

Appendix C: Avoided Natural Gas Cost Results

Table of Exhibits

| | |
|---|------|
| Exhibit C-1. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Southern New England (SNE) Assuming Some Avoidable Retail Margin (2013\$/MMBtu) | C-3 |
| Exhibit C-2. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Southern New England (SNE) Assuming No Avoidable Retail Margin (2013\$/MMBtu)..... | C-4 |
| Exhibit C-3. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Northern New England (NNE) Assuming Some Avoidable Retail Margin (2013\$/MMBtu)..... | C-5 |
| Exhibit C-4. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Northern New England (NNE) Assuming No Avoidable Retail Margin (2013\$/MMBtu) | C-6 |
| Exhibit C-5. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Vermont (VT) Assuming Some Avoidable Retail Margin (2013\$/MMBtu)..... | C-7 |
| Exhibit C-6. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Vermont (VT) Assuming No Avoidable Retail Margin (2013\$/MMBtu) | C-8 |
| Exhibit C-7. Connecticut – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu) | C-9 |
| Exhibit C-8. Connecticut – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu) .. | C-10 |
| Exhibit C-9. Massachusetts – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu) | C-11 |
| Exhibit C-10. Massachusetts – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu).. | C-12 |
| Exhibit C-11. Maine – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu) | C-13 |
| Exhibit C-12. Maine – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu) | C-14 |
| Exhibit C-13. New Hampshire – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu) | C-15 |
| Exhibit C-14. New Hampshire – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu) | C-16 |
| Exhibit C-15. Rhode Island – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu) | C-17 |
| Exhibit C-16. Rhode Island – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu) | C-18 |



Exhibit C-17. Vermont – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)C-19

Exhibit C-18. Vermont – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)C-20

Exhibit C-19. New England – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)C-21

Exhibit C-20. New England – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)C-22



Exhibit C-1. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Southern New England (SNE) Assuming Some Avoidable Retail Margin (2013\$/MMBtu)

| Year | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
|------------------------------|----------------|--------------|---------|-------|-------------------------|---------|-------|---------------------------|
| | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| 2013 | 5.32 | 5.78 | 6.90 | 6.73 | 5.51 | 6.35 | 6.05 | 6.41 |
| 2014 | 5.53 | 5.98 | 7.10 | 6.93 | 5.72 | 6.56 | 6.26 | 6.61 |
| 2015 | 5.54 | 5.98 | 7.09 | 6.93 | 5.72 | 6.56 | 6.26 | 6.61 |
| 2016 | 5.61 | 6.08 | 7.21 | 7.03 | 5.81 | 6.66 | 6.36 | 6.71 |
| 2017 | 5.71 | 6.34 | 7.51 | 7.30 | 5.96 | 6.91 | 6.57 | 6.95 |
| 2018 | 6.02 | 6.62 | 7.79 | 7.58 | 6.26 | 7.20 | 6.86 | 7.24 |
| 2019 | 6.46 | 6.95 | 8.08 | 7.90 | 6.66 | 7.53 | 7.22 | 7.58 |
| 2020 | 6.73 | 7.20 | 8.33 | 8.15 | 6.93 | 7.78 | 7.48 | 7.83 |
| 2021 | 6.87 | 7.36 | 8.48 | 8.30 | 7.07 | 7.93 | 7.62 | 7.98 |
| 2022 | 7.07 | 7.55 | 8.67 | 8.50 | 7.27 | 8.12 | 7.82 | 8.18 |
| 2023 | 7.20 | 7.67 | 8.80 | 8.62 | 7.40 | 8.25 | 7.95 | 8.30 |
| 2024 | 7.33 | 7.82 | 8.95 | 8.77 | 7.53 | 8.39 | 8.08 | 8.44 |
| 2025 | 7.52 | 7.99 | 9.12 | 8.94 | 7.72 | 8.57 | 8.27 | 8.62 |
| 2026 | 7.64 | 8.13 | 9.25 | 9.07 | 7.84 | 8.70 | 8.39 | 8.75 |
| 2027 | 7.76 | 8.25 | 9.37 | 9.19 | 7.96 | 8.82 | 8.51 | 8.87 |
| 2028 | 7.86 | 8.34 | 9.46 | 9.29 | 8.06 | 8.91 | 8.61 | 8.97 |
| 2029 | 8.01 | 8.49 | 9.61 | 9.44 | 8.22 | 9.06 | 8.76 | 9.12 |
| 2030 | 8.17 | 8.65 | 9.76 | 9.60 | 8.38 | 9.21 | 8.92 | 9.28 |
| 2031 | 8.33 | 8.81 | 9.92 | 9.76 | 8.54 | 9.37 | 9.08 | 9.44 |
| 2032 | 8.50 | 8.97 | 10.07 | 9.92 | 8.70 | 9.53 | 9.24 | 9.60 |
| 2033 | 8.67 | 9.13 | 10.23 | 10.08 | 8.87 | 9.69 | 9.40 | 9.76 |
| 2034 | 8.84 | 9.30 | 10.40 | 10.24 | 9.04 | 9.85 | 9.57 | 9.92 |
| 2035 | 9.01 | 9.47 | 10.56 | 10.41 | 9.22 | 10.02 | 9.74 | 10.09 |
| 2036 | 9.19 | 9.65 | 10.73 | 10.58 | 9.39 | 10.19 | 9.91 | 10.26 |
| 2037 | 9.38 | 9.82 | 10.90 | 10.75 | 9.57 | 10.36 | 10.09 | 10.44 |
| 2038 | 9.56 | 10.01 | 11.07 | 10.93 | 9.76 | 10.54 | 10.27 | 10.62 |
| 2039 | 9.75 | 10.19 | 11.25 | 11.11 | 9.95 | 10.72 | 10.45 | 10.80 |
| 2040 | 9.94 | 10.38 | 11.43 | 11.29 | 10.14 | 10.90 | 10.64 | 10.98 |
| 2041 | 10.14 | 10.57 | 11.61 | 11.47 | 10.33 | 11.09 | 10.82 | 11.17 |
| 2042 | 10.34 | 10.76 | 11.79 | 11.66 | 10.53 | 11.27 | 11.02 | 11.35 |
| 2043 | 10.55 | 10.96 | 11.98 | 11.85 | 10.73 | 11.46 | 11.21 | 11.55 |
| Levelized (2014-2023) (a) | 6.25 | 6.75 | 7.88 | 7.70 | 6.46 | 7.32 | 7.02 | 7.38 |
| Levelized (2014-2028) | 6.67 | 7.17 | 8.30 | 8.12 | 6.88 | 7.74 | 7.44 | 7.80 |
| Levelized (2014-2024) (b) | 7.80 | 8.28 | 9.38 | 9.22 | 8.01 | 8.83 | 8.54 | 8.90 |

(a) Real (constant \$) riskless annual rate of return: 1.36%

(b) Values from 2029-2043 extrapolated from Compound Annual Growth Rate (2019-2028)



Exhibit C-2. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Southern New England (SNE) Assuming No Avoidable Retail Margin (2013\$/MMBtu)

| Year | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
|------------------------------|----------------|--------------|---------|-------|-------------------------|---------|-------|---------------------------|
| | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| 2013 | 4.72 | 5.18 | 5.33 | 5.21 | 4.89 | 5.18 | 5.05 | 5.14 |
| 2014 | 4.93 | 5.38 | 5.53 | 5.41 | 5.10 | 5.39 | 5.26 | 5.34 |
| 2015 | 4.94 | 5.38 | 5.52 | 5.41 | 5.10 | 5.39 | 5.26 | 5.34 |
| 2016 | 5.01 | 5.48 | 5.64 | 5.51 | 5.19 | 5.49 | 5.36 | 5.44 |
| 2017 | 5.11 | 5.74 | 5.94 | 5.78 | 5.34 | 5.74 | 5.57 | 5.68 |
| 2018 | 5.42 | 6.02 | 6.22 | 6.06 | 5.64 | 6.03 | 5.86 | 5.97 |
| 2019 | 5.86 | 6.35 | 6.51 | 6.38 | 6.04 | 6.36 | 6.22 | 6.31 |
| 2020 | 6.13 | 6.60 | 6.76 | 6.63 | 6.31 | 6.61 | 6.48 | 6.56 |
| 2021 | 6.27 | 6.76 | 6.91 | 6.78 | 6.45 | 6.76 | 6.62 | 6.71 |
| 2022 | 6.47 | 6.95 | 7.10 | 6.98 | 6.65 | 6.95 | 6.82 | 6.91 |
| 2023 | 6.60 | 7.07 | 7.23 | 7.10 | 6.78 | 7.08 | 6.95 | 7.03 |
| 2024 | 6.73 | 7.22 | 7.38 | 7.25 | 6.91 | 7.22 | 7.08 | 7.17 |
| 2025 | 6.92 | 7.39 | 7.55 | 7.42 | 7.10 | 7.40 | 7.27 | 7.35 |
| 2026 | 7.04 | 7.53 | 7.68 | 7.55 | 7.22 | 7.53 | 7.39 | 7.48 |
| 2027 | 7.16 | 7.65 | 7.80 | 7.67 | 7.34 | 7.65 | 7.51 | 7.60 |
| 2028 | 7.26 | 7.74 | 7.89 | 7.77 | 7.44 | 7.74 | 7.61 | 7.70 |
| 2029 | 7.42 | 7.89 | 8.04 | 7.92 | 7.60 | 7.89 | 7.77 | 7.85 |
| 2030 | 7.58 | 8.05 | 8.20 | 8.08 | 7.76 | 8.05 | 7.92 | 8.01 |
| 2031 | 7.74 | 8.21 | 8.36 | 8.24 | 7.92 | 8.21 | 8.08 | 8.17 |
| 2032 | 7.91 | 8.38 | 8.52 | 8.41 | 8.09 | 8.37 | 8.25 | 8.34 |
| 2033 | 8.08 | 8.55 | 8.69 | 8.57 | 8.26 | 8.54 | 8.42 | 8.51 |
| 2034 | 8.26 | 8.72 | 8.85 | 8.75 | 8.43 | 8.71 | 8.59 | 8.68 |
| 2035 | 8.43 | 8.89 | 9.03 | 8.92 | 8.61 | 8.88 | 8.76 | 8.85 |
| 2036 | 8.62 | 9.07 | 9.20 | 9.10 | 8.79 | 9.06 | 8.94 | 9.03 |
| 2037 | 8.80 | 9.25 | 9.38 | 9.28 | 8.98 | 9.24 | 9.12 | 9.21 |
| 2038 | 8.99 | 9.43 | 9.56 | 9.46 | 9.16 | 9.42 | 9.31 | 9.40 |
| 2039 | 9.19 | 9.62 | 9.75 | 9.65 | 9.36 | 9.61 | 9.50 | 9.59 |
| 2040 | 9.39 | 9.82 | 9.94 | 9.84 | 9.55 | 9.80 | 9.69 | 9.78 |
| 2041 | 9.59 | 10.01 | 10.13 | 10.04 | 9.76 | 9.99 | 9.89 | 9.97 |
| 2042 | 9.80 | 10.21 | 10.33 | 10.24 | 9.96 | 10.19 | 10.09 | 10.18 |
| 2043 | 10.01 | 10.42 | 10.53 | 10.44 | 10.17 | 10.39 | 10.30 | 10.38 |
| Levelized (2014-2023) (a) | 5.65 | 6.15 | 6.31 | 6.18 | 5.84 | 6.16 | 6.02 | 6.11 |
| Levelized (2014-2028) | 6.08 | 6.57 | 6.73 | 6.60 | 6.26 | 6.58 | 6.44 | 6.53 |
| Levelized (2014-2043) (b) | 7.21 | 7.69 | 7.84 | 7.72 | 7.39 | 7.69 | 7.56 | 7.65 |

(a) Real (constant \$) riskless annual rate of return: 1.36%

(b) Values from 2029-2043 extrapolated from Compound Annual Growth Rate (2019-2028)

Exhibit C-3. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Northern New England (NNE) Assuming Some Avoidable Retail Margin (2013\$/MMBtu)

| Year | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
|------------------------------|----------------|--------------|---------|-------|-------------------------|---------|-------|---------------------------|
| | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| 2013 | 5.21 | 5.81 | 6.83 | 6.63 | 5.38 | 6.03 | 5.78 | 5.92 |
| 2014 | 5.07 | 5.79 | 6.84 | 6.61 | 5.29 | 6.24 | 5.99 | 6.12 |
| 2015 | 5.14 | 6.49 | 7.75 | 7.35 | 5.59 | 6.24 | 5.99 | 6.12 |
| 2016 | 5.50 | 6.12 | 7.15 | 6.94 | 5.68 | 6.34 | 6.09 | 6.22 |
| 2017 | 5.94 | 6.38 | 7.34 | 7.19 | 6.05 | 6.59 | 6.30 | 6.46 |
| 2018 | 6.07 | 6.81 | 7.87 | 7.64 | 6.30 | 6.88 | 6.59 | 6.75 |
| 2019 | 6.34 | 8.19 | 9.61 | 9.08 | 6.98 | 7.21 | 6.95 | 7.09 |
| 2020 | 6.60 | 8.44 | 9.86 | 9.33 | 7.23 | 7.46 | 7.21 | 7.34 |
| 2021 | 6.73 | 8.61 | 10.04 | 9.50 | 7.38 | 7.61 | 7.35 | 7.49 |
| 2022 | 6.94 | 8.83 | 10.26 | 9.72 | 7.59 | 7.80 | 7.55 | 7.69 |
| 2023 | 7.06 | 8.96 | 10.39 | 9.85 | 7.71 | 7.93 | 7.68 | 7.81 |
| 2024 | 7.19 | 9.12 | 10.57 | 10.02 | 7.86 | 8.07 | 7.81 | 7.95 |
| 2025 | 7.37 | 9.31 | 10.75 | 10.20 | 8.04 | 8.25 | 8.00 | 8.13 |
| 2026 | 7.49 | 9.44 | 10.90 | 10.34 | 8.16 | 8.38 | 8.12 | 8.26 |
| 2027 | 7.62 | 9.58 | 11.03 | 10.48 | 8.30 | 8.50 | 8.24 | 8.38 |
| 2028 | 7.71 | 9.67 | 11.13 | 10.57 | 8.39 | 8.59 | 8.34 | 8.48 |
| 2029 | 7.86 | 9.83 | 11.29 | 10.73 | 8.54 | 8.75 | 8.50 | 8.63 |
| 2030 | 8.01 | 9.99 | 11.46 | 10.90 | 8.70 | 8.90 | 8.65 | 8.79 |
| 2031 | 8.17 | 10.16 | 11.63 | 11.06 | 8.86 | 9.06 | 8.81 | 8.95 |
| 2032 | 8.33 | 10.33 | 11.80 | 11.23 | 9.03 | 9.22 | 8.97 | 9.11 |
| 2033 | 8.50 | 10.50 | 11.98 | 11.40 | 9.20 | 9.38 | 9.14 | 9.27 |
| 2034 | 8.67 | 10.68 | 12.15 | 11.58 | 9.37 | 9.55 | 9.31 | 9.44 |
| 2035 | 8.84 | 10.86 | 12.33 | 11.76 | 9.54 | 9.71 | 9.48 | 9.61 |
| 2036 | 9.01 | 11.04 | 12.52 | 11.94 | 9.72 | 9.89 | 9.65 | 9.79 |
| 2037 | 9.19 | 11.23 | 12.70 | 12.12 | 9.90 | 10.06 | 9.83 | 9.96 |
| 2038 | 9.37 | 11.41 | 12.89 | 12.30 | 10.08 | 10.24 | 10.01 | 10.14 |
| 2039 | 9.56 | 11.60 | 13.08 | 12.49 | 10.27 | 10.42 | 10.19 | 10.33 |
| 2040 | 9.75 | 11.80 | 13.27 | 12.68 | 10.46 | 10.60 | 10.38 | 10.51 |
| 2041 | 9.94 | 12.00 | 13.47 | 12.88 | 10.65 | 10.79 | 10.57 | 10.70 |
| 2042 | 10.14 | 12.20 | 13.67 | 13.08 | 10.85 | 10.98 | 10.77 | 10.90 |
| 2043 | 10.34 | 12.40 | 13.87 | 13.28 | 11.05 | 11.17 | 10.97 | 11.09 |
| Levelized (2014-2023) (a) | 6.11 | 7.41 | 8.66 | 8.28 | 6.54 | 7.01 | 6.75 | 6.89 |
| Levelized (2014-2028) | 6.53 | 8.04 | 9.35 | 8.91 | 7.04 | 7.43 | 7.17 | 7.31 |
| Levelized (2014-2024) (b) | 7.64 | 9.38 | 10.76 | 10.26 | 8.24 | 8.53 | 8.28 | 8.41 |

(a) Real (constant \$) riskless annual rate of return: 1.36%

(b) Values from 2029-2043 extrapolated from Compound Annual Growth Rate (2019-2028)



Exhibit C-4. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Northern New England (NNE) Assuming No Avoidable Retail Margin (2013\$/MMBtu)

| Year | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
|---------------------------|-------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| 2013 | 4.70 | 5.30 | 5.50 | 5.34 | 4.92 | 5.31 | 5.14 | 5.25 |
| 2014 | 4.56 | 5.28 | 5.51 | 5.32 | 4.83 | 5.28 | 5.08 | 5.21 |
| 2015 | 4.63 | 5.98 | 6.42 | 6.06 | 5.13 | 5.99 | 5.61 | 5.85 |
| 2016 | 4.99 | 5.61 | 5.82 | 5.65 | 5.22 | 5.62 | 5.45 | 5.56 |
| 2017 | 5.43 | 5.87 | 6.01 | 5.90 | 5.59 | 5.87 | 5.75 | 5.83 |
| 2018 | 5.56 | 6.30 | 6.54 | 6.35 | 5.84 | 6.31 | 6.10 | 6.23 |
| 2019 | 5.83 | 7.68 | 8.28 | 7.79 | 6.52 | 7.70 | 7.18 | 7.51 |
| 2020 | 6.09 | 7.93 | 8.53 | 8.04 | 6.77 | 7.95 | 7.43 | 7.76 |
| 2021 | 6.22 | 8.10 | 8.71 | 8.21 | 6.92 | 8.12 | 7.60 | 7.93 |
| 2022 | 6.43 | 8.32 | 8.93 | 8.43 | 7.13 | 8.33 | 7.81 | 8.14 |
| 2023 | 6.55 | 8.45 | 9.06 | 8.56 | 7.25 | 8.46 | 7.93 | 8.27 |
| 2024 | 6.68 | 8.61 | 9.24 | 8.73 | 7.40 | 8.63 | 8.09 | 8.43 |
| 2025 | 6.86 | 8.80 | 9.42 | 8.91 | 7.58 | 8.81 | 8.27 | 8.61 |
| 2026 | 6.98 | 8.93 | 9.57 | 9.05 | 7.70 | 8.95 | 8.40 | 8.75 |
| 2027 | 7.11 | 9.07 | 9.70 | 9.19 | 7.84 | 9.08 | 8.54 | 8.89 |
| 2028 | 7.20 | 9.16 | 9.80 | 9.28 | 7.93 | 9.18 | 8.63 | 8.98 |
| 2029 | 7.35 | 9.32 | 9.97 | 9.44 | 8.09 | 9.34 | 8.79 | 9.14 |
| 2030 | 7.51 | 9.49 | 10.14 | 9.61 | 8.25 | 9.51 | 8.95 | 9.31 |
| 2031 | 7.67 | 9.66 | 10.31 | 9.78 | 8.41 | 9.68 | 9.12 | 9.47 |
| 2032 | 7.83 | 9.83 | 10.48 | 9.95 | 8.58 | 9.85 | 9.29 | 9.65 |
| 2033 | 8.00 | 10.00 | 10.66 | 10.13 | 8.75 | 10.02 | 9.46 | 9.82 |
| 2034 | 8.17 | 10.18 | 10.84 | 10.31 | 8.92 | 10.20 | 9.64 | 10.00 |
| 2035 | 8.35 | 10.36 | 11.03 | 10.49 | 9.09 | 10.38 | 9.82 | 10.18 |
| 2036 | 8.52 | 10.55 | 11.21 | 10.67 | 9.27 | 10.57 | 10.00 | 10.36 |
| 2037 | 8.71 | 10.73 | 11.41 | 10.86 | 9.46 | 10.75 | 10.18 | 10.55 |
| 2038 | 8.89 | 10.93 | 11.60 | 11.05 | 9.64 | 10.94 | 10.37 | 10.74 |
| 2039 | 9.08 | 11.12 | 11.80 | 11.25 | 9.84 | 11.14 | 10.57 | 10.93 |
| 2040 | 9.28 | 11.32 | 12.00 | 11.45 | 10.03 | 11.34 | 10.76 | 11.13 |
| 2041 | 9.47 | 11.52 | 12.20 | 11.65 | 10.23 | 11.54 | 10.96 | 11.33 |
| 2042 | 9.68 | 11.72 | 12.41 | 11.86 | 10.43 | 11.74 | 11.16 | 11.53 |
| 2043 | 9.88 | 11.93 | 12.62 | 12.07 | 10.64 | 11.95 | 11.37 | 11.74 |
| Levelized (2014-2023) (a) | 5.60 | 6.91 | 7.33 | 6.99 | 6.09 | 6.92 | 6.55 | 6.79 |
| Levelized (2014-2028) | 6.03 | 7.53 | 8.02 | 7.62 | 6.58 | 7.54 | 7.12 | 7.39 |
| Levelized (2014-2043) (b) | 7.14 | 8.88 | 9.45 | 8.99 | 7.79 | 8.89 | 8.41 | 8.72 |

(a) Real (constant \$) riskless annual rate of return: 1.36%

(b) Values from 2029-2043 extrapolated from Compound Annual Growth Rate (2019-2028)

Exhibit C-5. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Vermont (VT) Assuming Some Avoidable Retail Margin (2013\$/MMBtu)

| Year | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
|------------------------------|----------------|--------------|---------|-------|-------------------------|---------|-------|---------------------------|
| | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| 2013 | 5.59 | 6.10 | 7.28 | 7.10 | 5.31 | 5.76 | 5.58 | 6.19 |
| 2014 | 5.68 | 6.19 | 7.36 | 7.19 | 5.40 | 5.84 | 5.66 | 6.27 |
| 2015 | 5.75 | 6.34 | 7.55 | 7.35 | 5.50 | 6.00 | 5.79 | 6.42 |
| 2016 | 5.81 | 6.41 | 7.62 | 7.42 | 5.56 | 6.07 | 5.86 | 6.49 |
| 2017 | 6.11 | 6.71 | 7.92 | 7.72 | 5.86 | 6.37 | 6.16 | 6.79 |
| 2018 | 5.85 | 6.39 | 7.58 | 7.40 | 5.58 | 6.05 | 5.86 | 6.48 |
| 2019 | 6.65 | 7.27 | 8.48 | 8.28 | 6.41 | 6.92 | 6.71 | 7.34 |
| 2020 | 6.93 | 7.53 | 8.73 | 8.53 | 6.68 | 7.18 | 6.97 | 7.60 |
| 2021 | 7.11 | 7.73 | 8.95 | 8.74 | 6.87 | 7.39 | 7.18 | 7.81 |
| 2022 | 7.37 | 7.98 | 9.19 | 8.99 | 7.13 | 7.63 | 7.42 | 8.05 |
| 2023 | 7.54 | 8.14 | 9.34 | 9.14 | 7.29 | 7.79 | 7.58 | 8.21 |
| 2024 | 7.68 | 8.30 | 9.51 | 9.31 | 7.44 | 7.95 | 7.74 | 8.37 |
| 2025 | 7.86 | 8.48 | 9.68 | 9.48 | 7.62 | 8.13 | 7.92 | 8.55 |
| 2026 | 8.03 | 8.64 | 9.85 | 9.65 | 7.79 | 8.30 | 8.09 | 8.72 |
| 2027 | 8.18 | 8.79 | 10.00 | 9.80 | 7.94 | 8.44 | 8.23 | 8.86 |
| 2028 | 8.28 | 8.89 | 10.09 | 9.89 | 8.03 | 8.54 | 8.33 | 8.96 |
| 2029 | 8.47 | 9.07 | 10.27 | 10.06 | 8.21 | 8.72 | 8.52 | 9.14 |
| 2030 | 8.65 | 9.26 | 10.45 | 10.25 | 8.40 | 8.91 | 8.70 | 9.33 |
| 2031 | 8.85 | 9.45 | 10.63 | 10.43 | 8.59 | 9.10 | 8.89 | 9.52 |
| 2032 | 9.04 | 9.64 | 10.82 | 10.62 | 8.78 | 9.29 | 9.09 | 9.71 |
| 2033 | 9.24 | 9.83 | 11.01 | 10.81 | 8.98 | 9.49 | 9.28 | 9.90 |
| 2034 | 9.45 | 10.03 | 11.20 | 11.00 | 9.19 | 9.69 | 9.49 | 10.10 |
| 2035 | 9.66 | 10.24 | 11.40 | 11.20 | 9.40 | 9.90 | 9.69 | 10.31 |
| 2036 | 9.87 | 10.44 | 11.60 | 11.40 | 9.61 | 10.11 | 9.91 | 10.51 |
| 2037 | 10.09 | 10.66 | 11.80 | 11.60 | 9.83 | 10.32 | 10.12 | 10.73 |
| 2038 | 10.31 | 10.87 | 12.01 | 11.81 | 10.06 | 10.54 | 10.34 | 10.94 |
| 2039 | 10.54 | 11.09 | 12.22 | 12.02 | 10.28 | 10.76 | 10.57 | 11.16 |
| 2040 | 10.77 | 11.32 | 12.43 | 12.24 | 10.52 | 10.99 | 10.80 | 11.39 |
| 2041 | 11.01 | 11.55 | 12.65 | 12.46 | 10.76 | 11.23 | 11.04 | 11.62 |
| 2042 | 11.26 | 11.78 | 12.87 | 12.68 | 11.00 | 11.47 | 11.28 | 11.85 |
| 2043 | 11.51 | 12.02 | 13.10 | 12.91 | 11.26 | 11.71 | 11.52 | 12.09 |
| Levelized (2014-2023) (a) | 6.46 | 7.05 | 8.25 | 8.05 | 6.20 | 6.70 | 6.50 | 7.12 |
| Levelized (2014-2028) | 6.94 | 7.53 | 8.74 | 8.54 | 6.68 | 7.19 | 6.98 | 7.61 |
| Levelized (2014-2024) (b) | 8.25 | 8.84 | 10.02 | 9.81 | 8.00 | 8.49 | 8.29 | 8.91 |

(a) Real (constant \$) riskless annual rate of return: 1.36%

(b) Values from 2029-2043 extrapolated from Compound Annual Growth Rate (2019-2028)



Exhibit C-6. Avoided Cost of Natural Gas Delivered to Retail Customers by End Use for Vermont (VT) Assuming No Avoidable Retail Margin (2013\$/MMBtu)

| Year | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | ALL RETAIL END USES |
|---------------------------|-------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| 2013 | 4.97 | 5.48 | 5.65 | 5.51 | 5.16 | 5.49 | 5.35 | 5.44 |
| 2014 | 5.06 | 5.57 | 5.73 | 5.60 | 5.25 | 5.57 | 5.43 | 5.52 |
| 2015 | 5.13 | 5.72 | 5.92 | 5.76 | 5.35 | 5.73 | 5.56 | 5.67 |
| 2016 | 5.19 | 5.79 | 5.99 | 5.83 | 5.41 | 5.80 | 5.63 | 5.74 |
| 2017 | 5.49 | 6.09 | 6.29 | 6.13 | 5.71 | 6.10 | 5.93 | 6.04 |
| 2018 | 5.23 | 5.77 | 5.95 | 5.81 | 5.43 | 5.78 | 5.63 | 5.73 |
| 2019 | 6.03 | 6.65 | 6.85 | 6.69 | 6.26 | 6.65 | 6.48 | 6.59 |
| 2020 | 6.31 | 6.91 | 7.10 | 6.94 | 6.53 | 6.91 | 6.74 | 6.85 |
| 2021 | 6.49 | 7.11 | 7.32 | 7.15 | 6.72 | 7.12 | 6.95 | 7.06 |
| 2022 | 6.75 | 7.36 | 7.56 | 7.40 | 6.98 | 7.36 | 7.19 | 7.30 |
| 2023 | 6.92 | 7.52 | 7.71 | 7.55 | 7.14 | 7.52 | 7.35 | 7.46 |
| 2024 | 7.06 | 7.68 | 7.88 | 7.72 | 7.29 | 7.68 | 7.51 | 7.62 |
| 2025 | 7.24 | 7.86 | 8.05 | 7.89 | 7.47 | 7.86 | 7.69 | 7.80 |
| 2026 | 7.41 | 8.02 | 8.22 | 8.06 | 7.64 | 8.03 | 7.86 | 7.97 |
| 2027 | 7.56 | 8.17 | 8.37 | 8.21 | 7.79 | 8.17 | 8.00 | 8.11 |
| 2028 | 7.66 | 8.27 | 8.46 | 8.30 | 7.88 | 8.27 | 8.10 | 8.21 |
| 2029 | 7.85 | 8.45 | 8.64 | 8.48 | 8.06 | 8.45 | 8.28 | 8.39 |
| 2030 | 8.04 | 8.64 | 8.82 | 8.67 | 8.25 | 8.64 | 8.47 | 8.58 |
| 2031 | 8.23 | 8.83 | 9.01 | 8.85 | 8.44 | 8.83 | 8.66 | 8.77 |
| 2032 | 8.43 | 9.02 | 9.21 | 9.05 | 8.64 | 9.02 | 8.86 | 8.96 |
| 2033 | 8.63 | 9.22 | 9.40 | 9.24 | 8.84 | 9.22 | 9.06 | 9.16 |
| 2034 | 8.84 | 9.43 | 9.60 | 9.45 | 9.05 | 9.43 | 9.26 | 9.37 |
| 2035 | 9.06 | 9.63 | 9.81 | 9.65 | 9.26 | 9.63 | 9.47 | 9.58 |
| 2036 | 9.28 | 9.85 | 10.02 | 9.86 | 9.47 | 9.85 | 9.68 | 9.79 |
| 2037 | 9.50 | 10.06 | 10.23 | 10.08 | 9.69 | 10.06 | 9.90 | 10.01 |
| 2038 | 9.73 | 10.28 | 10.45 | 10.30 | 9.92 | 10.28 | 10.13 | 10.23 |
| 2039 | 9.97 | 10.51 | 10.67 | 10.52 | 10.15 | 10.51 | 10.35 | 10.46 |
| 2040 | 10.21 | 10.74 | 10.90 | 10.75 | 10.39 | 10.74 | 10.59 | 10.69 |
| 2041 | 10.45 | 10.98 | 11.13 | 10.99 | 10.63 | 10.98 | 10.83 | 10.93 |
| 2042 | 10.71 | 11.22 | 11.37 | 11.23 | 10.88 | 11.22 | 11.07 | 11.17 |
| 2043 | 10.97 | 11.47 | 11.61 | 11.47 | 11.13 | 11.47 | 11.32 | 11.42 |
| Levelized (2014-2023) (a) | 5.83 | 6.42 | 6.62 | 6.46 | 6.05 | 6.43 | 6.26 | 6.37 |
| Levelized (2014-2028) | 6.32 | 6.91 | 7.11 | 6.95 | 6.54 | 6.92 | 6.75 | 6.86 |
| Levelized (2014-2043) (b) | 7.64 | 8.23 | 8.41 | 8.25 | 7.85 | 8.23 | 8.06 | 8.17 |

(a) Real (constant \$) riskless annual rate of return: 1.36%

(b) Values from 2029-2043 extrapolated from Compound Annual Growth Rate (2019-2028)

Exhibit C-7. Connecticut – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2013 | | | | | | | | | |
| 2014 | 0.04 | 1.64 | 2.70 | 3.04 | 2.76 | 2.03 | 2.71 | 2.41 | 2.60 |
| 2015 | 0.05 | 4.85 | 7.92 | 8.92 | 8.11 | 5.99 | 7.95 | 7.09 | 7.64 |
| 2016 | 0.08 | 4.89 | 7.95 | 8.94 | 8.14 | 6.03 | 7.98 | 7.12 | 7.67 |
| 2017 | 0.08 | 2.04 | 3.14 | 3.49 | 3.20 | 2.45 | 3.15 | 2.84 | 3.04 |
| 2018 | 0.08 | 1.46 | 2.17 | 2.41 | 2.22 | 1.72 | 2.18 | 1.98 | 2.11 |
| 2019 | 0.08 | 0.77 | 1.08 | 1.19 | 1.10 | 0.88 | 1.09 | 1.00 | 1.05 |
| 2020 | 0.08 | 0.49 | 0.69 | 0.76 | 0.70 | 0.57 | 0.69 | 0.64 | 0.67 |
| 2021 | 0.08 | 0.37 | 0.52 | 0.57 | 0.53 | 0.42 | 0.52 | 0.48 | 0.50 |
| 2022 | 0.08 | 0.24 | 0.34 | 0.38 | 0.35 | 0.28 | 0.34 | 0.32 | 0.33 |
| 2023 | 0.08 | 0.12 | 0.17 | 0.19 | 0.17 | 0.14 | 0.17 | 0.16 | 0.17 |
| 2024 | 0.08 | | | | | | | | |
| 2025 | 0.08 | | | | | | | | |
| 2026 | 0.08 | | | | | | | | |
| 2027 | 0.08 | | | | | | | | |
| 2028 | 0.08 | | | | | | | | |
| 2029 | 0.08 | | | | | | | | |
| 2030 | 0.08 | | | | | | | | |
| 2031 | 0.08 | | | | | | | | |
| 2032 | 0.08 | | | | | | | | |
| 2033 | 0.08 | | | | | | | | |
| 2034 | 0.08 | | | | | | | | |
| 2035 | 0.08 | | | | | | | | |
| 2036 | 0.08 | | | | | | | | |
| 2037 | 0.08 | | | | | | | | |
| 2038 | 0.08 | | | | | | | | |
| 2039 | 0.08 | | | | | | | | |
| 2040 | 0.08 | | | | | | | | |
| 2041 | 0.08 | | | | | | | | |
| 2042 | 0.08 | | | | | | | | |
| 2043 | 0.08 | | | | | | | | |
| Levelized (2014-2023) | 0.07 | 1.74 | 2.75 | 3.08 | 2.81 | 2.11 | 2.76 | 2.48 | 2.66 |
| Levelized (2014-2028) | 0.07 | 1.20 | 1.90 | 2.12 | 1.94 | 1.46 | 1.90 | 1.71 | 1.83 |
| Levelized (2014-2043) | 0.07 | 0.66 | 1.04 | 1.17 | 1.07 | 0.80 | 1.05 | 0.94 | 1.01 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8



Exhibit C-8. Connecticut – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction 1 | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES 9 |
|-----------------------|---|-----------------------|----------------|--------------|----------|-------------------------|--------------|----------|--------------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating 2 | Hot Water 3 | Heating 4 | All 5 | Non Heating 6 | Heating 7 | All 8 | |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.04 | 1.25 | 2.05 | 2.31 | 2.10 | 1.55 | 2.06 | 1.83 | 1.97 |
| 2016 | 0.05 | 4.45 | 7.24 | 8.14 | 7.41 | 5.49 | 7.26 | 6.49 | 6.98 |
| 2017 | 0.08 | 1.87 | 2.88 | 3.20 | 2.94 | 2.25 | 2.89 | 2.61 | 2.78 |
| 2018 | 0.08 | 1.48 | 2.21 | 2.45 | 2.26 | 1.75 | 2.22 | 2.01 | 2.14 |
| 2019 | 0.08 | 0.78 | 1.10 | 1.21 | 1.12 | 0.90 | 1.10 | 1.01 | 1.07 |
| 2020 | 0.08 | 0.50 | 0.70 | 0.77 | 0.72 | 0.57 | 0.70 | 0.65 | 0.68 |
| 2021 | 0.08 | 0.37 | 0.53 | 0.58 | 0.53 | 0.43 | 0.53 | 0.48 | 0.51 |
| 2022 | 0.08 | 0.25 | 0.35 | 0.38 | 0.35 | 0.28 | 0.35 | 0.32 | 0.34 |
| 2023 | 0.08 | 0.12 | 0.17 | 0.19 | 0.18 | 0.14 | 0.17 | 0.16 | 0.17 |
| 2024 | 0.08 | | | | | | | | |
| 2025 | 0.08 | | | | | | | | |
| 2026 | 0.08 | | | | | | | | |
| 2027 | 0.08 | | | | | | | | |
| 2028 | 0.08 | | | | | | | | |
| 2029 | 0.08 | | | | | | | | |
| 2030 | 0.08 | | | | | | | | |
| 2031 | 0.08 | | | | | | | | |
| 2032 | 0.08 | | | | | | | | |
| 2033 | 0.08 | | | | | | | | |
| 2034 | 0.08 | | | | | | | | |
| 2035 | 0.08 | | | | | | | | |
| 2036 | 0.08 | | | | | | | | |
| 2037 | 0.08 | | | | | | | | |
| 2038 | 0.08 | | | | | | | | |
| 2039 | 0.08 | | | | | | | | |
| 2040 | 0.08 | | | | | | | | |
| 2041 | 0.08 | | | | | | | | |
| 2042 | 0.08 | | | | | | | | |
| 2043 | 0.08 | | | | | | | | |
| Levelized (2014-2023) | 0.06 | 1.14 | 1.78 | 1.99 | 1.82 | 1.38 | 1.79 | 1.61 | 1.72 |
| Levelized (2014-2028) | 0.07 | 0.79 | 1.23 | 1.37 | 1.25 | 0.95 | 1.23 | 1.11 | 1.19 |
| Levelized (2014-2043) | 0.07 | 0.43 | 0.68 | 0.75 | 0.69 | 0.52 | 0.68 | 0.61 | 0.65 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-9. Massachusetts – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | 0.09 | 2.86 | 4.71 | 5.31 | 4.82 | 3.55 | 4.72 | 4.21 | 4.54 |
| 2015 | 0.12 | 8.48 | 13.84 | 15.58 | 14.17 | 10.47 | 13.89 | 12.39 | 13.34 |
| 2016 | 0.17 | 8.53 | 13.87 | 15.60 | 14.19 | 10.51 | 13.91 | 12.43 | 13.37 |
| 2017 | 0.17 | 3.59 | 5.51 | 6.13 | 5.62 | 4.30 | 5.52 | 4.99 | 5.33 |
| 2018 | 0.17 | 2.57 | 3.83 | 4.24 | 3.91 | 3.04 | 3.84 | 3.49 | 3.72 |
| 2019 | 0.17 | 1.36 | 1.92 | 2.10 | 1.95 | 1.56 | 1.92 | 1.76 | 1.86 |
| 2020 | 0.17 | 0.87 | 1.23 | 1.34 | 1.25 | 1.00 | 1.23 | 1.13 | 1.19 |
| 2021 | 0.17 | 0.65 | 0.92 | 1.01 | 0.94 | 0.75 | 0.92 | 0.85 | 0.90 |
| 2022 | 0.17 | 0.43 | 0.61 | 0.67 | 0.62 | 0.50 | 0.62 | 0.57 | 0.60 |
| 2023 | 0.17 | 0.22 | 0.31 | 0.34 | 0.31 | 0.25 | 0.31 | 0.28 | 0.30 |
| 2024 | 0.17 | | | | | | | | |
| 2025 | 0.17 | | | | | | | | |
| 2026 | 0.17 | | | | | | | | |
| 2027 | 0.17 | | | | | | | | |
| 2028 | 0.17 | | | | | | | | |
| 2029 | 0.17 | | | | | | | | |
| 2030 | 0.17 | | | | | | | | |
| 2031 | 0.17 | | | | | | | | |
| 2032 | 0.17 | | | | | | | | |
| 2033 | 0.17 | | | | | | | | |
| 2034 | 0.17 | | | | | | | | |
| 2035 | 0.17 | | | | | | | | |
| 2036 | 0.17 | | | | | | | | |
| 2037 | 0.17 | | | | | | | | |
| 2038 | 0.17 | | | | | | | | |
| 2039 | 0.17 | | | | | | | | |
| 2040 | 0.17 | | | | | | | | |
| 2041 | 0.17 | | | | | | | | |
| 2042 | 0.17 | | | | | | | | |
| 2043 | 0.17 | | | | | | | | |
| Levelized (2014-2023) | 0.16 | 3.04 | 4.82 | 5.39 | 4.92 | 3.70 | 4.83 | 4.34 | 4.65 |
| Levelized (2014-2028) | 0.16 | 2.10 | 3.32 | 3.72 | 3.39 | 2.55 | 3.33 | 2.99 | 3.20 |
| Levelized (2014-2043) | 0.17 | 1.15 | 1.83 | 2.05 | 1.87 | 1.40 | 1.83 | 1.65 | 1.76 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations

2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter

5 Weighted average per Percentage of residential load columns 2 to 4

6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter

8 Weighted average per Percentage of commercial load columns 6 and 7

9 Weighted average per Percentage of residential and commercial load columns 5 and 8



Exhibit C-10. Massachusetts – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.09 | 2.19 | 3.58 | 4.03 | 3.66 | 2.71 | 3.59 | 3.21 | 3.45 |
| 2016 | 0.12 | 7.76 | 12.63 | 14.20 | 12.92 | 9.57 | 12.67 | 11.31 | 12.17 |
| 2017 | 0.17 | 3.29 | 5.05 | 5.62 | 5.16 | 3.95 | 5.07 | 4.58 | 4.89 |
| 2018 | 0.17 | 2.61 | 3.90 | 4.31 | 3.98 | 3.09 | 3.91 | 3.55 | 3.78 |
| 2019 | 0.17 | 1.38 | 1.95 | 2.13 | 1.98 | 1.59 | 1.95 | 1.79 | 1.89 |
| 2020 | 0.17 | 0.88 | 1.24 | 1.36 | 1.27 | 1.02 | 1.25 | 1.15 | 1.21 |
| 2021 | 0.17 | 0.66 | 0.94 | 1.02 | 0.95 | 0.76 | 0.94 | 0.86 | 0.91 |
| 2022 | 0.17 | 0.44 | 0.62 | 0.68 | 0.63 | 0.51 | 0.62 | 0.57 | 0.61 |
| 2023 | 0.17 | 0.22 | 0.31 | 0.34 | 0.32 | 0.26 | 0.31 | 0.29 | 0.30 |
| 2024 | 0.17 | | | | | | | | |
| 2025 | 0.17 | | | | | | | | |
| 2026 | 0.17 | | | | | | | | |
| 2027 | 0.17 | | | | | | | | |
| 2028 | 0.17 | | | | | | | | |
| 2029 | 0.17 | | | | | | | | |
| 2030 | 0.17 | | | | | | | | |
| 2031 | 0.17 | | | | | | | | |
| 2032 | 0.17 | | | | | | | | |
| 2033 | 0.17 | | | | | | | | |
| 2034 | 0.17 | | | | | | | | |
| 2035 | 0.17 | | | | | | | | |
| 2036 | 0.17 | | | | | | | | |
| 2037 | 0.17 | | | | | | | | |
| 2038 | 0.17 | | | | | | | | |
| 2039 | 0.17 | | | | | | | | |
| 2040 | 0.17 | | | | | | | | |
| 2041 | 0.17 | | | | | | | | |
| 2042 | 0.17 | | | | | | | | |
| 2043 | 0.17 | | | | | | | | |
| Levelized (2014-2023) | 0.14 | 2.01 | 3.12 | 3.49 | 3.19 | 2.42 | 3.13 | 2.82 | 3.02 |
| Levelized (2014-2028) | 0.15 | 1.38 | 2.15 | 2.40 | 2.20 | 1.67 | 2.16 | 1.94 | 2.08 |
| Levelized (2014-2043) | 0.16 | 0.76 | 1.18 | 1.32 | 1.21 | 0.92 | 1.19 | 1.07 | 1.15 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-11. Maine – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2013 | | | | | | | | | |
| 2014 | 0.01 | 0.59 | 1.01 | 1.14 | 1.03 | 0.75 | 1.01 | 0.90 | 0.97 |
| 2015 | 0.02 | 1.76 | 2.95 | 3.34 | 3.03 | 2.20 | 2.96 | 2.63 | 2.84 |
| 2016 | 0.02 | 1.77 | 2.97 | 3.36 | 3.04 | 2.22 | 2.98 | 2.65 | 2.86 |
| 2017 | 0.02 | 0.74 | 1.17 | 1.31 | 1.20 | 0.90 | 1.17 | 1.05 | 1.13 |
| 2018 | 0.02 | 0.53 | 0.81 | 0.90 | 0.83 | 0.63 | 0.81 | 0.74 | 0.79 |
| 2019 | 0.02 | 0.28 | 0.41 | 0.45 | 0.41 | 0.33 | 0.41 | 0.37 | 0.39 |
| 2020 | 0.02 | 0.18 | 0.26 | 0.28 | 0.26 | 0.21 | 0.26 | 0.24 | 0.25 |
| 2021 | 0.02 | 0.13 | 0.19 | 0.21 | 0.20 | 0.15 | 0.19 | 0.18 | 0.19 |
| 2022 | 0.02 | 0.09 | 0.13 | 0.14 | 0.13 | 0.10 | 0.13 | 0.12 | 0.12 |
| 2023 | 0.02 | 0.04 | 0.06 | 0.07 | 0.06 | 0.05 | 0.06 | 0.06 | 0.06 |
| 2024 | 0.02 | | | | | | | | |
| 2025 | 0.02 | | | | | | | | |
| 2026 | 0.02 | | | | | | | | |
| 2027 | 0.02 | | | | | | | | |
| 2028 | 0.02 | | | | | | | | |
| 2029 | 0.02 | | | | | | | | |
| 2030 | 0.02 | | | | | | | | |
| 2031 | 0.02 | | | | | | | | |
| 2032 | 0.02 | | | | | | | | |
| 2033 | 0.02 | | | | | | | | |
| 2034 | 0.02 | | | | | | | | |
| 2035 | 0.02 | | | | | | | | |
| 2036 | 0.02 | | | | | | | | |
| 2037 | 0.02 | | | | | | | | |
| 2038 | 0.02 | | | | | | | | |
| 2039 | 0.02 | | | | | | | | |
| 2040 | 0.02 | | | | | | | | |
| 2041 | 0.02 | | | | | | | | |
| 2042 | 0.02 | | | | | | | | |
| 2043 | 0.02 | | | | | | | | |
| Levelized (2014-2023) | 0.02 | 0.63 | 1.03 | 1.16 | 1.05 | 0.78 | 1.03 | 0.92 | 0.99 |
| Levelized (2014-2028) | 0.02 | 0.43 | 0.71 | 0.80 | 0.72 | 0.54 | 0.71 | 0.63 | 0.68 |
| Levelized (2014-2043) | 0.02 | 0.24 | 0.39 | 0.44 | 0.40 | 0.29 | 0.39 | 0.35 | 0.38 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-12. Maine – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.01 | 0.45 | 0.76 | 0.86 | 0.78 | 0.57 | 0.77 | 0.68 | 0.74 |
| 2016 | 0.02 | 1.61 | 2.70 | 3.06 | 2.77 | 2.02 | 2.71 | 2.41 | 2.60 |
| 2017 | 0.02 | 0.68 | 1.07 | 1.20 | 1.10 | 0.83 | 1.08 | 0.97 | 1.04 |
| 2018 | 0.02 | 0.54 | 0.83 | 0.92 | 0.84 | 0.65 | 0.83 | 0.75 | 0.80 |
| 2019 | 0.02 | 0.28 | 0.41 | 0.45 | 0.42 | 0.33 | 0.41 | 0.38 | 0.40 |
| 2020 | 0.02 | 0.18 | 0.26 | 0.29 | 0.27 | 0.21 | 0.26 | 0.24 | 0.25 |
| 2021 | 0.02 | 0.13 | 0.20 | 0.22 | 0.20 | 0.16 | 0.20 | 0.18 | 0.19 |
| 2022 | 0.02 | 0.09 | 0.13 | 0.14 | 0.13 | 0.10 | 0.13 | 0.12 | 0.13 |
| 2023 | 0.02 | 0.04 | 0.06 | 0.07 | 0.07 | 0.05 | 0.06 | 0.06 | 0.06 |
| 2024 | 0.02 | | | | | | | | |
| 2025 | 0.02 | | | | | | | | |
| 2026 | 0.02 | | | | | | | | |
| 2027 | 0.02 | | | | | | | | |
| 2028 | 0.02 | | | | | | | | |
| 2029 | 0.02 | | | | | | | | |
| 2030 | 0.02 | | | | | | | | |
| 2031 | 0.02 | | | | | | | | |
| 2032 | 0.02 | | | | | | | | |
| 2033 | 0.02 | | | | | | | | |
| 2034 | 0.02 | | | | | | | | |
| 2035 | 0.02 | | | | | | | | |
| 2036 | 0.02 | | | | | | | | |
| 2037 | 0.02 | | | | | | | | |
| 2038 | 0.02 | | | | | | | | |
| 2039 | 0.02 | | | | | | | | |
| 2040 | 0.02 | | | | | | | | |
| 2041 | 0.02 | | | | | | | | |
| 2042 | 0.02 | | | | | | | | |
| 2043 | 0.02 | | | | | | | | |
| Levelized (2014-2023) | 0.02 | 0.41 | 0.66 | 0.75 | 0.68 | 0.51 | 0.67 | 0.60 | 0.64 |
| Levelized (2014-2028) | 0.02 | 0.29 | 0.46 | 0.51 | 0.47 | 0.35 | 0.46 | 0.41 | 0.44 |
| Levelized (2014-2043) | 0.02 | 0.16 | 0.25 | 0.28 | 0.26 | 0.19 | 0.25 | 0.23 | 0.24 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-13. New Hampshire – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | 0.01 | 0.59 | 0.99 | 1.13 | 1.02 | 0.74 | 1.00 | 0.89 | 0.96 |
| 2015 | 0.01 | 1.75 | 2.91 | 3.29 | 2.98 | 2.18 | 2.92 | 2.60 | 2.80 |
| 2016 | 0.01 | 1.76 | 2.92 | 3.30 | 3.00 | 2.19 | 2.93 | 2.61 | 2.82 |
| 2017 | 0.01 | 0.74 | 1.15 | 1.29 | 1.18 | 0.89 | 1.16 | 1.04 | 1.12 |
| 2018 | 0.01 | 0.53 | 0.80 | 0.89 | 0.82 | 0.63 | 0.80 | 0.73 | 0.78 |
| 2019 | 0.01 | 0.28 | 0.40 | 0.44 | 0.41 | 0.33 | 0.40 | 0.37 | 0.39 |
| 2020 | 0.01 | 0.18 | 0.26 | 0.28 | 0.26 | 0.21 | 0.26 | 0.24 | 0.25 |
| 2021 | 0.01 | 0.13 | 0.19 | 0.21 | 0.20 | 0.16 | 0.19 | 0.18 | 0.19 |
| 2022 | 0.01 | 0.09 | 0.13 | 0.14 | 0.13 | 0.10 | 0.13 | 0.12 | 0.12 |
| 2023 | 0.01 | 0.04 | 0.06 | 0.07 | 0.07 | 0.05 | 0.06 | 0.06 | 0.06 |
| 2024 | 0.01 | | | | | | | | |
| 2025 | 0.01 | | | | | | | | |
| 2026 | 0.01 | | | | | | | | |
| 2027 | 0.01 | | | | | | | | |
| 2028 | 0.01 | | | | | | | | |
| 2029 | 0.01 | | | | | | | | |
| 2030 | 0.01 | | | | | | | | |
| 2031 | 0.01 | | | | | | | | |
| 2032 | 0.01 | | | | | | | | |
| 2033 | 0.01 | | | | | | | | |
| 2034 | 0.01 | | | | | | | | |
| 2035 | 0.01 | | | | | | | | |
| 2036 | 0.01 | | | | | | | | |
| 2037 | 0.01 | | | | | | | | |
| 2038 | 0.01 | | | | | | | | |
| 2039 | 0.01 | | | | | | | | |
| 2040 | 0.01 | | | | | | | | |
| 2041 | 0.01 | | | | | | | | |
| 2042 | 0.01 | | | | | | | | |
| 2043 | 0.01 | | | | | | | | |
| Levelized (2014-2023) | 0.01 | 0.63 | 1.01 | 1.14 | 1.04 | 0.77 | 1.02 | 0.91 | 0.98 |
| Levelized (2014-2028) | 0.01 | 0.43 | 0.70 | 0.78 | 0.71 | 0.53 | 0.70 | 0.63 | 0.67 |
| Levelized (2014-2043) | 0.01 | 0.24 | 0.38 | 0.43 | 0.39 | 0.29 | 0.39 | 0.34 | 0.37 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations

2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter

5 Weighted average per Percentage of residential load columns 2 to 4

6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter

8 Weighted average per Percentage of commercial load columns 6 and 7

9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-14. New Hampshire – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.01 | 0.45 | 0.75 | 0.85 | 0.77 | 0.56 | 0.76 | 0.67 | 0.72 |
| 2016 | 0.01 | 1.61 | 2.66 | 3.01 | 2.73 | 2.00 | 2.67 | 2.38 | 2.56 |
| 2017 | 0.01 | 0.68 | 1.06 | 1.18 | 1.08 | 0.82 | 1.06 | 0.96 | 1.02 |
| 2018 | 0.01 | 0.54 | 0.81 | 0.90 | 0.83 | 0.64 | 0.82 | 0.74 | 0.79 |
| 2019 | 0.01 | 0.28 | 0.41 | 0.45 | 0.42 | 0.33 | 0.41 | 0.38 | 0.40 |
| 2020 | 0.01 | 0.18 | 0.26 | 0.29 | 0.27 | 0.21 | 0.26 | 0.24 | 0.25 |
| 2021 | 0.01 | 0.14 | 0.20 | 0.21 | 0.20 | 0.16 | 0.20 | 0.18 | 0.19 |
| 2022 | 0.01 | 0.09 | 0.13 | 0.14 | 0.13 | 0.11 | 0.13 | 0.12 | 0.13 |
| 2023 | 0.01 | 0.05 | 0.07 | 0.07 | 0.07 | 0.05 | 0.07 | 0.06 | 0.06 |
| 2024 | 0.01 | | | | | | | | |
| 2025 | 0.01 | | | | | | | | |
| 2026 | 0.01 | | | | | | | | |
| 2027 | 0.01 | | | | | | | | |
| 2028 | 0.01 | | | | | | | | |
| 2029 | 0.01 | | | | | | | | |
| 2030 | 0.01 | | | | | | | | |
| 2031 | 0.01 | | | | | | | | |
| 2032 | 0.01 | | | | | | | | |
| 2033 | 0.01 | | | | | | | | |
| 2034 | 0.01 | | | | | | | | |
| 2035 | 0.01 | | | | | | | | |
| 2036 | 0.01 | | | | | | | | |
| 2037 | 0.01 | | | | | | | | |
| 2038 | 0.01 | | | | | | | | |
| 2039 | 0.01 | | | | | | | | |
| 2040 | 0.01 | | | | | | | | |
| 2041 | 0.01 | | | | | | | | |
| 2042 | 0.01 | | | | | | | | |
| 2043 | 0.01 | | | | | | | | |
| Levelized (2014-2023) | 0.01 | 0.41 | 0.66 | 0.74 | 0.67 | 0.50 | 0.66 | 0.59 | 0.63 |
| Levelized (2014-2028) | 0.01 | 0.28 | 0.45 | 0.51 | 0.46 | 0.35 | 0.45 | 0.41 | 0.44 |
| Levelized (2014-2043) | 0.01 | 0.16 | 0.25 | 0.28 | 0.25 | 0.19 | 0.25 | 0.22 | 0.24 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-15. Rhode Island – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | 0.01 | 0.40 | 0.65 | 0.73 | 0.66 | 0.49 | 0.65 | 0.58 | 0.62 |
| 2015 | 0.02 | 1.16 | 1.88 | 2.11 | 1.92 | 1.43 | 1.89 | 1.69 | 1.81 |
| 2016 | 0.02 | 1.17 | 1.89 | 2.12 | 1.93 | 1.44 | 1.90 | 1.70 | 1.82 |
| 2017 | 0.02 | 0.49 | 0.75 | 0.83 | 0.76 | 0.59 | 0.75 | 0.68 | 0.72 |
| 2018 | 0.02 | 0.35 | 0.52 | 0.57 | 0.53 | 0.41 | 0.52 | 0.47 | 0.50 |
| 2019 | 0.02 | 0.19 | 0.26 | 0.28 | 0.26 | 0.21 | 0.26 | 0.24 | 0.25 |
| 2020 | 0.02 | 0.12 | 0.17 | 0.18 | 0.17 | 0.14 | 0.17 | 0.15 | 0.16 |
| 2021 | 0.02 | 0.09 | 0.12 | 0.14 | 0.13 | 0.10 | 0.12 | 0.11 | 0.12 |
| 2022 | 0.02 | 0.06 | 0.08 | 0.09 | 0.08 | 0.07 | 0.08 | 0.08 | 0.08 |
| 2023 | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 |
| 2024 | 0.02 | | | | | | | | |
| 2025 | 0.02 | | | | | | | | |
| 2026 | 0.02 | | | | | | | | |
| 2027 | 0.02 | | | | | | | | |
| 2028 | 0.02 | | | | | | | | |
| 2029 | 0.02 | | | | | | | | |
| 2030 | 0.02 | | | | | | | | |
| 2031 | 0.02 | | | | | | | | |
| 2032 | 0.02 | | | | | | | | |
| 2033 | 0.02 | | | | | | | | |
| 2034 | 0.02 | | | | | | | | |
| 2035 | 0.02 | | | | | | | | |
| 2036 | 0.02 | | | | | | | | |
| 2037 | 0.02 | | | | | | | | |
| 2038 | 0.02 | | | | | | | | |
| 2039 | 0.02 | | | | | | | | |
| 2040 | 0.02 | | | | | | | | |
| 2041 | 0.02 | | | | | | | | |
| 2042 | 0.02 | | | | | | | | |
| 2043 | 0.02 | | | | | | | | |
| Levelized (2014-2023) | 0.02 | 0.42 | 0.66 | 0.73 | 0.67 | 0.51 | 0.66 | 0.59 | 0.63 |
| Levelized (2014-2028) | 0.02 | 0.29 | 0.45 | 0.50 | 0.46 | 0.35 | 0.45 | 0.41 | 0.44 |
| Levelized (2014-2043) | 0.02 | 0.16 | 0.25 | 0.28 | 0.25 | 0.19 | 0.25 | 0.22 | 0.24 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations

2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter

5 Weighted average per Percentage of residential load columns 2 to 4

6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter

8 Weighted average per Percentage of commercial load columns 6 and 7

9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-16. Rhode Island – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.01 | 0.30 | 0.49 | 0.55 | 0.50 | 0.37 | 0.49 | 0.44 | 0.47 |
| 2016 | 0.02 | 1.07 | 1.72 | 1.93 | 1.76 | 1.31 | 1.73 | 1.55 | 1.66 |
| 2017 | 0.02 | 0.45 | 0.69 | 0.76 | 0.70 | 0.54 | 0.69 | 0.62 | 0.66 |
| 2018 | 0.02 | 0.36 | 0.53 | 0.58 | 0.54 | 0.42 | 0.53 | 0.48 | 0.51 |
| 2019 | 0.02 | 0.19 | 0.26 | 0.29 | 0.27 | 0.22 | 0.26 | 0.24 | 0.26 |
| 2020 | 0.02 | 0.12 | 0.17 | 0.18 | 0.17 | 0.14 | 0.17 | 0.16 | 0.16 |
| 2021 | 0.02 | 0.09 | 0.13 | 0.14 | 0.13 | 0.10 | 0.13 | 0.12 | 0.12 |
| 2022 | 0.02 | 0.06 | 0.08 | 0.09 | 0.08 | 0.07 | 0.08 | 0.08 | 0.08 |
| 2023 | 0.02 | 0.03 | 0.04 | 0.05 | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 |
| 2024 | 0.02 | | | | | | | | |
| 2025 | 0.02 | | | | | | | | |
| 2026 | 0.02 | | | | | | | | |
| 2027 | 0.02 | | | | | | | | |
| 2028 | 0.02 | | | | | | | | |
| 2029 | 0.02 | | | | | | | | |
| 2030 | 0.02 | | | | | | | | |
| 2031 | 0.02 | | | | | | | | |
| 2032 | 0.02 | | | | | | | | |
| 2033 | 0.02 | | | | | | | | |
| 2034 | 0.02 | | | | | | | | |
| 2035 | 0.02 | | | | | | | | |
| 2036 | 0.02 | | | | | | | | |
| 2037 | 0.02 | | | | | | | | |
| 2038 | 0.02 | | | | | | | | |
| 2039 | 0.02 | | | | | | | | |
| 2040 | 0.02 | | | | | | | | |
| 2041 | 0.02 | | | | | | | | |
| 2042 | 0.02 | | | | | | | | |
| 2043 | 0.02 | | | | | | | | |
| Levelized (2014-2023) | 0.02 | 0.28 | 0.42 | 0.47 | 0.43 | 0.33 | 0.43 | 0.38 | 0.41 |
| Levelized (2014-2028) | 0.02 | 0.19 | 0.29 | 0.33 | 0.30 | 0.23 | 0.29 | 0.26 | 0.28 |
| Levelized (2014-2043) | 0.02 | 0.10 | 0.16 | 0.18 | 0.16 | 0.13 | 0.16 | 0.15 | 0.16 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-17. Vermont – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | 0.00 | 0.10 | 0.18 | 0.20 | 0.18 | 0.13 | 0.18 | 0.16 | 0.17 |
| 2015 | 0.00 | 0.38 | 0.66 | 0.75 | 0.68 | 0.49 | 0.66 | 0.59 | 0.64 |
| 2016 | 0.01 | 0.40 | 0.69 | 0.79 | 0.71 | 0.51 | 0.69 | 0.61 | 0.67 |
| 2017 | 0.01 | 0.17 | 0.28 | 0.31 | 0.28 | 0.21 | 0.28 | 0.25 | 0.27 |
| 2018 | 0.01 | 0.12 | 0.20 | 0.22 | 0.20 | 0.15 | 0.20 | 0.18 | 0.19 |
| 2019 | 0.01 | 0.06 | 0.10 | 0.11 | 0.10 | 0.08 | 0.10 | 0.09 | 0.09 |
| 2020 | 0.01 | 0.04 | 0.06 | 0.07 | 0.06 | 0.05 | 0.06 | 0.06 | 0.06 |
| 2021 | 0.01 | 0.03 | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 | 0.05 |
| 2022 | 0.01 | 0.02 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| 2023 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 |
| 2024 | 0.01 | | | | | | | | |
| 2025 | 0.01 | | | | | | | | |
| 2026 | 0.01 | | | | | | | | |
| 2027 | 0.01 | | | | | | | | |
| 2028 | 0.01 | | | | | | | | |
| 2029 | 0.01 | | | | | | | | |
| 2030 | 0.01 | | | | | | | | |
| 2031 | 0.01 | | | | | | | | |
| 2032 | 0.01 | | | | | | | | |
| 2033 | 0.01 | | | | | | | | |
| 2034 | 0.01 | | | | | | | | |
| 2035 | 0.01 | | | | | | | | |
| 2036 | 0.01 | | | | | | | | |
| 2037 | 0.01 | | | | | | | | |
| 2038 | 0.01 | | | | | | | | |
| 2039 | 0.01 | | | | | | | | |
| 2040 | 0.01 | | | | | | | | |
| 2041 | 0.01 | | | | | | | | |
| 2042 | 0.01 | | | | | | | | |
| 2043 | 0.01 | | | | | | | | |
| Levelized (2014-2023) | 0.01 | 0.14 | 0.23 | 0.26 | 0.24 | 0.17 | 0.23 | 0.21 | 0.22 |
| Levelized (2014-2028) | 0.01 | 0.10 | 0.16 | 0.18 | 0.16 | 0.12 | 0.16 | 0.14 | 0.15 |
| Levelized (2014-2043) | 0.01 | 0.05 | 0.09 | 0.10 | 0.09 | 0.07 | 0.09 | 0.08 | 0.08 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-18. Vermont – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|------|-------------------------|---------|------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.00 | 0.10 | 0.17 | 0.19 | 0.18 | 0.13 | 0.17 | 0.15 | 0.16 |
| 2016 | 0.00 | 0.37 | 0.63 | 0.72 | 0.65 | 0.47 | 0.63 | 0.56 | 0.61 |
| 2017 | 0.01 | 0.16 | 0.26 | 0.29 | 0.26 | 0.19 | 0.26 | 0.23 | 0.25 |
| 2018 | 0.01 | 0.13 | 0.20 | 0.22 | 0.20 | 0.15 | 0.20 | 0.18 | 0.19 |
| 2019 | 0.01 | 0.06 | 0.10 | 0.11 | 0.10 | 0.08 | 0.10 | 0.09 | 0.09 |
| 2020 | 0.01 | 0.04 | 0.06 | 0.07 | 0.06 | 0.05 | 0.06 | 0.06 | 0.06 |
| 2021 | 0.01 | 0.03 | 0.05 | 0.06 | 0.05 | 0.04 | 0.05 | 0.05 | 0.05 |
| 2022 | 0.01 | 0.02 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| 2023 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 |
| 2024 | 0.01 | | | | | | | | |
| 2025 | 0.01 | | | | | | | | |
| 2026 | 0.01 | | | | | | | | |
| 2027 | 0.01 | | | | | | | | |
| 2028 | 0.01 | | | | | | | | |
| 2029 | 0.01 | | | | | | | | |
| 2030 | 0.01 | | | | | | | | |
| 2031 | 0.01 | | | | | | | | |
| 2032 | 0.01 | | | | | | | | |
| 2033 | 0.01 | | | | | | | | |
| 2034 | 0.01 | | | | | | | | |
| 2035 | 0.01 | | | | | | | | |
| 2036 | 0.01 | | | | | | | | |
| 2037 | 0.01 | | | | | | | | |
| 2038 | 0.01 | | | | | | | | |
| 2039 | 0.01 | | | | | | | | |
| 2040 | 0.01 | | | | | | | | |
| 2041 | 0.01 | | | | | | | | |
| 2042 | 0.01 | | | | | | | | |
| 2043 | 0.01 | | | | | | | | |
| Levelized (2014-2023) | 0.00 | 0.10 | 0.16 | 0.18 | 0.16 | 0.12 | 0.16 | 0.14 | 0.15 |
| Levelized (2014-2028) | 0.00 | 0.07 | 0.11 | 0.12 | 0.11 | 0.08 | 0.11 | 0.10 | 0.10 |
| Levelized (2014-2043) | 0.01 | 0.04 | 0.06 | 0.07 | 0.06 | 0.04 | 0.06 | 0.05 | 0.06 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-19. New England – 2014 Gas Efficiency Installations – Gas Supply DRIPE and Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2013 | | | | | | | | | |
| 2014 | 0.16 | 6.18 | 10.23 | 11.55 | 10.48 | 7.69 | 10.27 | 9.14 | 9.86 |
| 2015 | 0.22 | 18.38 | 30.17 | 33.99 | 30.89 | 22.76 | 30.28 | 26.99 | 29.07 |
| 2016 | 0.31 | 18.53 | 30.30 | 34.11 | 31.01 | 22.90 | 30.40 | 27.12 | 29.20 |
| 2017 | 0.31 | 7.77 | 12.00 | 13.36 | 12.25 | 9.34 | 12.03 | 10.86 | 11.60 |
| 2018 | 0.31 | 5.56 | 8.34 | 9.24 | 8.51 | 6.59 | 8.36 | 7.59 | 8.08 |
| 2019 | 0.31 | 2.93 | 4.16 | 4.56 | 4.24 | 3.39 | 4.17 | 3.83 | 4.05 |
| 2020 | 0.31 | 1.87 | 2.66 | 2.92 | 2.71 | 2.17 | 2.67 | 2.45 | 2.59 |
| 2021 | 0.31 | 1.41 | 2.00 | 2.19 | 2.03 | 1.63 | 2.00 | 1.84 | 1.94 |
| 2022 | 0.31 | 0.93 | 1.33 | 1.46 | 1.35 | 1.08 | 1.33 | 1.22 | 1.29 |
| 2023 | 0.31 | 0.47 | 0.67 | 0.73 | 0.68 | 0.54 | 0.67 | 0.61 | 0.65 |
| 2024 | 0.31 | | | | | | | | |
| 2025 | 0.31 | | | | | | | | |
| 2026 | 0.31 | | | | | | | | |
| 2027 | 0.31 | | | | | | | | |
| 2028 | 0.31 | | | | | | | | |
| 2029 | 0.31 | | | | | | | | |
| 2030 | 0.31 | | | | | | | | |
| 2031 | 0.31 | | | | | | | | |
| 2032 | 0.31 | | | | | | | | |
| 2033 | 0.31 | | | | | | | | |
| 2034 | 0.31 | | | | | | | | |
| 2035 | 0.31 | | | | | | | | |
| 2036 | 0.31 | | | | | | | | |
| 2037 | 0.31 | | | | | | | | |
| 2038 | 0.31 | | | | | | | | |
| 2039 | 0.31 | | | | | | | | |
| 2040 | 0.31 | | | | | | | | |
| 2041 | 0.31 | | | | | | | | |
| 2042 | 0.31 | | | | | | | | |
| 2043 | 0.31 | | | | | | | | |
| Levelized (2014-2023) | 0.29 | 6.59 | 10.50 | 11.76 | 10.73 | 8.04 | 10.53 | 9.44 | 10.13 |
| Levelized (2014-2028) | 0.30 | 4.54 | 7.23 | 8.10 | 7.39 | 5.54 | 7.25 | 6.51 | 6.98 |
| Levelized (2014-2043) | 0.30 | 2.50 | 3.98 | 4.46 | 4.07 | 3.05 | 3.99 | 3.58 | 3.84 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-28. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8

Exhibit C-20. New England – 2015 Gas Efficiency Installations – Gas to Electric DRIPE (2013\$/MMBtu)

| Year | Gas Supply DRIPE applicable to every MMBtu Reduction | Gas to Electric DRIPE | | | | | | | ALL RETAIL END USES |
|-----------------------|--|-----------------------|-----------|---------|-------|-------------------------|---------|-------|---------------------|
| | | RESIDENTIAL | | | | COMMERCIAL & INDUSTRIAL | | | |
| | | Non Heating | Hot Water | Heating | All | Non Heating | Heating | All | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2013 | | | | | | | | | |
| 2014 | | | | | | | | | |
| 2015 | 0.16 | 4.75 | 7.80 | 8.79 | 7.99 | 5.89 | 7.83 | 6.98 | 7.52 |
| 2016 | 0.22 | 16.87 | 27.58 | 31.05 | 28.23 | 20.85 | 27.68 | 24.69 | 26.58 |
| 2017 | 0.31 | 7.13 | 11.00 | 12.26 | 11.24 | 8.57 | 11.04 | 9.96 | 10.64 |
| 2018 | 0.31 | 5.66 | 8.48 | 9.39 | 8.65 | 6.70 | 8.50 | 7.72 | 8.21 |
| 2019 | 0.31 | 2.98 | 4.23 | 4.64 | 4.31 | 3.44 | 4.24 | 3.89 | 4.11 |
| 2020 | 0.31 | 1.90 | 2.70 | 2.96 | 2.75 | 2.20 | 2.71 | 2.49 | 2.63 |
| 2021 | 0.31 | 1.43 | 2.03 | 2.22 | 2.06 | 1.65 | 2.03 | 1.87 | 1.97 |
| 2022 | 0.31 | 0.95 | 1.35 | 1.48 | 1.37 | 1.10 | 1.35 | 1.24 | 1.31 |
| 2023 | 0.31 | 0.48 | 0.68 | 0.74 | 0.69 | 0.55 | 0.68 | 0.62 | 0.66 |
| 2024 | 0.31 | | | | | | | | |
| 2025 | 0.31 | | | | | | | | |
| 2026 | 0.31 | | | | | | | | |
| 2027 | 0.31 | | | | | | | | |
| 2028 | 0.31 | | | | | | | | |
| 2029 | 0.31 | | | | | | | | |
| 2030 | 0.31 | | | | | | | | |
| 2031 | 0.31 | | | | | | | | |
| 2032 | 0.31 | | | | | | | | |
| 2033 | 0.31 | | | | | | | | |
| 2034 | 0.31 | | | | | | | | |
| 2035 | 0.31 | | | | | | | | |
| 2036 | 0.31 | | | | | | | | |
| 2037 | 0.31 | | | | | | | | |
| 2038 | 0.31 | | | | | | | | |
| 2039 | 0.31 | | | | | | | | |
| 2040 | 0.31 | | | | | | | | |
| 2041 | 0.31 | | | | | | | | |
| 2042 | 0.31 | | | | | | | | |
| 2043 | 0.31 | | | | | | | | |
| Levelized (2014-2023) | 0.26 | 4.35 | 6.81 | 7.60 | 6.96 | 5.26 | 6.83 | 6.14 | 6.58 |
| Levelized (2014-2028) | 0.28 | 3.00 | 4.69 | 5.24 | 4.79 | 3.63 | 4.70 | 4.23 | 4.53 |
| Levelized (2014-2043) | 0.30 | 1.65 | 2.58 | 2.88 | 2.64 | 2.00 | 2.59 | 2.33 | 2.49 |

Real (constant \$) riskless annual rate of return: 1.36%

1 Values from Exhibit 7-20 apply to both 2014 and 2015 Installations
 2 to 4 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 5 Weighted average per Percentage of residential load columns 2 to 4
 6 to 7 Exhibit 7-29. weighted average values per percentage annual baseload and winter
 8 Weighted average per Percentage of commercial load columns 6 and 7
 9 Weighted average per Percentage of residential and commercial load columns 5 and 8