

Cost Per Million Btu

Electricity 3412 BTU / kWh

| | | \$ / kWh | 0.038 | 0.040 | 0.042 | 0.044 | 0.046 | 0.048 | 0.050 | 0.052 | 0.054 | 0.056 | 0.058 | 0.060 | 0.062 | 0.064 | 0.066 | 0.068 | 0.070 | 0.072 | 0.074 | 0.076 | 0.078 | 0.080 | 0.090 | 0.100 |
|---|-------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| System Efficiency (C.O.P. or EF) | 100% | 11.14 | 11.72 | 12.31 | 12.90 | 13.48 | 14.07 | 14.65 | 15.24 | 15.83 | 16.41 | 17.00 | 17.58 | 18.17 | 18.76 | 19.34 | 19.93 | 20.52 | 21.10 | 21.69 | 22.27 | 22.86 | 23.45 | 26.38 | 29.31 | |
| | 150% | 7.42 | 7.82 | 8.21 | 8.60 | 8.99 | 9.38 | 9.77 | 10.16 | 10.55 | 10.94 | 11.33 | 11.72 | 12.11 | 12.50 | 12.90 | 13.29 | 13.68 | 14.07 | 14.46 | 14.85 | 15.24 | 15.63 | 17.58 | 19.54 | |
| | 200% | 5.57 | 5.86 | 6.15 | 6.45 | 6.74 | 7.03 | 7.33 | 7.62 | 7.91 | 8.21 | 8.50 | 8.79 | 9.09 | 9.38 | 9.67 | 9.96 | 10.26 | 10.55 | 10.84 | 11.14 | 11.43 | 11.72 | 13.19 | 14.65 | |
| | 250% | 4.45 | 4.69 | 4.92 | 5.16 | 5.39 | 5.63 | 5.86 | 6.10 | 6.33 | 6.57 | 6.80 | 7.03 | 7.27 | 7.50 | 7.74 | 7.97 | 8.21 | 8.44 | 8.68 | 8.91 | 9.14 | 9.38 | 10.55 | 11.72 | |
| | 275% | 4.05 | 4.26 | 4.48 | 4.69 | 4.90 | 5.12 | 5.33 | 5.54 | 5.76 | 5.97 | 6.18 | 6.39 | 6.61 | 6.82 | 7.03 | 7.25 | 7.46 | 7.67 | 7.89 | 8.10 | 8.31 | 8.53 | 9.59 | 10.66 | |
| | 300% | 3.71 | 3.91 | 4.10 | 4.30 | 4.49 | 4.69 | 4.88 | 5.08 | 5.28 | 5.47 | 5.67 | 5.86 | 6.06 | 6.25 | 6.45 | 6.64 | 6.84 | 7.03 | 7.23 | 7.42 | 7.62 | 7.82 | 8.79 | 9.77 | |
| | 325% | 3.43 | 3.61 | 3.79 | 3.97 | 4.15 | 4.33 | 4.51 | 4.69 | 4.87 | 5.05 | 5.23 | 5.41 | 5.59 | 5.77 | 5.95 | 6.13 | 6.31 | 6.49 | 6.67 | 6.85 | 7.03 | 7.21 | 8.12 | 9.02 | |
| | 350% | 3.18 | 3.35 | 3.52 | 3.68 | 3.85 | 4.02 | 4.19 | 4.35 | 4.52 | 4.69 | 4.86 | 5.02 | 5.19 | 5.36 | 5.53 | 5.69 | 5.86 | 6.03 | 6.20 | 6.36 | 6.53 | 6.70 | 7.54 | 8.37 | |
| | 400% | 2.78 | 2.93 | 3.08 | 3.22 | 3.37 | 3.52 | 3.66 | 3.81 | 3.96 | 4.10 | 4.25 | 4.40 | 4.54 | 4.69 | 4.84 | 4.98 | 5.13 | 5.28 | 5.42 | 5.57 | 5.72 | 5.86 | 6.59 | 7.33 | |

Natural Gas 100,000 BTU / therm

| | | \$ / ccf | 0.90 | 0.95 | 1.00 | 1.05 | 1.10 | 1.15 | 1.20 | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | 1.50 | 1.55 | 1.60 | 1.65 | 1.70 | 1.75 | 1.80 | 1.85 | 1.90 | 1.95 | 2.00 | 2.05 |
|--------------------------|------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| System Efficiency | 75% | 12.00 | 12.67 | 13.33 | 14.00 | 14.67 | 15.33 | 16.00 | 16.67 | 17.33 | 18.00 | 18.67 | 19.33 | 20.00 | 20.67 | 21.33 | 22.00 | 22.67 | 23.33 | 24.00 | 24.67 | 25.33 | 26.00 | 26.67 | 27.33 | |
| | 80% | 11.25 | 11.88 | 12.50 | 13.13 | 13.75 | 14.38 | 15.00 | 15.63 | 16.25 | 16.88 | 17.50 | 18.13 | 18.75 | 19.38 | 20.00 | 20.63 | 21.25 | 21.88 | 22.50 | 23.13 | 23.75 | 24.38 | 25.00 | 25.63 | |
| | 82% | 10.98 | 11.59 | 12.20 | 12.80 | 13.41 | 14.02 | 14.63 | 15.24 | 15.85 | 16.46 | 17.07 | 17.68 | 18.29 | 18.90 | 19.51 | 20.12 | 20.73 | 21.34 | 21.95 | 22.56 | 23.17 | 23.78 | 24.39 | 25.00 | |
| | 85% | 10.59 | 11.18 | 11.76 | 12.35 | 12.94 | 13.53 | 14.12 | 14.71 | 15.29 | 15.88 | 16.47 | 17.06 | 17.65 | 18.24 | 18.82 | 19.41 | 20.00 | 20.59 | 21.18 | 21.76 | 22.35 | 22.94 | 23.53 | 24.12 | |
| | 90% | 10.00 | 10.56 | 11.11 | 11.67 | 12.22 | 12.78 | 13.33 | 13.89 | 14.44 | 15.00 | 15.56 | 16.11 | 16.67 | 17.22 | 17.78 | 18.33 | 18.89 | 19.44 | 20.00 | 20.56 | 21.11 | 21.67 | 22.22 | 22.78 | |
| | 92% | 9.78 | 10.33 | 10.87 | 11.41 | 11.96 | 12.50 | 13.04 | 13.59 | 14.13 | 14.67 | 15.22 | 15.76 | 16.30 | 16.85 | 17.39 | 17.93 | 18.48 | 19.02 | 19.57 | 20.11 | 20.65 | 21.20 | 21.74 | 22.28 | |
| | 95% | 9.47 | 10.00 | 10.53 | 11.05 | 11.58 | 12.11 | 12.63 | 13.16 | 13.68 | 14.21 | 14.74 | 15.26 | 15.79 | 16.32 | 16.84 | 17.37 | 17.89 | 18.42 | 18.95 | 19.47 | 20.00 | 20.53 | 21.05 | 21.58 | |

Propane 95,500 BTU / gallon

| | | \$ / gal | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 | 1.60 | 1.70 | 1.80 | 1.90 | 2.00 | 2.10 | 2.20 | 2.30 | 2.40 | 2.50 | 2.60 | 2.70 | 2.80 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 |
|--------------------------|------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| System Efficiency | 75% | 13.96 | 15.36 | 16.75 | 18.15 | 19.55 | 20.94 | 22.34 | 23.73 | 25.13 | 26.53 | 27.92 | 29.32 | 30.72 | 32.11 | 33.51 | 34.90 | 36.30 | 37.70 | 39.09 | 40.49 | 41.88 | 42.58 | 43.28 | | |
| | 80% | 13.09 | 14.40 | 15.71 | 17.02 | 18.32 | 19.63 | 20.94 | 22.25 | 23.56 | 24.87 | 26.18 | 27.49 | 28.80 | 30.10 | 31.41 | 32.72 | 34.03 | 35.34 | 36.65 | 37.96 | 38.61 | 39.27 | 39.92 | 40.58 | |
| | 82% | 12.77 | 14.05 | 15.32 | 16.60 | 17.88 | 19.15 | 20.43 | 21.71 | 22.99 | 24.26 | 25.54 | 26.82 | 28.09 | 29.37 | 30.65 | 31.92 | 33.20 | 34.48 | 35.76 | 37.03 | 37.67 | 38.31 | 38.95 | 39.59 | |
| | 85% | 12.32 | 13.55 | 14.78 | 16.01 | 17.25 | 18.48 | 19.71 | 20.94 | 22.17 | 23.41 | 24.64 | 25.87 | 27.10 | 28.33 | 29.57 | 30.80 | 32.03 | 33.26 | 34.49 | 35.73 | 36.34 | 36.96 | 37.57 | 38.19 | |
| | 90% | 11.63 | 12.80 | 13.96 | 15.13 | 16.29 | 17.45 | 18.62 | 19.78 | 20.94 | 22.11 | 23.27 | 24.43 | 25.60 | 26.76 | 27.92 | 29.09 | 30.25 | 31.41 | 32.58 | 33.74 | 34.32 | 34.90 | 35.49 | 36.07 | |
| | 92% | 11.38 | 12.52 | 13.66 | 14.80 | 15.93 | 17.07 | 18.21 | 19.35 | 20.49 | 21.63 | 22.76 | 23.90 | 25.04 | 26.18 | 27.32 | 28.45 | 29.59 | 30.73 | 31.87 | 33.01 | 33.58 | 34.15 | 34.71 | 35.28 | |
| | 95% | 11.02 | 12.12 | 13.23 | 14.33 | 15.43 | 16.53 | 17.64 | 18.74 | 19.84 | 20.94 | 22.04 | 23.15 | 24.25 | 25.35 | 26.45 | 27.56 | 28.66 | 29.76 | 30.86 | 31.96 | 32.52 | 33.07 | 33.62 | 34.17 | |

Fuel Oil 138,900 BTU / gallon

| | | \$ / gal | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.55 | 3.60 | 3.65 | 3.70 | 3.80 | 3.90 | 4.00 | 4.10 | 4.20 | 4.30 | 4.40 | 4.50 | 4.60 | 4.70 | 4.80 | 4.90 | 5.00 |
|--------------------------|------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| System Efficiency | 75% | 30.72 | 31.20 | 31.68 | 32.16 | 32.64 | 33.12 | 33.60 | 34.08 | 34.56 | 35.04 | 35.52 | 36.48 | 37.44 | 38.40 | 39.36 | 40.32 | 41.28 | 42.24 | 43.20 | 44.16 | 45.12 | 46.08 | 47.04 | 48.00 | |
| | 80% | 28.80 | 29.25 | 29.70 | 30.15 | 30.60 | 31.05 | 31.50 | 31.95 | 32.40 | 32.85 | 33.30 | 34.20 | 35.10 | 36.00 | 36.90 | 37.80 | 38.70 | 39.60 | 40.50 | 41.40 | 42.30 | 43.20 | 44.10 | 45.00 | |
| | 82% | 28.10 | 28.53 | 28.97 | 29.41 | 29.85 | 30.29 | 30.73 | 31.17 | 31.61 | 32.05 | 32.49 | 33.36 | 34.24 | 35.12 | 36.00 | 36.88 | 37.75 | 38.63 | 39.51 | 40.39 | 41.26 | 42.14 | 43.02 | 43.90 | |
| | 85% | 27.10 | 27.53 | 27.95 | 28.37 | 28.80 | 29.22 | 29.64 | 30.07 | 30.49 | 30.92 | 31.34 | 32.19 | 33.03 | 33.88 | 34.73 | 35.57 | 36.42 | 37.27 | 38.11 | 38.96 | 39.81 | 40.66 | 41.50 | 42.35 | |
| | 90% | 25.60 | 26.00 | 26.40 | 26.80 | 27.20 | 27.60 | 28.00 | 28.40 | 28.80 | 29.20 | 29.60 | 30.40 | 31.20 | 32.00 | 32.80 | 33.60 | 34.40 | 35.20 | 36.00 | 36.80 | 37.60 | 38.40 | 39.20 | 40.00 | |
| | 92% | 25.04 | 25.43 | 25.82 | 26.22 | 26.61 | 27.00 | 27.39 | 27.78 | 28.17 | 28.56 | 28.95 | 29.74 | 30.52 | 31.30 | 32.08 | 32.87 | 33.65 | 34.43 | 35.21 | 36.00 | 36.78 | 37.56 | 38.34 | 39.13 | |
| | 95% | 24.25 | 24.63 | 25.01 | 25.39 | 25.77 | 26.15 | 26.52 | 26.90 | 27.28 | 27.66 | 28.04 | 28.80 | 29.56 | 30.31 | 31.07 | 31.83 | 32.59 | 33.34 | 34.10 | 34.86 | 35.62 | 36.38 | 37.13 | 37.89 | |

Energy Efficiency Terms

Annual Fuel Utilization Efficiency (AFUE) - The measure of annual efficiency of a residential heating furnace or boiler. Accounts for operation energy losses of the heating unit
 Co-efficient of Performance (C.O.P.) - The same as the efficiency stated as a ratio of work or useful energy output of a system vs. the amount of energy inputted into the system.
 Energy Factor (EF) - The efficiency or measure of overall efficiency of a variety of appliances. Water heater efficiencies are rated by EF.