawaiian Electric Industries, Inc.	$33.85	$19.86	1.70	108.88	113.00	0.75%	1.27%	41.32%	0.53%
14	NextEra Energy, Inc	$158.30	$68.30	2.32	500.00	535.00	1.36%	3.16%	56.85%	1.80%
15	NorthWestern Corporation	$52.74	$38.60	1.37	50.32	51.10	0.31%	0.42%	26.81%	0.11%
16	OGE Energy Corp	$31.96	$20.06	1.59	199.70	199.70	0.00%	0.00%	37.23%	0.00%
17	Otter Tail Corporation	$42.55	$18.38	2.32	39.66	41.75	1.03%	2.39%	56.80%	1.36%
18	Pinnacle West Capital Corporation	$78.35	$46.59	1.68	112.10	114.50	0.42%	0.71%	40.54%	0.29%
19	PNM Resources, Inc	$37.10	$21.20	1.75	79.65	84.00	1.07%	1.87%	42.86%	0.80%
20	Portland General Electric Company	$40.43	$28.07	1.44	89.27	90.00	0.16%	0.23%	30.57%	0.07%
21	Southern Company	$44.40	$24.35	1.82	1,040.00	1,090.00	0.94%	1.72%	45.16%	0.78%
22	WEC Energy Group, Inc.	$61.83	$31.02	1.99	315.52	315.50	- 0.00%	- 0.00%	49.83%	- 0.00%
23	Xcel Energy Inc.	$44.59	$23.78	1.88	514.04	521.50	0.29%	0.54%	46.67%	0.25%
24	**Average**	**$60.05**	**$34.69**	**1.77**	**272.46**	**280.13**	**0.70%**	**1.33%**	**41.69%**	**0.63%**

Sources and Notes
[1] S&P Global Market Intelligence, Downloaded on May 6, 2019.
[2] *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019
[3] Expected Growth in the Number of Shares, Column (3) * Column (6)
[4] Expected Profit of Stock Investment, [1 - 1 / Column (3)].

CenterPoint Energy Houston Electric

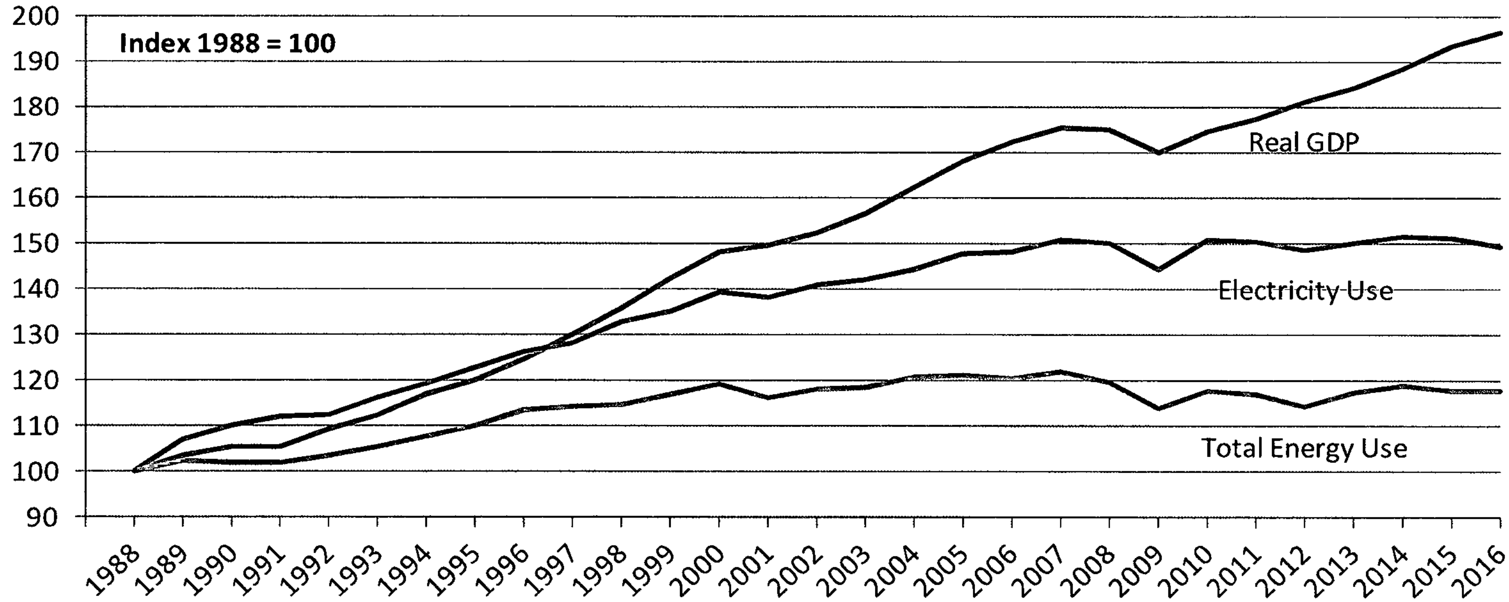
Constant Growth DCF Model
(Sustainable Growth Rate)

Line	Company	13-Week AVG Stock Price[1] (1)	Sustainable Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	ALLETE, Inc.	$71.16	2.94%	$2.35	3.40%	6.34%
2	Alliant Energy Corporation	$40.10	5.21%	$1.42	3.73%	8.94%
3	Ameren Corporation	$55.76	4.87%	$1.90	3.57%	8.44%
4	American Electric Power Company, Inc.	$67.40	4.20%	$2.68	4.14%	8.34%
5	Black Hills Corporation	$53.35	4.47%	$2.02	3.96%	8.42%
6	CMS Energy Corporation	$44.23	6.84%	$1.53	3.70%	10.54%
7	Consolidated Edison, Inc.	$77.20	2.82%	$2.96	3.94%	6.76%
8	DTE Energy Company	$102.95	5.36%	$3.78	3.87%	9.23%
9	Duke Energy Corporation	$77.15	2.06%	$3.71	4.91%	6.97%
10	El Paso Electric Company	$50.09	4.05%	$1.44	2.99%	7.04%
11	Evergy, Inc.	$57.09	2.42%	$1.90	3.41%	5.83%
12	Eversource Energy	$58.49	3.73%	$2.14	3.79%	7.52%
13	Hawaiian Electric Industries, Inc.	$33.85	4.69%	$1.28	3.96%	8.65%
14	NextEra Energy, Inc.	$158.30	6.60%	$4.44	2.99%	9.59%
15	NorthWestern Corporation	$52.74	3.11%	$2.30	4.50%	7.60%
16	OGE Energy Corp.	$31.96	3.46%	$1.46	4.73%	8.18%
17	Otter Tail Corporation	$42.55	5.10%	$1.40	3.46%	8.56%
18	Pinnacle West Capital Corporation	$78.35	3.86%	$2.95	3.91%	7.78%
19	PNM Resources, Inc.	$37.10	5.47%	$1.16	3.30%	8.76%
20	Portland General Electric Company	$40.43	3.33%	$1.45	3.71%	7.03%
21	Southern Company	$44.40	4.13%	$2.40	5.63%	9.76%
22	WEC Energy Group, Inc.	$61.83	4.15%	$2.36	3.98%	8.13%
23	Xcel Energy Inc.	$44.59	4.41%	$1.62	3.79%	8.20%
24	**Average**	**$60.05**	**4.23%**	**$2.20**	**3.88%**	**8.11%**
25	**Median**					**8.20%**

Sources:
[1] S&P Global Market Intelligence, Downloaded on May 6, 2019.
[2] Exhibit MPG-11, page 1.
[3] *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019.

CenterPoint Energy Houston Electric

Electricity Sales Are Linked to U.S. Economic Growth



Note:
1988 represents the base year. Graph depicts increases or decreases from the base year.

Sources:
U.S. Energy Information Administration
Federal Reserve Bank of St. Louis

CenterPoint Energy Houston Electric

Multi-Stage Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Annualized Dividend[2] (2)	First Stage Growth[3] (3)	Second Stage Growth: Year 6 (4)	Year 7 (5)	Year 8 (6)	Year 9 (7)	Year 10 (8)	Third Stage Growth[4] (9)	Multi-Stage Growth DCF (10)
1	ALLETE, Inc.	$71.16	$2.35	7.10%	6.58%	6.07%	5.55%	5.03%	4.52%	4.00%	8.17%
2	Alliant Energy Corporation	$40.10	$1.42	5.54%	5.28%	5.03%	4.77%	4.51%	4.26%	4.00%	8.06%
3	Ameren Corporation	$55.76	$1.90	6.42%	6.02%	5.62%	5.21%	4.81%	4.40%	4.00%	8.13%
4	American Electric Power Company, Inc.	$67.40	$2.68	5.80%	5.50%	5.20%	4.90%	4.60%	4.30%	4.00%	8.62%
5	Black Hills Corporation	$53.35	$2.02	4.31%	4.26%	4.21%	4.16%	4.10%	4.05%	4.00%	8.01%
6	CMS Energy Corporation	$44.23	$1.53	6.71%	6.26%	5.80%	5.35%	4.90%	4.45%	4.00%	8.26%
7	Consolidated Edison, Inc.	$77.20	$2.96	2.75%	2.96%	3.16%	3.37%	3.58%	3.79%	4.00%	7.67%
8	DTE Energy Company	$102.95	$3.78	5.30%	5.08%	4.86%	4.65%	4.43%	4.22%	4.00%	8.14%
9	Duke Energy Corporation	$77.15	$3.71	4.95%	4.79%	4.63%	4.47%	4.32%	4.16%	4.00%	9.30%
10	El Paso Electric Company	$50.09	$1.44	4.65%	4.54%	4.43%	4.32%	4.22%	4.11%	4.00%	7.11%
11	Evergy, Inc.	$57.09	$1.90	6.31%	5.93%	5.54%	5.16%	4.77%	4.39%	4.00%	8.00%
12	Eversource Energy	$58.49	$2.14	5.65%	5.38%	5.10%	4.83%	4.55%	4.28%	4.00%	8.22%
13	Hawaiian Electric Industries, Inc.	$33.85	$1.28	5.58%	5.31%	5.05%	4.79%	4.53%	4.26%	4.00%	8.34%
14	NextEra Energy, Inc	$158.30	$4.44	7.58%	6.99%	6.39%	5.79%	5.19%	4.60%	4.00%	7.66%
15	NorthWestern Corporation	$52.74	$2.30	2.97%	3.14%	3.31%	3.48%	3.66%	3.83%	4.00%	8.25%
16	OGE Energy Corp	$31.96	$1.46	4.99%	4.83%	4.66%	4.50%	4.33%	4.17%	4.00%	9.05%
17	Otter Tail Corporation	$42.55	$1.40	7.00%	6.50%	6.00%	5.50%	5.00%	4.50%	4.00%	8.13%
18	Pinnacle West Capital Corporation	$78.35	$2.95	5.10%	4.91%	4.73%	4.55%	4.37%	4.18%	4.00%	8.19%
19	PNM Resources, Inc.	$37.10	$1.16	4.60%	4.50%	4.40%	4.30%	4.20%	4.10%	4.00%	7.38%
20	Portland General Electric Company	$40.43	$1.45	4.92%	4.77%	4.62%	4.46%	4.31%	4.15%	4.00%	7.95%
21	Southern Company	$44.40	$2.40	3.87%	3.89%	3.92%	3.94%	3.96%	3.98%	4.00%	9.58%
22	WEC Energy Group, Inc	$61.83	$2.36	5.72%	5.44%	5.15%	4.86%	4.57%	4.29%	4.00%	8.42%
23	Xcel Energy Inc.	$44.59	$1.62	5.89%	5.58%	5.26%	4.95%	4.63%	4.32%	4.00%	8.25%
24	**Average**	**$60.05**	**$2.20**	**5.38%**	**5.15%**	**4.92%**	**4.69%**	**4.46%**	**4.23%**	**4.00%**	**8.21%**
25	**Median**										**8.17%**

Sources:

[1] S&P Global Market Intelligence, Downloaded on May 6, 2019.

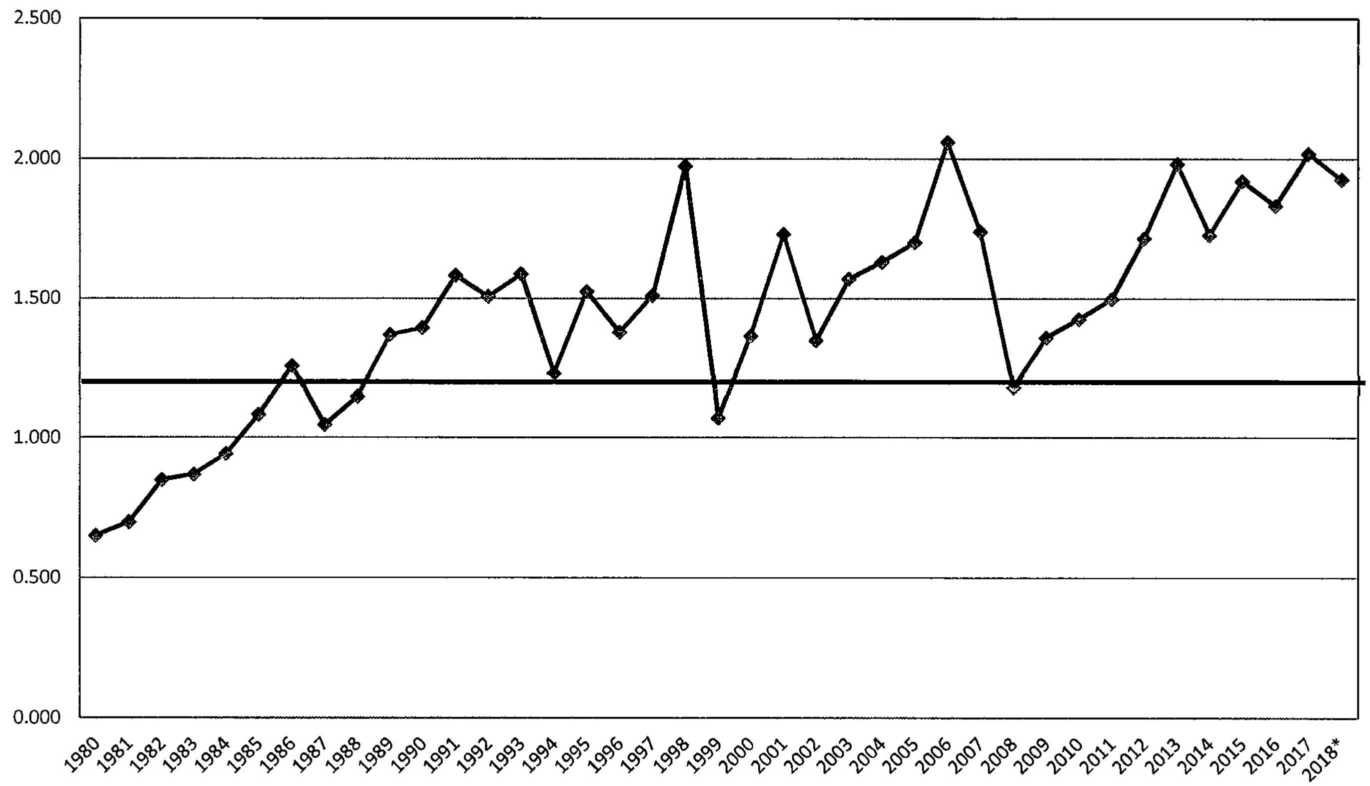
[2] *The Value Line Investment Survey*, February 15, March 15, and April 26, 2019.

[3] Exhibit MPG-8.

[4] Blue Chip Economic Indicators, March 10, 2019 at 14.

CenterPoint Energy Houston Electric

Common Stock Market/Book Ratio



Source:
1980 - 2000: Mergent Public Utility Manual.
2001 - 2015: AUS Utility Reports, multiple dates.
2016 - 2017: Value Line Investment Survey, multiple dates.
* Value Line Investment Survey Reports, January 25, February 15, March 1, and March 15, 2019.

CenterPoint Energy Houston Electric

Equity Risk Premium - Treasury Bond

Line	Year	Authorized Electric Returns[1]	30 yr. Treasury Bond Yield[2]	Indicated Risk Premium	Rolling 5 - Year Average	Rolling 10 - Year Average
		(1)	(2)	(3)	(4)	(5)
1	1986	13.93%	7.80%	6.13%		
2	1987	12.99%	8.58%	4.41%		
3	1988	12.79%	8.96%	3.83%		
4	1989	12.97%	8.45%	4.52%		
5	1990	12.70%	8.61%	4.09%	4.60%	
6	1991	12.55%	8.14%	4.41%	4.25%	
7	1992	12.09%	7.67%	4.42%	4.26%	
8	1993	11.41%	6.60%	4.81%	4.45%	
9	1994	11.34%	7.37%	3.97%	4.34%	
10	1995	11.55%	6.88%	4.67%	4.46%	4.53%
11	1996	11.39%	6.70%	4.69%	4.51%	4.38%
12	1997	11.40%	6.61%	4.79%	4.59%	4.42%
13	1998	11.66%	5.58%	6.08%	4.84%	4.65%
14	1999	10.77%	5.87%	4.90%	5.03%	4.68%
15	2000	11.43%	5.94%	5.49%	5.19%	4.82%
16	2001	11.09%	5.49%	5.60%	5.37%	4.94%
17	2002	11.16%	5.43%	5.73%	5.56%	5.07%
18	2003	10.97%	4.96%	6.01%	5.55%	5.19%
19	2004	10.75%	5.05%	5.70%	5.71%	5.37%
20	2005	10.54%	4.65%	5.89%	5.79%	5.49%
21	2006	10.34%	4.90%	5.44%	5.76%	5.56%
22	2007	10.31%	4.83%	5.48%	5.71%	5.63%
23	2008	10.37%	4.28%	6.09%	5.72%	5.63%
24	2009	10.52%	4.07%	6.45%	5.87%	5.79%
25	2010	10.29%	4.25%	6.04%	5.90%	5.84%
26	2011	10.19%	3.91%	6.28%	6.07%	5.91%
27	2012	10.01%	2.92%	7.09%	6.39%	6.05%
28	2013	9.81%	3.45%	6.36%	6.44%	6.08%
29	2014	9.75%	3.34%	6.41%	6.44%	6.15%
30	2015	9.60%	2.84%	6.76%	6.58%	6.24%
31	2016	9.60%	2.60%	7.00%	6.72%	6.40%
32	2017	9.68%	2.90%	6.79%	6.66%	6.53%
33	2018	9.55%	3.11%	6.44%	6.68%	6.56%
34	2019 [3]	9.57%	3.01%	6.56%	6.71%	6.57%
35	**Average**	**11.03%**	**5.46%**	**5.57%**	**5.54%**	**5.54%**
36	**Minimum**				**4.25%**	**4.38%**
37	**Maximum**				**6.72%**	**6.57%**

Sources:

[1] *Regulatory Research Associates, Inc.*, Regulatory Focus, Major Rate Case Decisions, Jan. 1997 pg. 5, and Jan. 2011 pg. 3.
S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January-March 2019, April 11, 2019, p. 1.
2006 - 2019 Authorized Returns exclude limited issue rider cases.

[2] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

[3] Data includes January - March, 2019.

CenterPoint Energy Houston Electric

Equity Risk Premium - Utility Bond

Line	Year	Authorized Electric Returns[1] (1)	Average "A" Rated Utility Bond Yield[2] (2)	Indicated Risk Premium (3)	Rolling 5 - Year Average (4)	Rolling 10 - Year Average (5)
1	1986	13.93%	9.58%	4.35%		
2	1987	12 99%	10.10%	2.89%		
3	1988	12 79%	10 49%	2 30%		
4	1989	12.97%	9.77%	3.20%		
5	1990	12.70%	9.86%	2.84%	3.12%	
6	1991	12.55%	9.36%	3.19%	2.88%	
7	1992	12 09%	8 69%	3 40%	2.99%	
8	1993	11.41%	7.59%	3 82%	3.29%	
9	1994	11 34%	8.31%	3.03%	3.26%	
10	1995	11.55%	7.89%	3.66%	3.42%	3.27%
11	1996	11.39%	7 75%	3 64%	3 51%	3.20%
12	1997	11.40%	7.60%	3.80%	3 59%	3.29%
13	1998	11.66%	7 04%	4 62%	3.75%	3 52%
14	1999	10 77%	7.62%	3.15%	3.77%	3 52%
15	2000	11.43%	8.24%	3.19%	3.68%	3 55%
16	2001	11.09%	7.76%	3.33%	3 62%	3.56%
17	2002	11.16%	7.37%	3 79%	3 61%	3.60%
18	2003	10.97%	6.58%	4.39%	3.57%	3.66%
19	2004	10.75%	6.16%	4.59%	3.86%	3.82%
20	2005	10.54%	5.65%	4.89%	4.20%	3.94%
21	2006	10.34%	6.07%	4.27%	4 39%	4.00%
22	2007	10.31%	6.07%	4.24%	4.48%	4.04%
23	2008	10.37%	6.53%	3.84%	4 37%	3.97%
24	2009	10.52%	6.04%	4.48%	4.34%	4.10%
25	2010	10.29%	5.47%	4.82%	4.33%	4.26%
26	2011	10.19%	5.04%	5.15%	4.51%	4.45%
27	2012	10.01%	4.13%	5.88%	4 83%	4.66%
28	2013	9.81%	4.48%	5.33%	5 13%	4.75%
29	2014	9 75%	4.28%	5 47%	5.33%	4 84%
30	2015	9 60%	4 12%	5 48%	5.46%	4.90%
31	2016	9.60%	3.93%	5.67%	5.57%	5.04%
32	2017	9.68%	4 00%	5.68%	5.53%	5.18%
33	2018	9.55%	4.25%	5.30%	5.52%	5.33%
34	2019 [3]	9.57%	4.25%	5.32%	5.49%	5.41%
35	**Average**	**11.03%**	**6.83%**	**4.21%**	**4.18%**	**4.15%**
36	**Minimum**				**2.88%**	**3.20%**
37	**Maximum**				**5.57%**	**5.41%**

Sources:

[1] *Regulatory Research Associates, Inc.*, Regulatory Focus, Major Rate Case Decisions, Jan. 1997 pg. 5, and Jan. 2011 pg 3
S&P Global Market Intelligence, RRA Regulatory Focus, Major Rate Case Decisions, January-March 2019, April 11, 2019, p. 1.
2006 - 2019 Authorized Returns exclude limited issue rider cases.

[2] Mergent Public Utility Manual, Mergent Weekly News Reports, 2003.
The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record.
The utility yields from 2010-2019 were obtained from http://credittrends.moodys.com/.

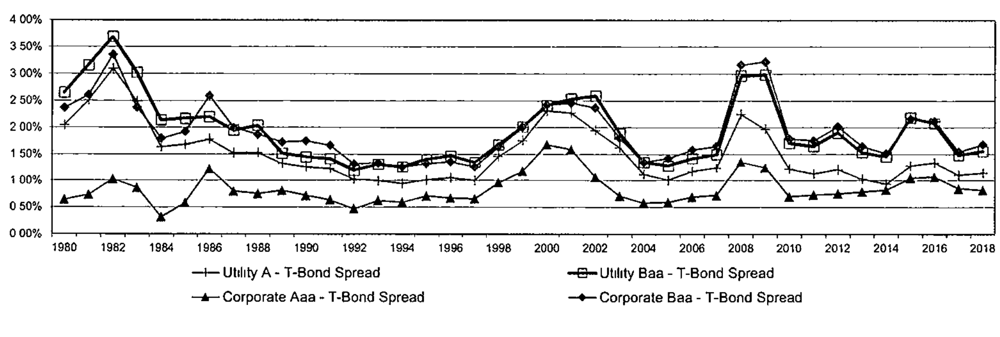
[3] Data includes January - March, 2019

CenterPoint Energy Houston Electric

Bond Yield Spreads

			Public Utility Bond				Corporate Bond				Utility to Corporate	
Line	Year	T-Bond Yield[1] (1)	A[2] (2)	Baa[2] (3)	A-T-Bond Spread (4)	Baa-T-Bond Spread (5)	Aaa[3] (6)	Baa[3] (7)	Aaa-T-Bond Spread (8)	Baa-T-Bond Spread (9)	Baa Spread (10)	A-Aaa Spread (11)
1	1980	11.30%	13.34%	13.95%	2.04%	2.65%	11.94%	13.67%	0.64%	2.37%	0.28%	1.40%
2	1981	13.44%	15.95%	16.60%	2.51%	3.16%	14.17%	16.04%	0.73%	2.60%	0.56%	1.78%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%	2.07%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.38%	0.65%	1.62%
5	1984	12.39%	14.03%	14.53%	1.64%	2.14%	12.71%	14.19%	0.32%	1.80%	0.34%	1.32%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%	1.10%
7	1986	7.80%	9.58%	10.00%	1.78%	2.20%	9.02%	10.39%	1.22%	2.59%	-0.39%	0.56%
8	1987	8.58%	10.10%	10.53%	1.52%	1.95%	9.38%	10.58%	0.80%	2.00%	-0.05%	0.72%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%	0.78%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%	0.51%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.30%	0.54%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.67%	-0.25%	0.59%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%	0.55%
14	1993	6.60%	7.59%	7.91%	0.99%	1.31%	7.22%	7.93%	0.62%	1.33%	-0.02%	0.37%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%	0.35%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%	0.30%
17	1996	6.70%	7.75%	8.17%	1.05%	1.47%	7.37%	8.05%	0.67%	1.35%	0.12%	0.38%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.66%	1.26%	0.09%	0.34%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%	0.51%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.18%	2.01%	0.01%	0.58%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	-0.01%	0.62%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.45%	0.08%	0.68%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%	0.88%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.08%	0.91%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.35%	0.00%	0.53%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.42%	-0.14%	0.41%
27	2006	4.90%	6.07%	6.32%	1.17%	1.42%	5.59%	6.48%	0.69%	1.58%	-0.16%	0.48%
28	2007	4.83%	6.07%	6.33%	1.24%	1.50%	5.56%	6.48%	0.72%	1.65%	-0.15%	0.52%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%	0.90%
30	2009	4.07%	6.04%	7.06%	1.97%	2.99%	5.31%	7.30%	1.24%	3.23%	-0.24%	0.73%
31	2010	4.25%	5.47%	5.96%	1.22%	1.71%	4.95%	6.04%	0.70%	1.79%	-0.08%	0.52%
32	2011	3.91%	5.04%	5.57%	1.13%	1.66%	4.64%	5.67%	0.73%	1.76%	-0.10%	0.40%
33	2012	2.92%	4.13%	4.83%	1.21%	1.90%	3.67%	4.94%	0.75%	2.02%	-0.11%	0.46%
34	2013	3.45%	4.48%	4.98%	1.03%	1.53%	4.24%	5.10%	0.79%	1.65%	-0.12%	0.24%
35	2014	3.34%	4.28%	4.80%	0.94%	1.46%	4.16%	4.86%	0.82%	1.52%	-0.06%	0.12%
36	2015	2.84%	4.12%	5.03%	1.27%	2.19%	3.89%	5.00%	1.05%	2.16%	0.03%	0.23%
37	2016	2.60%	3.93%	4.67%	1.33%	2.08%	3.66%	4.71%	1.07%	2.12%	-0.04%	0.27%
38	2017	2.90%	4.00%	4.38%	1.10%	1.48%	3.74%	4.44%	0.85%	1.55%	-0.06%	0.26%
39	2018	3.11%	4.25%	4.67%	1.14%	1.56%	3.93%	4.80%	0.82%	1.69%	-0.13%	0.32%
40	2019[4]	3.01%	4.25%	4.77%	1.24%	1.76%	3.83%	4.97%	0.82%	1.95%	-0.19%	0.42%
41	Average	6.44%	7.93%	8.37%	1.49%	1.93%	7.28%	8.37%	0.84%	1.93%	0.01%	0.66%

Yield Spreads
Treasury Vs. Corporate & Treasury Vs. Utility



Sources:
[1] St Louis Federal Reserve: Economic Research, http //research stlouisfed.org/.
[2] The utility yields for the period 1980-2000 were obtained from Mergent Public Utility Manual, Mergent Weekly News Reports, 2003.
The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record
The utility yields for the period 2010-2019 were obtained from http://credittrends moodys.com/
[3] The corporate yields for the period 1980-2009 were obtained from the St. Louis Federal Reserve Economic Research, http //research stlouisfed org/
The corporate yields from 2010-2019 were obtained from http //credittrends moodys com/.
[4] Data includes January - March, 2019

CenterPoint Energy Houston Electric

Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	05/03/19	2.93%	4.05%	4.50%
2	04/26/19	2.92%	4.04%	4.49%
3	04/18/19	2.96%	4.08%	4.55%
4	04/12/19	2.97%	4.11%	4.57%
5	04/05/19	2.91%	4.08%	4.55%
6	03/29/19	2.81%	3.99%	4.49%
7	03/22/19	2.88%	4.07%	4.55%
8	03/15/19	3.02%	4.21%	4.68%
9	03/08/19	3.00%	4.19%	4.70%
10	03/01/19	3.13%	4.30%	4.79%
11	02/22/19	3.02%	4.22%	4.70%
12	02/15/19	3.00%	4.23%	4.74%
13	02/08/19	2.97%	4.22%	4.74%
14	**Average**	**2.96%**	**4.14%**	**4.62%**
15	**Spread To Treasury**		**1.18%**	**1.66%**

Sources:
[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.
[2] http://credittrends.moodys.com/.

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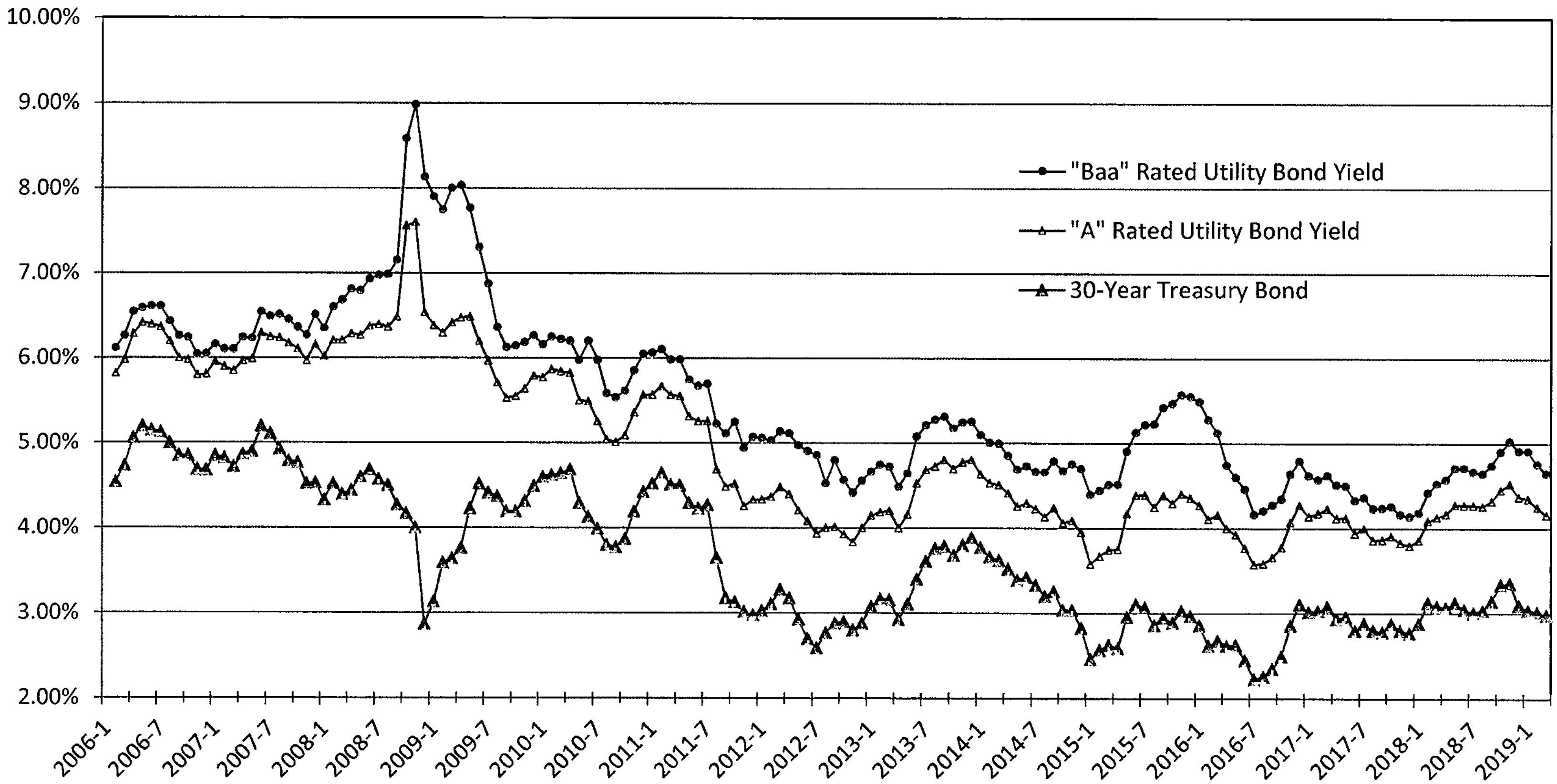
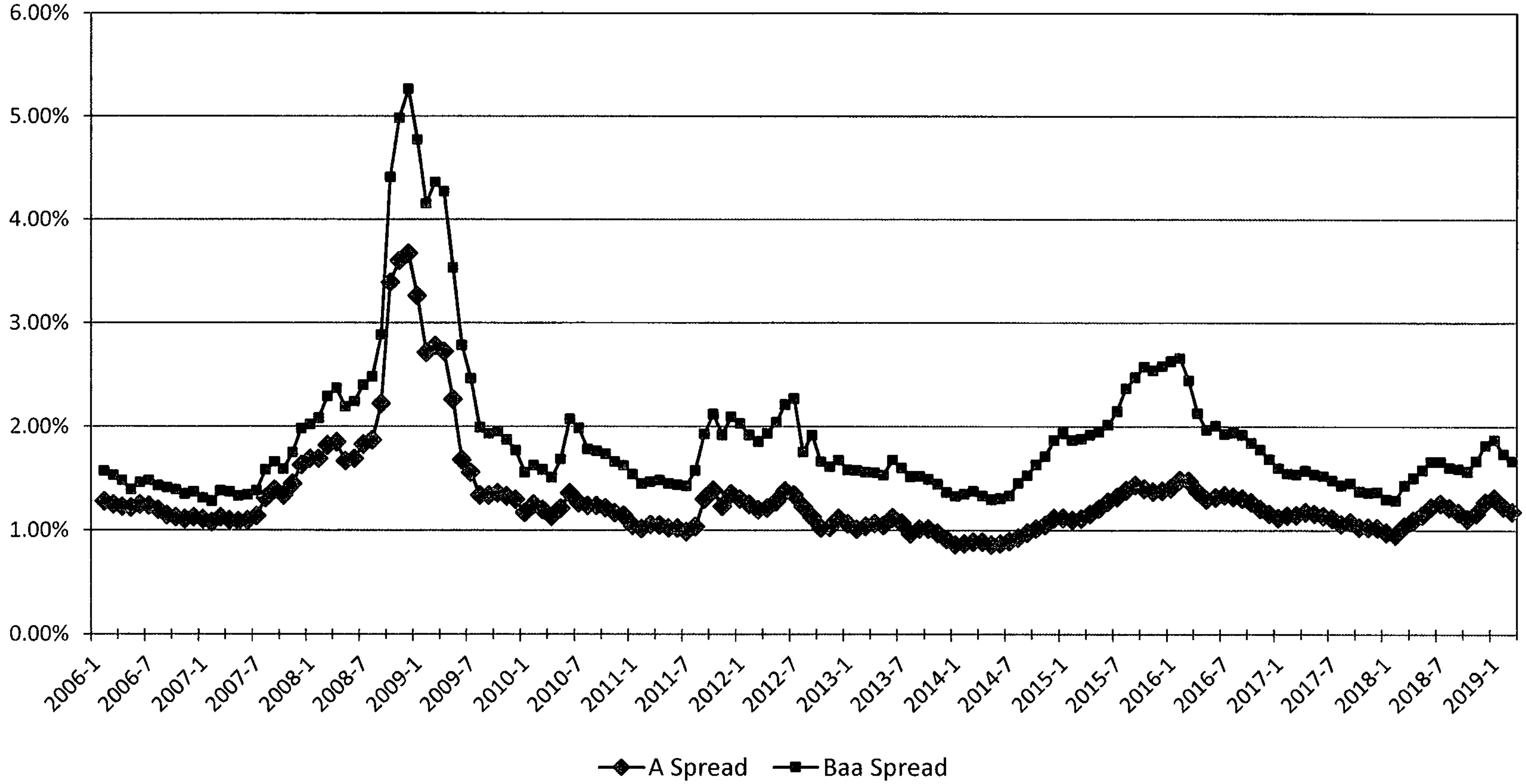
Trends in Bond Yields



Sources:
Mergent Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

CenterPoint Energy Houston Electric

Yield Spread Between Utility Bonds and 30-Year Treasury Bonds



Sources:
Mergent Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

CenterPoint Energy Houston Electric

Value Line Beta

Line	Company	Beta
1	ALLETE, Inc.	0.65
2	Alliant Energy Corporation	0.65
3	Ameren Corporation	0.60
4	American Electric Power Company, Inc.	0.55
5	Black Hills Corporation	0.80
6	CMS Energy Corporation	0.55
7	Consolidated Edison, Inc.	0.45
8	DTE Energy Company	0.55
9	Duke Energy Corporation	0.50
10	El Paso Electric Company	0.70
11	Evergy, Inc.	NMF
12	Eversource Energy	0.60
13	Hawaiian Electric Industries, Inc.	0.60
14	NextEra Energy, Inc.	0.60
15	NorthWestern Corporation	0.60
16	OGE Energy Corp.	0.85
17	Otter Tail Corporation	0.70
18	Pinnacle West Capital Corporation	0.55
19	PNM Resources, Inc.	0.65
20	Portland General Electric Company	0.60
21	Southern Company	0.50
22	WEC Energy Group, Inc.	0.55
23	Xcel Energy Inc.	0.50
24	**Average**	**0.60**

Source:
The Value Line Investment Survey,
February 15, March 15, and April 26, 2019.

CenterPoint Energy Houston Electric

Historical Betas

Line	Company	Average (1)	1Q19 (2)	4Q18 (3)	3Q18 (4)	2Q18 (5)	1Q18 (6)	4Q17 (7)	3Q17 (8)	2Q17 (9)	1Q17 (10)	4Q16 (11)	3Q16 (12)	2Q16 (13)	1Q16 (14)	4Q15 (15)	3Q15 (16)	2Q15 (17)	1Q15 (18)	4Q14 (19)	3Q14 (20)
1	ALLETE, Inc	0.76	0.65	0.65	0.70	0.75	0.75	0.80	0.75	0.80	0.80	0.75	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80
2	Alliant Energy Corporation	0.73	0.65	0.60	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80
3	Ameren Corporation	0.69	0.60	0.55	0.60	0.65	0.65	0.70	0.65	0.65	0.70	0.65	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
4	American Electric Power Company, Inc	0.66	0.55	0.55	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
5	Black Hills Corporation	0.88	0.75	0.80	0.85	0.90	0.90	0.90	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.85
6	CMS Energy Corporation	0.67	0.55	0.55	0.55	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.75	0.75	0.70	0.75	0.75	0.70	0.75
7	Consolidated Edison, Inc	0.54	0.45	0.45	0.45	0.50	0.50	0.50	0.50	0.50	0.55	0.55	0.55	0.55	0.55	0.60	0.60	0.60	0.60	0.60	0.60
8	DTE Energy Company	0.68	0.55	0.55	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75
9	Duke Energy Corporation	0.59	0.50	0.55	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.50	0.60	0.60	0.60	0.60	0.60
10	El Paso Electric Company	0.73	0.65	0.70	0.75	0.75	0.80	0.80	0.75	0.75	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.70	0.70	0.70	0.70
11	Evergy, Inc	N/A	NMF	NMF	NMF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	Eversource Energy	0.69	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
13	Hawaiian Electric Industries, Inc	0.72	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.75
14	NextEra Energy, Inc	0.67	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.70	0.75	0.70	0.75	0.70	0.70	0.70
15	NorthWestern Corporation	0.68	0.55	0.60	0.65	0.65	0.70	0.70	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.70	0.70	0.70	0.70
16	OGE Energy Corp	0.92	0.85	0.85	0.90	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.85
17	Otter Tail Corporation	0.85	0.70	0.75	0.80	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.80	0.85	0.85	0.85	0.90	0.90	0.90	0.95
18	Pinnacle West Capital Corporation	0.69	0.55	0.60	0.65	0.65	0.70	0.70	0.65	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.70	0.70	0.70	0.70	0.70
19	PNM Resources, Inc	0.77	0.65	0.60	0.75	0.70	0.75	0.75	0.75	0.70	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85	0.85	0.85	0.85
20	Portland General Electric Company	0.73	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75
21	Southern Company	0.56	0.50	0.50	0.50	0.55	0.65	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.60	0.60	0.55	0.60	0.55	0.55	0.60
22	WEC Energy Group, Inc	0.62	0.55	0.50	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.70	0.70	0.70	0.70	0.65	0.65	0.65
23	Xcel Energy Inc.	0.62	0.50	0.55	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.70	0.65
24	**Average**	0.70	0.60	0.60	0.65	0.68	0.70	0.70	0.69	0.69	0.70	0.69	0.71	0.73	0.75	0.75	0.75	0.75	0.74	0.74	0.74

Source Value Line Software Analyzer

CenterPoint Energy Houston Electric

CAPM Return

Line	Description	High Market Risk Premium (1)	Low Market Risk Premium (2)
1	Risk-Free Rate[1]	3.20%	3.20%
2	Risk Premium[2]	7.90%	6.00%
3	Beta[3]	0.70	0.70
4	**CAPM**	**8.73%**	**7.40%**

Sources:
[1] *Blue Chip Financial Forecasts*, May 1, 2019, at 2.
[2] *Duff & Phelps, 2019 SBBI Yearbook* at 6-17 and 6-18, and *Duff & Phelps, 2019 Valuation Handbook* at 3-1.
[3] Exhibit MPG-20, Page 2.

CenterPoint Energy Houston Electric

Standard & Poor's Credit Metrics
(December 31, 2018)

Line	Description	Retail Cost of Service Amount (1)	S&P Benchmark (Low Volatility) Intermediate (2)	Significant (3)	Aggressive (4)	Reference (5)
1	Rate Base (TX Retail)	$ 6,482,512				Schedule II-B
2	Weighted Common Return	3.70%				Page 2, Line 2, Col 3
3	Pre-Tax Rate of Return	7.67%				Page 2, Line 3, Col 4
4	Income to Common	$ 239,853				Line 1 x Line 2
5	EBIT	$ 497,057				Line 1 x Line 3
6	Depreciation & Amortization	$ 351,230				Schedule II-A-1
7	Imputed Amortization	$ -				NA, Response to Request No TIEC03-10
8	Capitalized Interest	$ 6,359				NA, Response to Request No TIEC03-09
9	Deferred Income Taxes & ITC	$ 21,285				Schedule II-E-3 15
10	Funds from Operations (FFO)	$ 618,727				Sum of Line 4 and Lines 6 through 8
11	Imputed Interest Expense	$ -				NA, Response to Request No. TIEC03-10
12	EBITDA	$ 848,287				Sum of Lines 5 through 7 and Line 10
13	Total Adjusted Debt Ratio	60%				Page 3, Line 3, Col 2
14	Debt to EBITDA	4.6x	3.0x - 4.0x	4.0x - 5.0x	5.0x - 6.0x	(Line 1 x Line 13) / Line 12
15	FFO to Total Debt	16%	13% - 23%	9% - 13%	6% - 9%	Line 10 / (Line 1 x Line 13)
16	Indicative Credit Rating		A	A-	BBB	S&P Methodology, November 19, 2013

Sources:
Standard & Poor's: "Criteria· Corporate Methodology," November 19, 2013

Note·
Based on the March 2019 S&P report, CEHE has an "Excellent" business profile and an "Intermediate" financial profile, and falls under the 'Low Volatility' matrix.

S&P Business/Financial Risk Profile Matrix			
Business Risk	Financial Risk Profile		
	Intermediate	Significant	Aggressive
Excellent	A	A-	BBB
Strong	A-	BBB	BB
Satisfactory	BBB	BB+	BB-

CenterPoint Energy Houston Electric

Standard & Poor's Credit Metrics
(Pre-Tax Rate of Return)

Line	Description	Weight (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
1	Long-Term Debt	60.00%	4.38%	2.63%	2.63%
2	Common Equity	40.00%	**9.25%**	3.70%	5.04%
3	**Total**	**100.00%**		**6.33%**	**7.67%**
4	Tax Conversion Rate*				26.58%

Sources:
Exhibit MPG-1.
*Schedule II-E-3.

CenterPoint Energy Houston Electric

Standard & Poor's Credit Metrics
(Financial Capital Structure)

Line	Description	Amount (1)	Weight (2)
1	Long-Term Debt	$3,536,738	60.0%
2	Debt Adjustments*	$ -	0.0%
3	Total Long-Term Debt	$3,536,738	60.0%
4	Common Equity	$2,357,825	40.0%
5	**Total**	**$5,894,563**	**100.0%**

Sources:
Exhibit MPG-1.
*Response to Request No.: TIEC03-10.

CenterPoint Energy Houston Electric

S&P Adjusted Debt Ratio

Operating Subsidiaries of Value Line Electric, Gas and Water Utilities
(Industry Medians)

		% Distribution of 9 Year Average		
Rating	**Median**	**<50**	**50 to 55**	**>55**
AA-	45.17%	100%	0%	0%
A+	53.26%	33%	33%	33%
A	51.46%	25%	50%	25%
A-	53.02%	35%	41%	24%
BBB+	52.82%	20%	48%	32%
BBB	56.04%	18%	29%	53%
BBB-	52.59%	33%	67%	0%
CEHE, Adj	**60.00%**			

Source:
S&P Capital IQ, downloaded May 6, 2019.

CenterPoint Energy Houston Electric

Hevert Multi-Stage Growth DCF Model
30 Day Average Stock Price

Line	Company	Average Stock Price[1]	Annualized Dividend[1]	Average Earnings Growth[1]	Second Stage Growth Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth[2]	Multi-Stage Growth DCF
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	ALLETE, Inc.	$75 79	$2.35	4.75%	4 63%	4.50%	4.38%	4.25%	4.13%	4.00%	7.38%
2	Alliant Energy Corporation	$43 38	$1.42	6.58%	6 15%	5.72%	5.29%	4.86%	4.43%	4.00%	8.01%
3	Ameren Corporation	$67.71	$1.90	7.33%	6.78%	6.22%	5.67%	5.11%	4.56%	4.00%	7.61%
4	American Electric Power Company, Inc.	$77.09	$2.68	5.35%	5.12%	4.90%	4.67%	4.45%	4.22%	4.00%	7.94%
5	Avangrid, Inc.	$49 45	$1.76	9.97%	8.97%	7.98%	6.98%	5.99%	4.99%	4 00%	9.32%
6	Black Hills Corporation	$66 05	$2.02	5.22%	5 02%	4.81%	4.61%	4.41%	4.20%	4.00%	7.44%
7	CMS Energy Corporation	$51.15	$1.53	6.83%	6 36%	5.89%	5.42%	4.94%	4.47%	4.00%	7.72%
8	Consolidated Edison, Inc	$76.88	$2.96	2.97%	3 14%	3.31%	3.48%	3.66%	3.83%	4.00%	7.74%
9	DTE Energy Company	$114.83	$3.78	6.33%	5.94%	5.55%	5.17%	4 78%	4.39%	4.00%	7.97%
10	Duke Energy Corporation	$86.78	$3.71	4.97%	4.81%	4.65%	4.49%	4.32%	4 16%	4.00%	8.72%
11	El Paso Electric Company	$51.25	$1.44	4.17%	4.14%	4 11%	4.08%	4.06%	4.03%	4.00%	6.94%
12	Evergy, Inc.	$57.06	$1.90	8.50%	7.75%	7.00%	6.25%	5.50%	4.75%	4.00%	8 58%
13	Eversource Energy	$67.79	$2.14	5.74%	5.45%	5 16%	4.87%	4.58%	4.29%	4.00%	7 67%
14	Hawaiian Electric Industries, Inc.	$36.69	$1.28	5.90%	5.58%	5.27%	4.95%	4.63%	4.32%	4.00%	8.09%
15	NextEra Energy, Inc.	$177.20	$5.00	8.05%	7.38%	6.70%	6.03%	5.35%	4.68%	4.00%	7 79%
16	NorthWestern Corporation	$62.50	$2.30	2.56%	2.80%	3.04%	3 28%	3.52%	3.76%	4.00%	7 48%
17	OGE Energy Corp.	$40.48	$1.46	5.60%	5 33%	5.07%	4.80%	4.53%	4.27%	4.00%	8.15%
18	Otter Tail Corporation	$48.31	$1.40	9.00%	8 17%	7.33%	6 50%	5.67%	4.83%	4.00%	8.12%
19	Pinnacle West Capital Corporation	$86.95	$2.95	4.92%	4.77%	4.61%	4.46%	4.31%	4.15%	4.00%	7 74%
20	PNM Resources, Inc.	$41.99	$1.16	5 43%	5 19%	4.96%	4.72%	4.48%	4.24%	4.00%	7.15%
21	Portland General Electric Company	$46.90	$1.45	4 12%	4 10%	4.08%	4.06%	4.04%	4.02%	4.00%	7.23%
22	Southern Company	$47.59	$2 40	3 23%	3.36%	3.48%	3.61%	3 74%	3.87%	4.00%	9.00%
23	WEC Energy Group, Inc.	$71.63	$2 36	5.37%	5.14%	4.91%	4.68%	4.46%	4.23%	4.00%	7.74%
24	Xcel Energy Inc.	$51.14	$1 52	6.01%	5.68%	5.34%	5.01%	4 67%	4.34%	4.00%	7.51%
25	**Average**	**$66.52**	**$2.20**	**5.79%**	**5.49%**	**5.19%**	**4.89%**	**4.60%**	**4.30%**	**4.00%**	**7.88%**
26	**Median**										**7.74%**

Sources:
[1] RBH-1, Page 1 of 3.
[2] Blue Chip Economic Indicators, March 10, 2019 at 14.

CenterPoint Energy Houston Electric

Hevert Multi-Stage Growth DCF Model
90 Day Average Stock Price

Line	Company	Average Stock Price[1]	Annualized Dividend[1]	Average Earnings Growth[1]	Second Stage Growth Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth[2]	Multi-Stage Growth DCF
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	ALLETE, Inc.	$76.90	$2.35	4.75%	4.63%	4.50%	4.38%	4.25%	4.13%	4.00%	7.33%
2	Alliant Energy Corporation	$43.76	$1 42	6.58%	6 15%	5.72%	5.29%	4.86%	4 43%	4 00%	7.97%
3	Ameren Corporation	$67.10	$1.90	7.33%	6 78%	6 22%	5 67%	5.11%	4.56%	4 00%	7.64%
4	American Electric Power Company, Inc.	$75.90	$2.68	5.35%	5 12%	4 90%	4.67%	4.45%	4.22%	4.00%	8.00%
5	Avangrid, Inc.	$49.34	$1.76	9.97%	8.97%	7.98%	6.98%	5.99%	4.99%	4.00%	9.33%
6	Black Hills Corporation	$64.12	$2.02	5.22%	5.02%	4.81%	4.61%	4.41%	4 20%	4.00%	7.54%
7	CMS Energy Corporation	$50.75	$1 53	6.83%	6.36%	5.89%	5.42%	4.94%	4.47%	4 00%	7.75%
8	Consolidated Edison, Inc.	$77.79	$2 96	2.97%	3.14%	3.31%	3.48%	3.66%	3.83%	4.00%	7 70%
9	DTE Energy Company	$114.88	$3.78	6.33%	5 94%	5.55%	5.17%	4.78%	4.39%	4.00%	7.96%
10	Duke Energy Corporation	$85 94	$3.71	4.97%	4 81%	4 65%	4.49%	4.32%	4.16%	4.00%	8.77%
11	El Paso Electric Company	$54.34	$1.44	4.17%	4.14%	4 11%	4.08%	4.06%	4.03%	4.00%	6.77%
12	Evergy, Inc.	$57 59	$1.90	8.50%	7.75%	7.00%	6.25%	5.50%	4.75%	4.00%	8.54%
13	Eversource Energy	$66.19	$2 14	5.74%	5.45%	5.16%	4.87%	4 58%	4.29%	4 00%	7 76%
14	Hawaiian Electric Industries, Inc.	$37.01	$1.28	5.90%	5.58%	5.27%	4.95%	4.63%	4.32%	4.00%	8.05%
15	NextEra Energy, Inc.	$175.87	$5.00	8.05%	7.38%	6.70%	6.03%	5.35%	4.68%	4.00%	7.82%
16	NorthWestern Corporation	$61.78	$2.30	2.56%	2.80%	3.04%	3.28%	3.52%	3.76%	4.00%	7.52%
17	OGE Energy Corp	$39.18	$1.46	5.60%	5.33%	5.07%	4.80%	4.53%	4.27%	4.00%	8.28%
18	Otter Tail Corporation	$47.95	$1.40	9.00%	8.17%	7.33%	6 50%	5.67%	4.83%	4 00%	8 15%
19	Pinnacle West Capital Corporation	$86.69	$2.95	4.92%	4.77%	4.61%	4.46%	4.31%	4 15%	4.00%	7.75%
20	PNM Resources, Inc	$41.40	$1.16	5.43%	5 19%	4 96%	4.72%	4.48%	4.24%	4.00%	7.19%
21	Portland General Electric Company	$46.88	$1.45	4.12%	4.10%	4.08%	4.06%	4 04%	4.02%	4.00%	7.23%
22	Southern Company	$46.26	$2.40	3.23%	3 36%	3 48%	3.61%	3.74%	3.87%	4.00%	9.14%
23	WEC Energy Group, Inc.	$70.80	$2 36	5 37%	5.14%	4.91%	4.68%	4.46%	4.23%	4 00%	7 78%
24	Xcel Energy Inc.	$50.58	$1.52	6.01%	5.68%	5.34%	5.01%	4.67%	4.34%	4 00%	7.55%
25	**Average**	**$66.21**	**$2.20**	**5.79%**	**5.49%**	**5.19%**	**4.89%**	**4.60%**	**4.30%**	**4.00%**	**7.90%**
26	**Median**										**7.77%**

Sources:
[1] RBH-1, Page 2 of 3.
[2] Blue Chip Economic Indicators, March 10, 2019 at 14.

CenterPoint Energy Houston Electric

Hevert Multi-Stage Growth DCF Model
180 Day Average Stock Price

Line	Company	Average Stock Price[1]	Annualized Dividend[1]	Average Earnings Growth[1]	Second Stage Growth Year 6	Year 7	Year 8	Year 9	Year 10	Third Stage Growth[2]	Multi-Stage Growth DCF
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	ALLETE, Inc	$76.55	$2.35	4.75%	4.63%	4.50%	4.38%	4 25%	4.13%	4.00%	7 35%
2	Alliant Energy Corporation	$43.06	$1.42	6.58%	6.15%	5.72%	5.29%	4.86%	4.43%	4.00%	8.04%
3	Ameren Corporation	$64.47	$1.90	7.33%	6.78%	6.22%	5.67%	5 11%	4 56%	4 00%	7 79%
4	American Electric Power Company, Inc.	$72.93	$2.68	5.35%	5.12%	4.90%	4.67%	4 45%	4.22%	4 00%	8 16%
5	Avangrid, Inc	$49.90	$1.76	9.97%	8.97%	7.98%	6.98%	5 99%	4.99%	4 00%	9.27%
6	Black Hills Corporation	$61.83	$2.02	5.22%	5.02%	4.81%	4.61%	4 41%	4.20%	4.00%	7.67%
7	CMS Energy Corporation	$49.29	$1.53	6.83%	6.36%	5.89%	5.42%	4.94%	4.47%	4.00%	7.86%
8	Consolidated Edison, Inc.	$77.75	$2 96	2.97%	3.14%	3 31%	3.48%	3.66%	3.83%	4.00%	7.70%
9	DTE Energy Company	$111.00	$3.78	6.33%	5.94%	5.55%	5.17%	4.78%	4.39%	4.00%	8.10%
10	Duke Energy Corporation	$82.74	$3.71	4.97%	4.81%	4.65%	4.49%	4.32%	4.16%	4.00%	8.95%
11	El Paso Electric Company	$57.24	$1.44	4.17%	4.14%	4.11%	4.08%	4.06%	4.03%	4.00%	6.63%
12	Evergy, Inc.	$56.71	$1.90	8.50%	7.75%	7.00%	6.25%	5.50%	4.75%	4.00%	8.60%
13	Eversource Energy	$63.01	$2.14	5.74%	5.45%	5.16%	4 87%	4.58%	4.29%	4.00%	7.94%
14	Hawaiian Electric Industries, Inc.	$35.90	$1.28	5.90%	5.58%	5.27%	4 95%	4.63%	4.32%	4.00%	8.18%
15	NextEra Energy, Inc	$171.99	$5.00	8.05%	7.38%	6.70%	6 03%	5.35%	4.68%	4.00%	7.90%
16	NorthWestern Corporation	$59.97	$2.30	2.56%	2.80%	3.04%	3 28%	3.52%	3.76%	4.00%	7.63%
17	OGE Energy Corp.	$37 55	$1.46	5 60%	5.33%	5.07%	4.80%	4.53%	4.27%	4.00%	8 47%
18	Otter Tail Corporation	$47 92	$1.40	9.00%	8.17%	7.33%	6.50%	5.67%	4.83%	4.00%	8.16%
19	Pinnacle West Capital Corporation	$83 10	$2.95	4 92%	4.77%	4.61%	4.46%	4.31%	4.15%	4.00%	7.91%
20	PNM Resources, Inc.	$40 10	$1.16	5 43%	5.19%	4.96%	4.72%	4 48%	4.24%	4.00%	7 29%
21	Portland General Electric Company	$45.72	$1.45	4.12%	4.10%	4.08%	4.06%	4.04%	4.02%	4.00%	7.32%
22	Southern Company	$45.92	$2.40	3.23%	3.36%	3.48%	3.61%	3.74%	3.87%	4.00%	9.18%
23	WEC Energy Group, Inc	$68.11	$2.36	5.37%	5.14%	4.91%	4.68%	4.46%	4.23%	4.00%	7.93%
24	Xcel Energy Inc.	$48.50	$1.52	6.01%	5.68%	5.34%	5.01%	4.67%	4.34%	4.00%	7.70%
25	**Average**	**$64.63**	**$2.20**	**5.79%**	**5.49%**	**5.19%**	**4.89%**	**4.60%**	**4.30%**	**4.00%**	**7.99%**
26	**Median**										**7.92%**

Sources:
[1] RBH-1, Page 3 of 3.
[2] Blue Chip Economic Indicators, March 10, 2019 at 14

CenterPoint Energy Houston Electric

Accuracy of Interest Rate Forecasts
(Long-Term Treasury Bond Yields - Projected Vs. Actual)

		Publication Data			Actual Yield	Projected Yield
		Prior Quarter	Projected	Projected	in Projected	Higher (Lower)
Line	Date	Actual Yield	Yield	Quarter	Quarter	Than Actual Yield*
		(1)	(2)	(3)	(4)	(5)
1	Dec-00	5 8%	5 8%	1Q, 02	5 6%	0 2%
2	Mar-01	5 7%	5 6%	2Q, 02	5 8%	-0 2%
3	Jun-01	5 4%	5 8%	3Q, 02	5 2%	0 6%
4	Sep-01	5 7%	5 9%	4Q, 02	5 1%	0 8%
5	Dec-01	5 5%	5 7%	1Q, 03	5 0%	0 7%
6	Mar-02	5 3%	5 9%	2Q, 03	4 7%	1 2%
7	Jun-02	5 6%	6 2%	3Q, 03	5 2%	1 0%
8	Sep-02	5 8%	5 9%	4Q, 03	5 2%	0 7%
9	Dec-02	5 2%	5 7%	1Q, 04	4 9%	0 8%
10	Mar-03	5 1%	5 7%	2Q, 04	5 4%	0 3%
11	Jun-03	5 0%	5 4%	3Q, 04	5 1%	0 3%
12	Sep-03	4 7%	5 8%	4Q, 04	4 9%	0 9%
13	Dec-03	5 2%	5 9%	1Q, 05	4 8%	1 1%
14	Mar-04	5 2%	5 9%	2Q, 05	4 6%	1 4%
15	Jun-04	4 9%	6 2%	3Q, 05	4 5%	1 7%
16	Sep-04	5 4%	6 0%	4Q, 05	4 8%	1 2%
17	Dec-04	5 1%	5 8%	1Q, 06	4 6%	1 2%
18	Mar-05	4 9%	5 6%	2Q, 06	5 1%	0 5%
19	Jun-05	4 8%	5 5%	3Q, 06	5 0%	0 5%
20	Sep-05	4 6%	5 2%	4Q, 06	4 7%	0 5%
21	Dec-05	4 5%	5 3%	1Q, 07	4 8%	0 5%
22	Mar-06	4 8%	5 1%	2Q, 07	5 0%	0 1%
23	Jun-06	4 6%	5 3%	3Q, 07	4 9%	0 4%
24	Sep-06	5 1%	5 2%	4Q, 07	4 6%	0 6%
25	Dec-06	5 0%	5 0%	1Q, 08	4 4%	0 6%
26	Mar-07	4 7%	5 1%	2Q, 08	4 6%	0 5%
27	Jun-07	4 8%	5 1%	3Q, 08	4 5%	0 7%
28	Sep-07	5 0%	5 2%	4Q, 08	3 7%	1 5%
29	Dec-07	4 9%	4 8%	1Q, 09	3 5%	1 4%
30	Mar-08	4 6%	4 8%	2Q, 09	4 0%	0 8%
31	Jun-08	4 4%	4 9%	3Q, 09	4 3%	0 6%
32	Sep-08	4 6%	5 1%	4Q, 09	4 3%	0 8%
33	Dec-08	4 5%	4 6%	1Q, 10	4 6%	0 0%
34	Mar-09	3 7%	4 1%	2Q, 10	4 4%	-0 3%
35	Jun-09	3 5%	4 6%	3Q, 10	3 9%	0 8%
36	Sep-09	4 0%	5 0%	4Q, 10	4 2%	0 8%
37	Dec-09	4 3%	5 0%	1Q, 11	4 6%	0 4%
38	Mar-10	4 3%	5 2%	2Q, 11	4 3%	0 9%
39	Jun-10	4 6%	5 2%	3Q, 11	3 7%	1 5%
40	Sep-10	4 4%	4 7%	4Q, 11	3 0%	1 7%
41	Dec-10	3 9%	4 6%	1Q, 12	3 1%	1 5%
42	Mar-11	4 2%	5 1%	2Q, 12	2 9%	2 2%
43	Jun-11	4 6%	5 2%	3Q, 12	2 8%	2 5%
44	Sep-11	4 3%	4 2%	4Q, 12	2 9%	1 3%
45	Dec-11	3 7%	3 8%	1Q, 13	3 1%	0 7%
46	Mar-12	3 0%	3 8%	2Q, 13	3 2%	0 7%
47	Jun-12	3 1%	3 7%	3Q, 13	3 7%	0 0%
48	Sep-12	2 9%	3 4%	4Q, 13	3 8%	-0 4%
49	Dec-12	2 8%	3 4%	1Q, 14	3 7%	-0 3%
50	Mar-13	2 9%	3 6%	2Q, 14	3 4%	0 2%
51	Jun-13	3 1%	3 7%	3Q, 14	3 3%	0 4%
52	Sep-13	3 2%	4 2%	4Q, 14	3 0%	1 2%
53	Dec-13	3 7%	4 2%	1Q, 15	2 6%	1 7%
54	Mar-14	3 8%	4 4%	2Q 15	2 9%	1 5%
55	Jun-14	3 7%	4 3%	3Q 15	2 8%	1 5%
56	Sep-14	3 4%	4 3%	4Q 15	3 0%	1 3%
57	Dec-14	3 3%	4 0%	1Q 16	2 7%	1 3%
58	Mar-15	3 0%	3 7%	2Q 16	2 6%	1 1%
59	Jun-15	2 6%	3 7%	3Q 16	2 3%	1 4%
60	Sep-15	2 9%	3 8%	4Q 16	2 8%	1 0%
61	Dec-15	2 8%	3 7%	1Q 17	3 0%	0 7%
62	Mar-16	3 0%	3 5%	2Q 17	2 9%	0 6%
63	Jun-16	2 7%	3 4%	3Q 17	2 8%	0 6%
64	Sep-16	2 6%	3 1%	4Q 17	2 8%	0 3%
65	Dec-16	2 3%	3 4%	1Q 18	3 0%	0 4%
66	Mar-17	2 8%	3 7%	2Q 18	3 1%	0 6%
67	Jun-17	3 0%	3 7%	3Q 18	3 1%	0 6%
68	Sep-17	2 9%	3 6%	4Q 18	3 3%	0 3%
69	Oct-17	2 8%	3 6%	1Q 19		
70	Nov-17	2 8%	3 6%	1Q 19		
71	Dec-17	2 8%	3 6%	1Q 19		
72	Jan-18	2 8%	3 6%	2Q 19		
73	Feb-18	2 8%	3 6%	2Q 19		
74	Mar-18	2 8%	3 7%	2Q 19		
75	Apr-18	3 0%	3 8%	3Q 19		
76	May-18	3 0%	3 8%	3Q 19		
77	Jun-18	3 0%	3 8%	3Q 19		
78	Jul-18	3 1%	3 8%	4Q 19		
79	Aug-18	3 1%	3 7%	4Q 19		
80	Sep-18	3 1%	3 7%	4Q 19		
81	Oct-18	3 1%	3 6%	1Q 20		
82	Nov-18	3 1%	3 7%	1Q 20		
83	Dec-18	3 1%	3 7%	1Q 20		
84	Jan-19	3 3%	3 6%	2Q 20		
85	Feb-19	3 3%	3 5%	2Q 20		
86	Mar-19	3 3%	3 4%	2Q 20		
87	Apr-19	3 0%	3 2%	3Q 20		
88	May-19	3 0%	3 2%	3Q 20		

Source
Blue Chip Financial Forecasts, Various Dates
* Col 2 - Col 4