

Massachusetts Electric Company  
Distribution DG Capital  
Summary Illustrative Revenue Requirement - 10 Years

		Year 1	Year 2	Year 3	Year 4	Year 5
		(a)	(b)	(c)	(d)	(e)
1	Cumulative Net Historic Capital Adjustment					
2	Annual Revenue Requirement on CapEx					
3						
4	Cumulative Net CapEx Adjustment					
5						
6	O&M related to capex					
7						
8	Total					

Page 2, Line (32)

\$29,419,484	\$57,717,406	\$53,476,737	\$46,187,833	\$39,331,788
\$29,419,484	\$57,717,406	\$53,476,737	\$46,187,833	\$39,331,788
\$19,099,500	\$0	\$0	\$0	\$0
\$48,518,984	\$57,717,406	\$53,476,737	\$46,187,833	\$39,331,788

Massachusetts Electric Company  
DG Capital Investment Recovery Illustration  
Illustrative Revenue Requirement - 10 Years

Year		<u>1</u> (a)	<u>2</u> (b)	<u>3</u> (c)	<u>4</u> (d)	<u>5</u> (e)
<u>Depreciable Plant Additions</u>						
(1) Distribution Plant Additions		\$496,587,000	\$0	\$0	\$0	\$0
(2) CIAC/CIP		(\$195,998,000)	(\$19,218,000)	(\$19,740,000)	(\$20,261,000)	(\$19,789,000)
(3) Accum. Gross Distribution Plant Additions	PY Line (3) + CY Line (1) & (2)	\$300,589,000	\$281,371,000	\$261,631,000	\$241,370,000	\$221,581,000
(4) Cumulative Cost of Removal		\$30,013,500	\$30,013,500	\$30,013,500	\$30,013,500	\$30,013,500
<u>Deferred Tax Calculation:</u>						
(5) Composite Book Depreciation Rate	Assumes 10 year	10.00%	10.00%	10.00%	10.00%	10.00%
<u>Vintage Year Tax Depreciation:</u>						
(6) Federal Tax Depreciation	Page 3, Line (31)	\$60,072,400	\$54,106,020	\$43,284,816	\$34,627,853	\$27,714,306
(7) Cumulative Federal Tax Depreciation	PY Line (7) + CY Line (6)	\$60,072,400	\$114,178,420	\$157,463,236	\$192,091,089	\$219,805,395
(8) State Tax Depreciation	Page 3, Line (46)	\$60,072,400	\$54,106,020	\$43,284,816	\$34,627,853	\$27,714,306
(9) Cumulative State Tax Depreciation	PY Line (9) + CY Line (8)	\$60,072,400	\$114,178,420	\$157,463,236	\$192,091,089	\$219,805,395
(10) Book Depreciation	Year 1: Line (3) x Line (5) x 50%; Year 2 and beyond: Line (3) x Line (5)	\$15,029,450	\$28,137,100	\$26,163,100	\$24,137,000	\$22,158,100
(11) Cumulative Book Depreciation	PY Line (11) + CY Line (10)	\$15,029,450	\$43,166,550	\$69,329,650	\$93,466,650	\$115,624,750
(12) Cumulative State Book / Tax Timer	Line (9) - Line (11)	\$45,042,950	\$71,011,870	\$88,133,586	\$98,624,439	\$104,180,645
(13) Effective State Tax Rate		8.000%	8.000%	8.000%	8.000%	8.000%
(14) Deferred State Tax Reserve	Line (12) x Line (13)	\$3,603,436	\$5,680,950	\$7,050,687	\$7,889,955	\$8,334,452
(14a) Less: State NOL	FY18 NOL true-up plus 75% of FY19 NOL per tax return	\$0	\$0	\$0	\$0	\$0
(14b) Net Deferred State Tax Reserve	Line (14) plus Line (14a)	\$3,603,436	\$5,680,950	\$7,050,687	\$7,889,955	\$8,334,452
(15) Cumulative Federal Book / Tax Timer	Line (7) - Line (11)	\$45,042,950	\$71,011,870	\$88,133,586	\$98,624,439	\$104,180,645
(16) Effective Tax Rate		21.000%	21.000%	21.000%	21.000%	21.000%
(17) Deferred Federal Tax Reserve	Line (15) x Line (16)	\$9,459,020	\$14,912,493	\$18,508,053	\$20,711,132	\$21,877,935
(18) Taxes	Less: Federal deduction for Deferred State If Line (14b) > \$0, Line (14b) * -21%, otherwise \$0	(\$756,722)	(\$1,193,000)	(\$1,480,644)	(\$1,656,891)	(\$1,750,235)
(19) Less: Federal NOL	FY18 NOL true-up plus 75% of FY19 NOL per tax return	-	\$0	\$0	\$0	\$0
(20) Net Deferred Federal Tax Reserve	Sum of Line (17) through Line (19)	\$8,702,298	\$13,719,494	\$17,027,409	\$19,054,241	\$20,127,700
(21) Total Deferred Tax Reserve	Line (14b) + Line (20)	\$12,305,734	\$19,400,444	\$24,078,096	\$26,944,196	\$28,462,152
<u>Rate Base Calculation:</u>						
(22) Gross Plant Additions	Line (3)	\$300,589,000	\$281,371,000	\$261,631,000	\$241,370,000	\$221,581,000
(23) Accumulated Book Depreciation	- Line (11)	(\$15,029,450)	(\$43,166,550)	(\$69,329,650)	(\$93,466,650)	(\$115,624,750)
(24) Deferred Tax Reserve	- Line (21)	(\$12,305,734)	(\$19,400,444)	(\$24,078,096)	(\$26,944,196)	(\$28,462,152)
(25) Cumulative Cost of Removal	- Line (4)	\$30,013,500	\$30,013,500	\$30,013,500	\$30,013,500	\$30,013,500
(26) Year End Rate Base	Sum of Lines (22) through (25)	\$303,267,316	\$248,817,507	\$198,236,754	\$150,972,654	\$107,507,598
<u>Revenue Requirement Calculation:</u>						
(27) Average Rate Base	Year 1: Line (26) ÷ 2; Year 2 and beyond: (PY Line (26) + CY Line (26)) ÷ 2	\$151,633,658	\$276,042,411	\$223,527,130	\$174,604,704	\$129,240,126
(28) Pre-Tax ROR	Page 5	9.49%	9.49%	9.49%	9.49%	9.49%
(29) Return and Taxes	Line (27) x Line (28)	\$14,390,034	\$26,196,425	\$21,212,725	\$16,569,986	\$12,264,888
(30) Book Depreciation	Line (10)	\$15,029,450	\$28,137,100	\$26,163,100	\$24,137,000	\$22,158,100
(31) Property Tax expense	Year 1: \$0, Year 2: (PY Line (3) - PY Line (11)) x Prop Tax Rate ÷ 2, Year 3 and beyond: (PY Line (3) - PY Line (11)) x Prop Tax Rate 1/	\$0	\$3,383,881	\$6,100,912	\$5,480,847	\$4,908,800
(32) Annual Revenue Requirement	Sum of Lines (29) through (31)	\$29,419,484	\$57,717,406	\$53,476,737	\$46,187,833	\$39,331,788

1/ Property Tax Rate Calculation

Year Plant in Service	\$4,554,343,860	DPU 18-150, Exhibit NG-RRP-2 (C), Schedule 6, Page 1
Rate Year Accumulated Depreciation	(\$1,783,103,879)	DPU 18-150, Exhibit NG-RRP-2 (C), Schedule 6, Page 1
Rate Year Net Plant in Service	\$2,771,239,981	
Rate Year Property Tax Expense	\$65,650,673	DPU 18-150, Exhibit NG-RRP-2 (C), Schedule 7, Page 1
Property Tax Rate	<u>2.37%</u>	

Massachusetts Electric Company  
DG Capital Investment Recovery Illustration  
Calculation of Tax Depreciation and Repairs Deduction - 10 Years

Year		<u>1</u> (a)	<u>2</u> (b)	<u>3</u> (c)	<u>4</u> (d)	<u>5</u> (e)
<b>Federal Tax Depreciation</b>						
<u>Capital Repairs Deduction</u>						
(1)	Plant Additions	Page 2, Line (3)	\$300,589,000			
(2)	Capital Repairs Deduction Rate	Tax Dept	1/ 0.00%			
(3)	Capital Repairs Deduction	Line (1) x Line (2)	\$0			
<u>Bonus Depreciation</u>						
(4)	Plant Additions	Line (1)	\$300,589,000			
(5)	Less Capital Repairs Deduction	Line (3)	\$0			
(6)	Plant Additions Net of Capital Repairs Deduction	Line (4) - Line (5)	\$300,589,000			
<u>Remaining Tax Depreciation</u>						
(7)	Plant Additions	Line (1)	\$300,589,000			
(8)	Less Capital Repairs Deduction	Line (3)	\$0			
(9)	Less Bonus Depreciation	Line (6)	\$0			
(10)	Less Plant Additions Subject to 39 Yr Straight Line Depreciation	Per Tax Dept	1/ \$0			
(11)	Remaining Plant Additions Subject to 10 YR MACRS Tax Depreciation	Line (7) - (8) - (9) - (10)	\$300,589,000	\$300,589,000	\$300,589,000	\$300,589,000
(12)	10 YR MACRS Tax Depreciation Rates	IRS Publication 946, Table A-1	10.00%	18.00%	14.40%	11.52%
(13)	Total Tax Depreciation on 10 YR MACRS assets	Line (11) x Line (12)	\$30,058,900	\$54,106,020	\$43,284,816	\$34,627,853
(14)	Plant Additions Subject to 39 Yr Straight Line Depreciation	Line (10)	\$0	\$0	\$0	\$0
(15)	39 YR SL Depreciation Rates	IRS Publication 946	2.5641%	2.5641%	2.5641%	2.5641%
(16)	Total Tax Depreciation on 39 YR SL assets	Line (14) * Line (15)	\$0	\$0	\$0	\$0
(17)	Total Tax Depreciation and Repairs Deduction	Sum of Lines (3), (13), (16)	\$30,058,900	\$54,106,020	\$43,284,816	\$34,627,853
(18)	Includable Cost of Removal	Page 2, Line (4)	\$30,013,500	\$0	\$0	\$0
(19)	Total Federal Tax Depreciation, Repairs Deduction and Cost of Removal	Line (17) through (18)	\$60,072,400	\$54,106,020	\$43,284,816	\$34,627,853
<b>State Tax Deduction</b>						
(20)	Plant Additions	Line (1)	\$300,589,000			
(21)	Capital Repairs Deduction Rate	Line (2)	0.00%			
(22)	Capital Repairs Deduction	Line (20) x Line (21)	\$0			
<u>Remaining Tax Depreciation</u>						
(23)	Plant Additions	Line (20)	\$300,589,000			
(24)	Less Capital Repairs Deduction	Line (22)	\$0			
(25)	Less Plant Additions Subject to 39 Yr Straight Line Depreciation	Per Tax Dept	1/ \$0			
(26)	Remaining Plant Additions Subject to 10 YR MACRS Tax Depreciation	Line (23) - Line (24) - Line (25)	\$300,589,000	\$300,589,000	\$300,589,000	\$300,589,000
(27)	10 YR MACRS Tax Depreciation Rates	IRS Publication 946, Table A-1	10.0000%	18.0000%	14.4000%	11.5200%
(28)	Total Tax Depreciation on 10 YR MACRS assets	Line (26) x Line (27)	\$30,058,900	\$54,106,020	\$43,284,816	\$34,627,853
(29)	Plant Additions Subject to 39 Yr Straight Line Depreciation	Line (25)	\$0	\$0	\$0	\$0
(30)	39 YR SL Depreciation Rates	IRS Publication 946	2.5641%	2.5641%	2.5641%	2.5641%
(31)	Total Tax Depreciation on 39 YR SL assets	Line (29) * Line (30)	\$0	\$0	\$0	\$0
(32)	Total Tax Depreciation and Repairs Deduction	Line (22) + Line (28) + Line (31)	\$30,058,900	\$54,106,020	\$43,284,816	\$34,627,853
(33)	Includable Cost of Removal	Page 2, Line (4)	\$30,013,500	\$0	\$0	\$0
(34)	Total State Tax Depreciation, Repairs Deduction and Cost of Removal	Line (32) + Line (33)	\$60,072,400	\$54,106,020	\$43,284,816	\$34,627,853

1/ Per FY 2019 Tax return

Massachusetts Electric Company  
 DG Capital Investment Recovery Illustration  
 MACRS Table

**MACRS DEPRECIATION BY CLASS OF PROPERTY**

<b>Year</b>	<b>3-year</b>	<b>5-year</b>	<b>7-year</b>	<b>10-year</b>	<b>15-year</b>	<b>20-year</b>
1	33.33%	20.00%	14.29%	10.00%	5.00%	3.75%
2	44.45	32	24.49	18%	9.5	7.219
3	14.81	19.2	17.49	14.40%	8.55	6.677
4	7.41	11.52	12.49	11.52%	7.7	6.177
5		11.52	8.93*	9.22%	6.93	5.713
6		5.76	8.92	7.37%	6.23	5.285
7			8.93	6.55%	5.9	4.888
8			4.46	6.55%	5.9	4.522
9				6.56%	5.91	4.462
10				6.55%	5.9	4.461
11				3.28%	5.9	4.462
12					5.9	4.461
13					5.91	4.462
14					5.9	4.461
15					5.91	4.462
16					2.95	4.461
17						4.462
18						4.461
19						4.462
20						4.461
21						2.231

Massachusetts Electric Company  
DG Capital Investment Recovery Illustration  
Cost of Capital

	Description	Capital Structure (a)	Cost Rate (b)	Weighted Return (c) = (a) x (b)	Taxes (d)	Pre-tax Return (e) = (c) + (d)
1	Long Term Debt	46.43%	5.22% <sup>1/</sup>	2.42%		2.42%
2						
3	Preferred Stock	0.08%	4.44% <sup>1/</sup>	0.00%		0.00%
4						
5	Total Common Equity	<u>53.49%</u>	9.60% <sup>3/</sup>	<u>5.14%</u>	<u>1.93%</u> <sup>2/</sup>	<u>7.07%</u>
6						
7	Total Capitalization	<u>100.00%</u>		<u>7.56%</u>	<u>1.93%</u>	<u>9.49%</u>

1/ Company's Effective Cost of Long Term Debt and Preferred Stock

2/ Line 5(c) / (1-0.2732) - Line 5(c)

3/ Per Docket No. 18-150 final order Page 497

<u>Effective Tax Rate</u>	<u>From Jan 1, 2018</u>
Federal Tax Rate	21.00%
State Tax Rate	8.00%
Federal Deduction for State Income Taxes	1.68%
State Tax, net of Federal Deduction	6.32%
Federal Tax Rate	21.00%
Effective Tax rate	27.32%