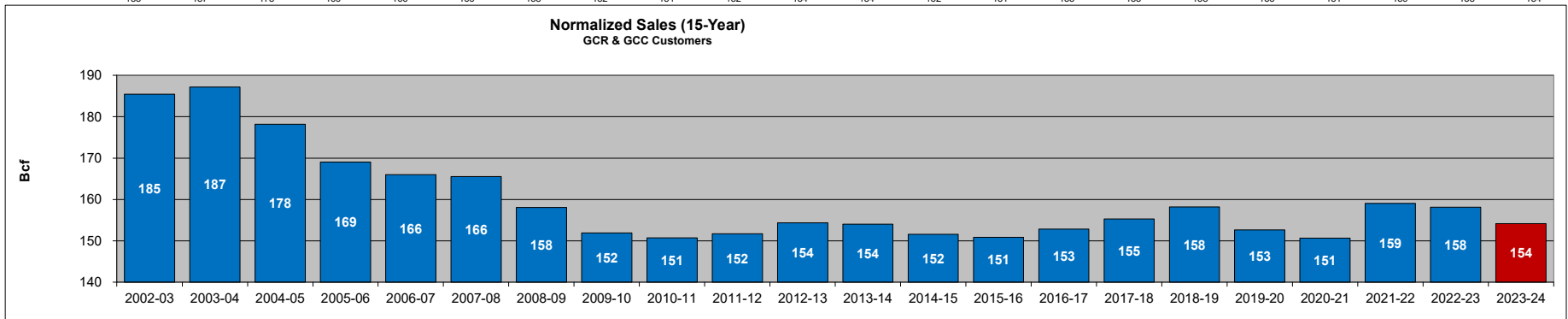
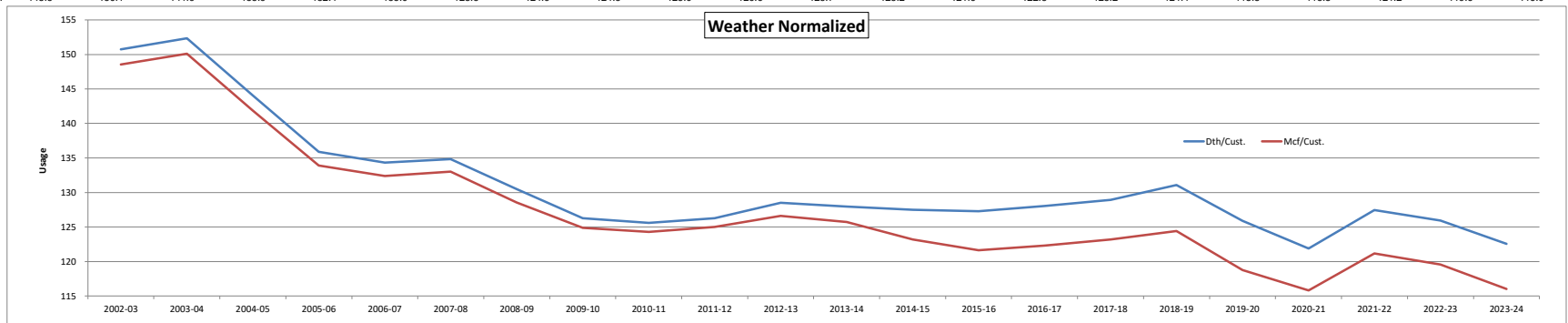


| Volumes in MMcf unless otherwise noted | | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) | (r) | (s) | (t) | (u) | (v) |
|--|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Line Rate Schedule | | Sep-Aug 2002-03 | Sep-Aug 2003-04 | Sep-Aug 2004-05 | Sep-Aug 2005-06 | Sep-Aug 2006-07 | Sep-Aug 2007-08 | Sep-Aug 2008-09 | Sep-Aug 2009-10 | Sep-Aug 2010-11 | Sep-Aug 2011-12 | Sep-Aug 2012-13 | Sep-Aug 2013-14 | Sep-Aug 2014-15 | Sep-Aug 2015-16 | Sep-Aug 2016-17 | Sep-Aug 2017-18 | Sep-Aug 2018-19 | Sep-Aug 2019-20 | Sep-Aug 2020-21 | Sep-Aug 2021-22 | Sep-Aug 2022-23 | May-Apr 2023-24 |
| 1 | Actual Billed Sales | 204,960 | 190,672 | 184,039 | 162,205 | 168,102 | 169,253 | 169,230 | 148,239 | 161,560 | 132,683 | 156,391 | 178,617 | 167,276 | 137,706 | 139,273 | 159,850 | 165,761 | 150,758 | 148,082 | 158,104 | 148,972 | 139,306 |
| 2 | Actual Base Load (August Billed Sales x 12) | 45,615 | 50,532 | 43,193 | 42,476 | 43,865 | 40,861 | 38,857 | 35,069 | 35,483 | 35,322 | 37,687 | 32,041 | 33,604 | 33,608 | 37,747 | 34,680 | 33,405 | 31,704 | 32,755 | 32,570 | 33,969 | 37,526 |
| 3 | Actual Heat Load Sales (Row 1 - Row 2) | 159,345 | 140,140 | 140,845 | 119,729 | 124,237 | 128,392 | 130,372 | 113,171 | 126,078 | 97,361 | 118,705 | 146,575 | 133,671 | 104,098 | 101,527 | 125,170 | 132,356 | 119,053 | 115,327 | 125,534 | 115,003 | 101,780 |
| 4 | Average Number of GCR & GCC Customers | 1,248,757 | 1,247,174 | 1,256,099 | 1,262,307 | 1,253,489 | 1,244,788 | 1,229,535 | 1,216,844 | 1,212,623 | 1,213,521 | 1,219,246 | 1,224,856 | 1,230,358 | 1,240,008 | 1,249,623 | 1,260,882 | 1,271,509 | 1,285,272 | 1,300,927 | 1,312,467 | 1,322,603 | 1,328,575 |
| 5 | Detroit Actual HDDs | 6,650 | 5,985 | 6,089 | 5,521 | 5,939 | 6,010 | 6,385 | 5,652 | 6,387 | 4,884 | 5,937 | 7,016 | 6,615 | 5,183 | 5,149 | 6,057 | 6,190 | 5,745 | 5,710 | 5,793 | 5,407 | 5,095 |
| 6 | Heat Load Mcf per Customer per HDD (Row 3 x 1,000) / Row 4 / Row 5) | 0.0192 | 0.0188 | 0.0184 | 0.0172 | 0.0167 | 0.0172 | 0.0166 | 0.0165 | 0.0163 | 0.0164 | 0.0164 | 0.0171 | 0.0164 | 0.0162 | 0.0158 | 0.0164 | 0.0168 | 0.0161 | 0.0155 | 0.0165 | 0.0161 | 0.0150 |
| 7 | Detroit 15-Year (09-23) Normal HDDs | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 | 5,837 |
| 8 | Normalized Heat Load (Row 4 x Row 6 / 1,000 x Row 7) | 139,864 | 136,675 | 135,016 | 126,582 | 122,103 | 124,696 | 119,183 | 116,875 | 115,221 | 116,359 | 116,705 | 121,944 | 117,950 | 117,233 | 115,092 | 120,623 | 124,808 | 120,960 | 117,892 | 126,487 | 124,149 | 116,602 |
| 9 | Normalized Sales (Row 2 + Row 8) | 185,480 | 187,207 | 178,210 | 169,058 | 165,968 | 165,557 | 158,041 | 151,943 | 150,704 | 151,681 | 154,392 | 153,986 | 151,554 | 150,841 | 152,839 | 155,304 | 158,213 | 152,664 | 150,647 | 159,057 | 158,118 | 154,129 |
| | Mcf per Customer | 148.5 | 150.1 | 141.9 | 133.9 | 132.4 | 133.0 | 128.5 | 124.9 | 124.3 | 125.0 | 126.6 | 125.7 | 123.2 | 121.6 | 122.3 | 123.2 | 124.4 | 118.8 | 115.8 | 121.2 | 119.6 | 116.0 |
| | | 185 | 187 | 178 | 169 | 166 | 166 | 158 | 152 | 151 | 152 | 154 | 154 | 152 | 151 | 153 | 155 | 158 | 153 | 151 | 159 | 158 | 154 |



| | | | | | | | | | | | | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dth/Cust. | 150.8 | 152.4 | 144.1 | 135.9 | 134.3 | 134.8 | 130.5 | 126.3 | 125.6 | 126.3 | 128.5 | 128.0 | 127.5 | 127.3 | 128.0 | 128.9 | 131.1 | 125.9 | 121.9 | 127.4 | 125.9 | 122.6 |
| Mcf/Cust. | 148.5 | 150.1 | 141.9 | 133.9 | 132.4 | 133.0 | 128.5 | 124.9 | 124.3 | 125.0 | 126.6 | 125.7 | 123.2 | 121.6 | 122.3 | 123.2 | 124.4 | 118.8 | 115.8 | 121.2 | 119.6 | 116.0 |



Michigan Public Service Commission
DTE Gas Company
Employee Savings Plan Adjustment to Staff
 (\$000's)

Case No.: U-21291
 Exhibit: A-29
 Schedule: S2
 Witness: M. S. Cooper
 Page: 1 of 2

| Line No. | Description | Source | Escalation | Expense |
|-----------------|---|--|-------------------|-------------------|
| 1 | 2023 Employee Savings Plan Expense | A-29, S2, p. 2, col (g), l. 2 | | 10,171 |
| 2 | | | | |
| 3 | Capitalization Adjustment | A-29, S2, page 2, col (g), l. 25) | | <u>559</u> |
| 4 | | | | |
| 5 | Normalized 2023 Employee Savings Plan Expense | | | 10,730 |
| 6 | | | | |
| 7 | 2024 Escalation | A-29, S2, page 2, col (m), l. 6 | 7.15% | 11,498 |
| 8 | | | | |
| 9 | Escalation for 12 Months Ending 9/30/25 | A-29, S2, page 2, col (m), l. 6 * 9/12 | 5.36% | <u>12,114</u> |
| 10 | | | | |
| 11 | Staff Projection | Exhibit S-9.2 | | <u>11,483</u> |
| 12 | | | | |
| 13 | Adjustment to Staff | | | <u><u>631</u></u> |

Michgian Public Service Commission
DTE Gas Company
Employee Savings Plan Expense: Staff Correction
 (\$000's)

Case No.: U-21291
 Exhibit: A-29
 Schedule: S2
 Witness: M. S. Cooper
 Page: 2 of 2

| Line No. | (a) Description | (b) 2018 | (c) 2019 | (d) 2020 | (e) 2021 | (f) 2022 | (g) 2023 | Percent Change | | | | | (m) 5 Yr. Avg. |
|----------|--|---------------|---------------|---------------|---------------|---------------|---------------|----------------|--------------|--------------|--------------|--------------|-------------------|
| | | | | | | | | (h) 2019 | (i) 2020 | (j) 2021 | (k) 2022 | (l) 2023 | |
| 1 | | | | | | | | | | | | | |
| 2 | Expense | 8,256 | 9,054 | 9,340 | 10,021 | 10,368 | 10,171 | 9.67% | 3.16% | 7.28% | 3.47% | (1.90)% | 4.34% |
| 3 | | | | | | | | | | | | | |
| 4 | Capitalized | 3,699 | 4,432 | 5,353 | 5,644 | 5,906 | 6,674 | 19.81% | 20.79% | 5.44% | 4.64% | 12.99% | 12.73% |
| 5 | | | | | | | | | | | | | |
| 6 | | <u>11,955</u> | <u>13,486</u> | <u>14,693</u> | <u>15,665</u> | <u>16,274</u> | <u>16,845</u> | <u>12.80%</u> | <u>8.96%</u> | <u>6.61%</u> | <u>3.89%</u> | <u>3.51%</u> | <u>7.15%</u> |
| 7 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | |
| 10 | O&M % | 69.1% | 67.1% | 63.6% | 64.0% | 63.7% | 60.4% | | | | | | |
| 11 | Capitalized % | 30.9% | 32.9% | 36.4% | 36.0% | 36.3% | 39.6% | | | | | | |
| 12 | | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | <u>100.0%</u> | | | | | | |
| 13 | | | | | | | | | | | | | |
| 14 | Total 2023 Cost | | | | | | 16,845 | | | | | | |
| 15 | 2022 % Expensed | | | | | | <u>63.7%</u> | | | | | | |
| 16 | 2023 Proforma Expense | | | | | | 10,730 | | | | | | |
| 17 | Adjusted Expense | | | | | | <u>10,171</u> | | | | | | |
| 18 | Excess Capitalization Adjustment (Sponsored by T.M. Uzenski) | | | | | | <u>559</u> | | | | | | |

Michigan Public Service Commission
DTE GasCompany
Active Healthcare Expense: Staff Correction
 (\$000)

Case No.: U-21291
 Exhibit: A-29
 Schedule: S3
 Witness: M. S. Cooper
 Page: 1 of 3

| Line No. | (a) <u>Description</u> | (b) <u>Source</u> | (c) <u>Amount</u> |
|---------------------|---|-----------------------------|-----------------------------|
| 1 | Updated Projected Active Healthcare Expense | Ex A-29, S3, p.2 | 21,081 |
| 2 | | | |
| 3 | Staff Projected Active Healthcare Expense | Ex. S-9-0 | <u>16,721</u> |
| 4 | | | |
| 5 | Difference | | <u><u>4,360</u></u> |

Michigan Public Service Commission
DTE Gas Company
Active Healthcare Expense: Staff Correction
(\$000)

Case No.: U-21291
Exhibit: A-29
Schedule: S3
Witness: M. S. Cooper
Page: 2 of 3

| Line No. | (a) Description | (b) Historical Period Ending 12/31/23 | (c) 2023 Excess Capitalization 1/ | (d) One-Time Item 2/ | (e) Constant Dollar 3/ | (f) Total Rate Case Adjustments | (g) Adjusted Historical Test Period | (h) (i) Projected Adjustments | | (j) Total Projected Adjustments | (k) Projected Period Ending 9/30/25 |
|----------|--|--|--------------------------------------|-------------------------|---------------------------|------------------------------------|--|----------------------------------|-------------------------------|------------------------------------|--|
| | | | | | | | | 1/1/24 - 12/31/24 Inflation 4/ | 1/1/25 - 9/30/25 Inflation 4/ | | |
| | | | | | | Cols (c) thru (e) | Col. (b)+Col (f) | | Col. (h)+Col.(i) | | Col. (d) + Col. (i) |
| 1 | Active Healthcare Expense | | | | | | | | | | |
| 2 | Medical Expenses | 15,283 | 1,205 | 206 | 1,438 | 2,850 | 18,132 | 907 | 571 | 1,478 | 19,610 |
| 3 | Dental Expenses | 1,088 | 71 | - | 101 | 172 | 1,260 | 63 | 40 | 103 | 1,363 |
| 4 | Vision Expenses | 85 | 6 | - | 9 | 15 | 99 | 5 | 3 | 8 | 107 |
| 5 | Total Active Healthcare Expense | <u>16,456</u> | <u>1,283</u> | <u>206</u> | <u>1,548</u> | <u>3,037</u> | <u>19,492</u> | <u>975</u> | <u>614</u> | <u>1,589</u> | <u>21,081</u> |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | 1/ Adjusts 2023 Expense based on 2022 capitalization percentages (Sponsored by T.M. Uzenski) | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | 2023 | Capitalization Percentages | | | 2023 | Excess | | | | |
| 12 | Medical | <u>Costs</u> | <u>2022</u> | <u>2023</u> | <u>Increase</u> | <u>Capitalization</u> | | | | | |
| 13 | Dental | 26,007 | 36.6% | 41.2% | 4.6% | 1,205 | | | | | |
| 14 | Vision | 1,826 | 36.5% | 40.4% | 3.9% | 71 | | | | | |
| 15 | Total | <u>159</u> | <u>42.9%</u> | <u>46.5%</u> | <u>3.6%</u> | <u>6</u> | | | | | |
| 16 | | <u>27,991</u> | | | | <u>1,283</u> | | | | | |
| 17 | 2/ Elimination of one-time credit from Prescription Drug Manager | | | | | | | | | | |
| 18 | 3/ Normalization adjustment to reflect constant-dollar five year average | | | | | | | | | | |
| 19 | 4/ Annual Inflation Rates applied to Active Healthcare: | | | | | | | | | | |
| 20 | | | <u>2024</u> | <u>9/30/2025</u> | | | | | | | |
| 21 | Medical Expenses | | 5.00% | 3.00% | | | | | | | |
| 22 | Dental Expenses | | 5.00% | 3.00% | | | | | | | |
| | Vision Expenses | | 5.00% | 3.00% | | | | | | | |

| Line No. | (a) Description | (b) 2019 | (c) 2020 | (d) 2021 | (e) 2022 | (f) 2023 | (g) Constant Dollar Five-Year Average Cost Per Employee | (h) 2023 Average Employees | (i) Constant Dollar 2023 Costs | (j) Actual 2023 Costs | (k) Difference | (l) Percent Expensed | (m) Constant Dollar Adjustment |
|----------|--|----------|----------|----------|----------|----------|---|----------------------------|--------------------------------|-----------------------|-------------------|----------------------|--------------------------------|
| | | | | | | | | | Col.(g) X Col.(h) | Col.(f), L.4 | Col.(i) - Col.(j) | | Col. (k) X Col.(l) |
| 1 | Medical Costs | \$24,496 | \$26,805 | \$26,160 | \$26,579 | \$26,007 | | | | | | | |
| 2 | Dental Costs | 1,476 | 1,493 | 1,832 | 1,717 | 1,826 | | | | | | | |
| 3 | Vision Costs | 228 | 227 | 151 | 179 | 159 | | | | | | | |
| 4 | SubTotal Active Healthcare Costs | 26,201 | 28,525 | 28,143 | 28,475 | 27,991 | | | | | | | |
| 5 | Average Annual Number of Employees | 2,802 | 2,806 | 2,796 | 2,809 | 2,797 | | | | | | | |
| 6 | Cost/Employee | \$9.352 | \$10.165 | \$10.066 | \$10.138 | \$10.008 | | | | | | | |
| 7 | Actual % Change | | | | | | | | | | | | |
| 8 | | 9.352 | | | | | | | | | | | |
| 9 | 2020 PwC Actual Annual Healthcare Trend | 5.5% | | | | | | | | | | | |
| 10 | | 9.867 | 10.165 | | | | | | | | | | |
| 11 | 2021 PwC Actual Annual Healthcare Trend | 6.0% | 6.0% | | | | | | | | | | |
| 12 | | 10.459 | 10.775 | 10.066 | | | | | | | | | |
| 13 | 2022 PwC Actual Annual Healthcare Trend | 4.0% | 4.0% | 4.0% | | | | | | | | | |
| 14 | | 10.877 | 11.206 | 10.468 | 10.138 | | | | | | | | |
| 15 | 2023 PwC Actual Annual Healthcare Trend | 4.0% | 4.0% | 4.0% | 4.0% | | | | | | | | |
| 16 | | \$11.312 | \$11.655 | \$10.887 | \$10.543 | \$10.008 | \$10.881 | 2,797 | \$30,432 | \$27,991 | \$2,441 | 63.4% | \$1,548 |
| 17 | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | |
| 24 | (1) Derivation of Annual Healthcare Trend: | 2019 | 2020 | 2021 | 2022 | 2023 | | | | | | | |
| 25 | PWC Actual Annual Healthcare Trend | 5.7% | 6.0% | 7.0% | 5.5% | 6.0% | | | | | | | |
| 26 | Wellness Adjustment | 0.0% | (0.5%) | (1.0%) | (1.5%) | (2.0%) | | | | | | | |
| 27 | Adjusted PWC Annual Healthcare Trend | 5.7% | 5.5% | 6.0% | 4.0% | 4.0% | | | | | | | |
| 28 | | | | | | | | | | | | | |

| | |
|---------------|----------------|
| Medical Costs | \$1,438 |
| Dental Costs | 101 |
| Vision Costs | 9 |
| Total | \$1,548 |

Michigan Public Service Commission
DTE Gas Company
Active Healthcare Expense: AG Correction
(\$000's)

Case No.: U-21291
Exhibit: A-29
Schedule: S4
Witness: M. S. Cooper
Page: 1 of 1

| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
|----------|-------------------------|-------------|------------------------------|------------------|-----------------|-------------------------------|----------|-----------|-----|
| Line No. | Active Healthcare Costs | Actual 2023 | 2023 Excess Capitalization 1 | One-Time Item 2/ | Normalized 2023 | Projections escalated at 2.4% | | | |
| | | | | | | 2024 | 2025 | Test Year | |
| 1 | Medical | 26,007 | | 360 | 26,367 | 26,999 | 27,647 | 27,485 | |
| 2 | Dental | 1,826 | | | 1,826 | 1,870 | 1,915 | 1,903 | |
| 3 | Vision | 159 | | | 159 | 162 | 166 | 165 | |
| 4 | Total | 27,991 | - | 360 | 28,351 | 29,032 | 29,728 | 29,554 | |
| 5 | | | | | | | | | |
| 6 | Portion Capitalized | (11,535) | 1,283 | (154) | (10,406) | (10,656) | (10,911) | (10,848) | |
| 7 | | | | | | | | | |
| 8 | Net Expense | 16,456 | 1,283 | 206 | 17,945 | 18,376 | 18,817 | 18,707 | |
| 9 | | | | | | | | | |
| 10 | AG Projection | | | | | | | 17,157 | |
| 11 | | | | | | | | | |
| 12 | Difference | | | | | | | 1,550 | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |

15 1/ Based on 2022 actual capitalization rate, as derived below

| | Actual 2023 | 2022 | 2023 | Increase | 2023 Excess Capitalization |
|------------|-------------|-------|-------|----------|----------------------------|
| 18 Medical | 26,007 | 36.6% | 41.2% | 4.6% | 1,205 |
| 19 Dental | 1,826 | 36.5% | 40.4% | 3.9% | 71 |
| 20 Vision | 159 | 42.9% | 46.5% | 3.6% | 6 |
| 21 Total | 27,991 | | | | 1,283 |

23 2/ Elimination of impact of Express Script credit in 2023

NEWS RELEASE

BUREAU OF LABOR STATISTICS

U. S. D E P A R T M E N T O F L A B O R



**Transmission of material in this release is embargoed until
8:30 a.m. (ET) Wednesday, January 31, 2024**

USDL-24-0146

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EMPLOYMENT COST INDEX – DECEMBER 2023

Compensation costs for civilian workers increased 0.9 percent, seasonally adjusted, for the 3-month period ending in December 2023, the U.S. Bureau of Labor Statistics reported today. **Wages and salaries** increased 0.9 percent and **benefit costs** increased 0.7 percent from September 2023. (See chart 1 and tables A, 1, 2, and 3.)

Chart 1. Three-month percent change, seasonally adjusted, civilian workers, total compensation

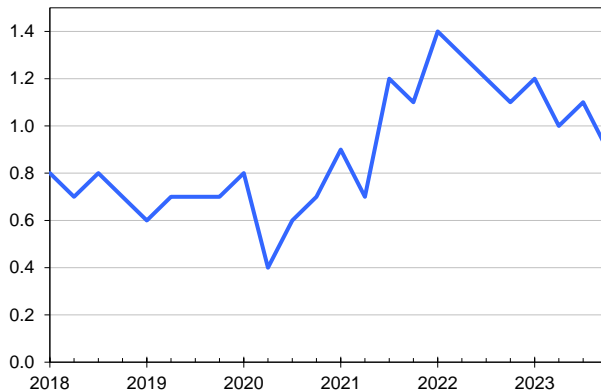
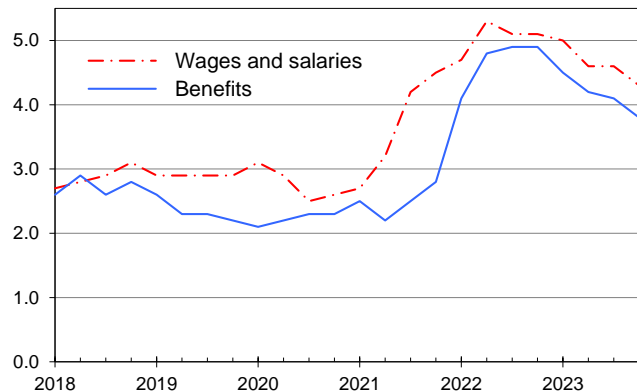


Chart 2. Twelve-month percent change, not seasonally adjusted, civilian workers



Compensation costs for civilian workers increased 4.2 percent for the 12-month period ending in December 2023 and increased 5.1 percent in December 2022. **Wages and salaries** increased 4.3 percent for the 12-month period ending in December 2023 and increased 5.1 percent for the 12-month period ending in December 2022. **Benefit costs** increased 3.8 percent over the year and increased 4.9 percent for the 12-month period ending in December 2022. (See chart 2 and tables A, 4, 8, and 12.)

Compensation costs for private industry workers increased 4.1 percent over the year. In December 2022, the increase was 5.1 percent. **Wages and salaries** increased 4.3 percent for the 12-month period ending in December 2023 and increased 5.1 percent in December 2022. The cost of **benefits** increased 3.6 percent for the 12-month period ending in December 2023 and increased 4.8 percent in December 2022. Inflation-adjusted (constant dollar) compensation costs for private industry increased 0.7 percent for the 12-month period ending in December 2023. Inflation-adjusted wages and salaries increased 0.9 percent for the 12 months ending December 2023. Inflation-adjusted benefit costs in the private sector increased 0.2 percent over that same period. (See charts 3, 4, and tables A, 5, 9, and 12.)

Chart 3. Twelve-month percent change, current dollar, private industry workers

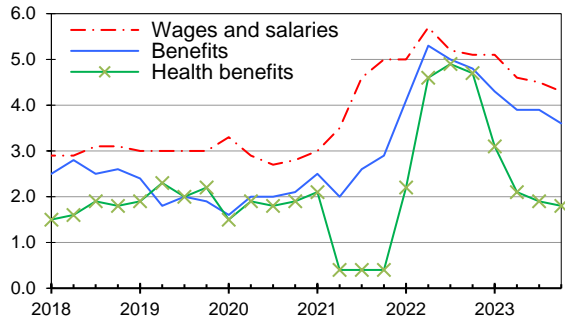
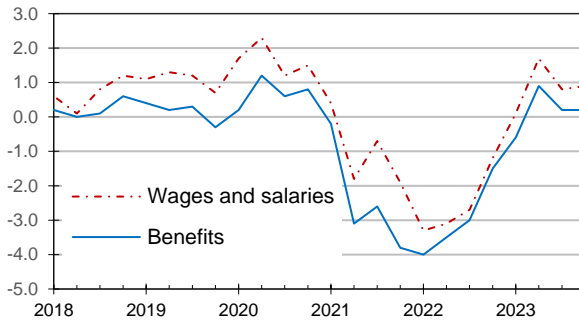


Chart 4. Twelve-month percent change, constant dollar, private industry workers



Within the private industry, **compensation costs** increased 4.5 percent for union workers and 4.0 percent for non-union workers for the 12-month period ending in December 2023. **Wages and salaries** increased 5.4 percent for union workers and 4.2 percent for non-union workers for the 12-month period ending in December 2023. **Benefit costs** increased 3.4 percent for union workers and 3.6 percent for non-union workers for the period ending in December 2023. (See tables 6, 10, and 12.)

Compensation costs for state and local government workers increased 4.6 percent for the 12-month period ending in December 2023 and increased 4.8 percent in the 12-month period ending December 2022. **Wages and salaries** increased 4.7 percent for the 12-month period ending in December 2023 and increased 4.7 percent a year ago. **Benefit costs** increased 4.6 percent for the 12-month period ending in December 2023. The prior year's increase was 5.0 percent. (See chart 5 and tables A, 7, 11, and 12.)

Chart 5. Twelve-month percent change, not seasonally adjusted, state and local government workers

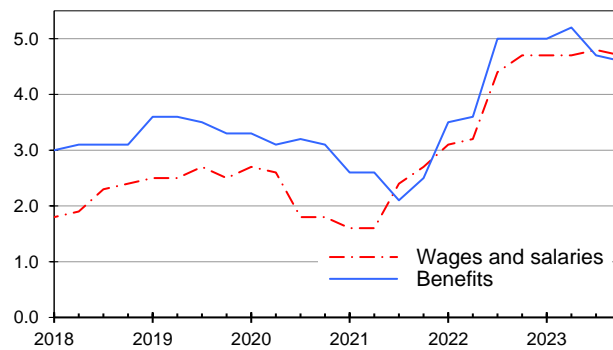


Table A. Major series of the Employment Cost Index
[Percent change]

| Category | 3-month, seasonally adjusted | | 12-month, not seasonally adjusted, current dollar | | | 12-month, not seasonally adjusted, constant dollar | | |
|-------------------------------------|------------------------------|-----------|---|-----------|-----------|--|-----------|-----------|
| | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Civilian workers¹ | | | | | | | | |
| Compensation ² | 1.1 | 0.9 | 5.1 | 4.3 | 4.2 | -1.3 | 0.6 | 0.9 |
| Wages and salaries..... | 1.2 | 0.9 | 5.1 | 4.6 | 4.3 | -1.2 | 0.9 | 1.0 |
| Benefits..... | 0.9 | 0.7 | 4.9 | 4.1 | 3.8 | -1.4 | 0.4 | 0.4 |
| Private industry | | | | | | | | |
| Compensation ² | 1.0 | 0.9 | 5.1 | 4.3 | 4.1 | -1.2 | 0.6 | 0.7 |
| Wages and salaries..... | 1.1 | 0.9 | 5.1 | 4.5 | 4.3 | -1.2 | 0.8 | 0.9 |
| Benefits..... | 0.8 | 0.6 | 4.8 | 3.9 | 3.6 | -1.5 | 0.2 | 0.2 |
| Health benefits..... | - | - | 4.7 | 1.9 | 1.8 | - | - | - |
| State and local government | | | | | | | | |
| Compensation ² | 1.5 | 1.0 | 4.8 | 4.8 | 4.6 | -1.5 | 1.0 | 1.3 |
| Wages and salaries..... | 1.8 | 1.1 | 4.7 | 4.8 | 4.7 | -1.5 | 1.0 | 1.1 |
| Benefits..... | 1.2 | 0.9 | 5.0 | 4.7 | 4.6 | -1.3 | 1.0 | 1.3 |

¹ Includes private industry and state and local government.

² Includes wages and salaries and benefits.

Note: All estimates in the table can be found in the public database at www.bls.gov/eci/data.htm. Dashes indicate data not available.

TECHNICAL NOTE

The Employment Cost Index (ECI) measures the change in the cost of labor, free from the influence of employment shifts among occupations and industries. For information on survey concepts, coverage, methods, nonresponse adjustment, and imputation, see *National Compensation Measures Handbook of Methods* at www.bls.gov/opub/hom/ncs/home.htm.

Sample size

Data for this reference period were collected from a probability sample of approximately 23,600 occupational observations selected from a sample of about 5,600 private industry establishments and approximately 7,500 occupational observations selected from a sample of about 1,400 state and local government establishments that provided data at the initial interview. From December 2021 to September 2023, an additional (fourth) private industry sample was used in estimation to mitigate the impact of decreasing response rates.

Standard errors

To assist users in ascertaining the reliability of ECI series, standard errors of all current quarter not seasonally adjusted 3- and 12-month percent change series are also available, see www.bls.gov/eci/factsheets/eci-standard-errors.htm and the database query tool at www.bls.gov/eci/data.htm. Standard errors provide users a measure of the precision of an estimate to ensure that it is within an acceptable range for their intended purpose.

Historical listings

Historical ECI data are available in (xlsx) format at www.bls.gov/eci/tables.htm. The continuous occupational and industry series listing uses the Standard Industrial Classification (SIC) Manual and Occupational Classification System (OCS) series from 1975 through 2005 and the North American Industry Classification System (NAICS) and Standard Occupational Classification (SOC) from 2006 to the present. It provides the official series deemed continuous after the change in classification systems. For more information on the criteria used in defining continuous series, see the article published in the *Monthly Labor Review* at www.bls.gov/opub/mlr/2006/04/art2full.pdf.

Employer Costs for Employee Compensation data

The costs per hour worked of compensation components are published as part of the Employer Costs for Employee Compensation (ECEC) news release. The ECEC release dates are available at www.bls.gov/schedule/news_release/ecec.htm. Historical ECEC data are available in xlsx format at www.bls.gov/ecec/tables.htm. Since the ECEC is calculated with current employment weights rather than the fixed weights used in computing the ECI, year-to-year changes in the cost levels usually differ from those in the ECI.

Fixed employment weights

For additional information on the use of fixed employment weights in computing the ECI, see www.bls.gov/opub/mlr/2016/article/introducing-2012-fixed-employment-weights-for-the-employment-cost-index.htm. Beginning with the December 2022 release, the ECI introduced new employment weights, see www.bls.gov/eci/notices/2022/eci-2021-fixed-weights-and-2018-soc-update.htm.

Additional information

Historical tables are available in (xlsx) format for constant dollar, current dollar, and continuous series, see www.bls.gov/eci/tables.htm. ECI release dates are available on the release calendar at www.bls.gov/schedule/news_release/eci.htm. Subscribe to receive the BLS Economic News Release email at public.govdelivery.com/accounts/USDOLBLS/subscriber/new. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

Table 1. Employment Cost Index for total compensation, by occupational group and industry¹
[Seasonally adjusted]

| Occupational group and industry | Indexes (Dec.2005=100) | | Percent changes for 3-months ended- | | | | | | | | |
|--|---------------------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Sep. 2023 | Dec. 2023 | Dec. 2021 | Mar. 2022 | Jun. 2022 | Sep. 2022 | Dec. 2022 | Mar. 2023 | Jun. 2023 | Sep. 2023 | Dec. 2023 |
| Civilian workers | | | | | | | | | | | |
| All workers ² | 160.7 | 162.1 | 1.1 | 1.4 | 1.3 | 1.2 | 1.1 | 1.2 | 1.0 | 1.1 | 0.9 |
| Industry | | | | | | | | | | | |
| Goods-producing industries ³ | 155.1 | 156.6 | 1.0 | 1.4 | 1.2 | 1.0 | 0.9 | 1.2 | 0.8 | 0.8 | 1.0 |
| Manufacturing..... | 154.6 | 156.1 | 0.9 | 1.7 | 1.1 | 0.9 | 0.9 | 1.1 | 0.9 | 0.7 | 1.0 |
| Service-providing industries ⁴ | 161.9 | 163.3 | 1.1 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 1.1 | 0.9 |
| Education and health services..... | 159.6 | 161.0 | 1.0 | 1.3 | 1.0 | 1.5 | 1.2 | 1.2 | 0.9 | 1.4 | 0.9 |
| Educational services..... | 158.1 | 159.5 | 0.6 | 1.1 | 0.9 | 1.6 | 1.1 | 1.2 | 0.7 | 1.4 | 0.9 |
| Elementary and secondary schools..... | 158.8 | 160.0 | 0.6 | 1.0 | 0.7 | 1.7 | 1.1 | 1.1 | 0.8 | 1.5 | 0.8 |
| Junior colleges, colleges, universities, and professional schools..... | 156.3 | 157.8 | 0.8 | 1.1 | 0.9 | 1.5 | 1.1 | 1.3 | 0.7 | 1.3 | 1.0 |
| Health care and social assistance..... | 161.0 | 162.4 | 1.5 | 1.4 | 1.3 | 1.4 | 1.3 | 1.2 | 1.1 | 1.3 | 0.9 |
| Hospitals..... | 161.4 | 162.7 | 1.5 | 1.4 | 1.3 | 1.4 | 1.2 | 1.3 | 1.1 | 1.2 | 0.8 |
| Nursing and residential care facilities..... | 161.7 | 163.1 | 1.8 | 1.6 | 1.6 | 1.8 | 1.2 | 1.3 | 1.1 | 1.3 | 0.9 |
| Public administration..... | 164.8 | 167.0 | 0.9 | 1.4 | 1.2 | 1.6 | 1.1 | 0.8 | 1.2 | 1.7 | 1.3 |
| Private industry workers | | | | | | | | | | | |
| All workers..... | 160.5 | 161.9 | 1.2 | 1.4 | 1.3 | 1.1 | 1.1 | 1.2 | 1.0 | 1.0 | 0.9 |
| Occupational group | | | | | | | | | | | |
| Management, professional, and related..... | 156.1 | 157.1 | 0.8 | 1.2 | 1.3 | 0.8 | 1.1 | 1.1 | 1.2 | 1.0 | 0.6 |
| Management, business, and financial..... | 157.1 | 157.8 | 0.6 | 1.2 | 1.4 | 0.5 | 0.9 | 1.1 | 1.2 | 1.0 | 0.4 |
| Professional and related..... | 155.5 | 156.7 | 1.1 | 1.2 | 1.2 | 1.1 | 1.1 | 1.3 | 1.1 | 1.0 | 0.8 |
| Sales and office..... | 163.6 | 165.0 | 1.1 | 1.6 | 2.0 | 1.2 | 1.2 | 1.2 | 1.1 | 0.7 | 0.9 |
| Sales and related..... | 161.3 | 163.0 | 1.0 | 1.8 | 2.6 | 1.0 | 1.2 | 1.1 | 1.1 | 0.4 | 1.1 |
| Office and administrative support.... | 165.0 | 166.2 | 1.1 | 1.5 | 1.6 | 1.3 | 1.2 | 1.2 | 1.0 | 1.0 | 0.7 |
| Natural resources, construction, and maintenance..... | 158.1 | 159.8 | 1.0 | 1.2 | 1.1 | 1.0 | 0.9 | 1.2 | 0.9 | 1.2 | 1.1 |
| Construction, extraction, farming, fishing, and forestry occupations.. | 157.1 | 158.2 | 0.9 | 1.2 | 0.9 | 1.0 | 0.9 | 1.0 | 1.0 | 1.0 | 0.7 |
| Installation, maintenance, and repair..... | 159.1 | 161.7 | 1.2 | 1.1 | 1.3 | 1.0 | 1.0 | 1.4 | 0.9 | 1.3 | 1.6 |
| Production, transportation, and material moving..... | 163.5 | 166.1 | 1.3 | 1.5 | 1.2 | 1.2 | 0.9 | 1.2 | 1.1 | 0.7 | 1.6 |
| Production..... | 159.8 | 161.5 | 1.2 | 1.6 | 1.3 | 1.3 | 0.9 | 1.4 | 0.9 | 0.8 | 1.1 |
| Transportation and material moving..... | 168.2 | 171.4 | 1.5 | 1.4 | 1.3 | 1.1 | 0.9 | 1.0 | 1.2 | 0.7 | 1.9 |
| Service occupations..... | 172.2 | 173.5 | 2.0 | 1.9 | 1.8 | 1.7 | 1.2 | 1.2 | 1.1 | 0.9 | 0.8 |
| Industry | | | | | | | | | | | |
| Goods-producing industries ³ | 155.0 | 156.5 | 1.0 | 1.4 | 1.2 | 0.9 | 0.9 | 1.3 | 0.7 | 0.8 | 1.0 |
| Construction..... | 156.2 | 157.8 | 1.0 | 0.8 | 1.3 | 1.1 | 1.0 | 1.5 | 0.5 | 1.1 | 1.0 |
| Manufacturing..... | 154.6 | 156.1 | 0.9 | 1.7 | 1.1 | 0.9 | 0.9 | 1.1 | 0.9 | 0.7 | 1.0 |
| Aircraft manufacturing..... | 134.5 | 135.1 | 0.4 | 2.1 | 0.7 | -5.6 | 0.8 | 0.9 | 0.9 | 0.3 | 0.4 |
| Service-providing industries ⁵ | 161.9 | 163.3 | 1.2 | 1.4 | 1.5 | 1.1 | 1.1 | 1.2 | 1.0 | 1.0 | 0.9 |
| Trade, transportation, and utilities..... | 165.6 | 167.7 | 1.9 | 1.4 | 1.4 | 1.0 | 0.9 | 1.1 | 1.3 | 0.9 | 1.3 |
| Wholesale trade..... | 158.4 | 159.7 | 1.6 | 1.7 | 1.6 | 0.7 | 1.1 | 0.8 | 1.5 | 0.6 | 0.8 |
| Retail trade..... | 170.8 | 171.8 | 2.5 | 1.6 | 1.6 | 1.3 | 1.0 | 1.4 | 1.0 | 1.1 | 0.6 |
| Transportation and warehousing. . . | 164.4 | 169.5 | 1.0 | 1.0 | 0.7 | 0.8 | 0.8 | 0.8 | 1.4 | 0.8 | 3.1 |
| Utilities..... | 171.1 | 172.5 | 0.7 | 0.9 | 0.7 | 0.9 | 1.0 | 1.0 | 1.5 | 1.2 | 0.8 |
| Information..... | 156.5 | 157.9 | 0.9 | 1.2 | 1.3 | 1.2 | 1.3 | 1.1 | 1.0 | 0.3 | 0.9 |
| Financial activities..... | 159.0 | 160.1 | -0.4 | 1.2 | 1.9 | 1.0 | 1.3 | 0.2 | 1.0 | 1.4 | 0.7 |
| Finance and insurance..... | 159.4 | 160.7 | -0.9 | 1.0 | 1.9 | 0.9 | 1.4 | 0.1 | 1.0 | 1.4 | 0.8 |

See footnotes at end of table.

Table 1. Employment Cost Index for total compensation, by occupational group and industry¹ — Continued
[Seasonally adjusted]

| Occupational group and industry | Indexes (Dec.2005=100) | | Percent changes for 3-months ended- | | | | | | | | |
|---|---------------------------|--------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Sep. 2023 | Dec. 2023 | Dec. 2021 | Mar. 2022 | Jun. 2022 | Sep. 2022 | Dec. 2022 | Mar. 2023 | Jun. 2023 | Sep. 2023 | Dec. 2023 |
| Credit intermediation and related activities..... | 159.4 | 161.6 | -1.3 | 0.0 | 2.0 | -0.1 | 1.6 | 1.5 | -0.5 | 1.7 | 1.4 |
| Insurance carriers and related activities..... | 160.5 | 160.8 | 1.0 | 1.5 | 1.7 | 1.1 | 1.0 | 1.2 | 0.9 | 0.8 | 0.2 |
| Real estate and rental and leasing.. | 157.2 | 157.2 | 1.6 | 1.8 | 1.9 | 0.9 | 0.8 | 1.0 | 1.1 | 1.2 | 0.0 |
| Professional and business services. .. | 160.4 | 161.2 | 1.1 | 1.3 | 1.5 | 1.1 | 1.0 | 1.5 | 0.8 | 0.9 | 0.5 |
| Professional, scientific, and technical services..... | 161.4 | 162.2 | 0.8 | 1.1 | 1.6 | 1.1 | 0.8 | 1.5 | 0.9 | 0.7 | 0.5 |
| Administrative and support and waste management and remediation services..... | 161.0 | 161.9 | 1.5 | 1.7 | 1.5 | 1.0 | 1.1 | 1.5 | 0.8 | 1.1 | 0.6 |
| Education and health services..... | 159.6 | 161.0 | 1.3 | 1.5 | 1.3 | 1.3 | 1.3 | 1.2 | 1.1 | 1.3 | 0.9 |
| Educational services..... | 156.0 | 157.5 | 0.5 | 1.3 | 1.4 | 1.1 | 1.2 | 1.3 | 0.6 | 1.3 | 1.0 |
| Junior colleges, colleges, universities, and professional schools..... | 155.1 | 156.4 | 0.7 | 0.9 | 1.1 | 1.2 | 0.9 | 1.0 | 0.7 | 1.2 | 0.8 |
| Health care and social assistance... | 160.3 | 161.7 | 1.5 | 1.5 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.3 | 0.9 |
| Hospitals..... | 161.1 | 162.6 | 1.6 | 1.4 | 1.3 | 1.3 | 1.2 | 1.4 | 1.2 | 1.1 | 0.9 |
| Nursing and residential care facilities..... | 160.3 | 161.6 | 1.9 | 1.9 | 1.6 | 1.7 | 1.2 | 1.4 | 1.1 | 1.3 | 0.8 |
| Leisure and hospitality..... | 172.3 | 173.7 | 1.8 | 1.9 | 1.6 | 1.6 | 1.2 | 1.4 | 1.1 | 0.6 | 0.8 |
| Accommodation and food services.. | 175.9 | 177.3 | 2.0 | 2.1 | 1.7 | 1.5 | 1.1 | 1.5 | 1.2 | 0.5 | 0.8 |
| Other services, except public administration..... | 163.2 | 164.8 | 1.6 | 1.3 | 1.0 | 1.0 | 0.8 | 1.7 | 1.2 | 1.1 | 1.0 |
| State and local government workers | | | | | | | | | | | |
| All workers..... | 161.6 | 163.2 | 0.8 | 1.1 | 0.9 | 1.7 | 1.1 | 1.1 | 1.0 | 1.5 | 1.0 |
| Industry | | | | | | | | | | | |
| Education and health services..... | 159.6 | 160.9 | 0.8 | 1.0 | 0.8 | 1.7 | 1.1 | 1.2 | 0.8 | 1.5 | 0.8 |
| Educational services..... | 158.7 | 160.0 | 0.7 | 1.0 | 0.7 | 1.8 | 1.1 | 1.2 | 0.8 | 1.5 | 0.8 |
| Schools..... | 158.6 | 160.0 | 0.7 | 1.0 | 0.7 | 1.7 | 1.1 | 1.2 | 0.8 | 1.5 | 0.9 |
| Elementary and secondary schools..... | 159.2 | 160.4 | 0.7 | 1.0 | 0.7 | 1.7 | 1.1 | 1.1 | 0.8 | 1.5 | 0.8 |
| Health care and social assistance... | 166.3 | 167.3 | 1.2 | 1.2 | 1.2 | 1.8 | 1.2 | 1.1 | 1.0 | 1.5 | 0.6 |
| Hospitals..... | 162.6 | 163.3 | 1.2 | 1.1 | 1.2 | 1.6 | 1.1 | 1.2 | 1.1 | 1.5 | 0.4 |
| Public administration..... | 164.8 | 167.0 | 0.9 | 1.4 | 1.2 | 1.6 | 1.1 | 0.8 | 1.2 | 1.7 | 1.3 |

¹ Includes wages, salaries, and employer costs for employee benefits.

² Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

³ Includes mining, construction, and manufacturing.

⁴ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; other services, except public administration; and public administration.

⁵ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 2. Employment Cost Index for wages and salaries, by occupational group and industry
[Seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | Percent changes for 3-months ended- | | | | | | | | |
|--|-------------------------|-----------|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Sep. 2023 | Dec. 2023 | Dec. 2021 | Mar. 2022 | Jun. 2022 | Sep. 2022 | Dec. 2022 | Mar. 2023 | Jun. 2023 | Sep. 2023 | Dec. 2023 |
| Civilian workers | | | | | | | | | | | |
| All workers ¹ | 160.5 | 162.0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.2 | 1.2 | 1.0 | 1.2 | 0.9 |
| Industry | | | | | | | | | | | |
| Goods-producing industries ² | 158.5 | 160.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.1 | 1.5 | 0.6 | 0.8 | 1.1 |
| Manufacturing..... | 158.4 | 160.0 | 1.1 | 1.4 | 1.2 | 1.3 | 1.1 | 1.2 | 0.9 | 0.6 | 1.0 |
| Service-providing industries ³ | 160.9 | 162.4 | 1.1 | 1.3 | 1.3 | 1.3 | 1.2 | 1.1 | 1.1 | 1.2 | 0.9 |
| Education and health services..... | 155.4 | 156.8 | 1.1 | 1.2 | 1.0 | 1.6 | 1.3 | 1.2 | 1.0 | 1.5 | 0.9 |
| Educational services..... | 148.5 | 149.9 | 0.5 | 0.9 | 0.8 | 1.6 | 1.1 | 1.0 | 0.7 | 1.6 | 0.9 |
| Elementary and secondary schools..... | 147.2 | 148.5 | 0.4 | 1.0 | 0.5 | 1.9 | 1.1 | 0.9 | 0.7 | 1.8 | 0.9 |
| Junior colleges, colleges, universities, and professional schools..... | 149.4 | 150.9 | 0.7 | 0.9 | 0.9 | 1.4 | 1.1 | 1.0 | 0.7 | 1.3 | 1.0 |
| Health care and social assistance..... | 162.4 | 163.9 | 1.7 | 1.4 | 1.3 | 1.5 | 1.4 | 1.4 | 1.1 | 1.4 | 0.9 |
| Hospitals..... | 162.2 | 163.7 | 1.6 | 1.4 | 1.3 | 1.5 | 1.3 | 1.7 | 1.2 | 1.2 | 0.9 |
| Nursing and residential care facilities..... | 165.3 | 166.8 | 1.9 | 1.8 | 1.7 | 2.0 | 1.4 | 1.4 | 1.2 | 1.5 | 0.9 |
| Private industry workers | | | | | | | | | | | |
| All workers..... | 162.8 | 164.3 | 1.3 | 1.3 | 1.4 | 1.2 | 1.2 | 1.2 | 1.0 | 1.1 | 0.9 |
| Occupational group | | | | | | | | | | | |
| Management, professional, and related..... | 157.4 | 158.4 | 0.8 | 1.0 | 1.3 | 0.9 | 1.0 | 1.1 | 1.2 | 1.0 | 0.6 |
| Professional and related..... | 157.3 | 158.6 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.4 | 1.1 | 1.1 | 0.8 |
| Management, business, and financial..... | 157.8 | 158.5 | 0.4 | 1.0 | 1.5 | 0.4 | 0.9 | 0.8 | 1.3 | 1.1 | 0.5 |
| Sales and office..... | 165.7 | 167.4 | 1.1 | 1.5 | 2.1 | 1.1 | 1.3 | 1.2 | 1.1 | 0.7 | 1.0 |
| Office and administrative support.... | 166.4 | 167.7 | 1.3 | 1.3 | 1.6 | 1.3 | 1.3 | 1.2 | 1.0 | 1.1 | 0.8 |
| Natural resources, construction, and maintenance..... | 159.6 | 161.7 | 1.1 | 1.2 | 1.1 | 1.1 | 1.0 | 1.5 | 0.9 | 1.2 | 1.3 |
| Construction, extraction, farming, fishing, and forestry occupations.. | 159.0 | 160.1 | 1.0 | 1.2 | 0.9 | 1.3 | 1.0 | 1.2 | 1.0 | 1.1 | 0.7 |
| Installation, maintenance, and repair..... | 160.5 | 163.6 | 1.2 | 1.4 | 1.2 | 1.1 | 1.0 | 1.7 | 0.8 | 1.4 | 1.9 |
| Production, transportation, and material moving..... | 167.6 | 170.5 | 1.7 | 1.3 | 1.4 | 1.4 | 1.0 | 1.2 | 1.1 | 0.8 | 1.7 |
| Production..... | 163.6 | 165.4 | 1.4 | 1.3 | 1.4 | 1.6 | 1.1 | 1.5 | 0.9 | 0.8 | 1.1 |
| Transportation and material moving..... | 172.5 | 176.1 | 1.8 | 1.3 | 1.4 | 1.2 | 1.0 | 1.0 | 1.2 | 0.8 | 2.1 |
| Service occupations..... | 177.1 | 178.4 | 2.2 | 1.9 | 1.9 | 1.8 | 1.2 | 1.4 | 1.2 | 1.0 | 0.7 |
| Industry | | | | | | | | | | | |
| Goods-producing industries ² | 158.6 | 160.3 | 1.2 | 1.2 | 1.3 | 1.2 | 1.1 | 1.5 | 0.6 | 0.8 | 1.1 |
| Construction..... | 158.6 | 160.5 | 1.1 | 0.9 | 1.4 | 1.2 | 1.2 | 1.8 | 0.4 | 1.1 | 1.2 |
| Manufacturing..... | 158.4 | 160.0 | 1.1 | 1.4 | 1.2 | 1.3 | 1.1 | 1.2 | 0.9 | 0.6 | 1.0 |
| Aircraft manufacturing..... | 160.1 | 161.0 | 0.5 | 1.1 | 0.8 | 1.0 | 0.9 | 0.4 | 1.1 | 0.5 | 0.5 |
| Service-providing industries ⁴ | 163.8 | 165.4 | 1.3 | 1.3 | 1.5 | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 |
| Trade, transportation, and utilities..... | 166.9 | 169.3 | 2.1 | 1.2 | 1.5 | 0.9 | 1.0 | 1.1 | 1.3 | 1.0 | 1.4 |
| Wholesale trade..... | 155.8 | 157.1 | 1.8 | 1.5 | 1.8 | 0.5 | 1.1 | 0.7 | 1.6 | 0.6 | 0.9 |
| Retail trade..... | 174.0 | 175.2 | 2.8 | 1.4 | 1.7 | 1.3 | 1.1 | 1.3 | 1.0 | 1.2 | 0.7 |
| Transportation and warehousing. . . | 167.7 | 173.8 | 1.2 | 0.8 | 0.9 | 0.8 | 0.9 | 0.9 | 1.5 | 0.8 | 3.6 |
| Utilities..... | 164.9 | 167.3 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 1.0 | 1.4 | 1.2 | 1.4 |
| Information..... | 155.3 | 156.6 | 0.7 | 1.4 | 0.8 | 1.3 | 1.4 | 1.3 | 1.0 | 0.2 | 0.8 |
| Financial activities..... | 160.7 | 161.9 | -1.1 | 0.7 | 1.8 | 0.9 | 1.6 | -0.4 | 1.3 | 1.8 | 0.7 |
| Finance and insurance..... | 161.3 | 162.7 | -1.8 | 0.5 | 1.8 | 1.0 | 1.6 | -0.7 | 1.3 | 1.9 | 0.9 |
| Credit intermediation and related activities..... | 159.0 | 161.8 | -2.3 | -0.9 | 1.7 | -0.6 | 1.9 | 1.3 | -0.7 | 1.9 | 1.7 |
| Insurance carriers and related activities..... | 160.0 | 159.7 | 0.9 | 1.3 | 1.5 | 1.1 | 1.0 | 1.3 | 1.1 | 1.2 | -0.2 |

See footnotes at end of table.

Table 2. Employment Cost Index for wages and salaries, by occupational group and industry — Continued
[Seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | Percent changes for 3-months ended- | | | | | | | | |
|---|-------------------------|-----------|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Sep. 2023 | Dec. 2023 | Dec. 2021 | Mar. 2022 | Jun. 2022 | Sep. 2022 | Dec. 2022 | Mar. 2023 | Jun. 2023 | Sep. 2023 | Dec. 2023 |
| Real estate and rental and leasing.. | 158.4 | 158.4 | 1.8 | 1.9 | 2.0 | 0.9 | 0.9 | 1.1 | 1.2 | 1.4 | 0.0 |
| Professional and business services. . . | 162.1 | 163.0 | 1.0 | 1.3 | 1.5 | 1.1 | 1.0 | 1.5 | 0.8 | 0.9 | 0.6 |
| Professional, scientific, and technical services..... | 162.5 | 163.4 | 0.7 | 1.1 | 1.6 | 1.2 | 0.7 | 1.4 | 0.8 | 0.8 | 0.5 |
| Administrative and support and waste management and remediation services..... | 165.4 | 166.5 | 1.7 | 1.7 | 1.6 | 1.3 | 1.1 | 1.5 | 0.8 | 1.1 | 0.7 |
| Education and health services..... | 161.3 | 162.8 | 1.5 | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | 1.1 | 1.4 | 0.9 |
| Educational services..... | 154.9 | 156.4 | 0.4 | 1.2 | 1.6 | 1.0 | 1.1 | 1.3 | 0.6 | 1.3 | 1.0 |
| Junior colleges, colleges, universities, and professional schools..... | 152.1 | 153.4 | 0.7 | 0.8 | 1.0 | 1.2 | 0.9 | 1.0 | 0.7 | 1.2 | 0.8 |
| Health care and social assistance... Hospitals..... | 162.6 | 164.2 | 1.7 | 1.5 | 1.3 | 1.4 | 1.4 | 1.4 | 1.2 | 1.4 | 1.0 |
| Nursing and residential care facilities..... | 163.0 | 164.7 | 1.7 | 1.4 | 1.3 | 1.4 | 1.3 | 1.7 | 1.2 | 1.2 | 1.1 |
| Leisure and hospitality..... | 166.3 | 167.7 | 2.0 | 1.9 | 1.7 | 1.9 | 1.4 | 1.4 | 1.3 | 1.5 | 0.8 |
| Accommodation and food services.. | 178.4 | 180.0 | 2.1 | 1.9 | 1.6 | 1.6 | 1.3 | 1.4 | 1.1 | 0.7 | 0.9 |
| Other services, except public administration..... | 182.0 | 183.7 | 2.3 | 1.9 | 1.7 | 1.5 | 1.2 | 1.4 | 1.3 | 0.4 | 0.9 |
| State and local government workers | 165.5 | 167.4 | 1.7 | 1.4 | 1.0 | 1.1 | 0.8 | 1.9 | 1.4 | 1.0 | 1.2 |
| All workers..... | 150.6 | 152.2 | 0.7 | 0.9 | 0.9 | 1.8 | 1.1 | 0.9 | 0.8 | 1.8 | 1.1 |
| Industry | | | | | | | | | | | |
| Education and health services..... | 148.5 | 149.8 | 0.7 | 0.8 | 0.7 | 1.8 | 1.1 | 0.9 | 0.8 | 1.7 | 0.9 |
| Educational services..... | 147.2 | 148.5 | 0.5 | 0.9 | 0.6 | 1.8 | 1.1 | 0.9 | 0.7 | 1.7 | 0.9 |
| Schools..... | 147.2 | 148.5 | 0.5 | 0.9 | 0.6 | 1.8 | 1.1 | 0.9 | 0.7 | 1.7 | 0.9 |
| Elementary and secondary schools..... | 146.7 | 148.0 | 0.5 | 0.8 | 0.5 | 1.9 | 1.1 | 0.8 | 0.7 | 1.8 | 0.9 |
| Health care and social assistance... Hospitals..... | 159.5 | 160.4 | 1.2 | 1.0 | 1.4 | 1.9 | 1.3 | 1.3 | 0.8 | 1.8 | 0.6 |
| Public administration..... | 158.3 | 159.0 | 1.1 | 1.0 | 1.4 | 1.7 | 1.1 | 1.4 | 0.9 | 1.9 | 0.4 |
| | 154.3 | 156.4 | 1.0 | 1.3 | 1.3 | 1.7 | 1.2 | 0.7 | 1.0 | 2.1 | 1.4 |

¹ Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

² Includes mining, construction, and manufacturing.

³ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; other services, except public administration; and public administration.

⁴ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 3. Employment Cost Index for benefits, by occupational group and industry
[Seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | Percent changes for 3-months ended- | | | | | | | | |
|---|-------------------------|-----------|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Sep. 2023 | Dec. 2023 | Dec. 2021 | Mar. 2022 | Jun. 2022 | Sep. 2022 | Dec. 2022 | Mar. 2023 | Jun. 2023 | Sep. 2023 | Dec. 2023 |
| Civilian workers | | | | | | | | | | | |
| All workers ¹ | 161.3 | 162.4 | 1.0 | 1.6 | 1.2 | 1.0 | 1.0 | 1.2 | 0.9 | 0.9 | 0.7 |
| Private industry workers | | | | | | | | | | | |
| All workers..... | 155.0 | 156.0 | 1.1 | 1.7 | 1.3 | 0.9 | 0.9 | 1.1 | 0.9 | 0.8 | 0.6 |
| Occupational group | | | | | | | | | | | |
| Management, professional, and related..... | 153.1 | 154.0 | 1.1 | 1.6 | 1.3 | 0.8 | 1.0 | 1.2 | 1.1 | 0.8 | 0.6 |
| Sales and office..... | 158.3 | 159.1 | 1.2 | 2.0 | 1.5 | 1.2 | 1.0 | 1.0 | 1.0 | 0.8 | 0.5 |
| Natural resources, construction, and maintenance..... | 154.8 | 156.0 | 0.8 | 0.9 | 1.2 | 0.7 | 0.7 | 0.7 | 0.9 | 1.0 | 0.8 |
| Production, transportation, and material moving..... | 155.4 | 157.2 | 0.7 | 1.9 | 1.0 | 0.7 | 0.6 | 1.0 | 1.0 | 0.8 | 1.2 |
| Service occupations..... | 156.5 | 157.4 | 1.3 | 1.9 | 1.6 | 1.3 | 1.3 | 0.7 | 0.7 | 0.8 | 0.6 |
| Industry | | | | | | | | | | | |
| Goods-producing industries ² | 147.9 | 149.0 | 0.6 | 1.8 | 0.8 | 0.4 | 0.6 | 0.7 | 0.9 | 1.0 | 0.7 |
| Manufacturing..... | 147.5 | 148.6 | 0.4 | 2.2 | 0.8 | 0.3 | 0.6 | 0.8 | 1.0 | 0.8 | 0.7 |
| Service-providing industries ³ | 157.4 | 158.4 | 1.1 | 1.7 | 1.4 | 1.1 | 0.9 | 1.2 | 1.0 | 0.8 | 0.6 |
| State and local government workers | | | | | | | | | | | |
| All workers ¹ | 183.3 | 185.0 | 0.9 | 1.4 | 0.9 | 1.6 | 1.0 | 1.5 | 1.0 | 1.2 | 0.9 |

¹ Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

² Includes mining, construction, and manufacturing.

³ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 4. Employment Cost Index for total compensation, for civilian workers, by occupational group and industry¹

[Not seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| All workers ² | 155.4 | 160.8 | 161.9 | 0.8 | 1.1 | 0.7 | 5.1 | 4.3 | 4.2 |
| Excluding incentive paid occupations ³ | 155.2 | 160.7 | 161.7 | 0.8 | 1.1 | 0.6 | 5.0 | 4.4 | 4.2 |
| Occupational group | | | | | | | | | |
| Management, professional, and related..... | 151.5 | 157.0 | 157.7 | 0.8 | 1.3 | 0.4 | 4.5 | 4.5 | 4.1 |
| Management, business, and financial..... | 152.1 | 157.6 | 158.0 | 0.7 | 1.1 | 0.3 | 4.2 | 4.3 | 3.9 |
| Professional and related..... | 151.2 | 156.7 | 157.6 | 0.9 | 1.4 | 0.6 | 4.6 | 4.6 | 4.2 |
| Sales and office..... | 159.1 | 164.2 | 165.4 | 1.0 | 0.7 | 0.7 | 6.0 | 4.3 | 4.0 |
| Sales and related..... | 157.0 | 161.3 | 163.0 | 1.2 | 0.2 | 1.1 | 6.7 | 3.9 | 3.8 |
| Office and administrative support..... | 160.0 | 165.7 | 166.6 | 0.9 | 1.1 | 0.5 | 5.5 | 4.5 | 4.1 |
| Natural resources, construction, and maintenance..... | 153.3 | 158.6 | 160.1 | 0.7 | 1.1 | 0.9 | 4.3 | 4.2 | 4.4 |
| Construction, extraction, farming, fishing, and forestry occupations..... | 152.9 | 157.7 | 158.6 | 0.7 | 1.0 | 0.6 | 4.1 | 3.9 | 3.7 |
| Installation, maintenance, and repair..... | 153.7 | 159.7 | 161.8 | 0.7 | 1.3 | 1.3 | 4.5 | 4.7 | 5.3 |
| Production, transportation, and material moving..... | 158.5 | 163.5 | 165.8 | 0.8 | 0.8 | 1.4 | 4.9 | 3.9 | 4.6 |
| Production..... | 154.9 | 159.8 | 161.4 | 0.8 | 0.7 | 1.0 | 5.0 | 4.0 | 4.2 |
| Transportation and material moving..... | 163.8 | 168.9 | 171.8 | 0.7 | 0.9 | 1.7 | 4.9 | 3.9 | 4.9 |
| Service occupations..... | 165.8 | 171.8 | 172.9 | 1.1 | 1.2 | 0.6 | 6.6 | 4.8 | 4.3 |
| Industry | | | | | | | | | |
| Goods-producing industries ⁴ | 150.6 | 155.1 | 156.4 | 0.8 | 0.6 | 0.8 | 4.6 | 3.8 | 3.9 |
| Manufacturing..... | 150.3 | 154.6 | 155.8 | 0.8 | 0.6 | 0.8 | 4.7 | 3.7 | 3.7 |
| Service-providing industries ⁵ | 156.3 | 161.9 | 162.9 | 0.9 | 1.3 | 0.6 | 5.1 | 4.5 | 4.2 |
| Education and health services..... | 154.1 | 159.7 | 161.0 | 1.1 | 1.8 | 0.8 | 5.2 | 4.8 | 4.5 |
| Educational services..... | 152.8 | 158.4 | 159.5 | 0.9 | 2.4 | 0.7 | 4.7 | 4.6 | 4.4 |
| Elementary and secondary schools... .. | 153.2 | 158.9 | 159.9 | 0.9 | 2.5 | 0.6 | 4.7 | 4.6 | 4.4 |
| Junior colleges, colleges, universities, and professional schools..... | 151.5 | 156.7 | 157.9 | 0.9 | 2.2 | 0.8 | 4.6 | 4.4 | 4.2 |
| Health care and social assistance..... | 155.4 | 161.1 | 162.5 | 1.3 | 1.3 | 0.9 | 5.5 | 5.0 | 4.6 |
| Hospitals..... | 155.7 | 161.3 | 162.8 | 1.3 | 1.2 | 0.9 | 5.4 | 4.9 | 4.6 |
| Nursing and residential care facilities... | 155.8 | 161.7 | 163.0 | 1.2 | 1.5 | 0.8 | 6.4 | 5.0 | 4.6 |
| Public administration..... | 158.6 | 165.1 | 166.7 | 0.8 | 2.4 | 1.0 | 5.3 | 4.9 | 5.1 |

¹ Includes wages, salaries, and employer costs for employee benefits.

² Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

³ The index for this series is not strictly comparable with other series in this table.

⁴ Includes mining, construction, and manufacturing.

⁵ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; other services, except public administration; and public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 5. Employment Cost Index for total compensation, for private industry workers, by occupational group and industry¹

[Not seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| All workers..... | 155.3 | 160.6 | 161.6 | 0.8 | 0.9 | 0.6 | 5.1 | 4.3 | 4.1 |
| Excluding incentive paid occupations ² | 155.0 | 160.4 | 161.4 | 0.8 | 0.9 | 0.6 | 5.0 | 4.4 | 4.1 |
| Occupational group | | | | | | | | | |
| Management, professional, and related..... | 150.8 | 156.2 | 156.8 | 0.8 | 1.0 | 0.4 | 4.4 | 4.4 | 4.0 |
| Excluding incentive paid occupations ² | 149.8 | 155.2 | 155.9 | 0.7 | 0.9 | 0.5 | 4.5 | 4.4 | 4.1 |
| Management, business, and financial..... | 151.8 | 157.2 | 157.5 | 0.6 | 0.9 | 0.2 | 4.1 | 4.2 | 3.8 |
| Excluding incentive paid occupations ² | 150.4 | 155.8 | 156.2 | 0.6 | 0.8 | 0.3 | 4.4 | 4.2 | 3.9 |
| Professional and related..... | 150.1 | 155.5 | 156.4 | 0.9 | 1.0 | 0.6 | 4.7 | 4.6 | 4.2 |
| Sales and office..... | 159.1 | 164.0 | 165.2 | 1.1 | 0.6 | 0.7 | 6.1 | 4.2 | 3.8 |
| Excluding incentive paid occupations ² | 160.3 | 166.0 | 166.9 | 0.9 | 0.7 | 0.5 | 5.7 | 4.5 | 4.1 |
| Sales and related..... | 156.9 | 161.2 | 162.9 | 1.2 | 0.2 | 1.1 | 6.7 | 3.9 | 3.8 |
| Excluding incentive paid occupations ² | 160.6 | 166.5 | 167.6 | 0.9 | 0.5 | 0.7 | 6.0 | 4.6 | 4.4 |
| Office and administrative support..... | 159.6 | 165.1 | 165.8 | 0.9 | 0.9 | 0.4 | 5.6 | 4.4 | 3.9 |
| Natural resources, construction, and maintenance..... | 152.9 | 158.2 | 159.7 | 0.7 | 1.0 | 0.9 | 4.2 | 4.2 | 4.4 |
| Construction, extraction, farming, fishing, and forestry occupations..... | 152.5 | 157.3 | 158.1 | 0.7 | 1.0 | 0.5 | 4.0 | 3.9 | 3.7 |
| Installation, maintenance, and repair..... | 153.3 | 159.2 | 161.5 | 0.7 | 1.2 | 1.4 | 4.4 | 4.6 | 5.3 |
| Production, transportation, and material moving..... | 158.2 | 163.2 | 165.5 | 0.8 | 0.8 | 1.4 | 4.8 | 3.9 | 4.6 |
| Excluding incentive paid occupations ² | 157.9 | 162.9 | 165.3 | 0.8 | 0.7 | 1.5 | 4.8 | 4.0 | 4.7 |
| Production..... | 154.9 | 159.8 | 161.3 | 0.9 | 0.7 | 0.9 | 5.2 | 4.1 | 4.1 |
| Excluding incentive paid occupations ² | 155.3 | 160.2 | 161.8 | 0.8 | 0.7 | 1.0 | 5.0 | 4.0 | 4.2 |
| Transportation and material moving..... | 163.4 | 168.5 | 171.5 | 0.7 | 0.8 | 1.8 | 4.7 | 3.9 | 5.0 |
| Service occupations..... | 166.6 | 172.3 | 173.2 | 1.0 | 0.9 | 0.5 | 6.9 | 4.5 | 4.0 |
| Industry and occupational group | | | | | | | | | |
| Goods-producing industries ³ | 150.6 | 155.1 | 156.3 | 0.8 | 0.6 | 0.8 | 4.6 | 3.8 | 3.8 |
| Excluding incentive paid occupations ² | 150.3 | 154.8 | 155.9 | 0.7 | 0.7 | 0.7 | 4.4 | 3.7 | 3.7 |
| Management, professional, and related..... | 144.3 | 148.4 | 148.9 | 0.6 | 0.4 | 0.3 | 3.6 | 3.5 | 3.2 |
| Sales and office..... | 158.0 | 163.0 | 167.1 | 1.7 | 0.2 | 2.5 | 6.5 | 4.9 | 5.8 |
| Natural resources, construction, and maintenance..... | 151.8 | 156.6 | 157.5 | 0.7 | 0.9 | 0.6 | 4.0 | 3.8 | 3.8 |
| Production, transportation, and material moving..... | 153.2 | 157.7 | 159.2 | 0.8 | 0.6 | 1.0 | 5.2 | 3.7 | 3.9 |
| Construction..... | 151.4 | 156.3 | 157.7 | 0.8 | 0.8 | 0.9 | 4.3 | 4.1 | 4.2 |
| Manufacturing..... | 150.3 | 154.6 | 155.8 | 0.8 | 0.6 | 0.8 | 4.7 | 3.7 | 3.7 |
| Management, professional, and related..... | 145.5 | 149.5 | 150.1 | 0.6 | 0.4 | 0.4 | 3.6 | 3.3 | 3.2 |
| Sales and office occupations..... | 155.0 | 159.4 | 160.4 | 1.2 | 0.6 | 0.6 | 6.4 | 4.0 | 3.5 |
| Natural resources, construction, and maintenance..... | 150.1 | 154.4 | 156.0 | 1.1 | 0.7 | 1.0 | 4.1 | 4.0 | 3.9 |
| Production, transportation, and material moving..... | 153.0 | 157.4 | 159.0 | 0.9 | 0.6 | 1.0 | 5.4 | 3.8 | 3.9 |
| Aircraft manufacturing..... | 131.3 | 134.6 | 134.7 | 0.4 | 0.0 | 0.1 | -4.1 | 2.9 | 2.6 |
| Service-providing industries ⁴ | 156.6 | 162.1 | 163.1 | 0.8 | 0.9 | 0.6 | 5.2 | 4.4 | 4.2 |
| Excluding incentive paid occupations ² | 156.4 | 162.0 | 163.0 | 0.9 | 0.9 | 0.6 | 5.2 | 4.5 | 4.2 |
| Management, professional, and related..... | 151.9 | 157.5 | 158.1 | 0.8 | 1.0 | 0.4 | 4.5 | 4.5 | 4.1 |
| Sales and office..... | 159.2 | 164.1 | 164.9 | 1.0 | 0.6 | 0.5 | 6.1 | 4.1 | 3.6 |
| Natural resources, construction, and maintenance..... | 154.5 | 160.6 | 163.0 | 0.8 | 1.3 | 1.5 | 4.5 | 4.8 | 5.5 |
| Production, transportation, and material moving..... | 163.8 | 169.2 | 172.1 | 0.7 | 0.9 | 1.7 | 4.5 | 4.1 | 5.1 |
| Service occupations..... | 166.6 | 172.4 | 173.3 | 1.0 | 1.0 | 0.5 | 6.9 | 4.5 | 4.0 |
| Trade, transportation, and utilities..... | 160.1 | 165.6 | 167.5 | 0.8 | 0.7 | 1.1 | 4.9 | 4.3 | 4.6 |
| Excluding incentive paid occupations ² | 160.1 | 166.0 | 168.1 | 0.8 | 0.8 | 1.3 | 4.9 | 4.5 | 5.0 |
| Wholesale trade..... | 153.2 | 158.5 | 159.1 | 0.7 | 0.4 | 0.4 | 5.2 | 4.1 | 3.9 |
| Excluding incentive paid occupations ² | 155.9 | 161.8 | 162.2 | 0.8 | 0.7 | 0.2 | 5.2 | 4.6 | 4.0 |

See footnotes at end of table.

Table 5. Employment Cost Index for total compensation, for private industry workers, by occupational group and industry¹ — Continued
[Not seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Service-providing industries - Continued | | | | | | | | | |
| Retail trade..... | 164.7 | 170.6 | 171.5 | 0.9 | 0.8 | 0.5 | 5.6 | 4.5 | 4.1 |
| Excluding incentive paid occupations ² | 162.8 | 169.2 | 170.1 | 0.7 | 0.8 | 0.5 | 5.8 | 4.7 | 4.5 |
| Transportation and warehousing..... | 159.8 | 164.5 | 169.8 | 0.9 | 0.9 | 3.2 | 3.3 | 3.9 | 6.3 |
| Utilities..... | 164.2 | 170.9 | 171.9 | 0.7 | 1.0 | 0.6 | 3.6 | 4.8 | 4.7 |
| Information..... | 152.3 | 156.4 | 157.5 | 1.1 | 0.1 | 0.7 | 5.3 | 3.9 | 3.4 |
| Financial activities..... | 153.8 | 159.1 | 159.0 | 0.6 | 0.8 | -0.1 | 5.3 | 4.1 | 3.4 |
| Excluding incentive paid occupations ² | 154.0 | 159.2 | 159.3 | 0.5 | 0.4 | 0.1 | 5.5 | 3.9 | 3.4 |
| Finance and insurance..... | 154.3 | 159.5 | 159.5 | 0.7 | 0.7 | 0.0 | 5.3 | 4.0 | 3.4 |
| Credit intermediation and related activities..... | 154.1 | 160.4 | 160.5 | 0.3 | 1.3 | 0.1 | 3.6 | 4.4 | 4.2 |
| Excluding incentive paid occupations ² | 157.6 | 163.4 | 163.5 | 0.4 | 0.6 | 0.1 | 6.2 | 4.1 | 3.7 |
| Insurance carriers and related activities.. | 155.1 | 160.6 | 159.9 | 0.5 | 0.4 | -0.4 | 5.4 | 4.0 | 3.1 |
| Excluding incentive paid occupations ² | 152.9 | 157.9 | 158.2 | 0.5 | 0.1 | 0.2 | 4.9 | 3.8 | 3.5 |
| Real estate and rental and leasing..... | 151.9 | 157.4 | 156.9 | 0.5 | 1.2 | -0.3 | 5.6 | 4.2 | 3.3 |
| Excluding incentive paid occupations ² | 156.0 | 161.2 | 160.8 | 0.6 | 0.7 | -0.2 | 5.3 | 3.9 | 3.1 |
| Professional and business services..... | 155.2 | 160.7 | 161.0 | 0.7 | 0.9 | 0.2 | 4.9 | 4.3 | 3.7 |
| Professional, scientific, and technical services..... | 156.1 | 161.7 | 161.9 | 0.4 | 0.9 | 0.1 | 4.6 | 4.0 | 3.7 |
| Administrative and support and waste management and remediation services... | 155.5 | 161.0 | 161.6 | 0.9 | 0.9 | 0.4 | 5.4 | 4.5 | 3.9 |
| Education and health services..... | 154.1 | 159.7 | 161.1 | 1.2 | 1.4 | 0.9 | 5.5 | 4.9 | 4.5 |
| Educational services..... | 151.4 | 156.5 | 157.7 | 1.0 | 2.0 | 0.8 | 5.1 | 4.4 | 4.2 |
| Junior colleges, colleges, universities, and professional schools..... | 150.8 | 155.6 | 156.5 | 0.7 | 2.0 | 0.6 | 4.1 | 3.9 | 3.8 |
| Health care and social assistance..... | 154.7 | 160.4 | 161.8 | 1.3 | 1.3 | 0.9 | 5.5 | 5.0 | 4.6 |
| Hospitals..... | 155.4 | 160.9 | 162.5 | 1.3 | 0.9 | 1.0 | 5.4 | 4.9 | 4.6 |
| Nursing and residential care facilities.... | 154.5 | 160.4 | 161.6 | 1.2 | 1.5 | 0.7 | 6.6 | 5.0 | 4.6 |
| Nursing care facilities ² | 154.2 | 160.2 | 161.6 | 1.4 | 1.5 | 0.9 | 7.0 | 5.3 | 4.8 |
| Leisure and hospitality..... | 166.3 | 172.5 | 173.0 | 0.7 | 0.8 | 0.3 | 6.4 | 4.4 | 4.0 |
| Accommodation and food service..... | 169.8 | 176.1 | 176.7 | 0.6 | 0.5 | 0.3 | 6.4 | 4.3 | 4.1 |
| Other services, except public administration.. | 156.3 | 163.4 | 164.3 | 0.3 | 1.1 | 0.6 | 4.1 | 4.9 | 5.1 |

¹ Includes wages, salaries, and employer costs for employee benefits.

² The index for this series is not strictly comparable with other series in this table.

³ Includes mining, construction, and manufacturing.

⁴ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 6. Employment Cost Index for total compensation, for private industry workers, by bargaining status and Census region and division¹
[Not seasonally adjusted]

| Bargaining status and Census region and division | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|--|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Bargaining status | | | | | | | | | |
| Union..... | 156.6 | 160.9 | 163.7 | 1.0 | 0.8 | 1.7 | 3.6 | 3.8 | 4.5 |
| Goods-producing industries ² | 150.0 | 153.2 | 154.9 | 0.7 | 0.7 | 1.1 | 2.6 | 2.8 | 3.3 |
| Manufacturing..... | 144.0 | 146.1 | 148.7 | 0.8 | 0.3 | 1.8 | 2.3 | 2.3 | 3.3 |
| Service-providing industries ³ | 161.3 | 166.4 | 169.8 | 1.2 | 0.9 | 2.0 | 4.1 | 4.4 | 5.3 |
| Nonunion..... | 155.0 | 160.4 | 161.2 | 0.8 | 0.9 | 0.5 | 5.3 | 4.4 | 4.0 |
| Goods-producing industries ² | 150.5 | 155.3 | 156.5 | 0.9 | 0.6 | 0.8 | 5.0 | 4.1 | 4.0 |
| Manufacturing..... | 151.8 | 156.6 | 157.5 | 0.7 | 0.6 | 0.6 | 5.1 | 3.9 | 3.8 |
| Service-providing industries ³ | 156.1 | 161.6 | 162.4 | 0.8 | 0.9 | 0.5 | 5.3 | 4.4 | 4.0 |
| Census region and division⁴ | | | | | | | | | |
| Northeast..... | 157.0 | 162.2 | 163.0 | 1.0 | 0.9 | 0.5 | 4.9 | 4.3 | 3.8 |
| New England..... | 162.1 | 166.7 | 167.1 | 1.1 | 1.0 | 0.2 | 5.7 | 4.0 | 3.1 |
| Middle Atlantic..... | 155.2 | 160.5 | 161.5 | 0.9 | 0.8 | 0.6 | 4.7 | 4.4 | 4.1 |
| South..... | 152.9 | 158.8 | 159.7 | 0.7 | 1.1 | 0.6 | 5.0 | 4.6 | 4.4 |
| South Atlantic..... | 155.8 | 162.2 | 162.9 | 0.8 | 1.2 | 0.4 | 5.6 | 5.0 | 4.6 |
| East South Central..... | 152.3 | 158.1 | 159.4 | 0.9 | 1.0 | 0.8 | 4.6 | 4.7 | 4.7 |
| West South Central..... | 148.2 | 153.4 | 154.3 | 0.4 | 0.8 | 0.6 | 4.0 | 3.9 | 4.1 |
| Midwest..... | 152.8 | 157.5 | 158.5 | 0.7 | 0.7 | 0.6 | 5.0 | 3.8 | 3.7 |
| East North Central..... | 151.4 | 156.3 | 157.4 | 0.9 | 0.8 | 0.7 | 5.3 | 4.1 | 4.0 |
| West North Central..... | 156.2 | 160.2 | 161.1 | 0.2 | 0.3 | 0.6 | 4.4 | 2.8 | 3.1 |
| West..... | 159.5 | 164.8 | 166.1 | 1.1 | 0.8 | 0.8 | 5.4 | 4.4 | 4.1 |
| Mountain..... | 157.0 | 162.9 | 164.8 | 1.0 | 1.1 | 1.2 | 5.2 | 4.8 | 5.0 |
| Pacific..... | 160.6 | 165.7 | 166.9 | 1.1 | 0.7 | 0.7 | 5.4 | 4.3 | 3.9 |

¹ Includes wages, salaries, and employer costs for employee benefits.

² Includes mining, construction, and manufacturing.

³ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

⁴ The Census divisions are defined as follows: New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont; Middle Atlantic: New Jersey, New York, and Pennsylvania; South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; East South Central: Alabama, Kentucky, Mississippi, and Tennessee; West South Central: Arkansas, Louisiana, Oklahoma, and Texas; East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin; West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; and Pacific: Alaska, California, Hawaii, Oregon, and Washington.

NOTE: The indexes for these series are not strictly comparable to those for the aggregate, occupation, and industry series.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 7. Employment Cost Index for total compensation, for state and local government workers, by occupational group and industry¹
[Not seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| All workers..... | 155.8 | 161.8 | 163.0 | 0.9 | 2.3 | 0.7 | 4.8 | 4.8 | 4.6 |
| Occupational group | | | | | | | | | |
| Management, professional, and related. | 153.3 | 159.1 | 160.2 | 0.9 | 2.5 | 0.7 | 4.6 | 4.7 | 4.5 |
| Professional and related..... | 153.2 | 158.8 | 159.8 | 0.9 | 2.3 | 0.6 | 4.6 | 4.6 | 4.3 |
| Sales and office..... | 159.0 | 165.5 | 167.0 | 0.8 | 2.2 | 0.9 | 5.0 | 4.9 | 5.0 |
| Office and administrative support..... | 159.1 | 165.5 | 167.0 | 0.8 | 2.2 | 0.9 | 5.1 | 4.9 | 5.0 |
| Service occupations..... | 163.3 | 169.6 | 171.4 | 1.2 | 2.0 | 1.1 | 6.0 | 5.1 | 5.0 |
| Industry | | | | | | | | | |
| Education and health services..... | 154.0 | 159.7 | 160.8 | 0.9 | 2.4 | 0.7 | 4.8 | 4.7 | 4.4 |
| Educational services..... | 153.2 | 158.9 | 159.9 | 0.9 | 2.5 | 0.6 | 4.6 | 4.7 | 4.4 |
| Schools..... | 153.2 | 158.8 | 159.9 | 0.9 | 2.5 | 0.7 | 4.7 | 4.6 | 4.4 |
| Elementary and secondary schools. ... | 153.6 | 159.3 | 160.2 | 0.9 | 2.5 | 0.6 | 4.6 | 4.6 | 4.3 |
| Health care and social assistance..... | 160.4 | 166.3 | 167.4 | 1.3 | 2.0 | 0.7 | 5.5 | 5.0 | 4.4 |
| Hospitals..... | 156.9 | 162.7 | 163.6 | 1.2 | 1.9 | 0.6 | 5.2 | 5.0 | 4.3 |
| Public administration..... | 158.6 | 165.1 | 166.7 | 0.8 | 2.4 | 1.0 | 5.3 | 4.9 | 5.1 |

¹ Includes wages, salaries, and employer costs for employee benefits.
SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 8. Employment Cost Index for wages and salaries, for civilian workers, by occupational group and industry
[Not seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| All workers ¹ | 155.2 | 160.7 | 161.9 | 1.0 | 1.3 | 0.7 | 5.1 | 4.6 | 4.3 |
| Excluding incentive paid occupations ² | 154.4 | 160.1 | 161.3 | 0.8 | 1.3 | 0.7 | 5.0 | 4.6 | 4.5 |
| Occupational group | | | | | | | | | |
| Management, professional, and related..... | 149.6 | 155.1 | 155.9 | 0.8 | 1.4 | 0.5 | 4.3 | 4.5 | 4.2 |
| Management, business, and financial..... | 151.8 | 157.2 | 157.6 | 0.6 | 1.4 | 0.3 | 3.9 | 4.2 | 3.8 |
| Professional and related..... | 148.5 | 154.1 | 155.1 | 1.0 | 1.6 | 0.6 | 4.6 | 4.8 | 4.4 |
| Sales and office..... | 160.1 | 165.2 | 166.8 | 1.2 | 0.8 | 1.0 | 6.1 | 4.4 | 4.2 |
| Sales and related..... | 160.2 | 164.3 | 166.4 | 1.3 | 0.2 | 1.3 | 6.8 | 3.9 | 3.9 |
| Office and administrative support..... | 159.6 | 165.6 | 166.7 | 1.1 | 1.3 | 0.7 | 5.6 | 4.9 | 4.4 |
| Natural resources, construction, and maintenance..... | 153.5 | 159.2 | 161.0 | 0.9 | 1.2 | 1.1 | 4.6 | 4.6 | 4.9 |
| Construction, extraction, farming, fishing, and forestry occupations..... | 153.3 | 158.5 | 159.5 | 0.9 | 1.0 | 0.6 | 4.5 | 4.3 | 4.0 |
| Installation, maintenance, and repair..... | 153.8 | 160.1 | 162.8 | 0.8 | 1.5 | 1.7 | 4.7 | 4.9 | 5.9 |
| Production, transportation, and material moving..... | 161.6 | 166.9 | 169.5 | 0.9 | 0.9 | 1.6 | 5.2 | 4.2 | 4.9 |
| Production..... | 158.2 | 163.5 | 165.2 | 1.0 | 0.7 | 1.0 | 5.4 | 4.4 | 4.4 |
| Transportation and material moving..... | 166.4 | 171.8 | 175.1 | 0.8 | 1.1 | 1.9 | 5.1 | 4.1 | 5.2 |
| Service occupations..... | 166.8 | 173.1 | 174.3 | 1.1 | 1.3 | 0.7 | 6.9 | 4.9 | 4.5 |
| Industry | | | | | | | | | |
| Goods-producing industries ³ | 153.8 | 158.5 | 160.1 | 1.0 | 0.6 | 1.0 | 5.0 | 4.1 | 4.1 |
| Manufacturing..... | 153.9 | 158.4 | 159.7 | 0.9 | 0.6 | 0.8 | 5.1 | 3.9 | 3.8 |
| Service-providing industries ⁴ | 155.4 | 161.1 | 162.2 | 0.9 | 1.4 | 0.7 | 5.1 | 4.6 | 4.4 |
| Education and health services..... | 150.0 | 155.7 | 157.0 | 1.2 | 2.0 | 0.8 | 5.2 | 5.1 | 4.7 |
| Educational services..... | 144.0 | 149.2 | 150.2 | 0.8 | 2.6 | 0.7 | 4.5 | 4.5 | 4.3 |
| Elementary and secondary schools... .. | 142.6 | 148.0 | 148.8 | 0.8 | 2.8 | 0.5 | 4.5 | 4.6 | 4.3 |
| Junior colleges, colleges, and universities..... | 145.4 | 150.1 | 151.3 | 0.9 | 2.3 | 0.8 | 4.4 | 4.2 | 4.1 |
| Health care and social assistance..... | 156.3 | 162.4 | 164.1 | 1.5 | 1.4 | 1.0 | 5.8 | 5.5 | 5.0 |
| Hospitals..... | 155.9 | 162.1 | 163.9 | 1.5 | 1.3 | 1.1 | 5.6 | 5.5 | 5.1 |
| Nursing and residential care facilities... | 158.7 | 165.4 | 166.9 | 1.3 | 1.7 | 0.9 | 6.9 | 5.6 | 5.2 |
| Public administration..... | 148.5 | 154.8 | 156.4 | 0.8 | 2.9 | 1.0 | 5.5 | 5.1 | 5.3 |

¹ Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

² The index for this series is not strictly comparable with other series in this table.

³ Includes mining, construction, and manufacturing.

⁴ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; other services, except public administration; and public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 9. Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry

[Not seasonally adjusted]

| Occupational group and industry | Index value (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-----------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| All workers..... | 157.4 | 162.9 | 164.1 | 1.0 | 1.0 | 0.7 | 5.1 | 4.5 | 4.3 |
| Excluding incentive paid occupations ¹ | 156.7 | 162.3 | 163.5 | 0.9 | 0.9 | 0.7 | 5.2 | 4.5 | 4.3 |
| Occupational group | | | | | | | | | |
| Management, professional, and related..... | 152.0 | 157.6 | 158.2 | 0.8 | 1.2 | 0.4 | 4.3 | 4.5 | 4.1 |
| Excluding incentive paid occupations ¹ | 150.5 | 155.9 | 156.7 | 0.8 | 1.0 | 0.5 | 4.4 | 4.4 | 4.1 |
| Management, business, and financial..... | 152.8 | 158.0 | 158.3 | 0.7 | 1.1 | 0.2 | 3.9 | 4.1 | 3.6 |
| Excluding incentive paid occupations ¹ | 150.2 | 155.3 | 155.8 | 0.5 | 0.8 | 0.3 | 4.3 | 3.9 | 3.7 |
| Professional and related..... | 151.5 | 157.3 | 158.4 | 1.0 | 1.1 | 0.7 | 4.6 | 4.9 | 4.6 |
| Sales and office..... | 161.3 | 166.3 | 167.8 | 1.2 | 0.6 | 0.9 | 6.2 | 4.3 | 4.0 |
| Excluding incentive paid occupations ¹ | 162.0 | 168.1 | 169.2 | 1.1 | 0.8 | 0.7 | 5.7 | 4.9 | 4.4 |
| Sales and related..... | 160.3 | 164.5 | 166.5 | 1.3 | 0.2 | 1.2 | 6.8 | 3.9 | 3.9 |
| Excluding incentive paid occupations ¹ | 163.4 | 169.5 | 170.8 | 1.0 | 0.6 | 0.8 | 6.0 | 4.8 | 4.5 |
| Office and administrative support..... | 160.6 | 166.4 | 167.4 | 1.1 | 1.0 | 0.6 | 5.7 | 4.8 | 4.2 |
| Natural resources, construction, and maintenance..... | 153.9 | 159.7 | 161.5 | 0.9 | 1.1 | 1.1 | 4.6 | 4.7 | 4.9 |
| Construction, extraction, farming, fishing, and forestry occupations..... | 153.7 | 159.0 | 159.9 | 0.9 | 1.0 | 0.6 | 4.4 | 4.3 | 4.0 |
| Installation, maintenance, and repair..... | 154.2 | 160.6 | 163.4 | 0.9 | 1.3 | 1.7 | 4.8 | 5.0 | 6.0 |
| Production, transportation, and material moving..... | 161.9 | 167.2 | 169.9 | 0.9 | 0.8 | 1.6 | 5.2 | 4.2 | 4.9 |
| Excluding incentive paid occupations ¹ | 161.6 | 167.0 | 169.8 | 0.9 | 0.8 | 1.7 | 5.2 | 4.3 | 5.1 |
| Production..... | 158.3 | 163.6 | 165.3 | 1.0 | 0.7 | 1.0 | 5.5 | 4.4 | 4.4 |
| Excluding incentive paid occupations ¹ | 158.7 | 164.0 | 165.7 | 1.0 | 0.7 | 1.0 | 5.4 | 4.4 | 4.4 |
| Transportation and material moving..... | 167.2 | 172.6 | 176.0 | 0.8 | 1.0 | 2.0 | 5.0 | 4.1 | 5.3 |
| Service occupations..... | 170.7 | 177.1 | 178.2 | 1.1 | 1.0 | 0.6 | 7.0 | 4.9 | 4.4 |
| Industry and occupational group | | | | | | | | | |
| Goods-producing industries ² | 153.9 | 158.6 | 160.2 | 1.0 | 0.6 | 1.0 | 5.0 | 4.1 | 4.1 |
| Excluding incentive paid occupations ¹ | 153.5 | 158.2 | 159.4 | 0.9 | 0.6 | 0.8 | 4.8 | 3.9 | 3.8 |
| Management, professional, and related..... | 148.2 | 152.4 | 152.9 | 0.7 | 0.3 | 0.3 | 3.9 | 3.5 | 3.2 |
| Sales and office..... | 163.2 | 168.6 | 174.5 | 2.1 | 0.2 | 3.5 | 7.1 | 5.4 | 6.9 |
| Natural resources, construction, and maintenance..... | 153.4 | 158.7 | 159.7 | 0.9 | 1.0 | 0.6 | 4.4 | 4.3 | 4.1 |
| Production, transportation, and material moving..... | 157.0 | 161.7 | 163.4 | 1.0 | 0.6 | 1.1 | 5.7 | 4.0 | 4.1 |
| Construction..... | 153.6 | 158.7 | 160.5 | 1.1 | 0.7 | 1.1 | 4.8 | 4.5 | 4.5 |
| Manufacturing..... | 153.9 | 158.4 | 159.7 | 0.9 | 0.6 | 0.8 | 5.1 | 3.9 | 3.8 |
| Management, professional, and related..... | 148.9 | 153.0 | 153.8 | 0.6 | 0.3 | 0.5 | 3.8 | 3.4 | 3.3 |
| Sales and office..... | 158.0 | 162.8 | 164.0 | 1.4 | 0.6 | 0.7 | 6.8 | 4.5 | 3.8 |
| Natural resources, construction, and maintenance..... | 154.2 | 159.4 | 161.1 | 1.2 | 0.9 | 1.1 | 4.5 | 4.7 | 4.5 |
| Production, transportation, and material moving..... | 157.0 | 161.7 | 163.4 | 1.0 | 0.6 | 1.1 | 5.8 | 4.1 | 4.1 |
| Aircraft manufacturing..... | 155.9 | 159.9 | 159.9 | 0.4 | 0.1 | 0.0 | 3.8 | 3.0 | 2.6 |
| Service-providing industries ³ | 158.3 | 164.0 | 165.2 | 0.9 | 1.0 | 0.7 | 5.2 | 4.5 | 4.4 |
| Excluding incentive paid occupations ¹ | 157.5 | 163.4 | 164.6 | 0.9 | 1.1 | 0.7 | 5.1 | 4.7 | 4.5 |
| Management, professional, and related..... | 152.6 | 158.3 | 159.0 | 0.8 | 1.2 | 0.4 | 4.3 | 4.6 | 4.2 |
| Sales and office..... | 161.1 | 166.0 | 167.1 | 1.1 | 0.7 | 0.7 | 6.1 | 4.2 | 3.7 |
| Natural resources, construction, and maintenance..... | 154.5 | 161.2 | 164.2 | 0.8 | 1.4 | 1.9 | 4.7 | 5.2 | 6.3 |
| Production, transportation, and material moving..... | 166.9 | 172.6 | 176.0 | 0.8 | 1.0 | 2.0 | 4.8 | 4.3 | 5.5 |
| Service occupations..... | 170.7 | 177.2 | 178.3 | 1.1 | 1.1 | 0.6 | 7.0 | 4.9 | 4.5 |
| Trade, transportation, and utilities..... | 161.2 | 166.8 | 169.0 | 0.9 | 0.8 | 1.3 | 4.9 | 4.4 | 4.8 |
| Excluding incentive paid occupations ¹ | 160.8 | 166.9 | 169.4 | 0.9 | 0.9 | 1.5 | 5.0 | 4.7 | 5.3 |
| Wholesale trade..... | 150.8 | 155.9 | 156.5 | 0.7 | 0.5 | 0.4 | 5.0 | 4.1 | 3.8 |
| Excluding incentive paid occupations ¹ | 152.8 | 158.5 | 159.1 | 0.8 | 0.8 | 0.4 | 5.2 | 4.6 | 4.1 |

See footnotes at end of table.

Table 9. Employment Cost Index for wages and salaries, for private industry workers, by occupational group and industry — Continued
[Not seasonally adjusted]

| Occupational group and industry | Index value (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-----------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Service-providing industries - Continued | | | | | | | | | |
| Retail trade..... | 167.8 | 173.9 | 175.0 | 1.0 | 0.9 | 0.6 | 5.5 | 4.7 | 4.3 |
| Excluding incentive paid occupations ¹ | 165.2 | 172.0 | 173.1 | 0.8 | 0.9 | 0.6 | 5.7 | 4.9 | 4.8 |
| Transportation and warehousing..... | 162.5 | 167.6 | 174.0 | 1.1 | 1.0 | 3.8 | 3.5 | 4.2 | 7.1 |
| Utilities..... | 158.6 | 164.8 | 166.7 | 0.6 | 1.0 | 1.2 | 3.4 | 4.5 | 5.1 |
| Information..... | 151.4 | 155.1 | 156.5 | 1.4 | 0.0 | 0.9 | 4.9 | 3.9 | 3.4 |
| Financial activities..... | 155.2 | 160.8 | 160.7 | 0.7 | 1.1 | -0.1 | 5.0 | 4.3 | 3.5 |
| Excluding incentive paid occupations ¹ | 153.5 | 159.0 | 159.2 | 0.5 | 0.5 | 0.1 | 5.1 | 4.1 | 3.7 |
| Finance and insurance..... | 155.9 | 161.3 | 161.3 | 0.7 | 0.9 | 0.0 | 4.8 | 4.2 | 3.5 |
| Credit intermediation and related activities..... | 153.9 | 160.3 | 160.6 | 0.3 | 1.6 | 0.2 | 2.1 | 4.5 | 4.4 |
| Excluding incentive paid occupations ¹ | 156.2 | 161.8 | 162.0 | 0.5 | 0.6 | 0.1 | 5.9 | 4.1 | 3.7 |
| Insurance carriers and related activities.. | 153.7 | 160.0 | 159.0 | 0.5 | 0.8 | -0.6 | 5.1 | 4.6 | 3.4 |
| Excluding incentive paid occupations ¹ | 149.7 | 155.4 | 155.7 | 0.5 | 0.4 | 0.2 | 4.2 | 4.4 | 4.0 |
| Real estate and rental and leasing..... | 152.2 | 158.5 | 158.0 | 0.6 | 1.4 | -0.3 | 5.8 | 4.8 | 3.8 |
| Excluding incentive paid occupations ¹ | 157.1 | 162.8 | 162.4 | 0.8 | 1.0 | -0.2 | 5.7 | 4.4 | 3.4 |
| Professional and business services..... | 157.0 | 162.4 | 162.8 | 0.7 | 1.1 | 0.2 | 5.0 | 4.2 | 3.7 |
| Professional, scientific, and technical services..... | 157.5 | 162.8 | 163.2 | 0.4 | 1.1 | 0.2 | 4.7 | 3.8 | 3.6 |
| Administrative and support and waste management and remediation services... | 159.8 | 165.5 | 166.2 | 0.8 | 1.0 | 0.4 | 5.8 | 4.4 | 4.0 |
| Education and health services..... | 155.4 | 161.4 | 163.0 | 1.4 | 1.5 | 1.0 | 5.6 | 5.3 | 4.9 |
| Educational services..... | 150.3 | 155.5 | 156.6 | 0.9 | 2.1 | 0.7 | 5.1 | 4.4 | 4.2 |
| Junior colleges, colleges, universities, and professional schools..... | 148.0 | 152.7 | 153.6 | 0.6 | 2.0 | 0.6 | 3.9 | 3.8 | 3.8 |
| Health care and social assistance..... | 156.5 | 162.7 | 164.4 | 1.5 | 1.4 | 1.0 | 5.7 | 5.5 | 5.0 |
| Hospitals..... | 156.7 | 162.8 | 164.9 | 1.6 | 1.1 | 1.3 | 5.7 | 5.5 | 5.2 |
| Nursing and residential care facilities.... | 159.6 | 166.4 | 167.8 | 1.4 | 1.7 | 0.8 | 7.2 | 5.7 | 5.1 |
| Nursing care facilities ¹ | 158.9 | 165.9 | 167.4 | 1.7 | 1.8 | 0.9 | 7.7 | 6.2 | 5.3 |
| Leisure and hospitality..... | 172.3 | 178.8 | 179.4 | 0.7 | 0.8 | 0.3 | 6.6 | 4.5 | 4.1 |
| Accommodation and food service..... | 175.8 | 182.4 | 183.1 | 0.6 | 0.6 | 0.4 | 6.5 | 4.4 | 4.2 |
| Other services, except public administration.. | 158.4 | 165.8 | 167.0 | 0.3 | 1.1 | 0.7 | 4.3 | 5.0 | 5.4 |

¹ The index for this series is not strictly comparable with other series in this table.

² Includes mining, construction, and manufacturing.

³ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 10. Employment Cost Index for wages and salaries, for private industry workers, by bargaining status and Census region and division
[Not seasonally adjusted]

| Bargaining status and Census region and division | Indexes (Dec.2005=100) | | | Percent changes for | | | | | |
|--|------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Bargaining status | | | | | | | | | |
| Union..... | 154.4 | 159.3 | 162.7 | 1.2 | 1.0 | 2.1 | 3.9 | 4.5 | 5.4 |
| Goods-producing industries ¹ | 147.3 | 150.9 | 153.0 | 0.9 | 0.7 | 1.4 | 3.3 | 3.4 | 3.9 |
| Manufacturing..... | 146.2 | 149.0 | 152.0 | 1.2 | 0.4 | 2.0 | 3.4 | 3.2 | 4.0 |
| Service-providing industries ² | 158.9 | 164.5 | 168.7 | 1.5 | 1.1 | 2.6 | 4.3 | 5.0 | 6.2 |
| Nonunion..... | 157.7 | 163.3 | 164.3 | 0.9 | 1.0 | 0.6 | 5.3 | 4.5 | 4.2 |
| Goods-producing industries ¹ | 155.3 | 160.3 | 161.7 | 1.0 | 0.6 | 0.9 | 5.3 | 4.2 | 4.1 |
| Manufacturing..... | 155.4 | 160.3 | 161.4 | 0.8 | 0.6 | 0.7 | 5.4 | 4.0 | 3.9 |
| Service-providing industries ² | 158.3 | 164.0 | 164.9 | 0.9 | 1.1 | 0.5 | 5.3 | 4.5 | 4.2 |
| Census region and division³ | | | | | | | | | |
| Northeast..... | 158.1 | 163.3 | 164.3 | 1.1 | 1.1 | 0.6 | 4.9 | 4.4 | 3.9 |
| New England..... | 165.5 | 170.1 | 170.6 | 1.2 | 1.2 | 0.3 | 5.9 | 4.0 | 3.1 |
| Middle Atlantic..... | 155.4 | 160.7 | 162.0 | 1.0 | 0.9 | 0.8 | 4.5 | 4.5 | 4.2 |
| South..... | 155.9 | 162.1 | 163.1 | 0.8 | 1.2 | 0.6 | 5.1 | 4.8 | 4.6 |
| South Atlantic..... | 159.1 | 166.0 | 166.9 | 1.0 | 1.4 | 0.5 | 5.6 | 5.3 | 4.9 |
| East South Central..... | 154.2 | 160.1 | 161.4 | 1.0 | 0.9 | 0.8 | 5.0 | 4.9 | 4.7 |
| West South Central..... | 151.4 | 156.5 | 157.6 | 0.5 | 1.0 | 0.7 | 4.0 | 3.8 | 4.1 |
| Midwest..... | 154.0 | 158.9 | 160.1 | 0.7 | 0.8 | 0.8 | 5.0 | 3.9 | 4.0 |
| East North Central..... | 152.4 | 157.6 | 158.8 | 0.9 | 1.0 | 0.8 | 5.1 | 4.3 | 4.2 |
| West North Central..... | 157.8 | 162.0 | 163.1 | 0.1 | 0.2 | 0.7 | 4.5 | 2.7 | 3.4 |
| West..... | 162.3 | 167.9 | 169.5 | 1.2 | 0.9 | 1.0 | 5.7 | 4.7 | 4.4 |
| Mountain..... | 160.1 | 166.3 | 168.4 | 1.2 | 1.2 | 1.3 | 5.4 | 5.1 | 5.2 |
| Pacific..... | 163.4 | 168.8 | 170.2 | 1.2 | 0.8 | 0.8 | 5.8 | 4.5 | 4.2 |

¹ Includes mining, construction, and manufacturing.

² Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

³ The Census divisions are defined as follows: New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont; Middle Atlantic: New Jersey, New York, and Pennsylvania; South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; East South Central: Alabama, Kentucky, Mississippi, and Tennessee; West South Central: Arkansas, Louisiana, Oklahoma, and Texas; East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin; West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; and Pacific: Alaska, California, Hawaii, Oregon, and Washington.

NOTE: The indexes for these series are not strictly comparable to those for the aggregate, occupation, and industry series.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 11. Employment Cost Index for wages and salaries, for state and local government workers, by occupational group and industry
[Not seasonally adjusted]

| Occupational group and industry | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| All workers..... | 145.6 | 151.2 | 152.4 | 0.9 | 2.7 | 0.8 | 4.7 | 4.8 | 4.7 |
| Occupational group | | | | | | | | | |
| Management, professional, and related. | 143.4 | 148.7 | 149.8 | 0.8 | 2.8 | 0.7 | 4.4 | 4.6 | 4.5 |
| Professional and related..... | 143.2 | 148.4 | 149.3 | 0.9 | 2.7 | 0.6 | 4.4 | 4.6 | 4.3 |
| Sales and office..... | 146.2 | 152.7 | 154.2 | 0.8 | 2.8 | 1.0 | 5.0 | 5.3 | 5.5 |
| Office and administrative support..... | 146.6 | 153.2 | 154.8 | 0.8 | 2.7 | 1.0 | 4.9 | 5.4 | 5.6 |
| Service occupations..... | 153.9 | 159.9 | 161.4 | 1.3 | 2.4 | 0.9 | 6.2 | 5.2 | 4.9 |
| Industry | | | | | | | | | |
| Education and health services..... | 143.9 | 149.1 | 150.1 | 0.9 | 2.7 | 0.7 | 4.5 | 4.6 | 4.3 |
| Educational services..... | 142.8 | 147.9 | 148.9 | 0.8 | 2.8 | 0.7 | 4.5 | 4.4 | 4.3 |
| Schools..... | 142.8 | 147.9 | 148.8 | 0.8 | 2.8 | 0.6 | 4.5 | 4.4 | 4.2 |
| Elementary and secondary schools. ... | 142.2 | 147.5 | 148.3 | 0.8 | 2.9 | 0.5 | 4.3 | 4.5 | 4.3 |
| Health care and social assistance..... | 153.9 | 159.6 | 160.9 | 1.5 | 2.2 | 0.8 | 5.7 | 5.3 | 4.5 |
| Hospitals..... | 152.4 | 158.4 | 159.5 | 1.4 | 2.3 | 0.7 | 5.4 | 5.4 | 4.7 |
| Public administration..... | 148.5 | 154.8 | 156.4 | 0.8 | 2.9 | 1.0 | 5.5 | 5.1 | 5.3 |

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 12. Employment Cost Index for benefits, by occupational group, industry, and bargaining status
[Not seasonally adjusted]

| Occupational group, industry, and bargaining status | Indexes (Dec. 2005=100) | | | Percent changes for | | | | | |
|---|-------------------------|-----------|-----------|---------------------|-----------|-----------|------------------|-----------|-----------|
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | 3-months ended- | | | 12-months ended- | | |
| | | | | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Civilian workers | | | | | | | | | |
| All workers ¹ | 155.9 | 161.1 | 161.9 | 0.7 | 0.9 | 0.5 | 4.9 | 4.1 | 3.8 |
| Private industry workers | | | | | | | | | |
| All workers..... | 150.1 | 155.0 | 155.5 | 0.6 | 0.6 | 0.3 | 4.8 | 3.9 | 3.6 |
| Occupational group | | | | | | | | | |
| Management, professional, and related..... | 147.9 | 153.1 | 153.5 | 0.7 | 0.6 | 0.3 | 4.7 | 4.2 | 3.8 |
| Sales and office..... | 153.2 | 158.0 | 158.3 | 0.7 | 0.4 | 0.2 | 5.9 | 3.8 | 3.3 |
| Natural resources, construction, and maintenance..... | 150.6 | 154.9 | 155.7 | 0.4 | 0.9 | 0.5 | 3.4 | 3.3 | 3.4 |
| Production, transportation, and material moving..... | 150.6 | 154.9 | 156.6 | 0.5 | 0.6 | 1.1 | 4.1 | 3.4 | 4.0 |
| Service occupations..... | 152.7 | 156.5 | 156.9 | 0.9 | 0.6 | 0.3 | 6.0 | 3.4 | 2.8 |
| Industry | | | | | | | | | |
| Goods-producing industries ² | 143.9 | 147.9 | 148.6 | 0.4 | 0.7 | 0.5 | 3.7 | 3.2 | 3.3 |
| Manufacturing..... | 143.5 | 147.4 | 148.3 | 0.5 | 0.5 | 0.6 | 3.8 | 3.2 | 3.3 |
| Aircraft manufacturing..... | 105.0 | 107.7 | 107.7 | 0.3 | -0.1 | 0.0 | -14.2 | 2.9 | 2.6 |
| Service-providing industries ³ | 152.3 | 157.4 | 157.9 | 0.7 | 0.6 | 0.3 | 5.2 | 4.0 | 3.7 |
| Bargaining status | | | | | | | | | |
| Union..... | 160.2 | 163.8 | 165.6 | 0.6 | 0.7 | 1.1 | 3.0 | 2.9 | 3.4 |
| Nonunion..... | 148.1 | 153.0 | 153.4 | 0.7 | 0.6 | 0.3 | 5.2 | 4.0 | 3.6 |
| State and local government workers | | | | | | | | | |
| All workers..... | 176.9 | 183.7 | 185.1 | 0.9 | 1.8 | 0.8 | 5.0 | 4.7 | 4.6 |

¹ Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

² Includes mining, construction, and manufacturing.

³ Includes the following industries: wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey

Table 13. Employment Cost Index for total compensation and wages and salaries, for private industry workers by area
[Not seasonally adjusted]

| Census region and metropolitan area ¹ | Percent changes for 12-months ended- | | | | | |
|---|--------------------------------------|-----------|-----------|--------------------|-----------|-----------|
| | Total compensation ² | | | Wages and salaries | | |
| | Dec. 2022 | Sep. 2023 | Dec. 2023 | Dec. 2022 | Sep. 2023 | Dec. 2023 |
| Northeast | | | | | | |
| Boston-Worcester-Providence, MA-RI-NH-CT CSA..... | 5.5 | 4.1 | 3.1 | 5.8 | 4.7 | 3.4 |
| New York-Newark, NY-NJ-CT-PA CSA..... | 5.1 | 4.7 | 4.2 | 5.0 | 4.8 | 4.3 |
| Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA..... | 4.1 | 5.2 | 4.4 | 4.4 | 5.5 | 4.7 |
| South | | | | | | |
| Atlanta-Athens-Clarke County-Sandy Springs, GA CSA..... | 4.4 | 4.0 | 3.8 | 4.8 | 4.6 | 4.4 |
| Dallas-Fort Worth, TX-OK CSA..... | 5.5 | 3.6 | 3.5 | 5.5 | 3.8 | 3.7 |
| Houston-The Woodlands, TX CSA..... | 3.1 | 4.3 | 5.2 | 3.3 | 3.9 | 4.9 |
| Miami-Fort Lauderdale-Port St. Lucie, FL CSA..... | 6.3 | 5.2 | 5.5 | 6.8 | 4.9 | 5.1 |
| Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA.... | 4.3 | 5.2 | 4.4 | 4.3 | 5.5 | 4.9 |
| Midwest | | | | | | |
| Chicago-Naperville, IL-IN-WI CSA..... | 4.4 | 4.2 | 4.1 | 4.4 | 4.1 | 4.1 |
| Detroit-Warren-Ann Arbor, MI CSA..... | 4.9 | 3.7 | 3.8 | 4.1 | 4.1 | 4.3 |
| Minneapolis-St. Paul, MN-WI CSA..... | 4.9 | 3.6 | 3.6 | 5.3 | 3.6 | 3.7 |
| West | | | | | | |
| Los Angeles-Long Beach, CA CSA..... | 5.7 | 4.6 | 4.5 | 5.9 | 4.9 | 5.0 |
| Phoenix-Mesa-Scottsdale, AZ MSA..... | 4.4 | 3.5 | 4.1 | 5.0 | 3.8 | 4.4 |
| San Jose-San Francisco-Oakland, CA CSA..... | 4.6 | 3.3 | 2.7 | 4.5 | 3.5 | 2.8 |
| Seattle-Tacoma, WA CSA..... | 3.2 | 4.3 | 3.8 | 6.2 | 4.9 | 4.3 |

¹ These areas include Consolidated Statistical Areas (CSAs) and Metropolitan Statistical Areas (MSAs). Beginning with the December 2018 release, area definitions are based on Office of Management and Budget Bulletin No. 13-01, dated February 28, 2013. Previous area definitions are based on Office of Management and Budget Bulletin No. 04-03, dated February 18, 2004. For more information on metropolitan area definitions, see www.census.gov/programs-surveys/metro-micro.html.

² Includes wages, salaries, and employer costs for employee benefits.

SOURCE: U.S. Bureau of Labor Statistics, National Compensation Survey



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Employers Budgeting 4.1% Pay Raises in 2024

Workspan Daily
August 31, 2023

By [Brett Christie](#)

[Finance and Budgeting](#)

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U.S. organizations are projecting 4.1% pay increase budgets in 2024 to remain competitive in the labor market.

That's according to WorldatWork's "[2023-24 Salary Budget Survey](#)" of 2,146 participating organizations. Notably, the research also revealed that 2023 salary increase budgets averaged 4.4%, significantly more than the 4.1% increases employers projected for 2023 in the previous year's survey.

"It's certainly noteworthy that projected budgets for 2023 were so far off from what actually happened," said Sue Holloway, a compensation content director at WorldatWork. "This is something to keep in mind along with how tight the labor market remains as organizations plan their 2024 budgets."

The survey found 2024 salary increase budget projections to be slightly higher than the 4% increases projected by 2,090 organizations in [WTW's survey](#) and significantly higher than the 3.8% increases projected by 1,757 organizations in [Payscale's survey](#).



projections from the previous year's survey.

Additionally, organizations are preparing for an average of 1.8% general/cost of living adjustments (COLA) in 2024. This is down from the 2% general/COLA that was provided in 2023, which fell well below the 2.3% that organizations had projected from the year prior.

Broken out by employee type, organizations are projecting an average increase of:

- 4.1% for nonexempt hourly employees and nonexempt salaried employees.
- 4.1% for exempt salaried employees.
- 4% for officers and executives in 2024.

Promotional Increases

WorldatWork's survey reported that 55% of organizations budget for promotional pay increases while 45% do not.

Of the organizations that do budget for promotional increases, the survey found that 40% have separate promotional increase budgets, while 34% include them as part of their "other" increase budget, 22% have them as part of their merit increase budget and 4% allot them as part of their general increase/COLA budget.

Of the organizations that do not include promotional increases in their salary increase budgets, 62% fund the promotional pay increases via vacancy, salary or other



often funded with savings from vacancies,” said Liz Supinski, director of research and insights at WorldatWork. “Very large organizations often have this degree of slack in their budgets, but other organizations choose not to budget for promotional increases as a control measure, believing that some managers with a line-item in a budget might promote staff simply because their budget allows it rather than because the employee deserves it.”

Additional Key Findings:

- **Layoff likelihood is predicted to be lower in 2024.** Averaged across all 18 countries, about 70% of participants reported no layoffs for 2023, with 91% anticipating the same for 2024.
- **Timing of pay increases.** The average time between increases is at or slightly lower than the historical average of 12 months in all countries.
- **United Kingdom salary increase budget growth.** In 2023, the United Kingdom's average total salary increase budget exceeded projections, reaching 4.5% (4% median) compared to the projected 3.9%.
- **The strength of India.** India again shows the largest salary increase budget in the survey, averaging 9.8%. This figure, slightly lower than 2022's 10.1%, draws closer to the pre-pandemic level of 9.9%.
- **Consistent growth in Mexico.** Mexico has witnessed steady expansion of its salary increase budgets,



see the pages below, which offer quick access to all WorldatWork content on these topics:

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Brett Christie is a digital content manager at WorldatWork and the managing editor of Workspan Daily.



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The graphic features a blue background with a white megaphone icon on the left. To the right of the megaphone, the words "NEWS" and "BYTES" are written in large, white, bold, sans-serif capital letters. The background is decorated with white dotted lines and circles.

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Natural Gas in New Homes

(A Survey of Single-family Home Builders)



September 2021

Economics & Housing Policy Group

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INTRODUCTION

For more than 30 years, the National Association of Home Builders (NAHB) has conducted a monthly survey of single-family builder members in order to generate the NAHB/Wells Fargo Housing Market Index (HMI). The HMI survey asks builders to rate market conditions for the sale of new homes at the present time and expected over the next 6 months, as well as the traffic of prospective buyers. The results are combined into a single composite index that measures the overall strength of the market for new single-family housing. Throughout its history, the HMI has become a leading indicator of single-family housing starts and is widely reported in business media and used by the Federal Reserve Bank, government agencies, and Wall Street analysts.

In August 2021, a set of special questions were included in the HMI survey regarding the average sales price of comparable homes with and without natural gas as well as the number of days each spent on the market before going under contract. The survey also asked whether there has been a change in buyers' preference for natural gas and how likely buyers are to request that specific appliances be installed for natural gas. The final two questions asked builders about the level of influence several factors have on their decision to install gas vs. electric appliances and their preference for fuel type based on each one of those factors.

The survey questionnaire (Appendix I) was sent electronically to a panel of approximately 3,000 builder members. A total of 360 builders responded to the survey, for a response rate of 12 percent, but not all questions were answered by every respondent. This report analyses responses by the four Census regions and by the number of for-sale units started by the builder in 2020. Any breakdown with fewer than 10 responses was removed to ensure the statistical reliability of cross-sectional analysis. In addition, the analysis comparing the price of homes with and without natural gas only includes homes with prices below \$1 million.

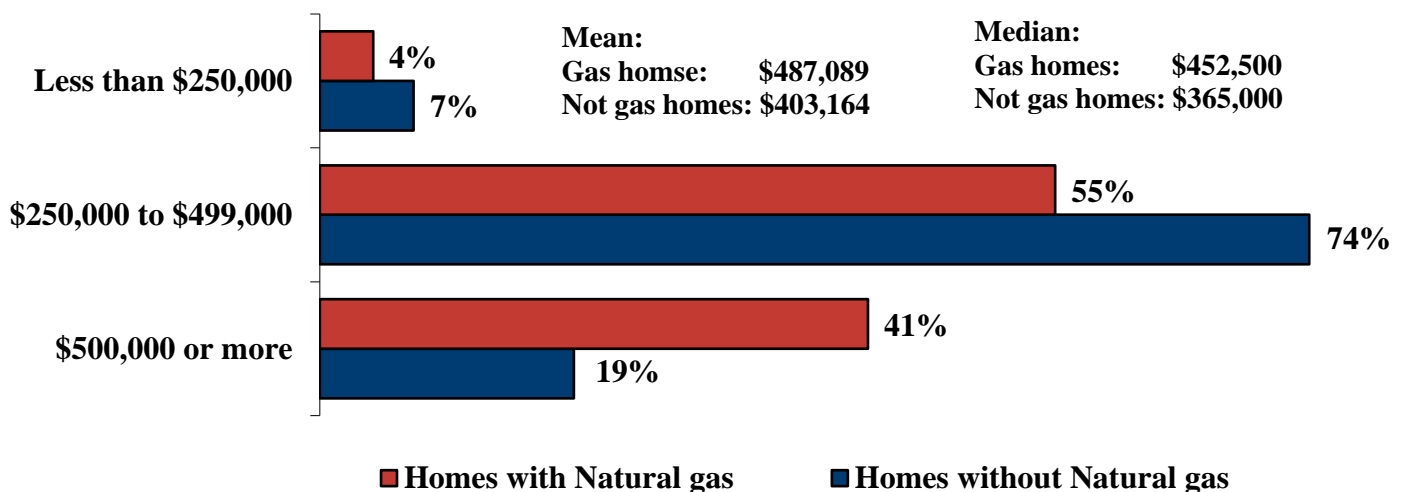
SURVEY FINDINGS

Builders were asked to report the average sales price for comparable single-family homes with and without natural gas built for-sale in the prior year. A total of 200 builders provided average prices: 140 reported the price of only one of these two types of homes and 60 reported the prices of both types of homes. At the request of the Energy Solutions Center, all observations showing prices of \$1 million or more were excluded from the analysis below. After the exclusion, results are based on responses from 170 builders, 119 of whom reported the price of only one type of home and 51 who reported the prices of both homes with and without natural gas. The price comparison is done first among all 170 respondents, regardless of whether they reported one or two of the prices asked, and then among the 51 common respondents who reported prices for both types of homes.

All Respondents

When all responses are aggregated, the price of a new home with natural gas averages \$487,089, about 21 percent higher than the average \$403,164 for a home without natural gas (Exhibit 1). An important finding to highlight is that 41 percent of builders reported their gas homes sold for at least \$500,000, more than double the share who reported that price point for homes without gas (19 percent).

**Exhibit 1: Sales price for homes with & without natural gas – ALL RESPONDENTS
(Percent of Respondents)**



The average sales price of homes with natural gas was higher than of those without gas in all regions of the country and across categories of builder size for which enough data were collected. For example, in the South, the average home with gas sold for \$464,719, a 22 percent premium over a comparable home without gas (\$382,098). In the Midwest, homes with natural gas sold for an average \$467,475, 11 percent higher than those without gas (\$423,000). In the West, the average gas home sold for \$537,696, but not enough builders provided price data for homes without gas to produce a reliable estimate for them in this region. The latter was also the case for both types of homes in the Northeast.

Meanwhile, across builder size categories, builders who started at least 100 units in 2020 reported their average gas home sold for \$433,333, 25 percent more than their average non-gas home (\$346,600). The price difference was significantly lower among smaller builders. Builders with 6 to 24 starts sold their average gas home for \$505,299, 11 percent more than their average non-gas home (\$454,174). Among builders with 25 to 99 housing starts, the price difference amounted to only 8 percent: \$468,973 for gas homes vs. \$435,653 for homes without natural gas (Exhibit 2).

**Exhibit 2. Sales price for homes with & without natural gas – By Region and Firm Size:
ALL RESPONDENTS
(Percent of Respondents)**

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---------------------------------|-----------|--------|-----------|-----------|-----------|------------------------------------|-----------|-----------|-----------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| HOME WITH NATURAL GAS | | | | | | | | | |
| Less than \$250,000 | 4 | | 5 | 6 | | 5 | 5 | 5 | 5 |
| \$250,000-\$499,999 | 55 | | 62 | 58 | 43 | 52 | 50 | 61 | 67 |
| \$500,000 or more | 41 | | 33 | 36 | 57 | 43 | 45 | 34 | 29 |
| Mean | \$487,089 | | \$467,475 | \$464,719 | \$537,696 | \$494,619 | \$505,299 | \$468,973 | \$433,333 |
| Median | \$452,500 | | \$450,000 | \$450,000 | \$500,000 | \$430,000 | \$475,000 | \$450,000 | \$450,000 |
| Min | \$190,000 | | \$200,000 | \$190,000 | \$317,157 | \$230,000 | \$200,000 | \$190,000 | \$235,000 |
| Max | \$950,000 | | \$950,000 | \$850,000 | \$950,000 | \$925,000 | \$950,000 | \$950,000 | \$700,000 |
| Responses | 148 | | 39 | 72 | 30 | 21 | 42 | 41 | 21 |
| HOME WITHOUT NATURAL GAS | | | | | | | | | |
| Less than \$100,000 | 7 | | | 10 | | | | 6 | 10 |
| \$250,000-\$499,999 | 74 | | 80 | 76 | | | 70 | 65 | 90 |
| \$500,000 or more | 19 | | 20 | 14 | | | 30 | 29 | |
| Mean | \$403,164 | | \$423,000 | \$382,098 | | | \$454,174 | \$435,653 | \$346,600 |
| Median | \$365,000 | | \$371,000 | \$350,000 | | | \$400,000 | \$375,000 | \$312,500 |
| Min | \$190,000 | | \$279,000 | \$190,000 | | | \$285,000 | \$190,000 | \$200,000 |
| Max | \$875,000 | | \$800,000 | \$800,000 | | | \$800,000 | \$875,000 | \$470,000 |
| Responses | 73 | | 10 | 50 | | | 23 | 17 | 10 |

The HMI survey has asked builders about the average price of homes they build with natural gas three times in the past. Not adjusted for inflation, the average price builders reported for this type of home was \$302,922 in December 2002, \$361,362 in October 2010, \$407,185 in August 2016, and now \$487,089 in August 2021 (Exhibit 3)¹.

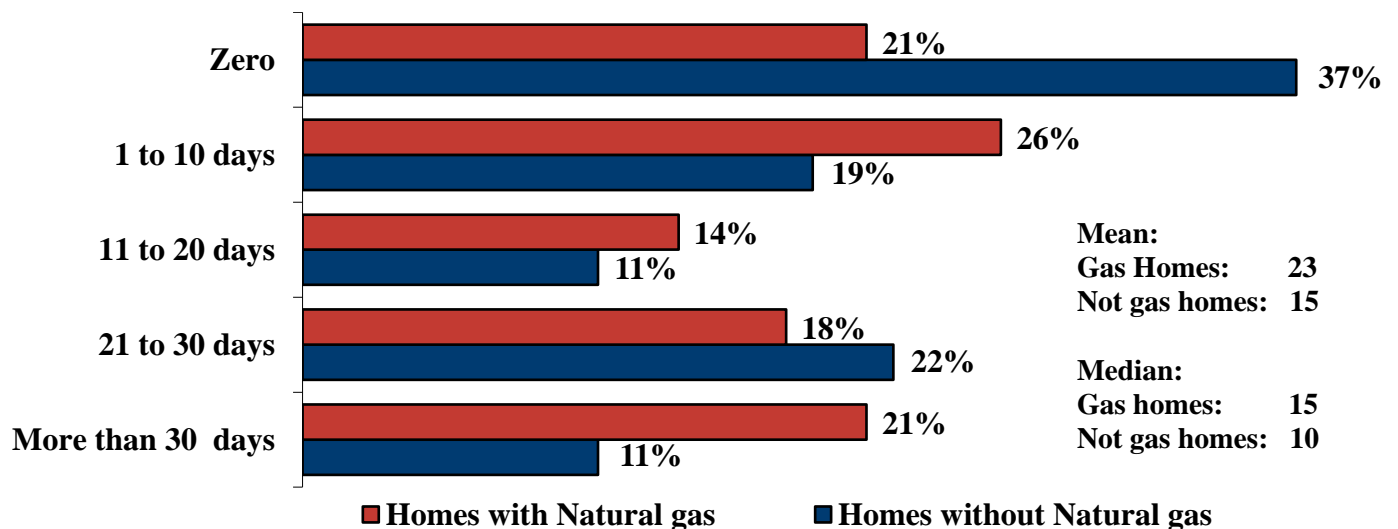
¹ Tabulations in 2002 and 2010 did not exclude homes with prices of \$1 million or more.

**Exhibit 3: History of sales price for homes with natural gas – ALL RESPONDENTS
(Percent of Respondents)**

| | Dec. 2002 | Oct. 2010 | Aug. 2016 | Aug. 2021 |
|----------------------------|------------------|------------------|------------------|------------------|
| Less than \$100,000 | 3 | 1 | | |
| \$100,000-\$149,999 | 22 | 4 | 1 | |
| \$150,000-\$174,999 | 8 | 6 | 1 | |
| \$175,000-\$249,999 | 15 | 24 | 12 | 4 |
| \$250,000-\$499,999 | 39 | 48 | 58 | 55 |
| \$500,000 or more | 14 | 17 | 28 | 41 |
| Mean | \$302,922 | \$361,362 | \$407,185 | \$487,089 |
| Median | \$250,000 | \$289,975 | \$350,000 | \$452,500 |
| Min | \$15,000 | \$50,000 | \$130,000 | \$190,000 |
| Max | \$1,200,000 | \$2,200,000 | \$975,000 | \$950,000 |

The same question that asked builders for the average price of comparable homes with and without natural gas also asked (for the first time in HMI history) about the number of days each type of home was on the market before going under contract. When aggregated across all responses, gas homes stayed on the market for an average of 23 days (median=15 days), compared to only 15 days for homes without natural gas (median=10 days). A point to note is that 21 percent of builders reported their gas homes stayed on the market for more than 30 days, compared to a smaller 11 percent share for homes without gas (Exhibit 4).

**Exhibit 4: Number of days for homes with & without natural gas – ALL RESPONDENTS
(Percent of Respondents)**



The average number of days homes with natural gas were on the market was higher than for homes without natural gas in all regions and across categories of builder size for which enough data were collected. In the Midwest and South regions, builders reported that homes with natural gas stayed on the market an average of 25 days, compared to 11 and 16 days, respectively, for homes without gas. Among builders with 5 or fewer starts, homes with gas were on the market for an average of 31 days vs. 13 days for those without. The comparison is 18 days vs. 12 days for builders with 6 to 24 starts, and 21 days vs. 17 days for builders with 25 to 99 starts (Exhibit 5).

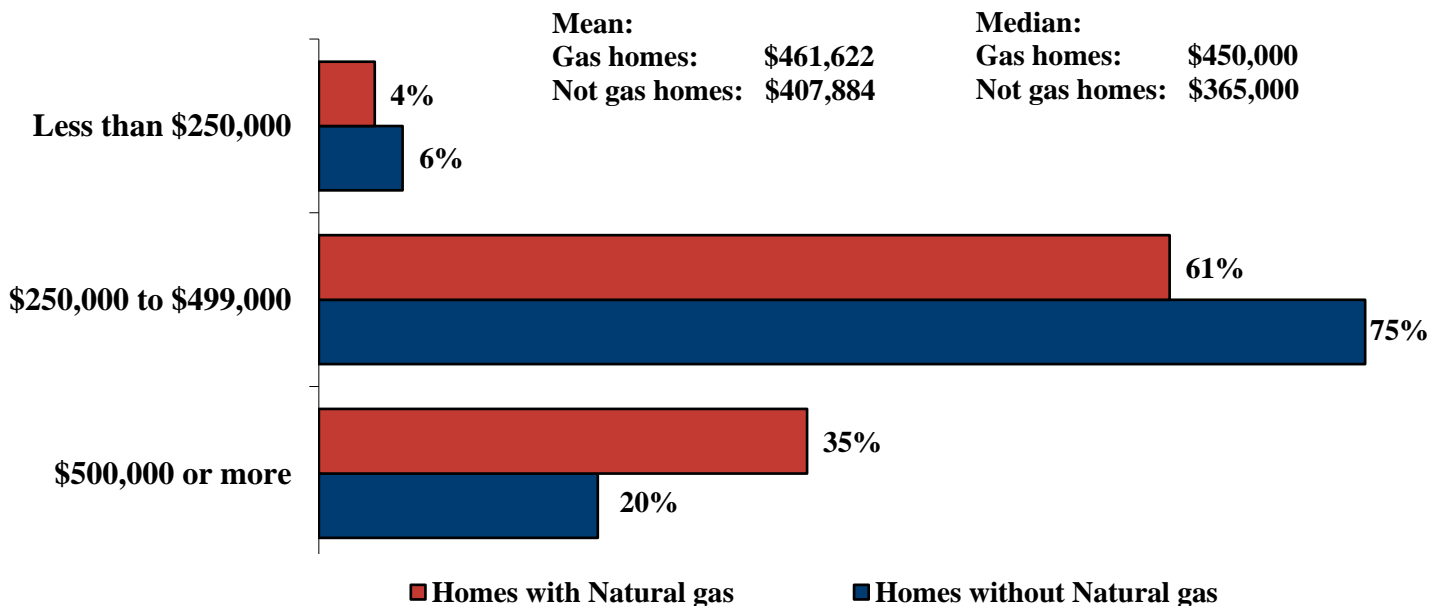
**Exhibit 5. Number of days for homes with & without natural gas – By Region and Firm Size:
ALL RESPONDENTS
(Percent of Respondents)**

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---------------------------------|-------|--------|-----|-----|----|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| HOME WITH NATURAL GAS | | | | | | | | | |
| Zero | 21 | | 25 | 21 | 16 | 17 | 34 | 20 | 10 |
| 1 to 10 days | 26 | | 19 | 24 | 35 | 22 | 20 | 33 | 25 |
| 11 to 20 days | 14 | | 11 | 10 | 26 | 13 | 12 | 8 | 25 |
| 21 to 30 days | 18 | | 19 | 22 | 10 | 17 | 15 | 18 | 20 |
| More than 30 days | 21 | | 25 | 24 | 13 | 30 | 20 | 23 | 20 |
| Mean | 23 | | 25 | 25 | 16 | 31 | 18 | 21 | 23 |
| Median | 15 | | 15 | 20 | 10 | 20 | 10 | 10 | 15 |
| Min | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max | 180 | | 100 | 180 | 60 | 180 | 90 | 110 | 60 |
| Responses | 145 | | 36 | 72 | 31 | 23 | 41 | 40 | 20 |
| HOME WITHOUT NATURAL GAS | | | | | | | | | |
| Zero | 37 | | 36 | 37 | | 40 | 48 | 41 | |
| 1 to 10 days | 19 | | 18 | 20 | | 10 | 17 | 12 | |
| 11 to 20 days | 11 | | 27 | 8 | | 20 | 9 | 6 | |
| 21 to 30 days | 22 | | 18 | 22 | | 30 | 17 | 24 | |
| More than 30 days | 11 | | | 12 | | | 9 | 18 | |
| Mean | 15 | | 11 | 16 | | 13 | 12 | 17 | |
| Median | 10 | | 10 | 7 | | 12 | 1 | 5 | |
| Min | 0 | | 0 | 0 | | 0 | 0 | 0 | |
| Max | 60 | | 30 | 60 | | 30 | 60 | 60 | |
| Responses | 73 | | 11 | 49 | | 10 | 23 | 17 | |

Common Respondents

When only common respondents are considered (builders reporting prices for homes with natural gas and also for those without gas), the average price for homes with gas was \$461,622, 13 percent higher than the \$407,884 average for homes without gas. This 13-point price difference among common respondents is significantly smaller than the 21-point price difference described earlier among all respondents. Within the subset of common respondents, 35 percent reported their gas homes sold for \$500,000 or more, compared to only 20 percent who reported that price point for homes without natural gas (Exhibit 6).

**Exhibit 6. Sales price for comparable homes with & without gas - COMMON RESPONDENTS
(Percent of Respondents)**



When only common respondents are analyzed by region and builder size, results show that the average price of a gas home is higher than that of a home without gas in every instance where data are available. For instance, builders in the South who sold both gas homes and non-gas homes reported an average price of \$459,875 for the former and \$377,844 for the latter, a difference of 22 percentage points. Among builders with 6 to 24 housing starts, the price difference was 7 percentage points: \$470,833 for

gas homes vs. \$438,917 for non-gas homes. Among builders with 25 to 99 starts, the difference was 5

percentage points: \$464,914 for gas homes vs. \$443,074 for non-gas homes (Exhibit 7).

**Exhibit 7. Sales price for comparable homes with & without gas – By Region and Firm Size:
COMMON RESPONDENTS
(Percent of Respondents)**

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---------------------------------|-----------|--------|----|-----------|---|------------------------------------|-----------|-----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| HOME WITH NATURAL GAS | | | | | | | | | |
| Less than \$250,000 | 4 | | | 6 | | | | 7 | |
| \$250,000-\$499,999 | 61 | | | 56 | | | 67 | 53 | |
| \$500,000 or more | 35 | | | 38 | | | 33 | 40 | |
| Mean | \$461,622 | | | \$459,875 | | | \$470,833 | \$464,914 | |
| Median | \$450,000 | | | \$450,000 | | | \$427,000 | \$450,000 | |
| Min | \$190,000 | | | \$190,000 | | | \$300,000 | \$190,000 | |
| Max | \$875,000 | | | \$850,000 | | | \$750,000 | \$875,000 | |
| Responses | 51 | | | 32 | | | 12 | 15 | |
| HOME WITHOUT NATURAL GAS | | | | | | | | | |
| Less than \$100,000 | 6 | | | 9 | | | | 7 | |
| \$250,000-\$499,999 | 75 | | | 78 | | | 75 | 60 | |
| \$500,000 or more | 20 | | | 13 | | | 25 | 33 | |
| Mean | \$407,884 | | | \$377,844 | | | \$438,917 | \$443,074 | |
| Median | \$365,000 | | | \$337,500 | | | \$381,000 | \$375,000 | |
| Min | \$190,000 | | | \$190,000 | | | \$285,000 | \$190,000 | |
| Max | \$875,000 | | | \$700,000 | | | \$800,000 | \$875,000 | |
| Responses | 51 | | | 32 | | | 12 | 15 | |

Exhibit 8 shows the price history available for homes with gas as reported by the smaller subset of builders who at the same time provided an average price for a different type of home². Among this group of respondents, and not adjusted for inflation, the average price for a home with natural gas was \$220,800 in December 2002, \$328,549 in October 2010, \$354,928 in August 2016, and now \$461,622 in August 2021.

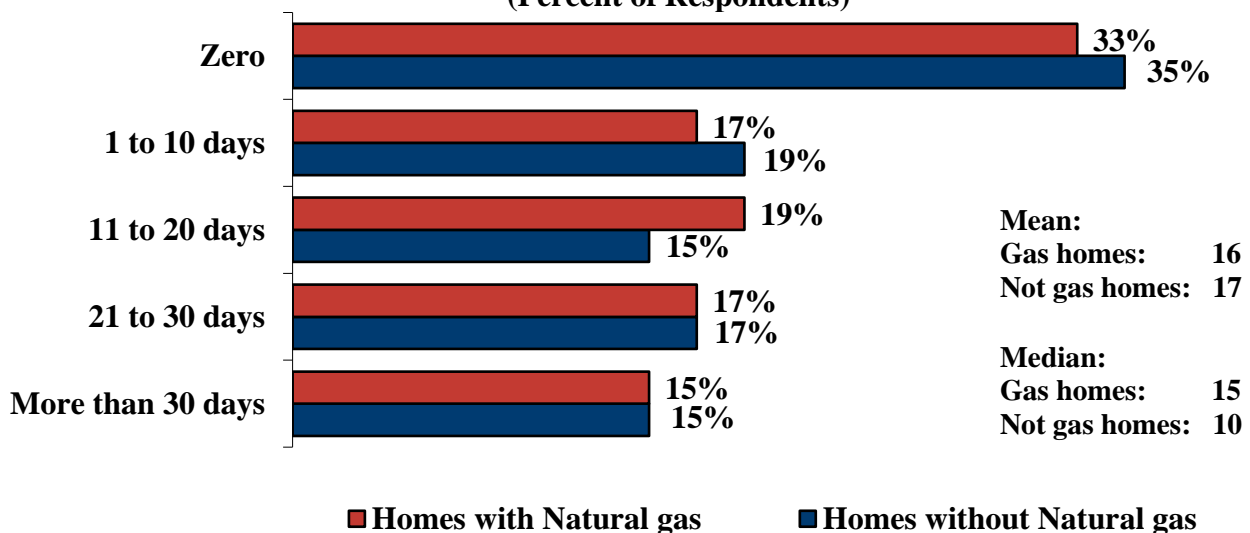
² Prior to 2021, the survey asked specifically about the average price of an ‘electric’ home. In 2021, the comparison home became a broader “home without natural gas.”

**Exhibit 8. History of sales price for homes with natural gas – COMMON RESPONDENTS
(Percent of Respondents)**

| | Dec. 2002 | Oct. 2010 | Aug. 2016 | Aug. 2021 |
|----------------------------|------------------|------------------|------------------|------------------|
| Less than \$100,000 | 3 | 2 | | |
| \$100,000-\$149,999 | 33 | 5 | 2 | |
| \$150,000-\$174,999 | 8 | 6 | | |
| \$175,000-\$249,999 | 11 | 33 | 16 | 4 |
| \$250,000-\$499,999 | 44 | 44 | 63 | 61 |
| \$500,000 or more | | 10 | 18 | 35 |
| Mean | \$220,800 | \$328,549 | \$354,928 | \$461,622 |
| Median | \$186,450 | \$250,000 | \$325,000 | \$450,000 |
| Min | \$40,000 | \$50,000 | \$130,000 | \$190,000 |
| Max | \$450,000 | \$2,200,000 | \$825,000 | \$875,000 |

Looking at the average number of days on the market only among common respondents (builders who provided a response for both homes with and without natural gas) reveals very little difference. According to these builders, gas homes stayed on the market for an average of 16 days, only 1 day less than the average 17 days for homes without gas. The plurality of these builders – around one-third – reported that both types of homes were on the market for zero days, meaning they sold even before being formally offered for-sale (Exhibit 9).

**Exhibit 9: Number of days on the market for homes with & without natural gas – COMMON RESPONDENTS
(Percent of Respondents)**



When only considering common respondents, the average number of days homes with or without natural gas were on the market was about the same for any of the regional or builder size breakdowns available. In the South, for example, both homes stayed on the market for the exact same average number of days: 19. Among builders with 6 to 24 starts, homes with gas were on the market an average of 11 days vs. 12 days for those without gas. The comparison is 16 days vs. 17 days, respectively, for builders with 25 to 99 starts (Exhibit 10).

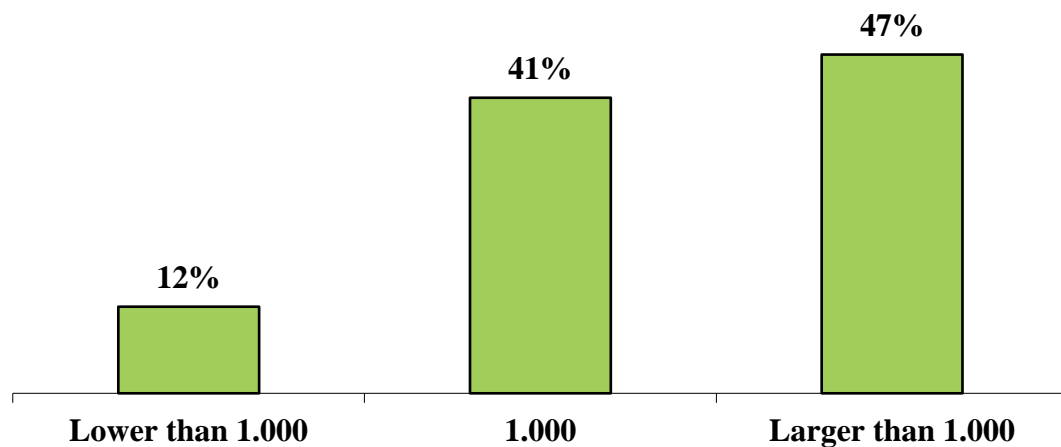
Exhibit 10. Number of days on the market for homes with & without natural gas – By Region and Firm Size: COMMON RESPONDENTS (Percent of Respondents)

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---------------------------------|-------|--------|----|----|---|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| HOME WITH NATURAL GAS | | | | | | | | | |
| Zero | 33 | | | 27 | | | 42 | 43 | |
| 1 to 10 days | 17 | | | 20 | | | 25 | 14 | |
| 11 to 20 days | 19 | | | 10 | | | 25 | 7 | |
| 21 to 30 days | 17 | | | 23 | | | 8 | 14 | |
| More than 30 days | 15 | | | 20 | | | | 21 | |
| Mean | 16 | | | 19 | | | 11 | 16 | |
| Median | 15 | | | 18 | | | 5 | 5 | |
| Min | 0 | | | 0 | | | 0 | 0 | |
| Max | 60 | | | 60 | | | 30 | 60 | |
| Responses | 48 | | | 30 | | | 12 | 14 | |
| HOME WITHOUT NATURAL GAS | | | | | | | | | |
| Zero | 35 | | | 33 | | | 50 | 43 | |
| 1 to 10 days | 19 | | | 20 | | | 17 | 14 | |
| 11 to 20 days | 15 | | | 10 | | | 8 | 7 | |
| 21 to 30 days | 17 | | | 20 | | | 17 | 14 | |
| More than 30 days | 15 | | | 17 | | | 8 | 21 | |
| Mean | 17 | | | 19 | | | 12 | 17 | |
| Median | 10 | | | 13 | | | 3 | 5 | |
| Min | 0 | | | 0 | | | 0 | 0 | |
| Max | 60 | | | 60 | | | 40 | 60 | |
| Responses | 48 | | | 30 | | | 12 | 14 | |

Ratio of sales price of homes with natural gas vs. homes without natural gas

About 41 percent of common respondents reported identical sales prices for a home with natural gas as for one without it (for a sales price ratio of 1.0). A small minority of 12 percent reported a lower price for gas homes than for non-gas homes, which produced sales price ratios lower than 1.0. Meanwhile, 47 percent reported higher sales prices for gas homes, producing price ratios larger than 1.0 (Exhibits 11 and 12).

**Exhibit 11. Ratio of sales price of homes with natural gas over homes without natural gas
(Percent of Common Respondents)**



**Exhibit 12. Ratio of sales price of homes with natural gas over homes without natural gas – By
Region and Firm Size
(Percent of Common Respondents)**

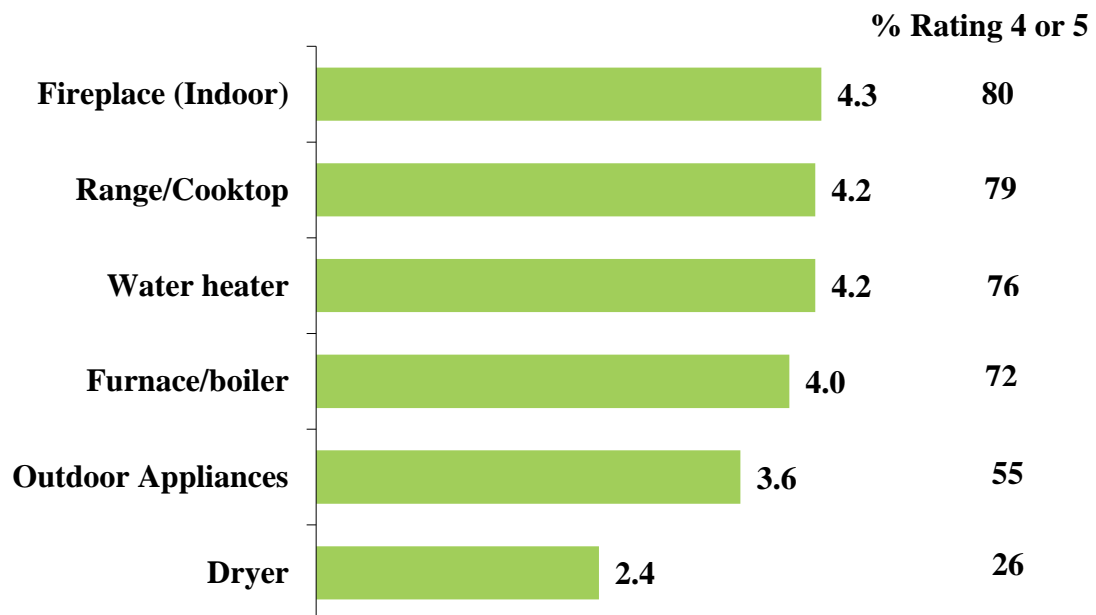
| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|-----------|-------|--------|----|-------|---|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| 0.61 | 1.96 | | | 3.13 | | | | 6.67 | |
| 0.93 | 1.96 | | | | | | | | |
| 0.94 | 3.92 | | | | | | 8.33 | 6.67 | |
| 0.95 | 1.96 | | | | | | | | |
| 0.95 | 1.96 | | | | | | | 6.67 | |
| 1.00 | 41.18 | | | 43.75 | | | 58.33 | 40.00 | |
| 1.00 | 1.96 | | | | | | | | |
| 1.00 | 1.96 | | | | | | 8.33 | | |
| 1.01 | 1.96 | | | 3.13 | | | | | |
| 1.02 | 1.96 | | | 3.13 | | | | | |
| 1.03 | 1.96 | | | 3.13 | | | | | |
| 1.03 | 1.96 | | | | | | | | |
| 1.03 | 1.96 | | | | | | 8.33 | | |
| 1.05 | 1.96 | | | 3.13 | | | | | |
| 1.05 | 1.96 | | | | | | | 6.67 | |
| 1.14 | 1.96 | | | 3.13 | | | | 6.67 | |
| 1.16 | 1.96 | | | | | | | 6.67 | |
| 1.19 | 1.96 | | | 3.13 | | | 8.33 | | |
| 1.25 | 1.96 | | | 3.13 | | | | 6.67 | |
| 1.33 | 1.96 | | | 3.13 | | | | | |
| 1.38 | 3.92 | | | 6.25 | | | | 6.67 | |
| 1.50 | 1.96 | | | 3.13 | | | | 6.67 | |
| 1.53 | 1.96 | | | | | | | | |
| 1.72 | 1.96 | | | 3.13 | | | | | |
| 1.89 | 1.96 | | | 3.13 | | | | | |
| 2.00 | 1.96 | | | 3.13 | | | | | |
| 2.09 | 1.96 | | | 3.13 | | | 8.33 | | |
| 2.26 | 1.96 | | | 3.13 | | | | | |
| 2.50 | 1.96 | | | 3.13 | | | | | |
| Mean | 1.17 | | | 1.26 | | | 1.10 | 1.07 | |
| Median | 1.00 | | | 1.01 | | | 1.00 | 1.00 | |
| Min | 0.61 | | | 0.61 | | | 0.94 | 0.61 | |
| Max | 2.50 | | | 2.50 | | | 2.09 | 1.50 | |
| Responses | 51 | | | 32 | | | 12 | 15 | |

Buyers' Preferences for Natural Gas

Builders were also asked about how likely it is for prospective home buyers to specifically request that certain appliances be installed or plumbed for natural gas. On a scale from 1 to 5, where 1=not at all likely and 5=very likely, the indoor fireplace is the most likely appliance buyers request be plumbed for gas, with an average rating of 4.3 (80 percent rated it likely or very likely, 4 or 5). The range/cooktop and the water heater tie in second place, with an average rating of 4.2 (79 and 76 percent, respectively, rated them 4 or 5). The only other appliance with an average rating of 4.0 or higher was the furnace/boiler.

The two appliances buyers are least likely to request be plumbed for gas are outdoor appliances and the dryer. Outdoor appliances received an average rating of 3.6 (55 percent rated it 4 or 5) and the dryer a 2.4, as only 26 percent of builders rated it likely or very likely (Exhibit 13).

**Exhibit 13: Likelihood prospective home buyers request appliances be installed or plumbed for natural gas (1= Not at all likely and 5=Very likely)
(Average Rating)**



Looking at results across regions of the country reveals that in the Northeast the range/cooktop and the furnace tie in first place as the most likely appliance buyers will request be plumbed for gas (3.9 average rating for both). In the Midwest, the title goes to the furnace (4.6 average rating), while in the South, the fireplace and the range/cooktop tie as the most likely (4.2 average rating for both). In the West, the fireplace and the water heater are the likeliest appliances buyers will request be plumbed for gas (4.6 average rating for both).

According to builders who start fewer than 5 units, the range/cooktop and the water heater are the most likely appliances buyers want to be plumbed for gas, while among those who start 6 to 99 units, the fireplace ranks at the top. For builders starting 100+ units, the furnace is the most likely appliance their buyers will request be plumbed for gas (Exhibit 14).

Exhibit 14. Likelihood prospective home buyers request appliances be installed or plumbed for natural gas - By Region and Firm Size (Percent of Respondents)

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---------------------------|-------|--------|-----|-----|-----|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| Dryer | | | | | | | | | |
| 1:Not at all likely | 42 | 56 | 30 | 51 | 28 | 33 | 42 | 47 | 35 |
| 2 | 21 | 8 | 19 | 19 | 34 | 18 | 24 | 23 | 19 |
| 3 | 11 | 12 | 18 | 9 | 10 | 16 | 12 | 7 | 13 |
| 4 | 8 | 4 | 8 | 7 | 10 | 9 | 3 | 7 | 19 |
| 5:Very likely | 18 | 20 | 25 | 15 | 17 | 24 | 19 | 17 | 13 |
| <i>Average Rating</i> | 2.4 | 2.2 | 2.8 | 2.2 | 2.6 | 2.7 | 2.3 | 2.2 | 2.6 |
| Responses | 317 | 25 | 73 | 161 | 58 | 85 | 93 | 60 | 31 |
| Fireplace (Indoor) | | | | | | | | | |
| 1:Not at all likely | 9 | 24 | 7 | 10 | 2 | 6 | 8 | 8 | 20 |
| 2 | 3 | 8 | 1 | 4 | 2 | 2 | 3 | 5 | 3 |
| 3 | 8 | 16 | 11 | 6 | 7 | 9 | 3 | 7 | 13 |
| 4 | 14 | 4 | 16 | 13 | 19 | 16 | 13 | 14 | 20 |
| 5:Very likely | 66 | 48 | 65 | 67 | 71 | 66 | 72 | 66 | 43 |
| <i>Average Rating</i> | 4.3 | 3.4 | 4.3 | 4.2 | 4.6 | 4.3 | 4.4 | 4.2 | 3.6 |
| Responses | 322 | 25 | 75 | 163 | 59 | 85 | 97 | 59 | 30 |

Exhibit 14. Likelihood prospective home buyers request appliances be installed or plumbed for natural gas - By Region and Firm Size

(Percent of Respondents) – continued

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|--|-------|--------|-----|-----|-----|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| Furnace/boiler | | | | | | | | | |
| 1:Not at all likely | 16 | 16 | 4 | 24 | 7 | 13 | 19 | 13 | 13 |
| 2 | 3 | 8 | | 5 | | 2 | 5 | 3 | |
| 3 | 10 | 4 | 7 | 14 | 5 | 12 | 6 | 12 | 20 |
| 4 | 11 | 12 | 7 | 10 | 16 | 16 | 10 | 8 | 7 |
| 5:Very likely | 61 | 60 | 83 | 47 | 72 | 56 | 60 | 63 | 60 |
| <i>Average Rating</i> | 4.0 | 3.9 | 4.6 | 3.5 | 4.5 | 4.0 | 3.9 | 4.1 | 4.0 |
| Responses | 322 | 25 | 75 | 164 | 58 | 85 | 97 | 60 | 30 |
| Range/cooktop | | | | | | | | | |
| 1:Not at all likely | 5 | 16 | 3 | 5 | 3 | 4 | 6 | 5 | 6 |
| 2 | 4 | 4 | 9 | 3 | 2 | 1 | 6 | 3 | 13 |
| 3 | 11 | 12 | 13 | 13 | 3 | 8 | 10 | 18 | 19 |
| 4 | 23 | 8 | 33 | 20 | 25 | 24 | 25 | 28 | 13 |
| 5:Very likely | 56 | 60 | 41 | 58 | 66 | 64 | 53 | 46 | 48 |
| <i>Average Rating</i> | 4.2 | 3.9 | 4.0 | 4.2 | 4.5 | 4.4 | 4.1 | 4.1 | 3.8 |
| Responses | 325 | 25 | 75 | 166 | 59 | 85 | 97 | 61 | 31 |
| Water heater | | | | | | | | | |
| 1:Not at all likely | 7 | 20 | 5 | 7 | 3 | 4 | 9 | 7 | 6 |
| 2 | 6 | 16 | 4 | 7 | | 1 | 5 | 7 | 16 |
| 3 | 12 | 8 | 11 | 15 | 5 | 14 | 8 | 11 | 19 |
| 4 | 13 | 4 | 12 | 13 | 17 | 12 | 18 | 16 | 6 |
| 5:Very likely | 63 | 52 | 68 | 58 | 75 | 69 | 60 | 59 | 52 |
| <i>Average Rating</i> | 4.2 | 3.6 | 4.3 | 4.1 | 4.6 | 4.4 | 4.1 | 4.2 | 3.8 |
| Responses | 323 | 25 | 74 | 165 | 59 | 84 | 97 | 61 | 31 |
| Outdoor Appliances (grills, firepits, tiki torches, outdoor fireplaces, etc.) | | | | | | | | | |
| 1:Not at all likely | 11 | 24 | 12 | 9 | 8 | 6 | 13 | 10 | 16 |
| 2 | 14 | 28 | 16 | 13 | 8 | 11 | 13 | 13 | 23 |
| 3 | 20 | 20 | 26 | 19 | 19 | 14 | 23 | 25 | 23 |
| 4 | 17 | 8 | 14 | 17 | 24 | 11 | 19 | 18 | 16 |
| 5:Very likely | 38 | 20 | 32 | 43 | 41 | 58 | 32 | 33 | 23 |
| <i>Average Rating</i> | 3.6 | 2.7 | 3.4 | 3.7 | 3.8 | 4.1 | 3.4 | 3.5 | 3.1 |
| Responses | 323 | 25 | 73 | 166 | 59 | 84 | 97 | 60 | 31 |

Builders had been asked about which appliances were most likely for buyers to request be plumbed for gas once before. In 2016, the indoor fireplace was the single most likely appliance buyers specifically requested gas plumbing for, with an average rating of 4.5. In 2021, the fireplace remained at the top of the list, with an average rating of 4.3. The dryer, on the other hand, has been the least likely item buyers request gas for both times, with average ratings of 2.6 in 2016 and 2.4 in 2021 (Exhibit 15).

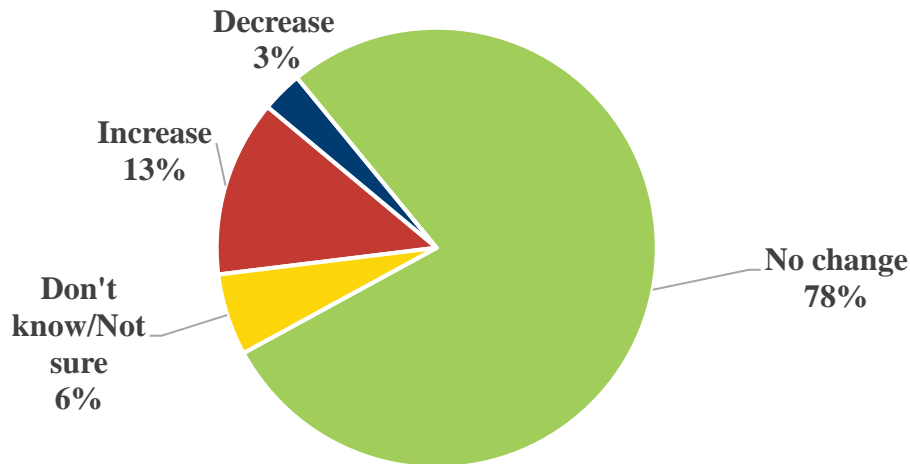
**Exhibit 15. History of average likelihood prospective home buyers request appliances be installed for natural gas
(1=not at all likely, 5=very likely)**

| | Aug. 2016 | Aug. 2021 |
|--|----------------------|----------------------|
| Fireplace (Indoor) | 4.5 | 4.3 |
| Range/cooktop | 4.1 | 4.2 |
| Water heater | 4.3 | 4.2 |
| Furnace/boiler | 4.2 | 4.0 |
| Outdoor Appliances (grills, firepits, tiki torches, outdoor fireplaces, etc.) | n/a | 3.6 |
| Dryer | 2.6 | 2.4 |

Change in buyers' preference for natural gas in the last year

When asked if they had noticed any change in home buyers' preference for natural gas in the past year, more than three-fourths of builders reported seeing 'no change' (78 percent). A minority of 13 percent noticed an increase, while a small fraction of only 3 percent noticed a decrease in buyers' preference for gas (Exhibit 16).

Exhibit 16: During the past year, have you noticed an increase or decrease in buyers' preference for natural gas? (Percent of Respondents)



Seventeen percent of builders in the West reported noticing an increase in buyers' preferences for natural gas during the past year, about the same share as in the Northeast (16 percent). Builders in the South and Midwest were somewhat less likely to report increased preferences for gas, with those shares at only 10 percent and 13 percent, respectively.

A breakdown of results by number of starts shows that builders with 25 to 99 starts were the most likely to notice an increase in gas preferences (23 percent). Fewer than 15 percent of builders in all other size categories noticed more buyers interested in natural gas (Exhibit 17).

Exhibit 17: During the past year, have you noticed an increase or decrease in buyers’ preference for natural gas? By Region and Firm Size (Percent of Respondents)

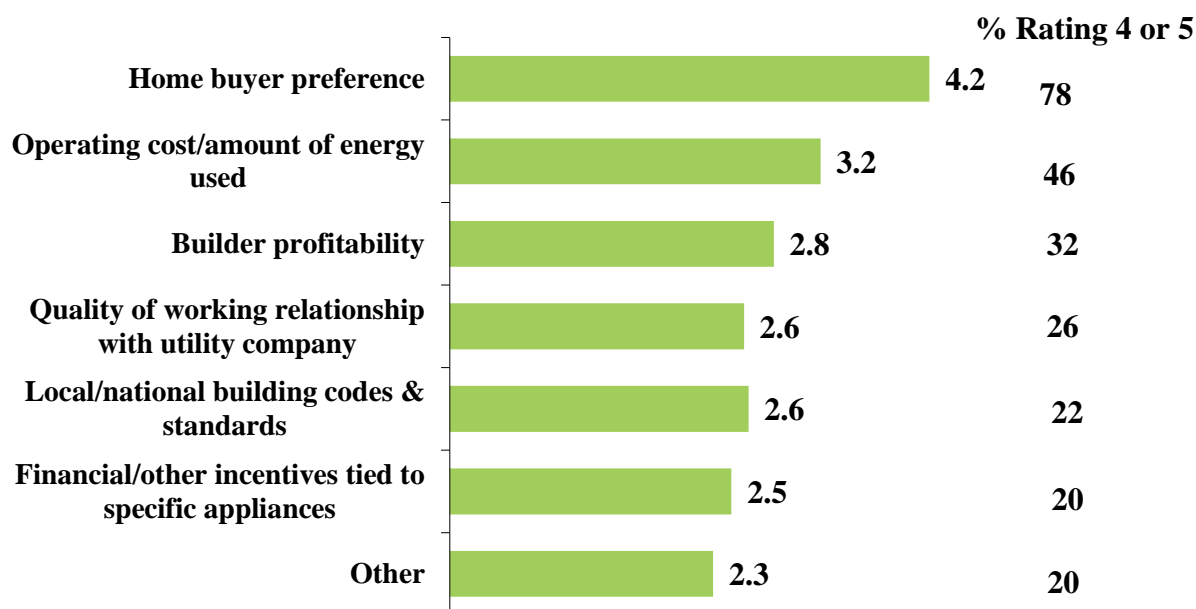
| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|----------------------------|-------|--------|----|-----|----|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| Increase | 13 | 16 | 13 | 10 | 17 | 9 | 12 | 23 | 10 |
| Decrease | 3 | 8 | 1 | 3 | 2 | 2 | 3 | | |
| No change | 78 | 68 | 83 | 78 | 76 | 79 | 76 | 74 | 83 |
| Don't know/Not sure | 6 | 8 | 3 | 8 | 5 | 9 | 8 | 3 | 7 |
| Responses | 325 | 25 | 75 | 166 | 59 | 85 | 97 | 62 | 30 |

Influence of Factors on Installation of Gas vs. Electric Appliances

Another question asked builders to rate the level of influence six different factors have on their decision to install electric vs. natural gas appliances in the new homes they build, using a scale from 1 to 5 where 1=’not at all influential’ and 5=’very influential.’ By far, the most influential factor on this decision is ‘home buyer preference,’ with an average influence rating of 4.2 and 78 percent of respondents rating it influential to very influential (4 or 5). In second place is ‘operating cost/amount of energy used,’ with an average rating of 3.2 and 46 percent of respondents rating it a 4 or 5.

All other factors are far less influential, with average ratings below 3.0. For example, ‘builder profitability’ received an average influence rating of 2.8, with only 32 percent rating it 4 or 5. ‘Quality of working relationship with utility company’ and ‘local/national building codes & standards’ have even less influence, both with average ratings of 2.6. At the very bottom in terms of influence on a builder’s decision to install electric vs. gas appliances is ‘financial/other incentives tied to specific appliances,’ which only received an average rating of 2.3 (Exhibit 18).

Exhibit 18: Influence of factors on decision to install electric vs. gas appliances
1=Not at all influential and 5=Very Influential.
(Average Rating)



Builders across the four census regions agreed the same two factors, and in the same order, have the most influence on their decision to install electric or natural gas appliances. First and foremost, it is ‘home buyer preferences,’ with an average influence rating of 4.4 in the Northeast, 4.2 in the Midwest, 4.1 in the South, and 4.4 in the West. The second factor in every region is ‘operating cost/amount of energy used,’ with average ratings ranging from 3.1 to 3.5 (Exhibit 19).

Interestingly, although ‘home buyer preference’ ranks as the most influential factor for builders of all sizes, its influence does decline a bit as the number of starts rises: from an average rating of 4.4 among builders with 5 or fewer starts to only 3.8 among those with 100+ starts. The second most influential factor on what type of appliances to install is ‘operating cost/amount of energy used’ for all builders who start fewer than 100 units. For those with 100+ starts, on the other hand, ‘builder profitability’ ranks second most influential, with an average rating of 3.3.

**Exhibit 19: Influence of factors on decision to install electric vs. gas appliances –
By Region and Firm Size
(Percent of Respondents)**

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---|-------|--------|-----|-----|-----|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| Home buyer preference | | | | | | | | | |
| 1=Not at all Influential | 4 | 4 | 3 | 6 | 4 | 1 | 5 | 7 | 3 |
| 2 | 5 | 4 | 4 | 6 | 4 | 2 | 4 | 7 | 16 |
| 3 | 13 | 4 | 15 | 14 | 9 | 13 | 8 | 19 | 19 |
| 4 | 23 | 21 | 27 | 23 | 18 | 22 | 23 | 17 | 19 |
| 5=Very Influential | 55 | 67 | 51 | 51 | 66 | 61 | 60 | 51 | 42 |
| <i>Average Rating</i> | 4.2 | 4.4 | 4.2 | 4.1 | 4.4 | 4.4 | 4.3 | 4.0 | 3.8 |
| Responses | 316 | 24 | 74 | 162 | 56 | 85 | 92 | 59 | 31 |
| Builder profitability | | | | | | | | | |
| 1=Not at all Influential | 27 | 29 | 32 | 26 | 23 | 32 | 29 | 22 | 10 |
| 2 | 12 | 13 | 9 | 15 | 7 | 11 | 12 | 14 | 10 |
| 3 | 28 | 25 | 34 | 25 | 33 | 34 | 20 | 34 | 42 |
| 4 | 15 | 21 | 11 | 18 | 12 | 18 | 16 | 12 | 23 |
| 5=Very Influential | 17 | 13 | 14 | 17 | 25 | 6 | 23 | 19 | 16 |
| <i>Average Rating</i> | 2.8 | 2.8 | 2.6 | 2.9 | 3.1 | 2.6 | 2.9 | 2.9 | 3.3 |
| Responses | 317 | 24 | 74 | 162 | 57 | 85 | 92 | 59 | 31 |
| Quality of working relationship with utility company | | | | | | | | | |
| 1=Not at all Influential | 33 | 42 | 32 | 32 | 32 | 36 | 35 | 25 | 19 |
| 2 | 13 | 29 | 7 | 14 | 14 | 11 | 14 | 17 | 19 |
| 3 | 28 | 13 | 38 | 26 | 25 | 31 | 24 | 27 | 35 |
| 4 | 17 | 13 | 16 | 19 | 18 | 18 | 21 | 19 | 10 |
| 5=Very Influential | 9 | 4 | 7 | 10 | 12 | 5 | 7 | 12 | 16 |
| <i>Average Rating</i> | 2.6 | 2.1 | 2.6 | 2.6 | 2.7 | 2.5 | 2.5 | 2.8 | 2.8 |
| Responses | 316 | 24 | 74 | 161 | 57 | 84 | 92 | 59 | 31 |
| Financial/other incentives tied to specific appliances | | | | | | | | | |
| 1=Not at all Influential | 30 | 29 | 32 | 32 | 21 | 32 | 34 | 27 | 10 |
| 2 | 21 | 25 | 20 | 18 | 30 | 19 | 18 | 27 | 39 |
| 3 | 29 | 25 | 32 | 27 | 32 | 32 | 32 | 27 | 29 |
| 4 | 13 | 13 | 8 | 15 | 12 | 15 | 11 | 14 | 16 |
| 5=Very Influential | 7 | 8 | 7 | 7 | 5 | 2 | 5 | 5 | 6 |
| <i>Average Rating</i> | 2.5 | 2.5 | 2.4 | 2.5 | 2.5 | 2.4 | 2.4 | 2.4 | 2.7 |
| Responses | 317 | 24 | 74 | 162 | 57 | 85 | 92 | 59 | 31 |

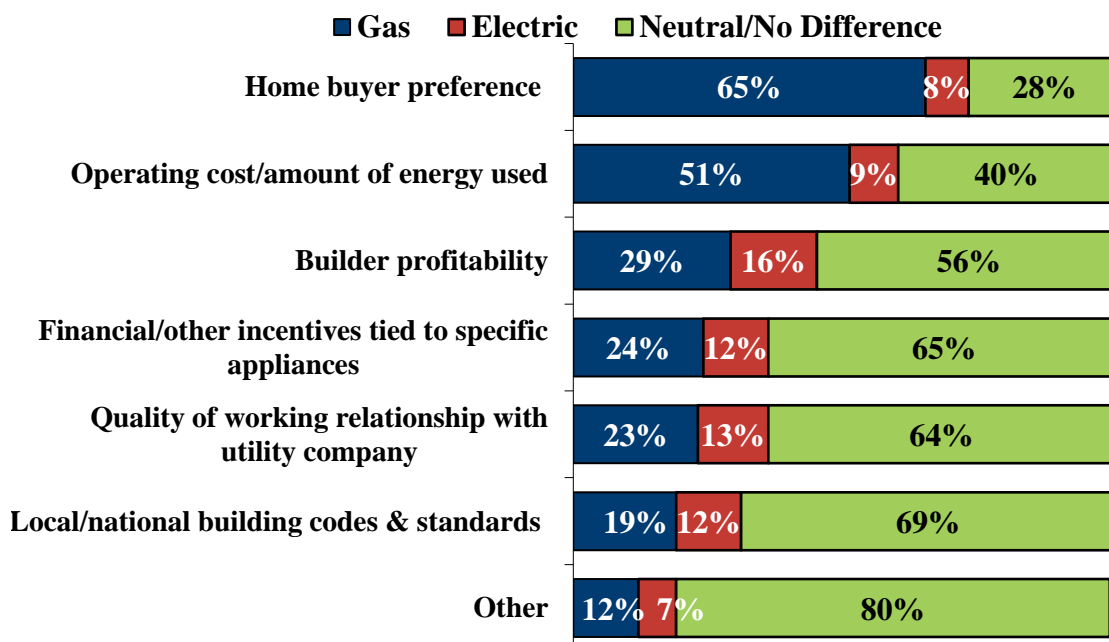
**Exhibit 19: Influence of factors on decision to install electric vs. gas appliances –
By Region and Firm Size
(Percent of Respondents) – continued**

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|--|-------|--------|-----|-----|-----|------------------------------------|---------|----------|------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| Operating cost/amount of energy used | | | | | | | | | |
| 1=Not at all Influential | 15 | 13 | 14 | 18 | 7 | 13 | 17 | 17 | 13 |
| 2 | 13 | 17 | 9 | 14 | 12 | 6 | 11 | 20 | 26 |
| 3 | 27 | 29 | 32 | 24 | 30 | 25 | 27 | 29 | 29 |
| 4 | 25 | 21 | 16 | 29 | 26 | 35 | 21 | 24 | 19 |
| 5=Very Influential | 21 | 21 | 28 | 15 | 25 | 21 | 24 | 10 | 13 |
| <i>Average Rating</i> | 3.2 | 3.2 | 3.4 | 3.1 | 3.5 | 3.5 | 3.2 | 2.9 | 2.9 |
| Responses | 317 | 24 | 74 | 162 | 57 | 85 | 92 | 59 | 31 |
| Local/national building codes & standards | | | | | | | | | |
| 1=Not at all Influential | 30 | 33 | 38 | 32 | 16 | 33 | 42 | 22 | 10 |
| 2 | 10 | 17 | 8 | 11 | 7 | 10 | 7 | 14 | 16 |
| 3 | 38 | 17 | 36 | 39 | 44 | 35 | 38 | 41 | 42 |
| 4 | 12 | 21 | 14 | 9 | 12 | 14 | 9 | 14 | 10 |
| 5=Very Influential | 10 | 13 | 4 | 9 | 21 | 8 | 4 | 10 | 23 |
| <i>Average Rating</i> | 2.6 | 2.6 | 2.4 | 2.5 | 3.2 | 2.6 | 2.3 | 2.8 | 3.2 |
| Responses | 315 | 24 | 74 | 160 | 57 | 84 | 92 | 59 | 31 |
| Other | | | | | | | | | |
| 1=Not at all Influential | 49 | 58 | 59 | 49 | 30 | 47 | 58 | 50 | 27 |
| 2 | 2 | | | 3 | | | 3 | 4 | |
| 3 | 30 | 8 | 33 | 26 | 50 | 34 | 33 | 21 | 45 |
| 4 | 9 | 8 | 4 | 9 | 15 | 9 | 3 | 13 | 9 |
| 5=Very Influential | 11 | 25 | 4 | 13 | 5 | 9 | 5 | 13 | 18 |
| <i>Average Rating</i> | 2.3 | 2.4 | 1.9 | 2.3 | 2.7 | 2.3 | 2.0 | 2.3 | 2.9 |
| Responses | 128 | 12 | 27 | 69 | 20 | 32 | 40 | 24 | 11 |

A final question asked builders about the fuel type they would install if they could choose based solely on each individual factor mentioned above. As Exhibit 20 shows, if builders could choose what type of appliances to install based exclusively on ‘home buyer preferences’, 65 percent would install gas, 8 percent electric, and 28 percent would be neutral or indifferent between the two fuel types. If the only consideration were ‘operating cost/amount of energy used,’ 51 percent of builders would install gas, 9 percent electric, and 40 percent would be neutral.

Most builders would be indifferent to the choice of gas vs. electric appliances if the decision was based on any of the other factors individually. For example, 56 percent report the choice of fuel type would make no difference if analyzed from the perspective of ‘builder profitability.’ Even larger majorities report fuel type would make no difference to them if the only consideration was ‘financial/other incentive tied to specific appliances’ (65 percent), ‘quality of working relationship with utility company’ (64 percent), or ‘local/national building codes & standards’ (69 percent).

**Exhibit 20: If you could choose fuel type based solely on each one of these factors individually, which one would you install?
(Percent of Respondents)**



Most builders in every region and size category would choose to install gas appliances if the decision was based entirely on ‘home buyer preferences.’ In fact, the share rises with builder size, from 57 percent of those with 5 or fewer starts to 74 percent of those with at least 100 starts. In the Midwest and South, 61 percent of builders would install gas appliances if ‘home buyer preference’ was the only consideration. The shares are higher in the West (75 percent) and Northeast (76 percent) (Exhibit 21). ‘Operating cost/amount of energy used’ is the only other individual factor that would lead a majority (or large plurality) of builders in every region and size category to choose gas as fuel type.

Exhibit 21: If you could choose fuel type based solely on each one of these factors individually, which one would you install? By Region and Firm Size (Percent of Respondents)

| | Total | Region | | | | Total No. of Units Started in 2020 | | | |
|---|------------|-----------|-----------|------------|-----------|------------------------------------|-----------|-----------|-----------|
| | | NE | MW | S | W | 5 or Fewer | 6 to 24 | 25 to 99 | 100+ |
| Home buyer preference | | | | | | | | | |
| Gas | 65 | 76 | 61 | 61 | 75 | 57 | 68 | 68 | 74 |
| Electric | 8 | 12 | 7 | 9 | 4 | 7 | 4 | 8 | 6 |
| Neutral/No Difference | 28 | 12 | 32 | 30 | 21 | 36 | 28 | 24 | 19 |
| Responses | 316 | 25 | 74 | 160 | 57 | 84 | 94 | 59 | 31 |
| Builder profitability | | | | | | | | | |
| Gas | 29 | 28 | 28 | 26 | 37 | 21 | 40 | 27 | 23 |
| Electric | 16 | 16 | 7 | 22 | 9 | 12 | 14 | 19 | 19 |
| Neutral/No Difference | 56 | 56 | 65 | 52 | 54 | 67 | 46 | 54 | 58 |
| Responses | 315 | 25 | 74 | 159 | 57 | 84 | 93 | 59 | 31 |
| Quality of working relationship with utility company | | | | | | | | | |
| Gas | 23 | 12 | 25 | 21 | 30 | 16 | 35 | 19 | 26 |
| Electric | 13 | 16 | 12 | 15 | 9 | 13 | 9 | 17 | 10 |
| Neutral/No Difference | 64 | 72 | 63 | 64 | 61 | 71 | 56 | 64 | 65 |
| Responses | 315 | 25 | 75 | 159 | 56 | 83 | 94 | 59 | 31 |
| Financial/other incentives tied to specific appliances | | | | | | | | | |
| Gas | 24 | 16 | 24 | 24 | 25 | 14 | 29 | 20 | 33 |
| Electric | 12 | 12 | 11 | 11 | 14 | 14 | 9 | 15 | 3 |
| Neutral/No Difference | 65 | 72 | 65 | 65 | 61 | 71 | 62 | 64 | 63 |
| Responses | 313 | 25 | 74 | 158 | 56 | 83 | 92 | 59 | 30 |
| Operating cost/amount of energy used | | | | | | | | | |
| Gas | 51 | 60 | 56 | 47 | 51 | 44 | 63 | 46 | 48 |
| Electric | 9 | 16 | 7 | 9 | 9 | 12 | 7 | 8 | 3 |
| Neutral/No Difference | 40 | 24 | 37 | 44 | 40 | 44 | 30 | 46 | 48 |
| Responses | 317 | 25 | 75 | 160 | 57 | 84 | 94 | 59 | 31 |
| Local/national building codes & standards | | | | | | | | | |
| Gas | 19 | 28 | 17 | 15 | 28 | 18 | 26 | 15 | 16 |
| Electric | 12 | 20 | 7 | 14 | 11 | 14 | 9 | 15 | 6 |
| Neutral/No Difference | 69 | 52 | 76 | 71 | 61 | 68 | 66 | 69 | 77 |
| Responses | 316 | 25 | 75 | 159 | 57 | 84 | 94 | 59 | 31 |
| Other | | | | | | | | | |
| Gas | 12 | 22 | 15 | 8 | 18 | 9 | 21 | 4 | |
| Electric | 7 | 22 | 3 | 5 | 14 | 6 | 5 | 4 | |
| Neutral/No Difference | 80 | 56 | 82 | 86 | 68 | 84 | 74 | 92 | 100 |
| Responses | 138 | 9 | 34 | 73 | 22 | 32 | 42 | 24 | 14 |

Appendix I: Survey Questionnaire: HMI Special Questions for August 2021

1. Of the typical single-family homes you built for-sale in the past 12 months, please indicate the average sales price for comparable homes with and without natural gas. On average, about how many days was each type of home on the market before going under contract?

| | Sales Price | Avg. # of Days on the Market | Did not build this type of home in last 12 months |
|---------------------------------|-------------|------------------------------|---|
| Home <u>with</u> natural gas | _____ | _____ | <input type="checkbox"/> |
| Home <u>without</u> natural gas | _____ | _____ | <input type="checkbox"/> |

2. In your experience, how likely are prospective home buyers to request that the following appliances be installed or plumbed for natural gas? Use a scale from 1 to 5, where 1= not at all likely and 5=very likely.

| | 1=Not at all likely | 2 | 3 | 4 | 5=Very likely |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Dryer | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fireplace (indoor) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Furnace/boiler | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Range/cooktop | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Water heater | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Outdoor Appliances (grills, firepits, tiki torches, outdoor fireplaces, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. During the past year, have you noticed an increase or decrease in buyers' preference for natural gas?
 Increase Decrease No change Don't know/Not sure

4. Please rate the level of influence each of the following factors has on the decision of which appliances to install (electric or natural gas) in the new homes you build. Use a scale from 1 to 5, where 1=Not at all influential and 5=Very Influential.

| | Not at all Influential: 1 | 2 | 3 | 4 | Very Influential: 5 |
|--|------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Home buyer preference | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Builder profitability | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Quality of working relationship with utility company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Financial/other incentives tied to specific appliances | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Operating cost/amount of energy used | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Local/national building codes & standards | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. If you could choose fuel type based solely on each one of these factors individually, which one would you install?

| | Gas | Electric | Neutral/ No Difference |
|--|--------------------------|--------------------------|---------------------------|
| Home buyer preference | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Builder profitability | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Quality of working relationship with utility company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Financial/other incentives tied to specific appliances | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Operating cost/amount of energy used | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Local/national building codes & standards | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

NAHB Priced-Out Estimates for 2023

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Special Study for Housing Economics
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Economics and Housing Policy
National Association of Home Builders

This article presents the NAHB's "priced out estimates" for 2023, showing how higher prices and interest rates affect housing affordability. The 2023 US estimates indicate that a \$1,000 increase in the median new home price (\$425,786¹) would price 140,436 households out of the market. As a benchmark, 96.5 million households are not able to afford a new median priced new home. A \$1,000 home price increase would make 140,436 more households disqualify for the new home mortgage. Elevated mortgage interest rates, together with higher home prices, create affordability challenges, particularly for first-time buyers.

Other NAHB estimates in this paper show that for 2023, 25 basis points added to the mortgage rate at 30-year fixed rate of 6.25% would price out around 1.3 million households. In addition to the national numbers, NAHB once again is providing priced out estimates for individual states and more than 300 metropolitan areas.

The Priced-Out Methodology and Data

The NAHB priced-out model uses the ability to qualify a mortgage to measure housing affordability, because most home buyers finance their new home purchase with conventional loans, and because convenient underwriting standards for these loans apply. The standard NAHB adopts for its priced-out estimates is that the sum of the mortgage payment (including the principal amount, loan interest, property tax, homeowners' property and private mortgage insurance premiums (PITI), is no more than 28 percent of monthly gross household income.

As a result, the number of households that qualify for mortgages for a certain priced home depends on the household income distribution in an area and the mortgage interest rate at that

¹ The 2022 US median new home price is estimated by projecting the 2021 preliminary median new home price using the NAHB forecast of the Case-Shiller Home Price Index.

time. The most recent detailed household income distributions for all states and metro areas are from the 2021 American Community Survey (ACS). NAHB adjusts the income distributions to reflect the income and population changes that may happen from 2021 to 2023. The income distribution is adjusted for inflation using the 2022 median family income at the state² and metro³ levels and then extrapolated into 2023. The number of households in 2023 is projected by the growth rate of households from 2019 to 2021.

Other assumptions of the priced-out calculation include a 10% down payment and a 30-year fixed rate mortgage at an interest rate of 6.25% with zero points. For a loan with this down payment, private mortgage insurance is required by lenders and thus included as part of PITI. The typical private mortgage insurance annual premium is 73 basis points,⁴ based on the standard assumption of a national median credit score of 738⁵ and 10% down payment and 30-year fixed mortgage rate. Effective local property tax rates are calculated using data from the 2019 American Community Survey (ACS) summary files. Homeowner insurance rates are constructed from the 2019 ACS Public Use Microdata Sample (PUMS)⁶. For the US as a whole, the effective property tax rate is \$10.7 per \$1,000 of property value and typical homeowner insurance is \$3.6 per \$1,000 of property value.

U.S. Priced-Out Estimates

Under these assumptions, 35.9 million of the 132.5 million US households could afford to buy a new median priced home at \$425,786 in 2023. A \$1,000 home price increase will thus price 140,436 households out of the market for this home. These are the households that can qualify for a mortgage before a \$1,000 increase but not afterwards, as shown in Table 1 below.

² The state median family income is published by Department of Housing and Urban Development (HUD).

³ The MSA median family income is calculated by HUD and published by Federal Financial Institutions Examination Council (FFIEC).

⁴ Private mortgage insurance premium (PMI) is obtained from the PMI Cost Calculator(<https://www.hsh.com/calc-pmionly.html>)

⁵ Median credit score information is shown in the article “Four ways today’s high home prices affect the larger economy” October 2018 Urban Institute <https://www.urban.org/urban-wire/four-ways-todays-high-home-prices-affect-larger-economy>

⁶ Producing metro level estimates from the ACS PUMS involves aggregating Public Use Microdata Area (PUMA) level data according to the latest definitions of metropolitan areas. Due to complexity of these procedures and since metro level insurance rates tend to remain stable over time, NAHB revises these estimates only periodically.

Table 1. US Households Priced Out of the Market by Increases in House Prices, 2023

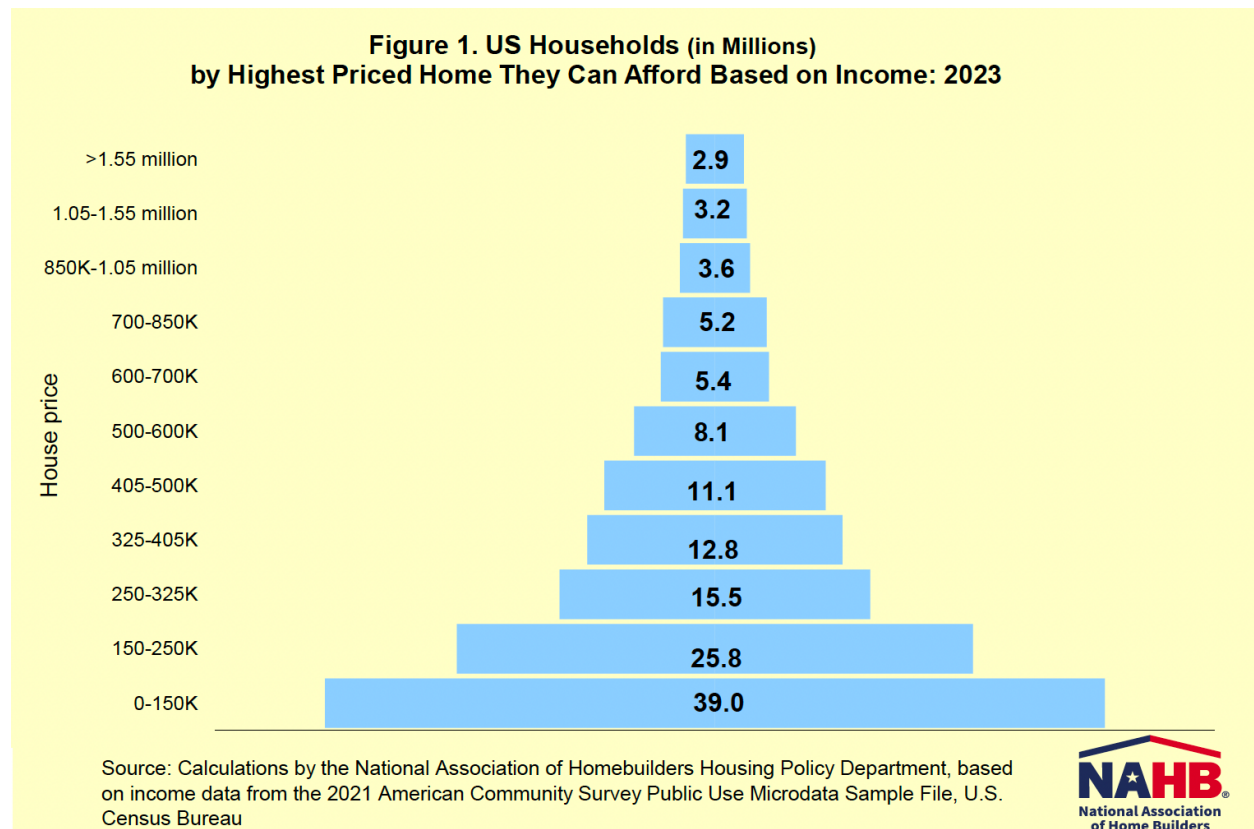
| Area | Mortgage Rate | House Price | Monthly Mortgage Payment | Taxes and Insurance | Minimum Income Needed | Households Unable to Afford the Median Price |
|---------------|---------------|-------------|--------------------------|---------------------|-----------------------|--|
| United States | 6.25% | \$425,786 | \$2,544 | \$481 | \$129,645 | 96,537,344 |
| United States | 6.25% | \$426,786 | \$2,550 | \$482 | \$129,950 | 96,677,780 |
| Difference | | \$1,000 | \$6 | \$1 | \$304 | 140,436 |

Calculations assume a 10% down payment and a 73 basis point fee for private mortgage insurance.
A Household Qualifies for a Mortgage if Mortgage Payments, Taxes, and Insurance are 28% of Income

| US Household Income Distribution for 2023 | | | | |
|---|--------------|------------|-------------|--|
| Income Range: | | Households | Cumulative | |
| \$0 | to \$11,000 | 7,986,189 | 7,986,189 | |
| \$11,001 | to \$16,501 | 5,109,466 | 13,095,654 | |
| \$16,502 | to \$22,002 | 4,803,477 | 17,899,132 | |
| \$22,003 | to \$27,503 | 5,133,510 | 23,032,642 | |
| \$27,504 | to \$33,003 | 5,039,706 | 28,072,348 | |
| \$33,004 | to \$38,504 | 5,315,092 | 33,387,441 | |
| \$38,505 | to \$44,005 | 5,049,951 | 38,437,391 | |
| \$44,006 | to \$49,505 | 5,236,353 | 43,673,744 | |
| \$49,506 | to \$55,006 | 4,632,695 | 48,306,439 | |
| \$55,007 | to \$66,008 | 9,455,402 | 57,761,842 | |
| \$66,009 | to \$82,510 | 12,815,946 | 70,577,788 | |
| \$82,511 | to \$110,013 | 16,905,320 | 87,483,108 | |
| \$110,014 | to \$137,517 | 12,685,395 | 100,168,502 | |
| \$137,518 | to \$165,021 | 8,856,542 | 109,025,044 | |
| \$165,022 | to \$220,028 | 10,486,472 | 119,511,516 | |
| \$220,029 | to More | 12,958,194 | 132,469,710 | |

The U.S. housing affordability pyramid represents the number of households that could only afford homes of no more than a certain price. Based on conventional assumptions and underwriting standards, the minimum income required to purchase a \$150,000 home at the mortgage rate of 6.25% is \$45,672.63. In 2023, about 39 million households in the U.S. are estimated to have incomes no more than that threshold and, therefore, can only afford to buy homes priced no more than \$150,000. These 39 million households form the bottom step of the pyramid (Figure 1). Of the remaining households who can afford a home priced at \$150,000, 25.8 million can only afford to pay a top price of somewhere between \$150,000 and \$250,000 (the second step on the pyramid). Each step represents a maximum affordable price range for

fewer and fewer households. Housing affordability is a great concern for households with annual income at the lower end of the distribution.



State and Local Estimates

The number of priced out households varies across both states and metropolitan areas, largely affected by the sizes of local population and the affordability of new homes. The 2023 priced-out estimates for all states and the District of Columbia are shown in Table 2, which presents the projected 2023 median new home price estimates and the amount of income needed to qualify the mortgage, the number and the percent of households who cannot afford the new homes, and the number of households could be priced out if price goes up by \$1,000. Among all the states, Florida registered the largest number of households priced out of the market by a \$1,000 increase in the median-priced home in the state (9,573), followed by Texas (9,151), and California (7,243), largely because these three states are the top three populous states.

Table 3 shows the 2023 priced-out estimates for over 300 metropolitan statistical areas and metro divisions. The metropolitan area (or metro division) with the largest priced out effect, in terms of absolute numbers, is Houston-The Woodlands-Sugar Land, TX, where 3,054 households will be disqualified for a new median-priced home if price goes up by \$1,000. The Atlanta-Sandy Springs-Alpharetta, GA metro area registers the second largest number of priced-out households (2,626), followed by Chicago-Naperville-Evanston, IL metro division (2,467) and New York-Jersey City-White Plains, NY-NJ metro division (2,065). Different impacts of adding \$1,000 to a new home price are largely due to different sizes of metro population and the affordability of new homes to begin with. The largest priced-out effect is in the Houston, TX metro area, where 2.1 million households are unable to afford the median-priced new home initially, and a \$1,000 increase prices out an additional 3,054. Compared to the Houston metro area, the relatively larger priced-out effect in the New York-Jersey City-White Plains, NY-NJ metro division is because of the largest population size among all metro areas and metro divisions.

Interest Rates

The NAHB 2023 priced-out estimates also present how interest rates affect the number of households that would be priced out of the new home market. If mortgage interest rate increase, the monthly mortgage payments will rise as well and therefore higher household income thresholds are needed to qualify for a mortgage loan. Table 4 shows the number of households priced out of the market for a new median priced home at \$ 425,786 by each 25 basis-point increase in interest rate from 3.5% to 8%. When interest rates increase from 6.25% to 6.5%, around 1.28 million households can no longer afford buying median-priced new homes. An increase from 6.5% to 7% prices approximately 1.29 million households out of the market. However, about 917,000 households would be squeezed out of the market if interest rate goes up to 7.25% from 7%. This diminishing effect happens because only a few households at the smaller end of household income distribution will be affected. In contrast, when interest rates are relatively low, a 25 basis-point increase would affect a larger number of households at the larger section of the income distribution.

Table 4. U.S. Households Priced Out of the Market by an Increase in Interest Rates, 2022

| Mortgage Rate | Median New House Price | Monthly Mortgage Payment | Taxes and Insurance | Minimum Income Needed | Households That Can Afford House | Change in Households | Cumulative Change |
|----------------------|-------------------------------|---------------------------------|----------------------------|------------------------------|---|-----------------------------|--------------------------|
| 3.50% | \$425,786 | \$1,881 | \$481 | \$101,202 | 50,403,369 | | |
| 3.75% | \$425,786 | \$1,937 | \$481 | \$103,621 | 48,916,640 | -1,486,729 | -1,486,729 |
| 4.00% | \$425,786 | \$1,994 | \$481 | \$106,075 | 47,408,011 | -1,508,629 | -2,995,358 |
| 4.25% | \$425,786 | \$2,052 | \$481 | \$108,564 | 45,877,919 | -1,530,092 | -4,525,450 |
| 4.50% | \$425,786 | \$2,111 | \$481 | \$111,088 | 44,491,512 | -1,386,407 | -5,911,857 |
| 4.75% | \$425,786 | \$2,171 | \$481 | \$113,645 | 43,312,175 | -1,179,337 | -7,091,194 |
| 5.00% | \$425,786 | \$2,231 | \$481 | \$116,234 | 42,117,769 | -1,194,406 | -8,285,600 |
| 5.25% | \$425,786 | \$2,293 | \$481 | \$118,856 | 40,908,653 | -1,209,116 | -9,494,716 |
| 5.50% | \$425,786 | \$2,354 | \$481 | \$121,509 | 39,685,191 | -1,223,462 | -10,718,178 |
| 5.75% | \$425,786 | \$2,417 | \$481 | \$124,192 | 38,447,750 | -1,237,441 | -11,955,619 |
| 6.00% | \$425,786 | \$2,480 | \$481 | \$126,904 | 37,196,702 | -1,251,048 | -13,206,667 |
| 6.25% | \$425,786 | \$2,544 | \$481 | \$129,645 | 35,932,420 | -1,264,282 | -14,470,949 |
| 6.50% | \$425,786 | \$2,609 | \$481 | \$132,414 | 34,655,276 | -1,277,144 | -15,748,093 |
| 6.75% | \$425,786 | \$2,674 | \$481 | \$135,210 | 33,365,647 | -1,289,629 | -17,037,722 |
| 7.00% | \$425,786 | \$2,740 | \$481 | \$138,033 | 32,135,530 | -1,230,117 | -18,267,839 |
| 7.25% | \$425,786 | \$2,806 | \$481 | \$140,880 | 31,218,499 | -917,031 | -19,184,870 |
| 7.50% | \$425,786 | \$2,874 | \$481 | \$143,753 | 30,293,530 | -924,969 | -20,109,839 |
| 7.75% | \$425,786 | \$2,941 | \$481 | \$146,649 | 29,360,880 | -932,650 | -21,042,489 |
| 8.00% | \$425,786 | \$3,009 | \$481 | \$149,568 | 28,420,804 | -940,076 | -21,982,565 |

Table 2 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| State | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|----------------------|------------------------------|---------------------------------|-------------------------|---|---|
| United States | 425,786 | 129,645 | 132,469,710 | 96,537,344 | 140,436 |
| Alabama | 322,953 | 94,014 | 2,040,123 | 1,423,521 | 2,681 |
| Alaska | 308,985 | 96,439 | 291,871 | 153,955 | 431 |
| Arizona | 492,558 | 140,214 | 2,973,128 | 2,402,986 | 2,304 |
| Arkansas | 240,411 | 71,794 | 1,204,048 | 710,298 | 2,167 |
| California | 601,917 | 173,080 | 13,705,842 | 10,457,556 | 7,243 |
| Colorado | 589,695 | 168,256 | 2,393,699 | 1,892,915 | 1,305 |
| Connecticut | 536,220 | 182,643 | 1,481,360 | 1,156,449 | 914 |
| Delaware | 470,721 | 134,632 | 416,075 | 288,787 | 391 |
| District of Columbia | 589,493 | 166,112 | 350,248 | 238,348 | 244 |
| Florida | 436,336 | 132,891 | 9,279,841 | 7,344,433 | 9,573 |
| Georgia | 383,391 | 115,618 | 4,155,220 | 2,981,340 | 4,260 |
| Hawaii | 925,231 | 252,090 | 516,181 | 472,851 | 261 |
| Idaho | 472,319 | 134,076 | 734,109 | 607,296 | 495 |
| Illinois | 387,157 | 133,323 | 5,120,520 | 3,626,384 | 6,158 |
| Indiana | 397,428 | 120,129 | 2,766,270 | 2,131,760 | 3,024 |
| Iowa | 398,201 | 130,910 | 1,313,849 | 1,061,560 | 1,111 |
| Kansas | 480,388 | 158,124 | 1,180,099 | 994,030 | 903 |
| Kentucky | 321,661 | 97,821 | 1,823,413 | 1,278,174 | 2,532 |
| Louisiana | 276,776 | 83,497 | 1,827,826 | 1,143,531 | 2,973 |
| Maine | 359,607 | 110,807 | 614,332 | 447,030 | 701 |
| Maryland | 415,455 | 125,572 | 2,491,997 | 1,490,359 | 2,842 |
| Massachusetts | 1,014,587 | 310,447 | 2,871,784 | 2,869,291 | 1,727 |
| Michigan | 375,352 | 119,817 | 4,135,406 | 3,080,557 | 4,521 |
| Minnesota | 440,104 | 136,303 | 2,341,036 | 1,703,640 | 2,272 |
| Mississippi | 271,597 | 83,919 | 1,159,778 | 818,099 | 1,651 |
| Missouri | 401,811 | 124,110 | 2,479,159 | 1,938,218 | 2,563 |
| Montana | 495,760 | 146,763 | 460,539 | 390,222 | 314 |
| Nebraska | 348,221 | 116,125 | 800,794 | 602,408 | 1,068 |
| Nevada | 497,365 | 140,129 | 1,241,203 | 954,118 | 1,129 |
| New Hampshire | 480,929 | 159,069 | 554,737 | 440,226 | 425 |
| New Jersey | 449,221 | 156,124 | 3,723,261 | 2,552,082 | 3,565 |
| New Mexico | 468,259 | 138,450 | 876,670 | 746,336 | 574 |
| New York | 762,735 | 246,870 | 7,864,210 | 7,030,080 | 3,850 |
| North Carolina | 408,684 | 121,187 | 4,317,306 | 3,287,850 | 4,230 |
| North Dakota | 420,455 | 130,016 | 321,506 | 238,218 | 341 |
| Ohio | 407,092 | 131,655 | 4,937,729 | 3,976,527 | 5,579 |
| Oklahoma | 463,362 | 145,961 | 1,602,649 | 1,344,578 | 1,478 |
| Oregon | 600,373 | 176,300 | 1,757,565 | 1,493,179 | 763 |
| Pennsylvania | 560,152 | 178,526 | 5,341,014 | 4,611,284 | 2,528 |
| Rhode Island | 718,404 | 228,588 | 475,840 | 442,221 | 241 |
| South Carolina | 404,514 | 118,055 | 2,126,805 | 1,597,965 | 1,908 |
| South Dakota | 372,224 | 116,922 | 360,002 | 272,637 | 437 |
| Tennessee | 346,540 | 101,407 | 2,891,092 | 2,023,759 | 4,004 |
| Texas | 439,581 | 147,125 | 11,673,258 | 9,145,956 | 9,159 |
| Utah | 522,301 | 147,701 | 1,185,031 | 914,731 | 1,000 |
| Vermont | 447,116 | 147,705 | 277,767 | 225,257 | 231 |
| Virginia | 401,764 | 117,877 | 3,477,182 | 2,208,502 | 3,924 |
| Washington | 635,131 | 186,757 | 3,114,782 | 2,527,592 | 1,737 |
| West Virginia | 208,300 | 61,247 | 716,276 | 400,187 | 1,516 |
| Wisconsin | 436,772 | 141,285 | 2,514,998 | 2,006,180 | 1,996 |
| Wyoming | 406,817 | 117,706 | 252,796 | 183,976 | 273 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|---|------------------------------|---------------------------------|-------------------------|---|---|
| Abilene, TX | 255,297 | 84,621 | 72,298 | 36,962 | 177 |
| Akron, OH | 476,676 | 156,756 | 298,813 | 263,875 | 144 |
| Albany, GA | 234,253 | 74,854 | 61,892 | 48,105 | 150 |
| Albany-Lebanon, OR | 122,917 | 36,965 | 53,363 | 11,709 | 144 |
| Albany-Schenectady-Troy, NY | 378,852 | 128,524 | 394,699 | 276,520 | 512 |
| Albuquerque, NM | 460,702 | 138,801 | 400,228 | 335,705 | 310 |
| Alexandria, LA | 185,226 | 55,282 | 54,909 | 25,144 | 153 |
| Allentown-Bethlehem-Easton, PA-NJ | 539,102 | 179,196 | 352,961 | 297,547 | 171 |
| Altoona, PA | 347,060 | 108,607 | 47,232 | 37,529 | 48 |
| Amarillo, TX | 288,791 | 98,602 | 110,579 | 81,593 | 124 |
| Ames, IA | 446,598 | 145,765 | 49,157 | 43,392 | 25 |
| Anchorage, AK | 242,325 | 76,054 | 164,388 | 60,717 | 310 |
| Ann Arbor, MI | 637,659 | 205,521 | 156,978 | 131,216 | 75 |
| Anniston-Oxford, AL | 206,505 | 61,314 | 44,626 | 25,483 | 96 |
| Appleton, WI | 475,825 | 154,004 | 101,501 | 84,290 | 101 |
| Asheville, NC | 671,790 | 192,926 | 177,728 | 162,283 | 54 |
| Athens-Clarke County, GA | 565,354 | 171,108 | 92,128 | 86,526 | 47 |
| Atlanta-Sandy Springs-Alpharetta, GA | 442,012 | 133,070 | 2,369,222 | 1,683,117 | 2,626 |
| Atlantic City-Hammonton, NJ | 309,100 | 112,305 | 123,668 | 94,070 | 183 |
| Auburn-Opelika, AL | 370,287 | 107,287 | 70,399 | 45,325 | 95 |
| Augusta-Richmond County, GA-SC | 370,027 | 110,593 | 233,063 | 167,022 | 265 |
| Austin-Round Rock-Georgetown, TX | 447,001 | 146,130 | 1,115,314 | 817,808 | 1,166 |
| Bakersfield, CA | 444,360 | 134,608 | 293,410 | 232,964 | 274 |
| Baltimore-Columbia-Towson, MD | 535,157 | 162,569 | 1,174,925 | 845,730 | 967 |
| Bangor, ME | 276,351 | 87,614 | 66,814 | 43,233 | 91 |
| Barnstable Town, MA | 628,335 | 185,215 | 113,658 | 90,524 | 69 |
| Baton Rouge, LA | 273,480 | 82,239 | 353,980 | 174,670 | 474 |
| Battle Creek, MI | 303,039 | 98,785 | 53,139 | 38,533 | 68 |
| Bay City, MI | 367,617 | 138,969 | 46,095 | 40,676 | 25 |
| Beaumont-Port Arthur, TX | 175,869 | 59,685 | 155,127 | 71,852 | 382 |
| Beckley, WV | 312,125 | 92,652 | 43,611 | 31,475 | 61 |
| Bellingham, WA | 824,054 | 239,095 | 95,776 | 88,347 | 35 |
| Bend, OR | 782,373 | 223,594 | 91,682 | 81,780 | 42 |
| Billings, MT | 220,157 | 65,761 | 77,629 | 35,847 | 173 |
| Binghamton, NY | 226,801 | 83,773 | 112,117 | 72,660 | 213 |
| Birmingham-Hoover, AL | 427,339 | 124,239 | 444,712 | 339,700 | 410 |
| Bismarck, ND | 608,205 | 186,770 | 53,451 | 47,557 | 33 |
| Blacksburg-Christiansburg, VA | 269,333 | 78,995 | 72,167 | 46,892 | 91 |
| Bloomington, IL | 342,140 | 120,926 | 73,672 | 50,783 | 91 |
| Bloomington, IN | 279,328 | 83,582 | 68,607 | 43,347 | 112 |
| Bloomsburg-Berwick, PA | 353,865 | 111,661 | 33,256 | 24,227 | 43 |
| Boise City, ID | 342,213 | 96,948 | 315,585 | 202,457 | 526 |
| Boston, MA Metro Division | 879,346 | 265,956 | 825,038 | 729,240 | 497 |
| Cambridge-Newton-Framingham, MA Metro Division | 879,346 | 266,336 | 976,505 | 845,763 | 633 |
| Rockingham County-Strafford County, NH Metro Division | 879,346 | 286,604 | 185,254 | 200,357 | 164 |
| Boulder, CO | 725,593 | 204,563 | 139,467 | 119,853 | 99 |
| Bowling Green, KY | 297,007 | 89,298 | 78,015 | 56,431 | 140 |
| Bremerton-Silverdale-Port Orchard, WA | 904,759 | 264,726 | 105,285 | 104,415 | 62 |
| Bridgeport-Stamford-Norwalk, CT | 834,475 | 273,812 | 374,805 | 314,489 | 216 |
| Brownsville-Harlingen, TX | 337,171 | 118,994 | 142,480 | 125,671 | 98 |
| Brunswick, GA | 202,239 | 61,031 | 45,816 | 17,903 | 87 |
| Buffalo-Cheektowaga, NY | 579,922 | 201,294 | 519,193 | 473,873 | 244 |
| Burlington, NC | 249,121 | 73,237 | 74,763 | 37,917 | 146 |
| Burlington-South Burlington, VT | 442,437 | 143,672 | 96,852 | 70,679 | 68 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|---|------------------------------|---------------------------------|-------------------------|---|---|
| California-Lexington Park, MD | 380,766 | 114,607 | 43,913 | 29,147 | 74 |
| Canton-Massillon, OH | 379,697 | 121,525 | 170,987 | 137,580 | 191 |
| Cape Coral-Fort Myers, FL | 372,260 | 113,529 | 357,975 | 247,015 | 527 |
| Cape Girardeau, MO-IL | 262,102 | 79,894 | 37,769 | 23,231 | 91 |
| Carbondale-Marion, IL | 235,165 | 81,889 | 54,093 | 34,878 | 106 |
| Carson City, NV | 511,339 | 140,433 | 25,223 | 22,625 | 10 |
| Casper, WY | 339,298 | 98,872 | 33,363 | 23,676 | 56 |
| Cedar Rapids, IA | 256,291 | 85,087 | 112,563 | 64,591 | 204 |
| Chambersburg-Waynesboro, PA | 351,313 | 109,187 | 63,957 | 45,348 | 71 |
| Champaign-Urbana, IL | 414,300 | 144,134 | 93,450 | 77,942 | 80 |
| Charleston, WV | 202,261 | 60,648 | 103,258 | 55,006 | 216 |
| Charleston-North Charleston, SC | 499,699 | 145,375 | 329,286 | 250,659 | 239 |
| Charlotte-Concord-Gastonia, NC-SC | 469,445 | 138,191 | 1,119,126 | 847,316 | 845 |
| Charlottesville, VA | 536,117 | 156,785 | 89,417 | 70,010 | 50 |
| Chattanooga, TN-GA | 404,903 | 120,780 | 234,912 | 200,952 | 185 |
| Cheyenne, WY | 493,263 | 144,324 | 45,812 | 33,470 | 47 |
| Chicago-Naperville-Evanston, IL Metro Division | 503,364 | 172,518 | 2,918,910 | 2,275,906 | 2,467 |
| Elgin, IL Metro Division | 503,364 | 179,163 | 270,235 | 205,312 | 292 |
| Gary, IN Metro Division | 503,364 | 150,652 | 284,035 | 239,486 | 220 |
| Lake County-Kenosha County, IL-WI Metro Division | 503,364 | 179,180 | 333,628 | 250,904 | 209 |
| Chico, CA | 492,200 | 144,085 | 85,231 | 68,806 | 60 |
| Cincinnati, OH-KY-IN | 379,102 | 119,938 | 928,534 | 632,608 | 1,034 |
| Clarksville, TN-KY | 345,997 | 103,917 | 128,083 | 91,925 | 218 |
| Cleveland, TN | 316,118 | 92,291 | 53,768 | 39,034 | 81 |
| Cleveland-Elyria, OH | 417,609 | 139,995 | 907,934 | 748,509 | 710 |
| Coeur d'Alene, ID | 448,605 | 125,871 | 70,354 | 57,872 | 48 |
| College Station-Bryan, TX | 272,523 | 90,828 | 105,536 | 65,568 | 141 |
| Colorado Springs, CO | 683,121 | 195,351 | 315,164 | 276,966 | 164 |
| Columbia, MO | 310,376 | 95,148 | 90,055 | 67,227 | 99 |
| Columbia, SC | 262,421 | 77,707 | 351,465 | 186,359 | 590 |
| Columbus, GA-AL | 281,399 | 86,562 | 135,238 | 92,826 | 184 |
| Columbus, IN | 362,248 | 109,140 | 34,803 | 20,339 | 51 |
| Columbus, OH | 427,798 | 137,345 | 897,172 | 668,215 | 1,086 |
| Corpus Christi, TX | 256,892 | 90,204 | 153,172 | 82,641 | 267 |
| Corvallis, OR | 594,845 | 178,518 | 41,426 | 30,151 | 28 |
| Crestview-Fort Walton Beach-Destin, FL | 344,295 | 101,624 | 136,758 | 88,124 | 188 |
| Cumberland, MD-WV | 396,577 | 120,150 | 44,094 | 40,107 | 19 |
| Dallas-Plano-Irving, TX Metro Division | 483,393 | 163,741 | 2,070,202 | 1,639,096 | 1,212 |
| Fort Worth-Arlington-Grapevine, TX Metro Division | 483,393 | 162,837 | 984,037 | 798,973 | 839 |
| Dalton, GA | 129,616 | 38,902 | 50,895 | 17,205 | 162 |
| Danville, IL | 242,648 | 85,500 | 27,008 | 20,541 | 44 |
| Daphne-Fairhope-Foley, AL | 380,873 | 109,394 | 107,571 | 78,134 | 92 |
| Davenport-Moline-Rock Island, IA-IL | 242,112 | 82,485 | 162,967 | 87,594 | 281 |
| Dayton-Kettering, OH | 482,248 | 161,294 | 344,869 | 302,821 | 155 |
| Decatur, AL | 177,889 | 51,902 | 62,314 | 33,666 | 127 |
| Decatur, IL | 278,477 | 98,458 | 45,119 | 29,618 | 75 |
| Deltona-Daytona Beach-Ormond Beach, FL | 311,333 | 93,792 | 322,037 | 222,462 | 495 |
| Denver-Aurora-Lakewood, CO | 673,917 | 193,001 | 1,233,142 | 985,772 | 737 |
| Des Moines-West Des Moines, IA | 420,170 | 140,089 | 302,677 | 231,559 | 255 |
| Detroit-Dearborn-Livonia, MI Metro Division | 419,258 | 138,760 | 700,854 | 583,439 | 672 |
| Warren-Troy-Farmington Hills, MI Metro Division | 419,258 | 133,165 | 1,098,798 | 761,182 | 1,276 |
| Dothan, AL | 250,513 | 72,998 | 65,888 | 38,244 | 117 |
| Dover, DE | 350,994 | 99,645 | 72,379 | 51,244 | 134 |
| Dubuque, IA | 296,979 | 95,477 | 42,738 | 29,316 | 67 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|---------------------------------------|------------------------------|---------------------------------|-------------------------|---|---|
| Duluth, MN-WI | 428,083 | 134,246 | 125,079 | 100,673 | 142 |
| Durham-Chapel Hill, NC | 502,265 | 150,532 | 273,019 | 224,742 | 153 |
| East Stroudsburg, PA | 294,320 | 100,971 | 77,189 | 52,013 | 127 |
| Eau Claire, WI | 436,268 | 139,011 | 73,122 | 57,133 | 74 |
| El Centro, CA | 327,139 | 98,244 | 47,518 | 32,646 | 51 |
| Elizabethtown-Fort Knox, KY | 301,338 | 91,109 | 57,832 | 36,235 | 103 |
| Elkhart-Goshen, IN | 198,836 | 60,301 | 69,480 | 24,022 | 163 |
| Elmira, NY | 210,745 | 77,600 | 37,434 | 22,846 | 79 |
| El Paso, TX | 435,323 | 155,397 | 331,339 | 295,614 | 217 |
| Enid, OK | 334,726 | 106,376 | 22,368 | 14,236 | 30 |
| Erie, PA | 227,120 | 76,483 | 110,996 | 67,852 | 253 |
| Eugene-Springfield, OR | 622,241 | 183,871 | 164,748 | 148,221 | 47 |
| Evansville, IN-KY | 466,893 | 142,146 | 135,981 | 113,713 | 128 |
| Fairbanks, AK | 435,313 | 138,980 | 37,317 | 25,973 | 30 |
| Fargo, ND-MN | 441,959 | 140,492 | 116,231 | 87,950 | 103 |
| Farmington, NM | 223,292 | 66,193 | 39,196 | 24,299 | 74 |
| Fayetteville, NC | 338,872 | 105,034 | 202,276 | 162,879 | 208 |
| Fayetteville-Springdale-Rogers, AR | 249,875 | 73,783 | 217,252 | 107,690 | 470 |
| Flagstaff, AZ | 611,395 | 172,024 | 62,070 | 58,028 | 40 |
| Flint, MI | 220,634 | 72,301 | 166,554 | 100,240 | 333 |
| Florence, SC | 199,474 | 58,443 | 77,988 | 44,206 | 147 |
| Florence-Muscle Shoals, AL | 162,378 | 47,793 | 62,154 | 28,105 | 172 |
| Fond du Lac, WI | 548,767 | 178,779 | 42,913 | 37,354 | 27 |
| Fort Collins, CO | 435,313 | 124,096 | 157,813 | 104,239 | 171 |
| Fort Smith, AR-OK | 118,451 | 35,749 | 96,082 | 30,458 | 257 |
| Fort Wayne, IN | 373,818 | 113,457 | 177,641 | 134,869 | 197 |
| Fresno, CA | 595,510 | 174,945 | 329,459 | 286,587 | 152 |
| Gadsden, AL | 145,034 | 42,679 | 36,064 | 15,203 | 117 |
| Gainesville, FL | 272,523 | 84,211 | 143,688 | 88,276 | 240 |
| Gainesville, GA | 433,506 | 129,602 | 79,994 | 58,457 | 50 |
| Gettysburg, PA | 427,445 | 136,714 | 41,312 | 33,015 | 40 |
| Glens Falls, NY | 347,379 | 117,117 | 55,493 | 41,213 | 62 |
| Goldensboro, NC | 305,933 | 93,744 | 45,432 | 37,435 | 50 |
| Grand Forks, ND-MN | 284,219 | 89,001 | 41,767 | 23,342 | 60 |
| Grand Island, NE | 355,757 | 116,334 | 30,427 | 25,944 | 22 |
| Grand Junction, CO | 333,698 | 93,098 | 63,948 | 41,304 | 81 |
| Grand Rapids-Kentwood, MI | 405,948 | 125,711 | 424,533 | 324,476 | 549 |
| Grants Pass, OR | 662,752 | 187,995 | 38,372 | 35,660 | 11 |
| Great Falls, MT | 422,119 | 130,194 | 35,857 | 32,181 | 26 |
| Greeley, CO | 610,226 | 175,483 | 128,311 | 105,653 | 70 |
| Green Bay, WI | 301,551 | 96,246 | 139,370 | 88,284 | 226 |
| Greensboro-High Point, NC | 230,416 | 69,193 | 312,576 | 192,231 | 710 |
| Greenville, NC | 224,036 | 69,312 | 80,535 | 49,906 | 151 |
| Greenville-Anderson, SC | 282,624 | 81,724 | 398,342 | 224,612 | 746 |
| Gulfport-Biloxi, MS | 337,915 | 105,884 | 166,185 | 130,042 | 202 |
| Hagerstown-Martinsburg, MD-WV | 285,920 | 84,762 | 125,755 | 81,577 | 238 |
| Hammond, LA | 342,902 | 100,924 | 53,551 | 43,011 | 43 |
| Hanford-Corcoran, CA | 371,728 | 109,584 | 41,583 | 30,710 | 66 |
| Harrisburg-Carlisle, PA | 541,384 | 170,464 | 252,478 | 218,268 | 139 |
| Harrisonburg, VA | 333,237 | 95,858 | 54,101 | 39,596 | 69 |
| Hartford-East Hartford-Middletown, CT | 658,544 | 228,693 | 499,747 | 438,390 | 328 |
| Hattiesburg, MS | 189,479 | 58,971 | 75,148 | 46,672 | 176 |
| Hickory-Lenoir-Morganton, NC | 518,569 | 152,865 | 146,877 | 128,706 | 72 |
| Hilton Head Island-Bluffton, SC | 584,145 | 171,536 | 95,682 | 81,195 | 39 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|--|------------------------------|---------------------------------|-------------------------|---|---|
| Hinesville, GA | 202,877 | 62,886 | 28,623 | 13,941 | 67 |
| Homosassa Springs, FL | 224,036 | 67,409 | 72,317 | 40,979 | 118 |
| Hot Springs, AR | 214,254 | 63,509 | 42,414 | 28,093 | 83 |
| Houma-Thibodaux, LA | 122,811 | 37,215 | 87,630 | 31,343 | 246 |
| Houston-The Woodlands-Sugar Land, TX | 426,298 | 145,492 | 2,777,533 | 2,051,616 | 3,054 |
| Huntington-Ashland, WV-KY-OH | 269,893 | 81,460 | 152,512 | 104,256 | 195 |
| Huntsville, AL | 330,366 | 95,427 | 224,047 | 142,495 | 284 |
| Idaho Falls, ID | 414,366 | 118,495 | 57,744 | 41,213 | 57 |
| Indianapolis-Carmel-Anderson, IN | 437,327 | 132,495 | 877,392 | 654,687 | 907 |
| Iowa City, IA | 412,427 | 134,655 | 69,409 | 57,783 | 41 |
| Ithaca, NY | 315,055 | 108,548 | 49,043 | 35,635 | 49 |
| Jackson, MI | 313,181 | 100,464 | 62,476 | 39,158 | 82 |
| Jackson, MS | 194,796 | 59,923 | 237,531 | 113,172 | 466 |
| Jackson, TN | 292,651 | 89,062 | 72,562 | 54,945 | 113 |
| Jacksonville, FL | 381,298 | 114,946 | 711,658 | 500,843 | 813 |
| Jacksonville, NC | 303,310 | 92,936 | 84,062 | 69,039 | 95 |
| Janesville-Beloit, WI | 405,435 | 134,617 | 70,536 | 59,710 | 75 |
| Jefferson City, MO | 312,928 | 95,610 | 52,154 | 34,225 | 66 |
| Johnson City, TN | 294,334 | 86,539 | 84,570 | 55,067 | 124 |
| Johnstown, PA | 325,794 | 104,325 | 54,102 | 42,644 | 89 |
| Jonesboro, AR | 216,912 | 65,126 | 51,022 | 27,710 | 100 |
| Joplin, MO | 181,186 | 55,553 | 72,216 | 37,414 | 206 |
| Kahului-Wailuku-Lahaina, HI | 753,664 | 203,251 | 57,939 | 47,270 | 27 |
| Kalamazoo-Portage, MI | 429,146 | 138,706 | 108,146 | 87,848 | 80 |
| Kankakee, IL | 340,042 | 123,438 | 42,509 | 26,808 | 50 |
| Kansas City, MO-KS | 474,549 | 150,457 | 924,762 | 729,864 | 780 |
| Kennewick-Richland, WA | 774,079 | 228,665 | 110,005 | 107,264 | 62 |
| Killeen-Temple, TX | 298,361 | 100,277 | 193,838 | 129,941 | 286 |
| Kingsport-Bristol, TN-VA | 241,156 | 70,947 | 125,748 | 77,446 | 227 |
| Kingston, NY | 368,964 | 125,312 | 81,195 | 59,533 | 77 |
| Knoxville, TN | 417,556 | 120,932 | 375,906 | 290,190 | 418 |
| Kokomo, IN | 370,240 | 112,921 | 39,075 | 31,898 | 63 |
| La Crosse-Onalaska, WI-MN | 193,945 | 63,611 | 59,524 | 25,857 | 139 |
| Lafayette, LA | 238,816 | 72,120 | 191,072 | 105,232 | 313 |
| Lafayette-West Lafayette, IN | 450,306 | 134,704 | 88,058 | 77,602 | 47 |
| Lake Charles, LA | 338,703 | 102,188 | 66,562 | 46,938 | 98 |
| Lake Havasu City-Kingman, AZ | 245,940 | 70,210 | 115,103 | 69,789 | 188 |
| Lakeland-Winter Haven, FL | 284,963 | 87,169 | 320,309 | 220,162 | 487 |
| Lancaster, PA | 368,326 | 117,359 | 215,565 | 151,734 | 282 |
| Lansing-East Lansing, MI | 365,443 | 121,089 | 224,362 | 174,415 | 271 |
| Laredo, TX | 218,082 | 75,557 | 81,210 | 41,056 | 184 |
| Las Cruces, NM | 242,963 | 72,125 | 91,392 | 57,778 | 120 |
| Las Vegas-Henderson-Paradise, NV | 494,150 | 139,520 | 897,005 | 686,547 | 728 |
| Lawrence, KS | 469,642 | 151,070 | 51,042 | 39,855 | 35 |
| Lawton, OK | 326,630 | 104,907 | 49,881 | 39,489 | 67 |
| Lebanon, PA | 406,102 | 130,556 | 55,971 | 45,900 | 46 |
| Lewiston, ID-WA | 444,855 | 131,830 | 27,123 | 18,963 | 34 |
| Lewiston-Auburn, ME | 316,969 | 100,671 | 46,725 | 31,920 | 75 |
| Lexington-Fayette, KY | 364,604 | 110,033 | 225,769 | 161,116 | 221 |
| Lima, OH | 226,907 | 71,586 | 41,590 | 21,256 | 79 |
| Lincoln, NE | 580,028 | 193,688 | 141,486 | 130,955 | 70 |
| Little Rock-North Little Rock-Conway, AR | 304,103 | 91,942 | 329,675 | 210,539 | 427 |
| Logan, UT-ID | 413,835 | 119,325 | 51,535 | 39,593 | 67 |
| Longview, TX | 282,837 | 91,982 | 109,437 | 74,197 | 153 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|---|------------------------------|---------------------------------|-------------------------|---|---|
| Longview, WA | 586,207 | 173,358 | 43,622 | 41,116 | 19 |
| Anaheim-Santa Ana-Irvine, CA Metro Division | 617,207 | 176,296 | 1,111,143 | 791,248 | 716 |
| Los Angeles-Long Beach-Glendale, CA Metro Division | 617,207 | 177,022 | 3,423,445 | 2,753,888 | 1,685 |
| Louisville/Jefferson County, KY-IN | 369,602 | 111,879 | 552,143 | 388,061 | 776 |
| Lubbock, TX | 443,286 | 154,074 | 136,778 | 115,961 | 69 |
| Lynchburg, VA | 556,529 | 160,146 | 104,919 | 90,627 | 57 |
| Macon-Bibb County, GA | 224,462 | 70,689 | 85,656 | 51,762 | 190 |
| Madera, CA | 370,133 | 108,790 | 43,712 | 30,344 | 38 |
| Madison, WI | 382,042 | 124,776 | 307,517 | 201,627 | 338 |
| Manchester-Nashua, NH | 464,341 | 153,642 | 173,383 | 124,126 | 206 |
| Manhattan, KS | 443,948 | 145,798 | 55,944 | 48,714 | 41 |
| Mankato, MN | 298,574 | 93,485 | 41,660 | 23,986 | 63 |
| Mansfield, OH | 232,224 | 74,574 | 49,262 | 30,749 | 105 |
| McAllen-Edinburg-Mission, TX | 142,056 | 49,480 | 291,443 | 148,625 | 719 |
| Medford, OR | 585,524 | 170,656 | 93,938 | 84,032 | 29 |
| Memphis, TN-MS-AR | 409,697 | 125,649 | 536,031 | 407,804 | 454 |
| Merced, CA | 401,394 | 115,981 | 89,521 | 59,928 | 77 |
| Fort Lauderdale-Pompano Beach-Sunrise, FL Metro Division | 668,465 | 208,612 | 792,487 | 713,326 | 294 |
| Miami-Miami Beach-Kendall, FL Metro Division | 668,465 | 205,280 | 1,016,962 | 928,369 | 366 |
| West Palm Beach-Boca Raton-Boynton Beach, FL Metro Division | 668,465 | 207,324 | 623,216 | 546,759 | 268 |
| Michigan City-La Porte, IN | 264,548 | 81,049 | 43,793 | 24,384 | 89 |
| Midland, MI | 357,905 | 118,894 | 36,591 | 24,161 | 48 |
| Midland, TX | 254,553 | 82,025 | 75,700 | 25,804 | 100 |
| Milwaukee-Waukesha, WI | 569,537 | 183,484 | 663,561 | 566,196 | 285 |
| Minneapolis-St. Paul-Bloomington, MN-WI | 520,802 | 161,417 | 1,513,133 | 1,114,015 | 1,414 |
| Missoula, MT | 508,149 | 152,782 | 53,085 | 47,139 | 28 |
| Mobile, AL | 302,543 | 91,458 | 177,111 | 127,026 | 213 |
| Modesto, CA | 512,934 | 149,243 | 173,721 | 149,272 | 88 |
| Monroe, LA | 204,047 | 60,629 | 83,602 | 50,073 | 173 |
| Monroe, MI | 342,732 | 108,190 | 62,281 | 44,027 | 97 |
| Montgomery, AL | 340,361 | 98,405 | 156,969 | 101,673 | 182 |
| Morgantown, WV | 346,366 | 100,332 | 59,068 | 35,955 | 89 |
| Morristown, TN | 204,791 | 59,523 | 52,044 | 24,324 | 98 |
| Mount Vernon-Anacortes, WA | 297,829 | 87,770 | 55,074 | 32,188 | 93 |
| Muncie, IN | 170,234 | 52,505 | 46,316 | 19,759 | 109 |
| Muskegon, MI | 305,982 | 97,140 | 69,303 | 47,473 | 108 |
| Myrtle Beach-Conway-North Myrtle Beach, SC-NC | 356,523 | 103,795 | 223,427 | 153,204 | 301 |
| Napa, CA | 261,039 | 75,276 | 51,924 | 18,283 | 69 |
| Naples-Marco Island, FL | 704,221 | 208,226 | 191,191 | 155,198 | 67 |
| Nashville-Davidson--Murfreesboro--Franklin, TN | 489,541 | 141,541 | 859,961 | 644,144 | 883 |
| New Bern, NC | 204,897 | 62,285 | 49,730 | 24,023 | 92 |
| New Haven-Milford, CT | 567,492 | 197,940 | 370,398 | 326,769 | 242 |
| New Orleans-Metairie, LA | 316,437 | 96,836 | 531,781 | 337,357 | 592 |
| Nassau County-Suffolk County, NY Metro Division | 809,594 | 266,528 | 993,767 | 863,942 | 831 |
| Newark, NJ-PA Metro Division | 809,594 | 279,915 | 909,680 | 847,887 | 586 |
| New Brunswick-Lakewood, NJ Metro Division | 809,594 | 272,206 | 988,282 | 901,032 | 702 |
| New York-Jersey City-White Plains, NY-NJ Metro Division | 809,594 | 250,888 | 4,711,379 | 4,011,912 | 2,065 |
| Niles, MI | 316,862 | 98,302 | 69,972 | 52,321 | 76 |
| North Port-Sarasota-Bradenton, FL | 493,157 | 148,630 | 406,168 | 328,555 | 301 |
| Norwich-New London, CT | 395,652 | 132,132 | 112,161 | 78,397 | 158 |
| Ocala, FL | 334,913 | 101,579 | 170,018 | 131,136 | 251 |
| Ocean City, NJ | 344,402 | 109,289 | 58,314 | 34,594 | 107 |
| Odessa, TX | 182,887 | 59,796 | 77,465 | 16,631 | 115 |
| Ogden-Clearfield, UT | 541,537 | 153,858 | 242,607 | 192,424 | 241 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|--|------------------------------|---------------------------------|-------------------------|---|---|
| Oklahoma City, OK | 339,191 | 109,103 | 609,969 | 402,676 | 832 |
| Olympia-Lacey-Tumwater, WA | 581,517 | 172,904 | 121,625 | 93,093 | 93 |
| Omaha-Council Bluffs, NE-IA | 416,387 | 141,014 | 404,864 | 330,775 | 435 |
| Orlando-Kissimmee-Sanford, FL | 433,556 | 131,009 | 1,102,569 | 852,494 | 1,101 |
| Oshkosh-Neenah, WI | 417,781 | 138,900 | 74,384 | 64,105 | 56 |
| Owensboro, KY | 208,831 | 64,770 | 48,729 | 27,994 | 97 |
| Oxnard-Thousand Oaks-Ventura, CA | 661,961 | 190,462 | 290,234 | 227,188 | 184 |
| Palm Bay-Melbourne-Titusville, FL | 383,212 | 116,648 | 281,146 | 205,230 | 324 |
| Panama City, FL | 322,923 | 96,279 | 91,413 | 57,737 | 91 |
| Parkersburg-Vienna, WV | 310,651 | 91,757 | 38,380 | 29,919 | 58 |
| Pensacola-Ferry Pass-Brent, FL | 381,298 | 114,390 | 211,357 | 151,500 | 216 |
| Peoria, IL | 176,401 | 62,690 | 180,496 | 78,324 | 439 |
| Camden, NJ Metro Division | 486,139 | 178,706 | 515,820 | 402,006 | 394 |
| Montgomery County-Bucks County-Chester County, PA Metro Di | 486,139 | 155,042 | 821,119 | 542,688 | 864 |
| Philadelphia, PA Metro Division | 486,139 | 148,737 | 932,434 | 779,230 | 673 |
| Wilmington, DE-MD-NJ Metro Division | 486,139 | 145,691 | 299,460 | 214,596 | 315 |
| Phoenix-Mesa-Chandler, AZ | 491,895 | 139,216 | 1,966,703 | 1,543,518 | 1,691 |
| Pine Bluff, AR | 245,783 | 74,419 | 26,408 | 20,072 | 45 |
| Pittsburgh, PA | 438,716 | 140,911 | 1,022,967 | 805,029 | 821 |
| Pittsfield, MA | 733,568 | 233,752 | 62,031 | 57,216 | 27 |
| Pocatello, ID | 427,764 | 125,058 | 38,440 | 34,136 | 38 |
| Portland-South Portland, ME | 506,129 | 153,884 | 247,934 | 193,426 | 210 |
| Portland-Vancouver-Hillsboro, OR-WA | 650,950 | 192,207 | 1,040,866 | 866,291 | 571 |
| Port St. Lucie, FL | 400,317 | 124,798 | 221,987 | 161,696 | 294 |
| Poughkeepsie-Newburgh-Middletown, NY | 527,714 | 181,596 | 270,308 | 206,003 | 178 |
| Prescott Valley-Prescott, AZ | 628,302 | 177,225 | 122,206 | 107,794 | 71 |
| Providence-Warwick, RI-MA | 702,307 | 221,051 | 723,071 | 661,032 | 379 |
| Provo-Orem, UT | 601,507 | 168,313 | 214,277 | 175,055 | 117 |
| Pueblo, CO | 434,888 | 126,923 | 72,178 | 64,479 | 61 |
| Punta Gorda, FL | 318,457 | 98,912 | 103,394 | 68,708 | 158 |
| Racine, WI | 510,934 | 169,771 | 79,231 | 67,760 | 66 |
| Raleigh-Cary, NC | 441,799 | 130,530 | 579,404 | 373,717 | 635 |
| Rapid City, SD | 393,207 | 122,868 | 58,629 | 40,404 | 74 |
| Reading, PA | 204,791 | 68,116 | 174,526 | 75,502 | 380 |
| Redding, CA | 511,977 | 150,203 | 70,318 | 54,270 | 54 |
| Reno, NV | 495,397 | 138,441 | 207,306 | 155,891 | 175 |
| Richmond, VA | 397,354 | 116,985 | 551,974 | 370,592 | 623 |
| Riverside-San Bernardino-Ontario, CA | 617,456 | 181,176 | 1,506,275 | 1,289,136 | 716 |
| Roanoke, VA | 229,566 | 68,112 | 136,131 | 68,713 | 212 |
| Rochester, MN | 629,152 | 197,129 | 89,649 | 76,023 | 41 |
| Rochester, NY | 378,640 | 138,893 | 471,433 | 374,093 | 419 |
| Rockford, IL | 255,297 | 92,434 | 134,480 | 83,941 | 221 |
| Rocky Mount, NC | 327,601 | 101,044 | 55,198 | 47,939 | 42 |
| Rome, GA | 262,422 | 80,916 | 35,391 | 24,253 | 50 |
| Sacramento-Roseville-Folsom, CA | 668,601 | 195,104 | 905,768 | 772,716 | 508 |
| Saginaw, MI | 316,940 | 105,371 | 81,257 | 59,375 | 119 |
| St. Cloud, MN | 296,979 | 92,459 | 81,799 | 50,951 | 126 |
| St. George, UT | 471,465 | 131,301 | 73,423 | 59,330 | 102 |
| St. Joseph, MO-KS | 345,890 | 105,941 | 46,639 | 37,415 | 44 |
| St. Louis, MO-IL | 416,387 | 133,660 | 1,142,641 | 828,376 | 1,245 |
| Salem, OR | 589,161 | 174,636 | 164,228 | 137,504 | 115 |
| Salinas, CA | 306,123 | 87,349 | 138,416 | 71,265 | 230 |
| Salisbury, MD-DE | 259,533 | 74,141 | 187,790 | 89,311 | 314 |
| Salt Lake City, UT | 521,334 | 148,117 | 485,134 | 355,961 | 393 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|---|------------------------------|---------------------------------|-------------------------|---|---|
| San Angelo, TX | 401,809 | 132,867 | 48,636 | 34,182 | 63 |
| San Antonio-New Braunfels, TX | 315,480 | 105,818 | 1,083,181 | 712,019 | 1,675 |
| San Diego-Chula Vista-Carlsbad, CA | 862,014 | 248,229 | 1,194,177 | 1,105,801 | 723 |
| Oakland-Berkeley-Livermore, CA Metro Division | 888,915 | 256,138 | 1,016,294 | 807,436 | 616 |
| San Francisco-San Mateo-Redwood City, CA Metro Division | 888,915 | 251,823 | 599,410 | 432,265 | 329 |
| San Rafael, CA Metro Division | 888,915 | 256,088 | 101,493 | 81,030 | 63 |
| San Jose-Sunnyvale-Santa Clara, CA | 1,186,851 | 338,381 | 679,056 | 627,466 | 439 |
| San Luis Obispo-Paso Robles, CA | 734,206 | 210,343 | 108,641 | 89,759 | 49 |
| Santa Cruz-Watsonville, CA | 674,661 | 192,214 | 96,997 | 74,040 | 53 |
| Santa Fe, NM | 357,161 | 100,991 | 79,144 | 56,291 | 71 |
| Santa Maria-Santa Barbara, CA | 384,593 | 110,008 | 154,748 | 89,777 | 147 |
| Santa Rosa-Petaluma, CA | 827,989 | 238,345 | 190,483 | 179,361 | 135 |
| Savannah, GA | 412,842 | 127,785 | 181,047 | 141,160 | 174 |
| Scranton--Wilkes-Barre, PA | 326,645 | 107,629 | 236,782 | 189,958 | 316 |
| Seattle-Bellevue-Kent, WA Metro Division | 805,128 | 235,795 | 1,267,391 | 1,055,105 | 856 |
| Tacoma-Lakewood, WA Metro Division | 805,128 | 238,470 | 362,267 | 352,084 | 245 |
| Sebastian-Vero Beach, FL | 367,156 | 111,072 | 76,605 | 50,814 | 84 |
| Sebring-Avon Park, FL | 369,512 | 113,078 | 49,164 | 41,071 | 52 |
| Sheboygan, WI | 457,729 | 148,549 | 50,152 | 44,372 | 23 |
| Sherman-Denison, TX | 397,446 | 131,158 | 63,980 | 48,996 | 63 |
| Shreveport-Bossier City, LA | 249,024 | 74,483 | 157,899 | 98,275 | 251 |
| Sierra Vista-Douglas, AZ | 242,027 | 71,773 | 48,001 | 32,639 | 94 |
| Sioux City, IA-NE-SD | 432,445 | 142,881 | 58,781 | 45,177 | 66 |
| Sioux Falls, SD | 326,858 | 102,891 | 122,954 | 83,323 | 188 |
| South Bend-Mishawaka, IN-MI | 460,269 | 141,269 | 131,264 | 114,592 | 106 |
| Spartanburg, SC | 274,862 | 80,643 | 136,043 | 82,521 | 292 |
| Spokane-Spokane Valley, WA | 682,211 | 201,963 | 244,390 | 226,736 | 92 |
| Springfield, IL | 298,893 | 104,608 | 90,296 | 56,426 | 146 |
| Springfield, MA | 398,204 | 129,058 | 280,765 | 202,315 | 300 |
| Springfield, MO | 449,774 | 136,841 | 192,539 | 175,335 | 71 |
| Springfield, OH | 375,228 | 122,182 | 59,745 | 53,339 | 46 |
| State College, PA | 451,369 | 138,353 | 56,108 | 46,786 | 31 |
| Staunton, VA | 389,166 | 112,235 | 52,471 | 40,235 | 66 |
| Stockton, CA | 708,261 | 208,164 | 253,855 | 243,893 | 168 |
| Sumter, SC | 258,079 | 77,058 | 52,936 | 35,787 | 69 |
| Syracuse, NY | 231,799 | 84,382 | 285,678 | 154,691 | 634 |
| Tallahassee, FL | 249,981 | 76,015 | 159,264 | 98,604 | 236 |
| Tampa-St. Petersburg-Clearwater, FL | 420,528 | 128,186 | 1,396,105 | 1,093,219 | 1,526 |
| Terre Haute, IN | 266,955 | 81,981 | 73,149 | 53,785 | 133 |
| Texarkana, TX-AR | 307,109 | 99,574 | 55,330 | 39,378 | 71 |
| The Villages, FL | 433,355 | 130,343 | 79,591 | 66,164 | 89 |
| Toledo, OH | 509,000 | 168,484 | 278,337 | 254,315 | 95 |
| Topeka, KS | 252,001 | 84,932 | 96,426 | 59,709 | 167 |
| Trenton-Princeton, NJ | 424,999 | 152,685 | 158,404 | 113,922 | 173 |
| Tucson, AZ | 387,678 | 114,321 | 457,152 | 333,814 | 427 |
| Tulsa, OK | 443,912 | 140,038 | 419,542 | 333,792 | 415 |
| Tuscaloosa, AL | 158,537 | 45,740 | 114,112 | 47,644 | 278 |
| Twin Falls, ID | 356,310 | 103,118 | 46,425 | 32,806 | 66 |
| Tyler, TX | 193,626 | 63,104 | 83,834 | 35,919 | 184 |
| Urban Honolulu, HI | 783,391 | 213,520 | 361,209 | 306,195 | 206 |
| Utica-Rome, NY | 237,540 | 83,273 | 121,181 | 69,536 | 258 |
| Valdosta, GA | 303,305 | 95,372 | 56,146 | 42,856 | 62 |
| Vallejo, CA | 624,799 | 182,159 | 165,188 | 130,725 | 88 |
| Victoria, TX | 229,459 | 77,873 | 51,612 | 24,312 | 120 |

Table 3 Households Priced Out of the Market by a \$1,000 Price Increase, 2023

| Metro Area | Median New Home Price | Income Needed to Qualify | Total Households | Households Unable to Afford the Median Price | Additional Households Priced Out by a \$1,000 increase |
|--|------------------------------|---------------------------------|-------------------------|---|---|
| Vineland-Bridgeton, NJ | 266,143 | 97,402 | 56,530 | 36,678 | 75 |
| Virginia Beach-Norfolk-Newport News, VA-NC | 402,399 | 121,445 | 770,233 | 536,571 | 961 |
| Visalia, CA | 522,078 | 153,749 | 142,975 | 119,191 | 77 |
| Waco, TX | 227,108 | 76,422 | 105,435 | 67,078 | 167 |
| Walla Walla, WA | 569,347 | 170,815 | 23,724 | 20,861 | 11 |
| Warner Robins, GA | 329,761 | 101,468 | 71,917 | 47,915 | 126 |
| Frederick-Gaithersburg-Rockville, MD Metro Division | 623,198 | 184,721 | 523,367 | 351,963 | 359 |
| Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Divis | 623,198 | 185,489 | 2,003,568 | 1,408,013 | 1,445 |
| Waterloo-Cedar Falls, IA | 597,679 | 199,364 | 69,848 | 64,525 | 16 |
| Watertown-Fort Drum, NY | 295,171 | 97,290 | 57,376 | 41,736 | 95 |
| Wausau-Weston, WI | 364,332 | 119,763 | 72,536 | 57,299 | 114 |
| Weirton-Steubenville, WV-OH | 339,298 | 104,489 | 48,242 | 37,875 | 64 |
| Wenatchee, WA | 582,155 | 170,609 | 50,853 | 41,321 | 36 |
| Wheeling, WV-OH | 191,712 | 58,146 | 58,910 | 31,149 | 114 |
| Wichita, KS | 327,835 | 109,201 | 253,500 | 167,814 | 339 |
| Wichita Falls, TX | 654,140 | 224,417 | 57,020 | 54,370 | 20 |
| Williamsport, PA | 432,655 | 140,383 | 49,308 | 40,716 | 40 |
| Wilmington, NC | 330,685 | 98,513 | 132,692 | 87,893 | 187 |
| Winchester, VA-WV | 428,423 | 123,365 | 56,002 | 36,880 | 70 |
| Winston-Salem, NC | 445,035 | 132,797 | 277,602 | 231,416 | 258 |
| Worcester, MA-CT | 410,858 | 129,604 | 395,844 | 262,740 | 496 |
| Yakima, WA | 553,066 | 165,036 | 90,099 | 81,828 | 56 |
| York-Hanover, PA | 276,032 | 91,062 | 182,423 | 98,193 | 315 |
| Youngstown-Warren-Boardman, OH-PA | 265,824 | 86,920 | 230,429 | 170,395 | 358 |
| Yuba City, CA | 537,184 | 158,704 | 63,378 | 52,401 | 32 |
| Yuma, AZ | 185,545 | 54,517 | 75,932 | 42,607 | 214 |

Michigan Public Service Commission
DTE Gas Company
Capital Expenditures - Distribution Plant
Communications & Control - Meters
 (\$000)

Case No.: U-21291
 Exhibit: A-30
 Schedule: T3
 Witness: E. M. Abona
 Page: 1 of 2

| Detail | Historical | Projected Bridge Year | | | 12 mos. ending |
|--------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| | 12 mos. ended 12/31/2022 | 12 mos. ended 12/31/2023 | 9 mos. ending 9/30/2024 | 21 mos. ending 9/30/2024 | 12 mos. ending 9/30/2025 |
| ST Labor | \$ 1,922 | \$ 2,124 | \$ 2,105 | \$ 4,229 | \$ 1,711 |
| OT Labor | 270 | 292 | 272 | \$ 564 | 221 |
| Contract Labor | 65 | 130 | 23 | \$ 153 | 66 |
| Benefits | 631 | 664 | 596 | \$ 1,260 | 520 |
| Payroll Tax | 175 | 201 | 240 | \$ 441 | 157 |
| REP | 49 | 30 | 45 | \$ 75 | 33 |
| Outside Services | 35 | 0 | 82 | \$ 82 | 28 |
| Material | 9,170 | 17,686 | 12,444 | \$ 30,130 | 11,717 |
| Other | 369 | 290 | 273 | \$ 563 | 248 |
| Fleet | 564 | 574 | 753 | \$ 1,327 | 497 |
| Facilities | 104 | 112 | 122 | \$ 234 | 98 |
| Stock | 504 | 679 | 561 | \$ 1,240 | 565 |
| Procurement | 46 | 67 | - | \$ 67 | 33 |
| A&G | 498 | 649 | 757 | \$ 1,406 | 570 |
| Grand Total | \$ 14,401 | \$ 23,498 | \$ 18,273 | \$ 41,771 | \$ 16,466 |

Michigan Public Service Commission
DTE Gas Company
Capital Expenditures - Distribution Plant
Communications & Control - Meters
Meter and Module Details
(\$000)

Case No.: U-21291
Exhibit: A-30
Schedule: T3
Witness: E. M. Abona
Page: 2 of 2

| Material Description | Historical | Projected Bridge Year | | | 12 mos. ending 9/30/2025 |
|---|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| | 12 mos. ended 12/31/2022 | 12 mos. ended 12/31/2023 | 9 mos. ending 9/30/2024 | 21 mos. ending 9/30/2024 | |
| METER_FLOW,250 AMER, 402 TMS | \$2,802.8 | \$5,139 | \$2,681 | \$7,820 | \$3,864 |
| METER_FLOW,250 AMER, 405 TMS | - | 1,758 | 213 | \$1,971 | 909 |
| METER_FLOW,425 AMER, 403 TMS | 2,287 | 2,952 | 1,691 | \$4,643 | 2,159 |
| METER_FLOW,45 LIGHT,DRESSER, D800 | 371 | 232 | 916 | \$1,148 | 341 |
| METER_FLOW,800 AMER, 404 TMS | 510 | 1,562 | 562 | \$2,123 | 796 |
| METER_FLOW,ROTARY 102 M, FM | 93 | 73 | 97 | \$170 | 53 |
| METER_FLOW,ROTARY 11 MTC | 3 | 38 | 145 | \$183 | 25 |
| METER_FLOW,ROTARY 16 M | - | - | 130 | \$130 | - |
| METER_FLOW,ROTARY 2 MTC | 842 | 836 | 208 | \$1,044 | 341 |
| METER_FLOW,ROTARY 23M LM | 65 | 132 | 161 | \$293 | 97 |
| METER_FLOW,ROTARY 3 MTC | 404 | 432 | 85 | \$517 | 310 |
| METER_FLOW,ROTARY 38 M ID-175,LM | 32 | 64 | 34 | \$98 | 47 |
| METER_FLOW,ROTARY 5 MTC | 176 | 338 | 124 | \$463 | 136 |
| METER_FLOW,ROTARY 56 M, FM | 53 | 12 | 44 | \$56 | 9 |
| METER_FLOW,ROTARY 7 MTC | 238 | 263 | 84 | \$346 | 104 |
| METER_GAS,5000 CF/HR,175 PSI MAOP,3 IN P | 2 | - | - | - | - |
| Total Meters | \$7,879 | \$13,830 | \$7,176 | \$21,006 | \$9,192 |
| MODULE_ELECT,AMI 2.4GZ W/WIRES/ROTARY HEADS | \$9 | \$171 | \$528 | \$698 | \$227 |
| MODULE_ELECT,AMI, TMS 400 | 1 | 44 | - | 44 | - |
| MODULE_ELECT,AMI,ACT/SPRAG 009P | 10 | - | - | - | - |
| MODULE_ELECT,AMR 100G REMOTE | 9 | 242 | - | 242 | - |
| MODULE_ELECT,AMR TMS 402 403 | 1,077 | 2,052 | 834 | 2,886 | 797 |
| MODULE_ELECT,AMR TMS 404 | 19 | - | - | - | - |
| MODULE_ELECT,AMR TMS 423 | 52 | 63 | - | 63 | - |
| MODULE_ELECT,AMR TMS 441_445 | 1 | - | - | - | - |
| MODULE_ELECT,TMS 402 | - | 913 | 3,806 | 4,719 | 1,356 |
| Total Modules | \$1,178 | \$3,485 | \$5,168 | \$8,652 | \$2,380 |
| Total Meters and Modules | \$9,057 | \$17,315 | \$12,344 | \$29,658 | \$11,572 |
| Miscellaneous Materials | \$113 | \$371 | \$101 | \$472 | \$145 |
| Total Materials | \$9,170 | \$17,686 | \$12,444 | \$30,130 | \$11,717 |

| Line No. | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
|----------|--------------------|------------------------|-------------------|----------------------|----------------------|-----------------|----------------------|----------------------|-----------------|
| 1 | 2018 | Dollar Amount * | Quantity** | 2019 | Dollar Amount | Quantity | 2020 | Dollar Amount | Quantity |
| 2 | Class 1 | | | Class 1 | | | Class 1 | | |
| 3 | Class 2 | \$ 3,319,005 | 64 | Class 2 | \$ 518,447 | 10 | Class 2 | \$ 965,510 | 15 |
| 4 | Class 3 | \$ 1,796,840 | 37 | Class 3 | \$ 1,303,270 | 28 | Class 3 | \$ 2,214,307 | 39 |
| 5 | Class 4 | \$ 645,162 | 7 | Class 4 | | | Class 4 | \$ 469,377 | 3 |
| 6 | Class 5 | \$ 499,129 | 6 | Class 5 | \$ 141,648 | 1 | Class 5 | \$ 216,132 | 2 |
| 7 | Class 6 | \$ 102,276 | 1 | Class 6 | \$ 376,060 | 6 | Class 6 | \$ 685,897 | 7 |
| 8 | Class 7 | \$ 6,004,872 | 26 | Class 7 | \$ 1,301,036 | 12 | Class 7 | \$ 1,171,438 | 5 |
| 9 | Class 8 | \$ 410,280 | 1 | Class 8 | \$ 2,223,239 | 22 | Class 8 | \$ 2,446,673 | 12 |
| 10 | Class 9 | \$ 370,546 | 18 | Class 9 | \$ 499,361 | 29 | Class 9 | \$ 264,593 | 15 |
| 11 | Class 10 | | | Class 10 | | | Class 10 | | |
| 12 | Class 11 | \$ 106,222 | 2 | Class 11 | \$ 96,307 | 2 | Class 11 | \$ 73,443 | 2 |
| 13 | Class 12 | \$ 21,980 | 1 | Class 12 | | | Class 12 | | |
| 14 | Class 13 | \$ 24,956 | 1 | Class 13 | \$ 13,843 | 1 | Class 13 | \$ 19,170 | 1 |
| 15 | Class 14 | | | Class 14 | | | Class 14 | | |
| 16 | Class 15 | \$ 8,381 | 1 | Class 15 | | | Class 15 | | |
| 17 | Class 16 | | | Class 16 | \$ 2,141,373 | 18 | Class 16 | \$ 1,050,279 | 8 |
| 18 | Class 17 | | | Class 17 | | | Class 17 | | |
| 19 | Class 18 | | | Class 18 | | | Class 18 | | |
| 20 | Class 19 | | | Class 19 | | | Class 19 | \$ 85,270 | 1 |
| 21 | | \$ 13,309,648 | | | \$ 8,614,583 | | | \$ 9,576,817 | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 28 | 2021 | Dollar Amount | Quantity | 2022 | Dollar Amount | Quantity | 2023 | Dollar Amount | Quantity |
| 29 | Class 1 | \$ 73,155 | 3 | Class 1 | | | Class 1 | \$ 453,582 | 11 |
| 30 | Class 2 | \$ 1,862,380 | 26 | Class 2 | \$ 749,985 | 13 | Class 2 | \$ 1,347,617 | 21 |
| 31 | Class 3 | \$ 2,720,558 | 32 | Class 3 | \$ 4,648,322 | 59 | Class 3 | \$ 7,261,422 | 89 |
| 32 | Class 4 | | | Class 4 | \$ 831,851 | 11 | Class 4 | | |
| 33 | Class 5 | \$ 1,026,414 | 8 | Class 5 | \$ 240,723 | 3 | Class 5 | \$ 1,710,469 | 11 |
| 34 | Class 6 | | | Class 6 | | | Class 6 | | |
| 35 | Class 7 | | | Class 7 | | | Class 7 | | |
| 36 | Class 8 | | | Class 8 | \$ 447,521 | 2 | Class 8 | \$ 661,415 | 2 |
| 37 | Class 9 | | | Class 9 | \$ 11,041 | 1 | Class 9 | \$ 87,533 | 7 |
| 38 | Class 10 | | | Class 10 | | | Class 10 | | |
| 39 | Class 11 | \$ 181,086 | 2 | Class 11 | \$ 43,916 | 1 | Class 11 | \$ 115,367 | 6 |
| 40 | Class 12 | | | Class 12 | | | Class 12 | | |
| 41 | Class 13 | | | Class 13 | | | Class 13 | \$ 16,349 | 1 |
| 42 | Class 14 | | | Class 14 | | | Class 14 | \$ 272,217 | 1 |
| 43 | Class 15 | | | Class 15 | | | Class 15 | | |
| 44 | Class 16 | \$ 1,516,056 | 17 | Class 16 | | | Class 16 | \$ 1,572,534 | 10 |
| 45 | Class 17 | | | Class 17 | | | Class 17 | | |
| 46 | Class 18 | | | Class 18 | | | Class 18 | | |
| 47 | Class 19 | \$ 62,271 | 2 | Class 19 | | | Class 19 | | |
| 48 | | \$ 7,379,649 | | | \$ 6,973,360 | | | \$ 13,498,505 | |
| 49 | | | | | | | | | |
| 50 | | | | | | | | | |
| 51 | 2024 Actual | Dollar Amount | Quantity | 2024 Forecast | Dollar Amount | Quantity | 2025 Forecast | Dollar Amount | Quantity |
| 52 | Class 1 | \$ 115,414 | 2 | Class 1 | | | Class 1 | \$ 450,000 | 10 |
| 53 | Class 2 | \$ 836,648 | 13 | Class 2 | \$ 1,467,611 | 21 | Class 2 | \$ 4,706,604 | 55 |
| 54 | Class 3 | \$ 6,666,368 | 90 | Class 3 | | | Class 3 | \$ 4,501,815 | 48 |
| 55 | Class 4 | | | Class 4 | | | Class 4 | \$ 270,000 | 3 |
| 56 | Class 5 | \$ 120,468 | 1 | Class 5 | | | Class 5 | | |
| 57 | Class 6 | | | Class 6 | | | Class 6 | | |
| 58 | Class 7 | | | Class 7 | \$ 785,126 | 2 | Class 7 | \$ 1,864,862 | 6 |
| 59 | Class 8 | | | Class 8 | \$ 2,795,547 | 11 | Class 8 | \$ 2,488,738 | 9 |
| 60 | Class 9 | \$ 17,337 | 1 | Class 9 | | | Class 9 | | |
| 61 | Class 10 | | | Class 10 | | | Class 10 | | |
| 62 | Class 11 | | | Class 11 | | | Class 11 | | |
| 63 | Class 12 | | | Class 12 | | | Class 12 | | |
| 64 | Class 13 | | | Class 13 | \$ 95,519 | 2 | Class 13 | | |
| 65 | Class 14 | | | Class 14 | | | Class 14 | | |
| 66 | Class 15 | | | Class 15 | | | Class 15 | \$ 1,486,148 | 4 |
| 67 | Class 16 | \$ 776,846 | 3 | Class 16 | \$ 1,285,010 | 11 | Class 16 | | |
| 68 | Class 17 | | | Class 17 | | | Class 17 | | |
| 69 | Class 18 | | | Class 18 | | | Class 18 | | |
| 70 | Class 19 | | | Class 19 | | | Class 19 | | |
| 71 | | \$ 8,533,081 | | | \$ 6,428,813 | | | \$ 15,768,167 | |
| 72 | | | | | | | | | |
| 73 | | | | | | | | | |

74 *Dollar Amount represents total spend per class per year
75 **Quantity Represents chassis quantity per class per year

Michigan Public Service Commission
DTE Gas Company
HPP HDDs and CDDs

Case No.: U-21291
Exhibit: A-31
Schedule: U1
Witness: H. J. Decker
Page: 1 of 2

Detroit Metro - HDDs

Source: National Oceanic and Atmospheric Administration

| | <u>JAN</u> | <u>FEB</u> | <u>MAR</u> | <u>APR</u> | <u>MAY</u> | <u>JUN</u> | <u>JUL</u> | <u>AUG</u> | <u>SEP</u> | <u>OCT</u> | <u>NOV</u> | <u>DEC</u> | <u>TOTAL</u> |
|-----------------------|--------------------------------|--------------|------------|-------------|------------|------------|------------|------------|-------------|------------|------------|--------------|--------------|
| 2008 | 1,112 | 1,148 | 970 | 390 | 252 | 11 | 1 | 3 | 37 | 438 | 770 | 1,154 | 6,286 |
| 2009 | 1,459 | 1,014 | 808 | 469 | 180 | 37 | 5 | 14 | 54 | 457 | 584 | 1,099 | 6,180 |
| 2010 | 1,230 | 1,034 | 694 | 325 | 162 | 13 | 0 | 0 | 91 | 309 | 683 | 1,212 | 5,753 |
| 2011 | 1,330 | 1,120 | 919 | 521 | 189 | 13 | 0 | 0 | 106 | 326 | 547 | 903 | 5,974 |
| 2012 | 1,056 | 930 | 454 | 463 | 79 | 19 | 0 | 1 | 112 | 380 | 733 | 893 | 5,120 |
| 2013 | 1,113 | 1,050 | 933 | 551 | 137 | 23 | 4 | 8 | 98 | 375 | 817 | 1,169 | 6,278 |
| 2014 | 1,499 | 1,272 | 1,119 | 473 | 169 | 12 | 8 | 5 | 108 | 391 | 865 | 967 | 6,888 |
| 2015 | 1,349 | 1,415 | 938 | 441 | 109 | 22 | 3 | 7 | 31 | 314 | 563 | 732 | 5,924 |
| 2016 | 1,139 | 974 | 670 | 554 | 192 | 14 | 0 | 0 | 30 | 298 | 523 | 1,111 | 5,505 |
| 2017 | 1,009 | 751 | 865 | 325 | 221 | 12 | 0 | 4 | 66 | 263 | 728 | 1,163 | 5,407 |
| 2018 | 1,243 | 946 | 911 | 654 | 76 | 7 | 0 | 0 | 61 | 411 | 829 | 940 | 6,078 |
| 2019 | 1,269 | 1,022 | 944 | 476 | 206 | 32 | 0 | 0 | 13 | 349 | 870 | 921 | 6,102 |
| 2020 | 1,008 | 1,006 | 729 | 561 | 269 | 19 | 0 | 0 | 98 | 426 | 575 | 988 | 5,679 |
| 2021 | 1,097 | 1,160 | 680 | 430 | 243 | 13 | 0 | 0 | 44 | 218 | 763 | 854 | 5,502 |
| 2022 | 1,378 | 1,069 | 790 | 544 | 122 | 11 | 0 | 0 | 76 | 361 | 643 | 993 | 5,987 |
| 2023 | 968 | 859 | 838 | 449 | 194 | 19 | 0 | 7 | 31 | 348 | 712 | 768 | 5,193 |
| Normal | | | | | | | | | | | | | |
| 15 Yr. (08-22) | 1,219 | 1,061 | 828 | 478 | 174 | 17 | 1 | 3 | 68 | 354 | 700 | 1,007 | 5,910 |
| (WTN)/CTN | (251) | (202) | 10 | (29) | 20 | 2 | (1) | 4 | (37) | (6) | 12 | (239) | (717) |
| | (Unfavorable)/Favorable | | | | | | | | | | | | |

Michigan Public Service Commission
DTE Gas Company
HPP HDDs and CDDs

Case No.: U-21291
Exhibit: A-31
Schedule: U1
Witness: H. J. Decker
Page: 2 of 2

Detroit Metro - CDDs

Source: National Oceanic and Atmospheric Administration

| | <u>JAN</u> | <u>FEB</u> | <u>MAR</u> | <u>APR</u> | <u>MAY</u> | <u>JUN</u> | <u>JUL</u> | <u>AUG</u> | <u>SEP</u> | <u>OCT</u> | <u>NOV</u> | <u>DEC</u> | <u>TOTAL</u> |
|-----------------------|--------------------------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|--------------|
| 2008 | 0 | 0 | 0 | 2 | 21 | 181 | 255 | 223 | 79 | 0 | 0 | 0 | 759 |
| 2009 | 0 | 0 | 0 | 20 | 12 | 128 | 131 | 214 | 92 | 0 | 0 | 0 | 597 |
| 2010 | 0 | 0 | 0 | 8 | 98 | 212 | 369 | 327 | 84 | 5 | 0 | 0 | 1,103 |
| 2011 | 0 | 0 | 0 | 0 | 63 | 186 | 451 | 260 | 94 | 6 | 0 | 0 | 1,060 |
| 2012 | 0 | 0 | 17 | 3 | 97 | 244 | 443 | 254 | 90 | 8 | 0 | 0 | 1,156 |
| 2013 | 0 | 0 | 0 | 0 | 103 | 170 | 293 | 227 | 78 | 20 | 0 | 0 | 891 |
| 2014 | 0 | 0 | 0 | 0 | 64 | 185 | 167 | 216 | 72 | 0 | 0 | 0 | 704 |
| 2015 | 0 | 0 | 0 | 0 | 104 | 140 | 254 | 222 | 170 | 1 | 0 | 0 | 891 |
| 2016 | 0 | 0 | 0 | 0 | 78 | 196 | 370 | 376 | 132 | 22 | 0 | 0 | 1,174 |
| 2017 | 0 | 0 | 0 | 7 | 38 | 202 | 300 | 202 | 136 | 32 | 0 | 0 | 917 |
| 2018 | 0 | 0 | 0 | 0 | 122 | 213 | 342 | 340 | 187 | 35 | 0 | 0 | 1,239 |
| 2019 | 0 | 0 | 0 | 0 | 23 | 134 | 369 | 257 | 128 | 14 | 0 | 0 | 925 |
| 2020 | 0 | 0 | 0 | 0 | 51 | 209 | 396 | 275 | 56 | 1 | 2 | 0 | 990 |
| 2021 | 0 | 0 | 0 | 5 | 65 | 255 | 287 | 333 | 108 | 55 | 0 | 0 | 1,108 |
| 2022 | 0 | 0 | 0 | 7 | 103 | 189 | 308 | 297 | 135 | 1 | 0 | 0 | 1,040 |
| 2023 | 0 | 0 | 0 | 13 | 36 | 133 | 276 | 173 | 75 | 30 | 0 | 0 | 736 |
| Normal | | | | | | | | | | | | | |
| 15 Yr. (08-22) | 0 | 0 | 1 | 3 | 69 | 190 | 316 | 268 | 109 | 13 | 0 | 0 | 969 |
| WTN/(CTN) | 0 | 0 | (1) | 10 | (33) | (57) | (40) | (95) | (34) | 17 | 0 | 0 | (233) |
| | (Unfavorable)/Favorable | | | | | | | | | | | | |



DTE's CleanVision 2022 Sustainability Report



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Chairman and CEO Letter

Our economy is riding a technology and electrification revolution unmatched since the early 1900s.

Today, we are more connected to smart phones, smart homes, their workplaces, fully electric automobiles, and other electronic devices. While we continue to make progress, too many of these connections are still supported by an electric grid built to sustain the industrial revolution of the last century.

At the same time, climate change continues to be one of the defining issues of our time. Severe weather in our state and around the country has become more extreme and unpredictable. From high winds to ice storms, what was once considered historic seems to regularly occur.

To meet these dual challenges, we're investing more than ever to upgrade infrastructure and build the energy grid of the future. In the last five years, we invested \$5 billion and we plan to invest an additional \$9 billion in the next five years to modernize the grid and provide customers the resiliency and reliability they deserve. We're also continuing to invest in cleaner sources of power generation, like our Blue Water Energy Center natural gas plant that went online in 2022. We're also significantly expanding our renewable portfolio, and strive to achieve net zero carbon emissions by 2050.

We're doing this all while continuing to build and invest in our greatest asset – our team. Continuing to attract and develop diverse, skilled and caring individuals who put our customers first is paramount to meeting our goals of providing reliable, cleaner and affordable energy.

In this report I invite you to learn more about how we're protecting our planet, planning for the future, supporting our people and communities – all in the name of serving our customers and our state.

Thank you for joining us on our journey.



Jerry Norcia
Chairman and Chief Executive Officer
DTE Energy

About this report

At DTE, we strive to do what's right for our employees, customers, communities and other stakeholders. That means environmental, social and governance matters guide us in how we do business, including in our operations, environmental efforts, corporate governance, corporate citizenship and human capital management. We believe in transparently sharing our sustainability strategies and ensuring data accuracy to help drive progress across the communities we serve and in our industry. DTE manages its sustainability priorities in a thoughtful way, intentionally engaging stakeholders to understand changing opportunities and expectations. Our reporting aims to be research-based, cross-functional, stakeholder-centered and inclusive, and we monitor progress through management dashboards to track metrics.

For additional information, see our appendix section. Information relating to forward-looking statements unless otherwise specified, references to "DTE, our company, we, and our" in this Report reflect information for DTE Energy and its affiliates, consolidated subsidiaries or its sources of information (collectively, the "Company"). References to DTE Electric, DTE Gas and DTE Vantage refer to information that is applicable only to such businesses, unless otherwise stated. Certain information presented herein includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 with respect to the financial condition, results of operations, and businesses of the Company. Statements that do not relate strictly to historical or current facts are based on current expectations, estimates, projections, opinions or beliefs of the Company as of the date of this Report. Words such as "aim," "hope," "strategy," "future," "opportunity," "target," "commit," "seek," "strive," "anticipate," "estimate," "could," "would," "will," "will be," "will continue," "should," "may," "forecast," "approximate," "expect," "project," "intend," "plan," "believe," "aspiration," "goals" and other words of similar meaning, or the negative thereof, in connection with any discussion of future operating or financial matters, signify forward-looking statements. Forward-looking statements are

not guarantees of future results and conditions, but rather are subject to numerous assumptions, risks, and uncertainties that may cause actual future results to be materially different from those contemplated, projected, estimated or budgeted. Many factors may impact forward-looking statements of the Company. New factors emerge from time to time. The Company cannot predict what factors may arise or how such factors may cause results to differ materially from those contained in any forward-looking statement. The factors, risks and uncertainties that may affect the operations, performance and results of DTE's business and forward-looking statements include, but are not limited to, those set forth in this Report and in the reports the Company files from time to time with the Securities and Exchange Commission (the "SEC"). Any forward-looking statements speak only as of the date on which such statements are made. The Company undertakes no obligation to correct or update any forward-looking statement, to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. There can be no assurance that the Company's environmental, social and governance ("ESG") and sustainability policies, procedures, initiatives and goals (including climate-related initiatives and goals) as described in this Report will continue; such policies, procedures, initiatives

and goals could change, even materially. The Company is permitted to determine in its discretion that it is not feasible or practical to implement or complete certain of its ESG and sustainability policies, procedures, initiatives and goals based on cost, timing, or other considerations. Additionally, terms such as “ESG,” “impact,” “best for the world” and “sustainability” can be subjective in nature, and there is no representation or guarantee that these terms, as used in the report, will reflect the beliefs or values, policies, principles, frameworks or preferred practices of any particular investor or other third-party or reflect market trends. The ESG, sustainability, best for the world, climate or impact goals, commitments, incentives and initiatives outlined in this report are purely voluntary, are not binding on the Company’s business or investment decisions and/or management and do not constitute a guarantee, promise or commitment regarding actual or potential positive impacts or outcomes. In particular, among other statements, statements relating to the Company’s climate-related policies, procedures, initiatives or goals (including, for the avoidance of doubt, net zero goals) and the Company’s targets, aims and objectives in connection with those ambitions (including greenhouse gas emissions reduction objectives), and to the Company’s expectations, targets and aims for capital expenditure (including the proportion of investment allocated to and capital employed in energy transition investments, coal plant retirements, renewable energy investments, energy efficiency enhancements, and emerging technological solutions), are aspirational and not guarantees or promises that all targets, aims and objectives will be met. Statistics and metrics relating to ESG and climate-related matters are estimates and may be based on assumptions or developing standards. The data contained herein has not been verified or otherwise assured by an independent third party. The Company has established, and may in the future establish, certain ESG, sustainability, best for the world, climate or impact goals, commitments, incentives and initiatives, including but not limited to those relating to greenhouse gas emissions reductions. The Company makes no representation or warranty, express or implied, with respect to the accuracy, fairness, reasonableness or completeness of any of the information contained herein, and expressly disclaims any responsibility or liability therefor. Actual results may differ materially from any forward-looking statements.



Sustainability oversight Board of Directors governance

At DTE, the ultimate oversight of our company’s sustainability efforts – including risk management – rests with the Board of Directors and permeates all levels of corporate executive leadership.

The Board’s commitment to sustainability has been and continues to be effectuated through its committee structure. As further described in our proxy statement, the Public Policy and Responsibility Committee maintains primary oversight for sustainability matters generally, while the Audit, Organization & Compensation, and Corporate Governance Committees oversee those matters within their expertise, and the entire Board remains committed to and updated on these matters regularly.

Please see the [2023 proxy statement](#) for additional information.

Environment

Creating a clean energy future for all

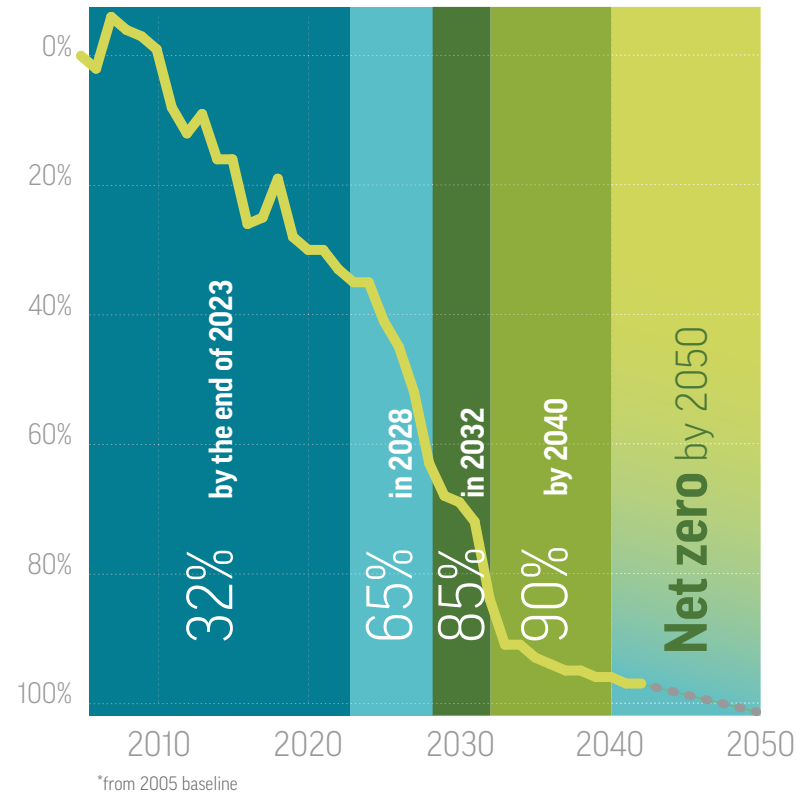
DTE is laser focused on creating a cleaner, healthier environment today and for generations to come. We're doing this by investing billions of dollars on behalf of customers in cleaner sources of energy generation, a more resilient grid and improvements to our natural gas supply and delivery systems. Our electric and gas operations have ambitious aspirational goals to achieve net zero by 2050 and are working to improve the reliability of our energy delivery systems to meet the needs of a 21st century economy. We describe how we will meet these goals safely, reliably and affordably in the sections below.

DTE Electric carbon reduction goals

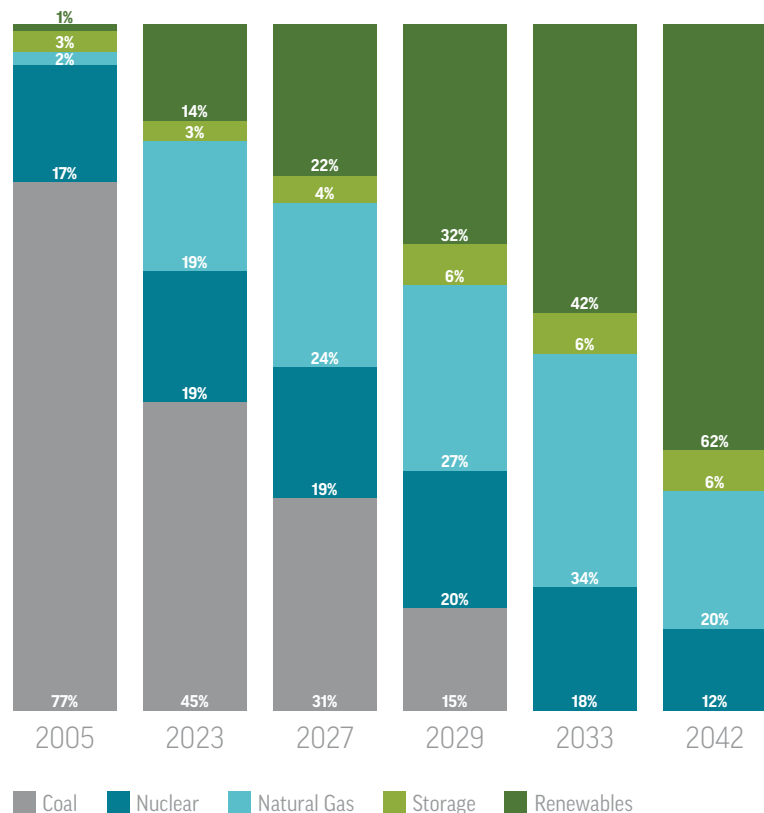
Climate change is one of the defining issues of our era and DTE Electric is proposing to fundamentally transform the way we generate power to reduce carbon emissions. Last fall DTE Electric issued our 2022 CleanVision Integrated Resource Plan (IRP), proposing to accelerate coal plant retirements and investing in cleaner Michigan-made energy – including wind and solar parks – to accelerate reductions in carbon emissions. On July 12, 2023, we announced a historic settlement agreement with nearly two dozen organizations from across Michigan further accelerating the retirement of coal and the deployment of renewable energy that we laid out in the original IRP proposal. On July 26, 2023, the settlement was approved by the Michigan Public Service Commission. You can find more information, including the approved IRP at [DTECleanEnergy.com](https://www.dtecleanenergy.com).

We're also providing options for customers to save money and energy through our energy efficiency and demand response programs and are offering residential and business customers the opportunity to buy more clean energy to meet their own sustainability goals.

Electric CO2 Reductions



Proposed generation mix (2005-2042 MWh%)



Our bold net zero carbon emissions goal in our CleanVision IRP sets the framework to accelerate our prior carbon emissions targets and reach 65% in 2028 and 90% by 2040¹.

We are carefully planning our energy generation transformation to cleaner sources of power like natural gas and renewables. DTE plans to bring over 1,200 megawatts of renewable energy online by the end of 2026 for our MIGreenPower program. We're maintaining the momentum our customer energy efficiency portfolio has achieved since its launch in 2009 by continuing to grow customer acceptance and adoption of energy efficiency measures. In 2022, DTE Electric exceeded its electric energy savings goal of 2% of 2020 planned retail sales. Since 2009, we have driven investment of \$4 billion in renewable energy infrastructure. By 2025, we plan to invest an additional \$3 billion in renewable energy assets.

[1] DTE Electric's proposal was approved by the Michigan Public Service Commission on July 26, 2023

In addition to wind and solar energy sources, natural gas will remain a critical part of Michigan's energy portfolio, as we work to ensure generation keeps up with demand. Our CleanVision IRP calls for repurposing existing infrastructure at the Belle River Power Plant by converting its fuel source from coal to natural gas. The Belle River plant will run during periods of high customer demand, such as in extreme summer heat and when other supplies are unavailable. This economical approach will be a fraction of the cost of building a brand-new natural gas plant and reduce emissions by 90-95% from current coal operations at Belle River, while protecting electric reliability.

Converting Belle River to natural gas also allows DTE to add thousands of megawatts of renewables onto the grid in advance of the first two units of Monroe Power Plant retiring in 2028, protecting customer affordability and system reliability. Our Blue Water Energy Center (BWEC), located in East China Township, came online June 1, 2022, and is a state-of-the-art 1,150 MW natural gas combined-cycle plant that provides 24/7, always available, power generation. BWEC supported the retirement of three coal-fired power plants without impacting system reliability and while sharply reducing carbon emissions.

Electric solar and wind energy investments

As Michigan's leading investor in and producer of renewable electricity, DTE is committed to the continued growth of our renewable energy portfolio as part of our plan to achieve net zero carbon emissions by 2050. In 2022, we added more than 150 megawatts of new wind and solar generation. On April 18, 2023, we announced that Meridian Wind Park was operational, adding an additional 225 megawatts. With the commissioning of Meridian Wind Park, we have 20 wind parks and 33 solar parks in our renewable energy portfolio, which is enough clean energy to power roughly 750,000 homes. We plan to add approximately 1,000 megawatts of new renewable energy each year starting in the middle part of the decade.

MIGreenPower

DTE's CleanVision MIGreenPower program helps customers reduce their carbon footprint and meet their personal or business sustainability goals by attributing more of their electricity use to our wind and solar projects, beyond the 15% we already provide. Per a National Renewable Energy Laboratory 2021 survey, MIGreenPower is among the largest voluntary renewable energy programs in the country. At the end of 2022, program subscribers included more than 75,000 residential customers, 800 businesses and 65 industrial customers. On an annual basis, MIGreenPower customers have enrolled four million megawatts hours of clean energy in the program, which has the environmental benefit equivalent to taking more than 630,000 gasoline-powered vehicles off the road. Also in 2022, based on BloombergNEF's Corporate PPA Database, we closed the largest and second largest renewable energy purchases through a utility in U.S. history with Ford Motor Company and Stellantis, respectively. Through these MIGreenPower clean energy purchases, we will add more than 1,050 megawatts of new solar energy to the grid by the end of 2026.

Clean energy transition

A key part of our clean energy generation transformation and net zero carbon emissions goal involves the sequential retirement of our coal-fired power plants. Our senior leaders established a vision to retire coal-fired power plants with PRIDE (People, Respect, Integrity, Dignity and Engagement). This vision is rooted in the concept that the plants and the employees who operate them every day have been partnering with nearby communities for nearly 100 years. The initiative seeks to ensure a thoughtful, dignified transition of these power plants, the employees and their host communities. A key commitment we have made in the retirement of our legacy coal plants is to avoid employee layoffs. Through the Retire with PRIDE initiative, we will seek to accomplish this through several measures that may include collaborating with union leadership to equip employees with training, skills and opportunities to succeed in other roles at our company.

We continue to work closely with community leaders, government officials and local businesses in these communities to foster development and investment through grants and volunteer efforts. Once plants are retired, the sites lend themselves to industrial or intermodal transportation applications due to existing electrical infrastructure, as well as rail and ship access. Through collaboration with local and state economic development authorities, local and state governments and the public-private sector, we work to create opportunities that lead to new Michigan jobs, support opportunities for local communities and advance efforts that strengthen our state's economy.

DTE Gas net zero commitment

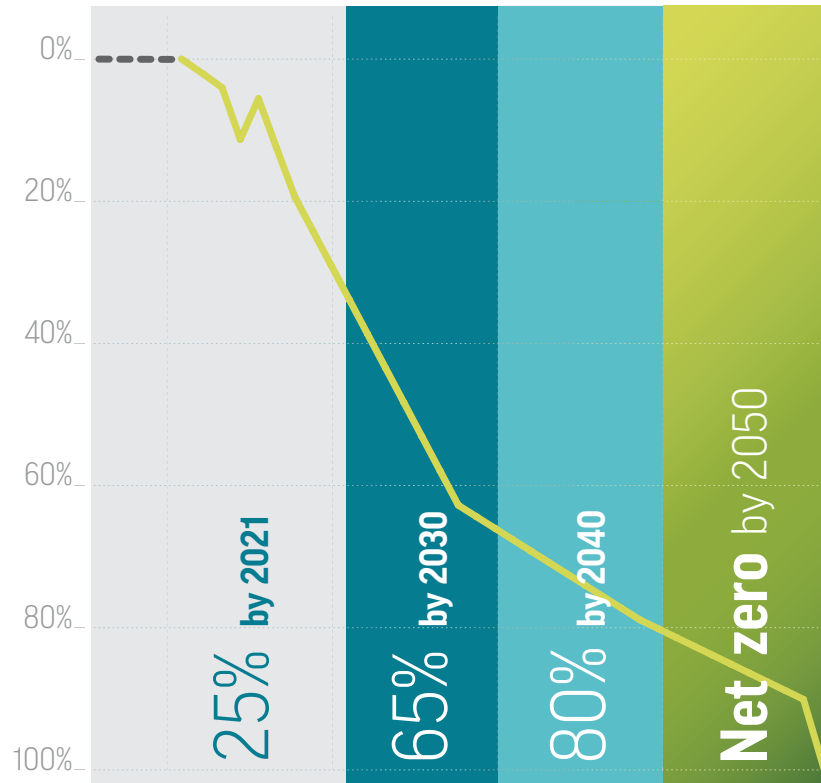
The company's emission reduction commitments, combined with customer participation in sustainability programs offered by DTE Gas, aim to reduce annual greenhouse gas emissions substantially across the natural gas supply chain, utilizing the programs described below.

DTE Gas decarbonization goals



*from estimated 2005 levels

Gas CO₂-e Reductions



DTE Gas carbon related plans are for carbon emission reductions from its gas utility operations. DTE's target is net zero by 2050 and the interim reductions shown are based off our latest plans but are not set commitments.

Natural Gas Balance

We are partnering with customers to balance their own natural gas carbon footprint with programs that encourage energy efficiency and participation in Natural Gas Balance. The CleanVision Natural Gas Balance program offers customers a way to affordably balance greenhouse gas emissions from an average home's natural gas usage through supporting the development of renewable natural gas (RNG) and the purchase of carbon offsets that protect forests in Michigan's Upper Peninsula.

Customers can balance between 25% and 100% of their greenhouse gas emissions from natural gas usage (based on an average customer's usage). More than 10,000 customers have enrolled since the program launched in early 2021.

A cleaner and sustainable natural gas supply

DTE is incorporating Responsibly Sourced Gas (RSG) into our supply portfolio. DTE Gas made its first purchase of RSG – natural gas that is third-party verified as meeting robust standards and practices to minimize environmental impact – in summer 2022. In doing so we intend to encourage the adoption of RSG more broadly throughout the industry. Further, we are joining ONE Future, a coalition of 56 companies representing the natural gas value chain focused on implementing innovative performance-based approaches to managing methane emissions. The ONE Future methane intensity goal of less than 1% across the natural gas value chain by 2025 has been consistently met by members for five consecutive years. These efforts are part of our drive to advance transparency and consistency in methane intensity reporting and to encourage our natural gas suppliers to do the same. We are working with industry associations to encourage the use of the Natural Gas Sustainability Initiative (NGSI) Methane Emissions Intensity Protocol to standardize reporting of methane emissions across the natural gas value chain.

Reducing emissions

We have cut emissions of conventional air pollutants at our operating power plants by applying state-of-the-art technology for control of these pollutants and through the retirement of previously operational coal plants. We have already reduced emissions of sulfur dioxide, nitrogen oxides, mercury and particulate matter, by more than 80% since 2005, and we will reduce these pollutants by more than 90% by 2040¹.

Our continued commitment to replacing old steel and cast-iron pipes with new, more efficient polyethylene main lines, implementing new technologies to detect leaks, reducing venting of gas during maintenance and progressive compressor station maintenance are helping us to reduce emissions of methane from leaks.

[1] Refer to the Appendix of this report for further details on our emissions metrics and targets.

Infrastructure investments

DTE is investing in both its electric grid and natural gas infrastructure to provide safe, reliable and affordable energy to customers.

In 2021, DTE Electric released a distribution grid plan that includes a \$9 billion investment in our electric grid over five years, preparing our infrastructure for 21st century demands posed by the electrification of vehicles, increasingly severe weather and the fast-evolving needs of consumers and businesses. We continue to upgrade our electric infrastructure and

have invested an additional \$580 million in tree trimming. In 2022, we trimmed more than 6,500 miles of trees near power lines, which contributed to a 40% to 70% increase in reliability in the trimmed areas. Our investments also include increased automation, self-healing circuits, pole maintenance and other projects that modernize our infrastructure. For up to date details, please see our recently published 2023 [Distribution Grid Plan](#).

DTE Gas is also investing \$3.5 billion to replace more than 200 miles of natural gas pipeline each year. The modernized infrastructure will help ensure we safely, affordably and reliably deliver the natural gas relied on by 1.3 million customers. By the time work is completed statewide in 2035, all obsolete natural gas pipes will be upgraded, which will reduce greenhouse gas emissions by an estimated 500,000 metric tons on annual basis – the equivalent of permanently taking 100,000 cars off the road. By the end of 2022, we hit a milestone of having replaced 1,400 miles of older natural gas pipes with these more durable lines.

These investments support thousands of jobs and businesses throughout the state, and a clean, modern grid of the future supports economic growth for Michigan's communities.

Water management

Water stewardship starts with operating facilities and equipment in compliance with governmental standards. We strive to exceed the standards that are incorporated into facility-specific water permits by eliminating unnecessary use of water in facilities and closely monitoring water discharge quality.

Fresh water is essential for non-contact cooling at our steam electric generating plants. As we retire coal-fired power plants, less fresh surface water withdrawals will occur. We've recently updated our water withdrawal goals to align with the accelerated carbon reduction targets announced in our 2022 Integrated Resource Plan. DTE Electric's revised goals are to reduce water withdrawal by 40% (from a 2005 baseline) in 2023, 65% by 2028, 90% by 2032 and greater than 90% by 2040.

Since 2005, we have reduced surface water withdrawals for power generation by 32% by retiring coal-fired power plants (e.g., Conners Creek, Harbor Beach, Trenton Channel, St. Clair Power Plant and River Rouge Power Plants) that use water for cooling. This accomplishes 80% of the 2023 target to reduce surface water withdrawal for power generation by 40% from the 2005 baseline. We project that surface water withdrawals will continue to decrease as we commission less water-intensive energy sources (e.g., Blue Water Energy Center, wind farms, solar projects and battery storage facilities) and additional coal-fired power plants are retired.

Reducing waste

The largest of our waste streams is coal combustion residuals (CCR), which includes fly ash, bottom ash and flue gas desulfurization (FGD) materials. Fly ash and bottom ash are byproducts of the coal burned in power plants. Synthetic gypsum is a byproduct of the FGD units that reduce sulfur dioxide emissions from coal-fired plants. These CCR materials – ash and synthetic gypsum – are recycled to the greatest extent possible. The portion of the CCR not recyclable is disposed of in state and federally regulated landfills and impoundments. DTE's ash recycling rates dropped starting in 2016 as the company brought sorbent injection and activated carbon emission controls online to meet the Mercury and Air Toxic Standards (MATS) rule. The presence of sorbents and activated carbon in coal ash reduces its acceptability for beneficial reuse.

DTE operates three licensed landfills to dispose of unrecycled CCR. Each coal plant has on-site facilities for managing CCR before it is recycled or disposed. These landfills operate in compliance with state and federal laws and are routinely inspected by state and local regulatory agencies. DTE assesses the condition of its facilities and equipment on a regular basis and conducts maintenance and repairs as necessary to maintain structural integrity and operational performance.

Through the retirement of our coal-fired assets, the volume of ash generated has significantly reduced since 2013 from over 1,000,000 tons generated in 2013 to approximately 576,000

tons generated in 2022, of which approximately 137,000 tons were recycled.

Gypsum is used as a component in drywall manufacturing and as a beneficial additive in agriculture. In 2022, DTE recycled 100% of the gypsum produced at its power plants. DTE performs audits of Treatment, Storage and Disposal Facility (TSDF) vendors to ensure that waste generated by the company is managed in accordance with environmental regulations for disposal of waste. The objective of the vendor audit program is to minimize DTE's environmental liability related to the disposal of waste. An environmental risk-screening matrix is used to determine the audit frequency for vendors providing waste disposal or significant recycling services.

Biodiversity

Among the largest landowners in Michigan, DTE voluntarily maintains thousands of acres of land in its natural state, thereby providing habitat for hundreds of species of birds, mammals, fish and insects. We also reclaim previously disturbed land to create and manage habitats featuring native Michigan plants such as gardens that benefit the monarch butterfly and other pollinators. We also manage about 150 acres to support the biodiversity required for mitigation. The Trenton Channel Power Plant and the Fermi II Nuclear Power Plant are both adjacent to the U.S. Fish and Wildlife Service (USFWS) International Wildlife Refuge. We are part of a cooperative management agreement with the Refuge covering over 650 acres.

Our properties are home to hundreds of species of wildlife, some of which are endangered or threatened. Our facilities are often located on land with abundant opportunities for wildlife and we strive to attract and increase wildlife populations at these sites. To this end, we have 30 sites certified under the Wildlife Habitat Council (WHC), a nonprofit organization that helps companies manage their property for the benefit of wildlife.



Social

Customers

Managing affordability

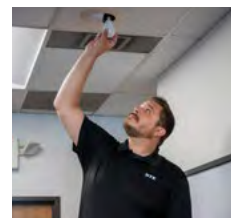
DTE's commitment to our customers is to provide reliable, affordable energy while minimizing our impact on the environment, including carbon emissions that affect climate change. We know some of our customers experience financial challenges, and we're doing everything in our power to help keep bills affordable. We don't mark up the cost of the fuel used to generate electricity or the natural gas we deliver to homes and businesses. DTE Gas secures its natural gas supply up to three years before delivering it to homes and businesses, which protects customers from sudden price spikes due to fluctuating supply and demand. DTE Electric protects against price increases by securing long-term, low-cost contracts for the fuel that the Company uses in its power plants. Approximately 14% of the Company's power comes from renewables and DTE has existing uranium fuel contracts to support safe Fermi 2 operations into 2028.

We recently launched a variety of energy usage tools to help customers learn how changes to their home and energy usage can save them money on their bills. In addition, we work closely with our federal, state and agency partners to get aid to our most vulnerable customers. In the 2021-2022 fiscal year, we connected our customers to nearly \$200 million in financial aid for their energy bills. We also work closely with the Michigan Department of Health and Human Services to directly apply aid to the accounts of some of our most vulnerable customers, [as spotlighted by the White House](#).

We also continue to work with customers having difficulty paying their bills through payment plans and have expanded our income-qualified Energy Efficiency Assistance (EEA) program to assist customers in making their homes more energy efficient and reducing their energy

bills. The EEA program pays 100% of costs and is delivered through more than 30 nonprofit and community action agencies and has served more than 50,000 customers since its inception.

DTE Gas is taking steps to bring the benefits of affordable natural gas to more Michigan homes, businesses and local economies with a project funded by Michigan's bipartisan Low Carbon Infrastructure Enhancement and Development Grant program. The new infrastructure will stretch between the Mesick and Buckley communities in Northern Michigan, expanding access to natural gas for up to 1,500 homes and businesses, helping them greatly reduce their energy costs. The local school district alone is expected to save \$70,000 annually thanks to this expansion.





Human capital management

Talent acquisition

DTE's approach to talent acquisition is focused on creating an organizational culture of service implemented by a diverse, inclusive workforce.

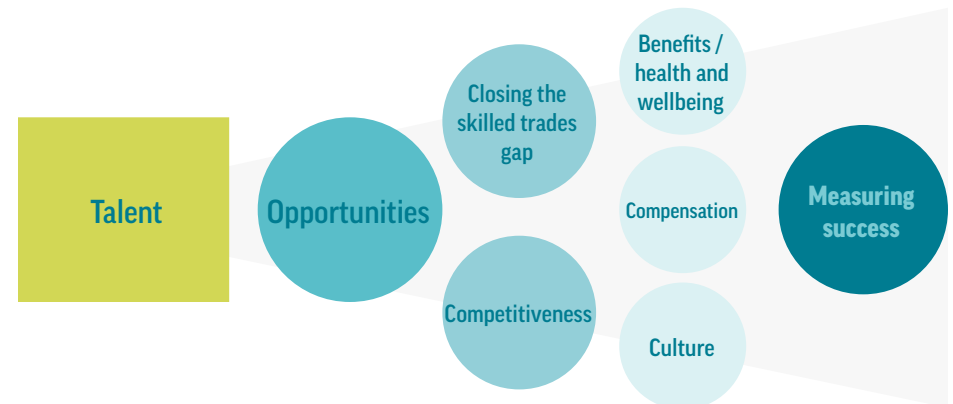
We engage those with the high-demand skills and expertise – in engineering, technology, and skilled trades – that are critical to our industry, all while the labor market is tightening and shrinking. Energy companies across the United States, including DTE, are managing a historic shift in their workforce as the baby boomer generation retires. With about 20% of our employees eligible to retire across the next decade, our drive to recruit and retain talent coincides with the transformation of our energy generation and distribution infrastructure to deliver cleaner, more reliable power to our customers and communities.

DTE's strategic talent management objectives include:

- Attract and retain the best talent to execute our aspiration and purpose
- Develop a deep, diverse, and inclusive workforce and talent pool
- Focus on building a culture of service excellence for both internal and external customers
- Deepen our safety and wellbeing culture through training, technology and communications
- Deliver world-class leadership development and technical training
- Continue to shape and implement a competitive total rewards strategy for employees

To ensure we are effective in meeting these strategic objectives, we have put in place a comprehensive governance structure that includes the Board of Directors, CEO and senior executive oversight of talent decisions. In addition, we have committees that focus specifically on ensuring diversity, equity and inclusion (DEI) are woven into our talent systems and cultural initiatives. Our approach to human capital management can be organized by the phases of our talent pipeline – from building career awareness to retention. Our commitment to diversity, equity and inclusion applies to every step of this process, as demonstrated in the following sections.

Human capital management



Labor relations

Approximately half of DTE’s workforce is represented by unions. Our labor relations professionals partner with business units and union leaders to build a thriving culture, proactively address changing business conditions, resolve employee issues and support collective bargaining negotiations. We operate in compliance with the policies and regulations established by the National Labor Relations Board, the statutes of the National Labor Relations Act and the guidance of the federal Department of Labor. Members of our Labor Management Committee, comprised of union leadership and company senior leaders, meet regularly to share opportunities to improve our company’s culture and systems for being safe, caring, dependable and efficient in serving customers, communities and each other – and then work together to develop and implement solutions. These types of meetings occur at all levels of leadership; open and inclusive communication is key to our successful partnership.

As part of our ongoing commitment to safety, business unit leaders, union officials and union safety representatives participate in safety sessions geared towards identifying safety improvement opportunities to work in collaboration with our union partners through the Executive Safety Committee.

Ensuring our talent competitiveness

Impending retirements, skilled trades gaps and remote working options have enhanced our focus on the competitiveness of employee attraction and retention. Our key areas of focus for our employees are:

1. Culture of health and wellbeing
2. Ensuring competitive and equitable compensation
3. Service excellence and employee engagement
4. Diversity, equity and inclusion

For more in-depth information on these focus areas, check out our [Health and Wellbeing Report](#).

Employee Resource Groups and Business Resource Groups

DTE’s nine Employee Resource Groups, which we call Energy Groups, are another way we’re strengthening our culture of inclusion. Our active and engaged Energy Groups, with more than 4,500 members in total, help build a safe and welcoming environment for people across our enterprise.

Our Energy Groups offer professional development, education, and networking opportunities. They hold events to build awareness and education, volunteer and support nonprofit organizations, and mentor coworkers, young professionals and youth.

DTE’s employee energy groups

Energy Group

Membership



Employees living with disabilities and their allies



Asian and Middle Eastern American employees and their allies



Employees with families and their allies



Members of the LGBTQ+ community and their allies



Black employees and their allies



Members of the Latino and Hispanic community and their allies



Young professional employees and their allies



Employees who are military veterans and their allies



Female employees and their allies

In 2022, we also activated 20 Business Resource Groups across our company. These groups are bringing our diversity, equity and inclusion priorities to life within their individual teams through learning activities, courageous conversations, communications, events, recruiting and hiring.

Learn more about the passionate team members behind our ERGs in [this video](#).

Our diversity, equity and inclusion governance structure

Our DEI governance structure engages all levels of the company in our DEI journey. Our People in Culture Priority Committee, comprised of the Chairman and CEO and other senior executives, provides strategic oversight of DEI efforts and programming across the company. Additionally, our DEI office and Inclusion Diversity Oversight Committee – a team of key leaders from across the company, all nine Employee Resource Groups (ERGs) and our 20 DEI Business Resource Groups – drive our strategic priorities forward.

Our goals

Cultivating an inclusive and diverse workforce is one of our company's top priorities. We are building an inclusive architecture that links our DEI efforts to every part of our workforce and business strategies, so it is embedded into everything we do.

In 2022, we connected DEI to our company's operating model so that it is tied to our aspiration, purpose, service keys and leadership principles. Specifically, we incorporated inclusive behaviors into our company's Service Keys and Leadership Principles to ensure we are inclusive in our everyday interactions with our team members, customers and communities. We also focused on three long-term strategic goals:

1. Prioritizing the effectiveness of the underrepresented talent pipeline by diversifying our workforce, creating a more equitable and inclusive culture and removing barriers to employment for people who are underrepresented or at risk by providing training and better access to good paying jobs.
2. Creating a speak-up culture that welcomes diverse voices and encourages listening and learning so that employees can bring their best energy to work every day.
3. Making DEI a defining and pervasive message in our communications to raise awareness and advance our DEI work.

Diversifying our workforce

To ensure that our workforce reflects the communities we serve, we have practices and programs in place to help us continue to build a pipeline of qualified and diverse candidates. We do this through:

- Targeted diverse recruiting
- Partnerships with diversity-based organizations
- Programs for underserved youth and young adults to develop their skills and prepare them for employment opportunities
- Programs designed to eliminate barriers to employment for youth and adults

We have recruited from diverse universities and organizations for years but we amplified our recruiting and hiring from Historically Black Universities and Colleges (HBCUs), Hispanic Serving Institutions (HSIs) and other diverse organizations, such as the Society of Professional Hispanic Engineers (SHPE), Society of Women Engineers, Society of Asian Scientists and Engineers, National Black Master of Business Administration (MBA) Association, Access for All, Center for Employment Opportunities and veterans' organizations.

Employee safety/safety management

Safety committees connect the organization

Our safety committees involve a partnership between management and labor to ensure all team members are aware of the latest safety information. Safety committees review key performance indicators, discuss recent incidents along with corrective actions, share learnings and extent of conditions and cascade changes in safety protocols across the various business units.

Our union partners are active participants and vital to our safety success. Union representatives co-chair safety committees and are part of the teams that investigate safety incidents within the company and help develop strategy and tactics.

Safety management

At DTE, health and safety remain our top priority.

Following benchmarking, research and culture assessment work in 2022, we introduced a new DTE Energy Safety Model. This model is focused on tasks where high energy is present – high voltage, high temperatures, high elevation, high pressure – the tasks most likely to cause serious injuries. An important element of the new model is a job aid called the Energy Wheel to help identify these high-energy hazards on the job site before beginning work. Crews then put controls in place to keep people safe when an unexpected release of high energy occurs.

Pre-job briefs focus on safety hazards

Jobs or tasks that present a potential hazard require a discussion among everyone who will do the work prior to beginning work. We call these discussions pre-job briefs (PJBs). During PJBs, participants identify risks and hazards along with controls to eliminate or mitigate the hazards. PJBs are intended to align employees regarding who is doing



what, what procedures will be followed and what personal protective equipment is required and what might happen that would cause the team to stop work and reassess conditions. All employees know they have the power – and the responsibility – to stop work any time they feel safety may be compromised for themselves or anyone around them.

Maintaining a safety culture

Employees who perform high-energy activities receive extra training, and their work is evaluated through our Life Critical Assessment program. The program concentrates on field work, ensuring compliance with the Occupational Health and Safety Management System as established by the American National Standards Institute as well as DTE safety protocols. Represented and non-represented employees conduct the assessments and interview colleagues performing the work. They share strengths with other organizations and identify gaps. A team tracks these gaps and conducts follow-up effectiveness reviews to ensure gaps are closed and sustained.

Company leaders also conduct safe worker observations at least once per week to verify that employees are following

safety procedures, to recognize people for working safely and to provide coaching if necessary. The observations are structured to create an opportunity for employees to raise safety concerns and offer suggestions as part of a two-way dialogue with their leaders.

Throughout the year, all front-line leaders conduct focused proactive safety discussions with all of their team members focusing on upcoming seasonal hazards, new procedures or other safety information. They also conduct reactive discussions as needed to share incidents that require added attention.

Tracking safety performance

DTE tracks a system of metrics to gauge health and safety performance and detect gaps. With our new Safety Energy Model strategy, we are tracking High-Energy Serious Injury or Fatality (HSIF) events, Potential Serious Injury or Fatality (PSIF) events, and capacity events where direct controls enabled everyone to remain safe despite the release of high energy. We also continue to track Occupational Safety and Health Administration (OSHA) recordable injuries, DART rate (Days Away, Restrictions or Transfers, which indicate the severity of an injury), incidents requiring first aid treatment, near misses and all vehicle accidents regardless of severity. Our suppliers' safety performance is also reviewed to assist in ensuring that our business partners are working in a safe manner. To further emphasize safety, all business units incorporate safety metrics into their performance goals.

Supply chain management

DTE's supply chain is a vital part of our commitment to provide safe and reliable energy for our customers. Our supply chain team ensures suppliers operate safely, ethically and efficiently. We prioritize local and diverse spending, using our procurement dollars to provide growth opportunities for businesses located within Michigan and those owned by minorities, women, veterans and members of the LGBTQ+ community.

Supplier pre-qualification and risk management

All DTE suppliers must undergo a rigorous [pre-qualification process](#) before they begin doing business with us. This ensures we are creating and maintaining a high-quality, cost-competitive supply chain we can count on.

Code of conduct

We value the business relationships we have with our suppliers and view them as strategic business partners in our success. [Our supplier code of conduct](#) outlines the values and principles that we expect our suppliers to share.

Supplier safety

Through our supplier safety program, we hold ourselves and our external partners accountable for prioritizing safety above everything else. Our [supplier safety handbook](#) details each supplier's responsibility for working safely at DTE.

Supplier performance management

DTE is committed to reducing costs and driving continuous improvement by managing, analyzing and measuring supplier performance. This practice, called Supplier Performance Management (SPM), has saved hundreds of millions of dollars over the past several years.

Fostering a more sustainable supply chain

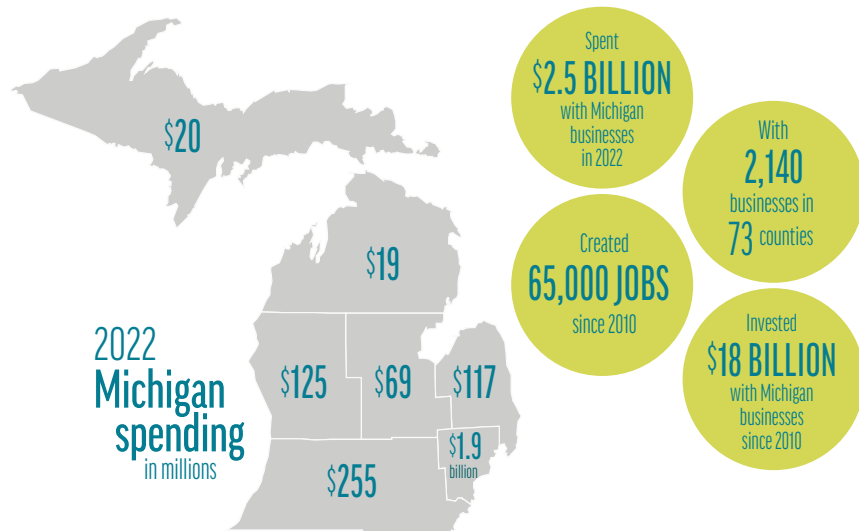
DTE is a charter member of The [Sustainable Supply Chain Alliance](#). The Alliance is a group of electric utilities and supplier affiliate members focused on developing a more environmentally friendly supply chain. The group shares best practices and promotes and develops sustainable solutions for businesses. [The Sustainability Project](#) (TSP) is one of our largest Alliance initiatives. TSP is an online assessment that measures our suppliers' environmental sustainability performance. We encourage our suppliers to use this resource. In 2022, 117 of our top suppliers took the assessment.

Supporting Michigan businesses

DTE invests nearly three times more with local businesses than we did a decade ago. Today, at least 60 cents of every dollar we spend goes to a Michigan company.

In 2022, we spent \$2.5 billion with 2,140 Michigan businesses, continuing to exceed the five-year \$10 billion spending goal we set in 2019.

A leader in supporting local businesses



Supplier diversity

We believe we're at our best when our supply chain reflects the diversity of our customer base. Our award-winning [supplier diversity program](#) benefits our company, our suppliers and the communities we serve. Our spend with diverse suppliers has grown by 244 percent from 2012 through 2022. And in 2020, we increased our commitment to achieving \$1 billion in annual spend with diverse suppliers by year-end 2026. Outreach, advocacy, mentoring and training enable us to achieve these goals and seek out diverse businesses to connect them with new growth opportunities.

We require that diverse suppliers undergo a review and certification process that ensures the business is minority or diversity owned and operated. This review process is completed by one of several third-party diverse business organizations. We have added a diverse spend requirement to our supplier terms and conditions. We expect our largest suppliers to dedicate at least 20% of their external spending to diverse companies, and we measure those results. In 2022, our Tier 1 suppliers spent \$171 million with Tier II diverse-owned businesses.

Externally, our outreach is facilitated by involvement in groups like the Michigan Minority Supplier Development Council and the Great Lakes Women's Business Council and by supporting unique outreach opportunities. An example is our participation in the BuyDetroit program. These events connect Detroit's largest companies with local suppliers looking for new opportunities. We also support a multi-year mentoring program that leverages the expertise of our leaders. Select suppliers meet periodically with our executives and supply chain professionals to review metrics and get advice. The goal is to position suppliers to take advantage of new opportunities – either with DTE or with another corporation – and grow their business.

For more information on Supply Chain, safety, quality, procurement or local and diverse spending commitment, please see the [Supply Chain Management overview](#).

Volunteerism

DTE strives to be more than just an energy provider. We want to be a resource for the communities we serve and, together, become a transformational force for good throughout the state. With this mindset, we are committed to serving our communities through employee volunteerism, philanthropic giving and targeted community programs that address pressing, emerging and/or systemic needs. With the full support and engagement of our leadership, our teams are actively out in the community, making connections, listening to their needs and identifying opportunities where we can actively provide support, ultimately strengthening the communities where we live and serve.

From on-the-ground support, such as planting trees or packing food – to our skills-based volunteerism programs, which pair employees with nonprofits in need of specific support, such as accounting aid or communications strategy – we work alongside our community partners to better their organizations.

In total, in 2022 over 4,600 DTE employees volunteered over 85,000 hours, with approximately 2,000 valued nonprofit partners.



Governance

Board and employee ethics

DTE Energy's corporate governance principles, responsibilities and internal structures reinforce our commitment to operating in an ethical, legal and environmentally sensitive and socially responsible manner, while creating long-term value for our employee ethics. DTE Energy promotes an ethical culture among employees firmly grounded in company values. This emphasis on ethics and values starts with our Board of Directors, and its executive leadership and extends throughout the company. The DTE Energy Way Code of Conduct is available on our public website, along with the Board of Directors Mission and Guidelines, Board Code of Business Conduct and Ethics and Categorical Standards for Director Independence. An Officer Code of Business Conduct also exists for executive officers leading the company. Our Ethics and Compliance Office promotes a culture of integrity, respect and compliance with laws and regulations. In addition to training and communicating with employees to provide guidance and reinforcement of our policies, ethics ambassadors are embedded within business groups companywide. These ambassadors are an in-department resource for employees seeking guidance.

Our employees can also access information and guidance on ethical concerns through extensive web-based resources on the company's intranet. Resources include a downloadable overview, which details ways to learn about ethical concerns at DTE Energy, offers examples of questionable behavior and provides reporting options. This pamphlet is provided to all new employees during onboarding as well as at business unit training sessions to reinforce key concepts.

Our Ethics in Action Program, administered by the Ethics and Compliance Office, promotes a "speak-up" culture by providing mechanisms for employees, retirees, vendors, customers, shareholders and the public, to report concerns and provide feedback. Visit DTE's Code of Ethics for more details.

In addition to Ethics and Compliance programs, DTE and our union partners jointly manage a grievance procedure which is defined by the collective bargaining agreements for represented employees. Additionally, we manage a dispute resolution process for non-represented employees.

Board of Directors

The Board of Directors meets regularly to lead our company, creating and sustaining long-term value for all stakeholders. With respect to sustainability, the Board of Directors:

- Bears responsibility for oversight and risk management of plans to create long-term value for shareholders while ensuring our company operates in an environmentally and socially responsible manner
- Oversees company management and assesses the effectiveness of management policies and decisions, including management's development and execution of our company's strategies
- Reviews all major environmental initiatives

For additional information on DTE's board sub-committees, roles and responsibilities, see the [2023 proxy statement](#) and the board committee charters.

Senior leadership

Our chairman and CEO, together with other senior leaders of the company, including the vice president of Environmental Management and Safety, provide leadership and oversight of our sustainability initiatives.

Through enterprise priority meetings and/or other leadership committees, DTE's senior management team:

- Gather and respond to input from investors, regulating bodies and other key stakeholders regarding our sustainability strategies, initiatives and priorities
- Review internal sustainability data and disclosure documents in consultation with relevant business units
- Execute our company's sustainability strategies, including governance, engagement and oversight initiatives, in consultation with the Board of Directors
- Manage our environmental compliance processes and carbon-reduction strategy
- Manage the progress of our diversity, equity and inclusion strategies
- Mobilize our employees, resources and partner organizations to strengthen and promote prosperity in our communities
- Report the outcomes of our sustainability initiatives to the Board of Directors
- Manage risks and opportunities associated with environmental and social initiatives
- Receive compensation tied to the achievement of company goals (see the [2023 proxy statement](#) for additional information on executive compensation)



Risk governance

The Board receives, reviews and assesses reports from the board committees and from management relating to enterprise-level risks. Each board committee is responsible for overseeing and considering risk issues relating to their respective committee and reporting their assessments to the full Board at each regularly scheduled board meeting. When granting authority to management, reviewing strategies and receiving management reports, the Board and committees consider, among other things, the risks we face.

Each board committee reviews management's assessment of risk for that committee's respective area of responsibility. As part of its oversight function, the board addresses any risk conflicts that may arise between the committees and assigns any emerging risks that do not fall within a specific committee's responsibilities to the most relevant committee.

Additional risk governance details can be found on the [2023 proxy statement](#).

Political participation

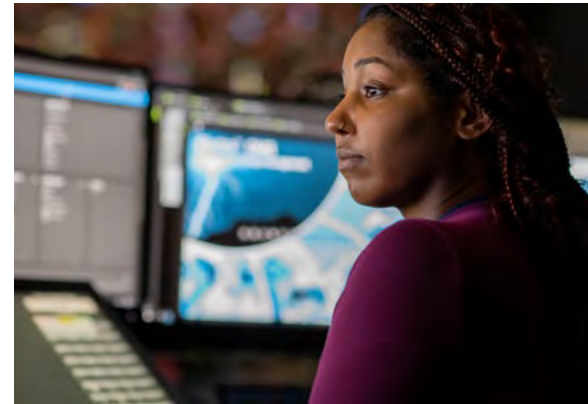
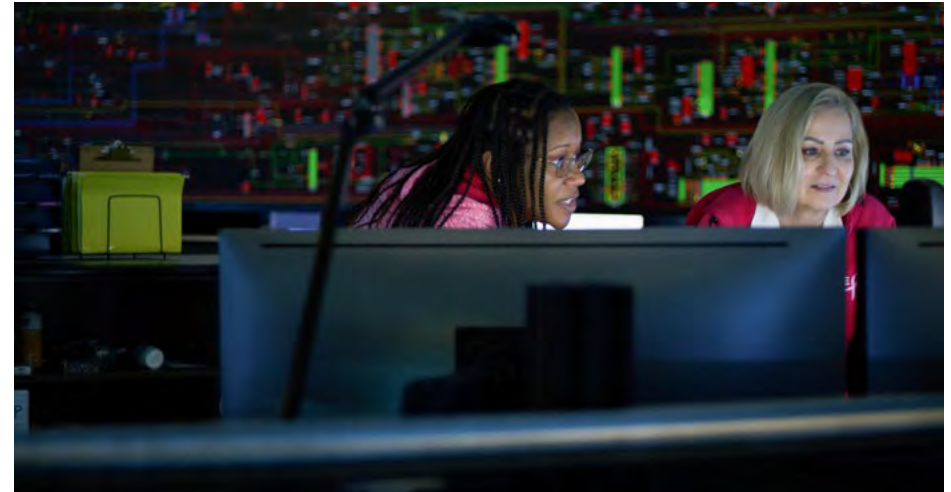
As an energy company, we are affected each day by the decisions of federal, state and local officials. Therefore, we seek to support candidates who we believe will ensure energy policies meet the needs of our region and our customers. DTE has a strong, bi-partisan track record of engaging in the political process. Each year, we evaluate the various requests made and seek to support political leaders and organizations that engage in constructive policy discussions and public conversations.

Under our corporate policy and to ensure transparency, we take proactive steps to disclose political activities. See additional information on [DTE's political participation website](#).

Cybersecurity

We work 24/7 to deliver safe, reliable energy to our customers. An essential part of that effort is protecting our physical and digital infrastructure. This commitment is supported by a dedicated cybersecurity team and an employee education program that puts customer and company information front and center. We have also forged trusted partnerships with companies, organizations and state and federal agencies to share best practices, tools and threat information to keep our infrastructure and our customers' information secure. This includes partnering with others in our industry to form the Electricity Subsector Coordinating Council (ESCC). The ESCC is the principal liaison between the energy sector and the federal government in coordinating efforts to prepare for - and respond to - threats to critical infrastructure.

Working closely with other interdependent infrastructure sectors like telecommunications and transportation, DTE's Chief Information Officer oversees our cybersecurity. Our Information Technology (IT) and Ethics personnel hold an annual meeting with members of the Michigan Public Service Commission (MPSC) staff to provide a verbal report that addresses the company's cybersecurity and IT risk planning. In addition to this initiative, we also communicate any exposures of customers' personally identifiable information (PII) to MPSC staff, and any cyber-attacks to both the MPSC staff and the Michigan Fusion Center, which is a collaboration between the Michigan State Police, FBI, Michigan Department of Health and Human Services and other organizations. The timing of these communications are to occur as soon as reasonable, practicable and prior to any public notification.



To improve cybersecurity, the ESCC focuses on:

Preparing for incidents

Improving the flow of threat information

Supporting the deployment of tools



Appendix

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EEI Sustainability Template: Quantitative Information

Disclaimer: All information below is being provided on a voluntarily basis, and as such, companies may elect to include or exclude any of the topics outlined below and customize the template to their specific needs. The decision to include data for historical and future years is at the discretion of each company and the specific years (e.g., historical baseline) should be chosen as appropriate for each company.

Parent Company: DTE Energy
Operating Company(s): DTE Electric
Business Type(s): Vertically Integrated
State(s) of Operation: Michigan
State(s) with RPS Programs: Michigan
Regulatory Environment: Regulated
Report Date: October 17, 2023

| Reference Number | | Baseline 2005 Actual | Last Year 2021 Actual | Current Year 2022 Actual | Next Year 2023 Forecast | Comments, Links, Additional Information and Notes |
|------------------|--|----------------------|-----------------------|--------------------------|-------------------------|---|
| Portfolio | | | | | | |
| 1 | Owned Nameplate Generation Capacity at end of year (MW) | | | | | |
| 1.1 | Coal | 7,733 | 5,775 | 5,715 | | |
| 1.2 | Natural Gas | 2,683 | 8,686 | 8,626 | | |
| 1.3 | Nuclear | 1,154 | 1,161 | 1,161 | | |
| 1.4 | Petroleum | 666 | 325 | 325 | | |
| 1.5 | Total Renewable Energy Resources | 997 | 2,611* | 2,611 | | |
| 1.5.1 | Biomass/Biogas | 8 | 186 | 186 | | |
| 1.5.2 | Geothermal | 0 | 0 | 0 | | |
| 1.5.3 | Hydroelectric | 989 | 1,112 | 1,122 | | |
| 1.5.4 | Solar | 0 | 65 | 65 | | |
| 1.5.5 | Wind | 0 | 1,238 | 1,238 | | |
| 1.6 | Other | 0 | 0 | 0 | | |
| 2 | Net Generation for the data year (MWh) | | | | | |
| 2.1 | Coal | 41,764,875 | 24,623,785 | 23,874,596 | | |
| 2.2 | Natural Gas | 1,033,086 | 2,604,706 | 4,876,678 | | |

| Reference Number | | Baseline 2005 Actual | Last Year 2021 Actual | Current Year 2022 Actual | Next Year 2023 Forecast | Comments, Links, Additional Information and Notes |
|------------------|---|----------------------|-----------------------|--------------------------|-------------------------|--|
| 2.3 | Nuclear | 8,753,555 | 9,222,235 | 7,016,628 | | |
| 2.4 | Petroleum | 7,800 | 74,697 | 62,914 | | |
| 2.5 | Total Renewable Energy Resources | 551,685 | 3,970,789 | 5,678,771 | | |
| 2.5.1 | Biomass/Biogas | --- | 460,728 | 367,441 | | |
| 2.5.2 | Geothermal | --- | 0 | 0 | | |
| 2.5.3 | Hydroelectric | --- | 25,087 | 14,897 | | |
| 2.5.4 | Solar | --- | 66,016 | 236,070 | | |
| 2.5.5 | Wind | --- | 3,418,958 | 5,060,363 | | |
| 2.6 | Other | --- | 0 | 0 | | |
| 3 | Investing in the Future: Capital Expenditures, Energy Efficiency (EE) and Smart Meters | | | | | |
| 3.1 | Total Annual Capital Expenditures (nominal dollars) | \$722,000,000 | \$3,000,000,000 | \$2,600,000,000 | | |
| 3.2 | Incremental Annual Electricity Savings from EE Measures (MWh) | N/A | 943,885 | 886,849 | | |
| 3.3 | Incremental Annual Investment in Electric EE Programs (nominal dollars) | N/A | \$181,100,000 | \$174,688,620 | | |
| 4 | Retail Electric Customer Count (at end of year) | | | | | |
| 4.1 | Commercial | 196,870 | 212,820 | 213,108 | | |
| 4.2 | Industrial | 1,097 | 836 | 836 | | |
| 4.3 | Residential | 1,982,979 | 2,043,056 | 2,047,960 | | |
| Emissions | | | | | | |
| 5 | GHG Emissions: Carbon Dioxide (CO₂) and Carbon Dioxide Equivalent (CO₂e) | | | | | |
| | Note: The alternatives available below are intended to provide flexibility in reporting | | | | | |
| 5.1 | Owned Generation | | | | | |
| 5.1.1 | Carbon Dioxide (CO ₂) | | | | | |
| 5.1.1.1 | Total Owned Generation CO ₂ Emissions (MT) | 38,434,095 | 26,279,276* | 25,172,219 | | |
| 5.1.1.2 | Total Owned Generation CO ₂ Emissions Intensity (MT/Net MWh) | 0.738 | 0.649 | 0.607 | | |
| 5.1.2 | Carbon Dioxide Equivalent (CO ₂ e) | | | | | |
| 5.1.2.1 | Total Owned Generation CO ₂ e Emissions (MT) | N/A | 26,476,208* | 25,359,331 | | CO ₂ e was not considered in 2005. DTE does not provide a target for CO ₂ e. |
| 5.1.2.2 | Total Owned Generation CO ₂ e Emissions Intensity (MT/Net MWh) | N/A | 0.654 | 0.611 | | CO ₂ e was not considered in 2005. DTE does not provide a target for CO ₂ e. |
| 5.2 | Purchased Power | | | | | |

| Reference Number | | Baseline 2005 Actual | Last Year 2021 Actual | Current Year 2022 Actual | Next Year 2023 Forecast | Comments, Links, Additional Information and Notes |
|------------------|---|----------------------|-----------------------|--------------------------|-------------------------|--|
| 5.2.1 | Carbon Dioxide (CO ₂) | | | | | |
| 5.2.1.1 | Total Purchased Generation CO ₂ Emissions (MT) | 4,526,780 | 4,860,975* | 5,175,308 | | |
| 5.2.1.2 | Total Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh) | 3.899 | 0.836* | 0.595 | | |
| 5.2.2 | Carbon Dioxide Equivalent (CO ₂ e) | | | | | |
| 5.2.2.1 | Total Purchased Generation CO ₂ e Emissions (MT) | N/A | 3,483,937* | 4,546,433 | | CO ₂ e was not considered in 2005. DTE does not provide a target for CO ₂ e. |
| 5.2.2.2 | Total Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh) | N/A | 0.599* | 0.523 | | CO ₂ e was not considered in 2005. DTE does not provide a target for CO ₂ e. |
| 5.3 | Owned Generation + Purchased Power | | | | | |
| 5.3.1 | Carbon Dioxide (CO ₂) | | | | | |
| 5.3.1.1 | Total Owned and Purchased Generation CO ₂ Emissions (MT) | 42,960,874 | 31,140,251* | 30,354,450 | | |
| 5.3.1.2 | Total Owned and Purchased Generation CO ₂ Emissions Intensity (MT/Net MWh) | 0.806 | 0.672* | 0.605 | | |
| 5.3.2 | Carbon Dioxide Equivalent (CO ₂ e) | | | | | |
| 5.3.2.1 | Total Owned and Purchased Generation CO ₂ e Emissions (MT) | N/A | 29,960,146* | 29,905,764 | | CO ₂ e was not considered in 2005. DTE does not provide a target for CO ₂ e. |
| 5.3.2.2 | Total Owned and Purchased Generation CO ₂ e Emissions Intensity (MT/Net MWh) | N/A | 0.647* | 0.596 | | CO ₂ e was not considered in 2005. DTE does not provide a target for CO ₂ e. |
| 5.4 | Non-Generation CO ₂ e Emissions of Sulfur Hexafluoride (SF ₆) | | | | | |
| 5.4.1 | Total CO ₂ e emissions of SF ₆ (lbs) | N/A | N/A | N/A | | Below threshold for reporting to EPA. |
| 5.4.2 | Leak rate of CO ₂ e emissions of SF ₆ (lbs/Net MWh) | N/A | N/A | N/A | | Below threshold for reporting to EPA. |
| 6 | Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Mercury (Hg) | | | | | |
| 6.1 | Generation basis for calculation | Total | Total | Total | | |
| 6.2 | Nitrogen Oxide (NO _x) | | | | | |
| 6.2.1 | Total NO _x Emissions (MT) | 58,476 | 17,333 | 12,060 | | 2020 NO _x emissions were 81% below 2005 emissions |
| 6.2.2 | Total NO _x Emissions Intensity (MT/Net MWh) | 1.12E-03 | 4.28E-04 | 2.91E-04 | | |
| 6.3 | Sulfur Dioxide (SO ₂), Sulfur Dioxide (SO ₂), Mercury (Hg) | | | | | |
| 6.3.1 | Total SO ₂ Emissions (MT) | 194,201 | 35,007* | 26,346 | | 2020 SO ₂ emissions were 89% below 2005 emissions |
| 6.3.2 | Total SO ₂ Emissions Intensity (MT/Net MWh) | 3.73E-03 | 8.64E-04 | 6.35E-04 | | |
| 6.4 | Mercury (Hg) | | | | | |
| 6.4.1 | Total Hg Emissions (kg) | 724.9 | 125.7 | 44.3 | | 2020 NO _x emissions were 95% below 2005 emissions |
| 6.4.2 | Total Hg Emissions Intensity (kg/Net MWh) | 1.39E-05 | 3.10E-06 | 1.07E-06 | | |

| Reference Number | | Baseline 2005 Actual | Last Year 2021 Actual | Current Year 2022 Actual | Next Year 2023 Forecast | Comments, Links, Additional Information and Notes |
|------------------|--|----------------------|-----------------------|--------------------------|-------------------------|---|
| Resources | | | | | | |
| 7 | Human Resources | | | | | |
| 7.1 | Total Number of Employees | 11,360 | 10,733 | 10,678 | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.2 | Percentage of Women in Total Workforce | 25.30% | 28.3% | 28.8% | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.3 | Percentage of Minorities in Total Workforce | 26.60% | 29.1% | 29.6% | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.4 | Total Number on Board of Directors/Trustees | 13 | 12* | 10 | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.5 | Percentage of Women on Board of Directors/Trustees | 15.40% | 25.0% | 20.0% | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.6 | Percentage of Minorities on Board of Directors/Trustees | 23.10% | 16.7% | 20.0% | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.7 | Employee Safety Metrics | --- | --- | --- | | |
| 7.7.1 | Recordable Incident Rate | N/A | 0.59 | 0.55 | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.7.2 | Lost-time Case Rate | N/A | 0.19 | 0.19 | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.7.3 | Days Away, Restricted, and Transfer (DART) Rate | N/A | 0.36 | 0.39 | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 7.7.4 | Work-related Fatalities | N/A | 2 | 0 | | This metric is for all of DTE Energy (not specifically the Electric Company). |
| 8 | Fresh Water Resources used in Thermal Power Generation Activities | | | | | |
| 8.1 | Water Withdrawals - Consumptive (Millions of Gallons) | 21,179 | 19,142* | 17,520 | | |
| 8.2 | Water Withdrawals - Non-Consumptive (Millions of Gallons) | 1,386,687 | 970,548* | 929,200 | | |
| 8.3 | Water Withdrawals - Consumptive Rate (Millions of Gallons/Net MWh) | 4.06E-04 | 4.73E-04 | 4.22E-04 | | |
| 8.4 | Water Withdrawals - Non-Consumptive Rate (Millions of Gallons/Net MWh) | 2.66E-02 | 2.40E-02 | 2.23E-02 | | |
| 9 | Waste Products | | | | | |
| 9.1 | Amount of Hazardous Waste Manifested for Disposal (tons) | --- | 48.89 | 59.3 | | |
| 9.2 | Percent of Coal Combustion Products Beneficially Used | --- | 54.37% | 55.48% | | |

*Numbers updated after publication in 2021 Sustainability Report

AGA Voluntary Sustainability Metrics: Quantitative Information

Disclaimer: All information below is being provided on a voluntary basis, and as such, companies may elect to include or exclude any of the topics outlined below and customize the template to their specific needs. The decision to include data for historical and future years is at the discretion of each company and the specific years (e.g., historical baseline) should be chosen as appropriate for each company. © American Gas Association. All rights reserved.

Parent Company: DTE Energy
Operating Company(s): DTE Gas
Business Type(s): Vertically Integrated
State(s) of Operation: Michigan
Regulatory Environment: Regulated
Note: Data from operating companies is rolled up to the corporate level.
Report Date: October 17, 2023

| Reference Number | | Last Year (2021) | Current Year (2022) | Definitions | Comments, Links, Additional Information and Notes |
|---------------------------------|--|------------------|---------------------|---|---|
| Natural Gas Distribution | | | | | |
| 1 | Methane Emissions And Mitigation from Distribution Mains | | | | |
| 1.1 | Number of Gas Distribution Customers | 1,312,496 | 1,323,954 | | |
| 1.2 | Distribution Mains in Service | | | These metrics should include all local distribution companies (LDCs) held by the Parent Company that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule. | |
| 1.2.1 | Plastic (miles) | 12733 | 13266 | | |
| 1.2.2 | Cathodically Protected Steel- Bare & Coated (miles) | 5186 | 5202 | | |
| 1.2.3 | Unprotected Steel- Bare & Coated (miles) | 1168 | 1082 | | |
| 1.2.4 | Cast Iron/ Wrought Iron-without upgrades (miles) | 1528 | 1356 | | |
| 1.3 | Plan/ Commitment to Replace/ Upgrade Remaining Miles of Distribution Mains (# years to complete) | | | These metrics should provide the number of years remaining to take out of service, replace or upgrade cathodically unprotected steel mains, and cast iron/wrought iron mains, consistent with applicable state utility commission authorizations. | DTE is scheduled to complete the replacement/upgrade by 2035. |
| 1.3.1 | Unprotected Steel (Bare & Coated) | 13 | 13 | | |
| 1.3.2 | Cast Iron/ Wrought Iron | 13 | 13 | | |

| Reference Number | | Last Year (2021) | Current Year (2022) | Definitions | Comments, Links, Additional Information and Notes |
|---|---|------------------|---------------------|--|---|
| 2 | Distribution CO₂e Fugitive Emissions | | | | |
| 2.1 | CO ₂ e Fugitive Methane Emissions from Gas Distribution Operations (metric tons) | 390,400 | 357,425 | Fugitive methane emissions (not CO ₂ combustion emissions) stated as CO ₂ e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(a)(3)(ix)(C) and (D), 98.236(r)(1)(iv) and (v), and 98.236(r)(2)(v)(A) and (B). This metric should include fugitive methane emissions above the reporting threshold for all natural gas local distribution companies (LDCs) held by the Parent Company that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule. | |
| 2.2 | CH ₄ Fugitive Methane Emissions from Gas Distribution Operations (metric tons) | 15,616 | 14,297 | INPUT VALUE (total mt CH ₄) as explained in definition above. Subpart W input is CH ₄ (mt). | |
| 2.21 | CH ₄ Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year) | 813 | 745 | | |
| 2.3 | Annual Natural Gas Throughput from Gas Distribution Operations (MSCF/ year) | 291,152,000* | 312,367,592 | This metric provides gas throughput from distribution (quantity of natural gas delivered to end users) reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(iv), as reported on the Subpart W e-GRRR integrated reporting form in the "Facility Overview" worksheet Excel form, Quantity of natural gas delivered to end users (column 4). | |
| 2.3.1 | Annual Methane Gas Throughput from Gas Distribution Operations (MMSCF/ year) | 267,569* | 291,407 | | |
| 2.4 | Fugitive Methane Emissions Rate (MMSCF of Methane Emissions per MMSCF of Methane Throughput) | 0.00134 | 0.00114 | $\frac{E_r}{TPC} = \frac{\text{tonnes CH}_4}{\text{MMscf gas}} \times \frac{10^6 \text{ g CH}_4}{\text{tonne CH}_4} \times \frac{\text{g mole CH}_4}{16 \text{ g CH}_4} \times \frac{\text{gmol Nat Gas}}{0.95 \text{ gmol CH}_4} \times \frac{\text{scf gas}}{1.198 \text{ gmol gas}} \times \frac{\text{MMscf gas emissions}}{10^6 \text{ scf gas}} =$ $\frac{\text{MMscf gas emissions}}{\text{MMscf gas throughput}} = 0\%$ | |
| Natural Gas Transmission & Storage | | | | | |
| 1 | Onshore Natural Gas Transmission Compression Methane Emissions | | | All methane leak sources per 98.232 (e) (1-8), (f)(1-8), and (m) are included for Transmission and Storage. Combustion sources are excluded. CO ₂ and N ₂ O are excluded. | |
| | | | | Fugitive Methane emissions as defined in 40 CFR 98 Sub W Section 232 (e) (1-8), CO ₂ and N ₂ O emissions are excluded from this section. | |
| 1.1.1 | Pneumatic Device Venting (metric tons/ year) | 37 | 55 | Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4) | |
| 1.1.2 | Blowdown Vent Stacks (metric tons/ year) | 116 | 73 | Value reported using calculation in 40 CFR 98 Sub W Section 236(j)(1)(iii) | |
| 1.1.3 | Transmission Storage Tanks (metric tons/ years) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(k)(2)(v) | |
| 1.1.4 | Flare Stack Emission (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11) | |
| 1.1.5 | Centrifugal Compressor Venting (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2) | |
| 1.1.6 | Reciprocating Compressor Venting (metric ton/ year) | 114 | 580 | Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2) | |
| 1.1.7 | Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/ year) | 62 | 129 | Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v) | |

| Reference Number | | Last Year (2021) | Current Year (2022) | Definitions | Comments, Links, Additional Information and Notes |
|------------------|---|------------------|---------------------|--|--|
| 1.1.8 | Other Leaks (metric tons/year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v) | |
| 1.2 | Total Transmission Compression Methane Emissions (metric tons/ year) | 328 | 836 | | |
| 1.3 | Total Transmission Compression Methane Emissions (CO ₂ e/ year) | 8,202 | 20,903 | | |
| 1.4 | Total Transmission Compression Methane Emissions (MSCF/ year) | 17,088 | 43,548 | Density of Methane = 0.0192 kg/ft ³ per 40 CFR Sub W EQ. W-36 | |
| 2 | Underground Natural Gas Storage Methane Emissions | | | Fugitive Methane emissions as defined in 40 CFR 98 Sub W Section 232 (f) (1-8), CO ₂ and N ₂ O emissions are excluded from this section. | 2021 storage emissions are zero because these emissions were associated with DT Midstream assets that were spun off in 2021. |
| 2.1.1 | Pneumatic Device Venting (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(b)(4) | |
| 2.1.2 | Flare Stack Emission (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(n)(11) | |
| 2.1.3 | Centrifugal Compressor Venting (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(o)(2)(ii)(D)(2) | |
| 2.1.4 | Reciprocating Compressor Venting (metric ton/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(p)(2)(ii)(D)(2) | |
| 2.1.5 | Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v) | |
| 2.1.6 | Other Equipment Leaks (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v) | |
| 2.1.7 | Equipment leaks from valves, connectors, open ended lines, and pressure relief valves associated with storage wellheads (metric tons/ year) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 236(q)(2)(v) | |
| 2.1.8 | Other equipment leaks from components associated with storage wellheads (metric tons/ years) | 0 | 0 | Value reported using calculation in 40 CFR 98 Sub W Section 232(q)(2)(v) | |
| 2.2 | Total Storage Compression Methane Emissions (metric tons/ years) | 0 | 0 | | |
| 2.3 | Total Storage Compression Methane Emissions (CO ₂ e/ year) | 0 | 0 | | |
| 2.4 | Total Storage Compression Methane Emission (MSCF/ year) | 0 | 0 | Density of Methane = 0.0192 kg/ft ³ per 40 CFR Sub W EQ. W-36 | |
| 3 | Onshore Natural Gas Transmission Pipeline Blowdowns | | | Blowdown vent stacks for onshore transmission pipeline as defined in 40 CFR 98 Sub W Section 232 (m), CO ₂ and N ₂ O emissions are excluded from this section. | |
| 3.1 | Transmission Pipeline Blowdown Vent Stacks (metric tons/ year) | 1,817 | 1,800 | Value reported using calculation in 40 CFR 98 Sub W Section 232(i)(3)(ii) | |
| 3.2 | Transmission Pipeline Blowdown Vent Stacks (CO ₂ e/ year) | 45,425 | 45,000 | | |

| Reference Number | | Last Year (2021) | Current Year (2022) | Definitions | Comments, Links, Additional Information and Notes |
|---|---|------------------|---------------------|---|--|
| 3.3 | Transmission Pipeline Blowdown Vent Stacks (MSCF/ year) | 94,635 | 93,750 | | |
| 4 | Other Non-Sub Emissions Data | | | Additional sources required by ONE Future include dehydrator vents, storage station venting transmission pipeline leaks, and storage tank methane | |
| 4.1 | Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (metric tons/ year) | 6,553 | 6,132 | | |
| 4.2 | Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (CO ₂ e/ year) | 163,825 | 153,300 | | |
| 4.3 | Total Methane Emissions from additional sources not recognized by 40 CFR 98 Subpart W (MSCF/ year) | 341,302 | 319,375 | | |
| 5 | Summary and Metrics | | | | |
| 5.1 | Total Transmission and Storage Methane Emissions (MMSCF/ year) | 453 | 457 | | |
| 5.2 | Annual Natural Gas Throughput from Gas Transmission and Storage Operations (MSCF/ year) | 1,213,693,384 | 1,189,338,008 | EIA 176 throughput or other reference for other throughput selected | |
| 5.2.1 | Annual Methane Gas Throughput from Gas Transmission and Storage Operations (MMSCF/ year) | 1,153,009 | 1,129,871 | | |
| 5.3 | Fugitive Methane Emissions Rate (MMSCF of Methane Emissions per MMSCF of Methane Throughput) | 0.00039 | 0.00040 | | |
| Natural Gas Gathering & Boosting | | | | | |
| 1 | Methane Emissions | | | | |
| 1.1 | Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions | | | | |
| 1.1.1 | Total Miles of Gathering Pipeline Operated by gas utility (miles) | 0 | 0 | | |
| 1.1.2 | Volume of Gathering Pipeline Blow Down Emissions (scf) | N/A | N/A | This metric is collected to support calculations under EPA 40 CFR 98, Subpart W. | Gathering and boosting assets were associated with DT Midstream that was spun off in 2021. |
| 1.1.3 | Gathering Pipeline Blow-Down Emissions outside storage and compression facilities (metric tons CO ₂ e) | N/A | N/A | | |
| 2 | CO₂e Combustion Emissions For Gathering & Boosting Compression | | | | |
| 2.1 | CO ₂ e Emissions for Gathering & Boosting Compression Stations (metric tons) | N/A | N/A | CO ₂ combustion emissions as reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k). | |

| Reference Number | | Last Year (2021) | Current Year (2022) | Definitions | Comments, Links, Additional Information and Notes |
|--|--|------------------|---------------------|---|--|
| 3 | CO₂e Combustion Emissions for Gathering & Boosting Compression | | | | |
| 3.1 | Emissions reported for all permitted sources (minor or major) | | | The number of permitted sources for conventional emissions may not be the same number of sources reporting under the EPA GHG reporting rule. Companies may wish to describe which, or how many, sources are included in the conventional pollutants data and whether the CO ₂ e data reported includes all of these sources. | Gathering and boosting assets were associated with DT Midstream that was spun off in 2021. |
| 3.1.1 | Nox (metric tons per year) | 0 | 0 | | |
| 3.1.2 | VOC (metric tons per year) | 0 | 0 | | |
| Human Resources | | | | | |
| 1.1 | Total Number of Employees | | | | Refer to EEI -- item 7.1 |
| 1.2 | Percentage of Women in Total Workforce | | | | Refer to EEI -- item 7.2 |
| 1.3 | Percentage of Minorities in Total Workforce | | | | Refer to EEI -- item 7.3 |
| 2.1 | Total Number on Board of Directors/ Trustees | | | | Refer to EEI -- item 7.4 |
| 2.2 | Percentage of Women on Board of Directors/ Trustees | | | | Refer to EEI -- item 7.5 |
| 2.3 | Percentage of Minorities on Board of Directors/ Trustees | | | | Refer to EEI -- item 7.6 |
| 3 | Employee Safety Metrics | | | | |
| 3.1 | Recordable Incident Rate | | | | Refer to EEI -- item 7.7.1 |
| 3.2 | Lost- Time Case Rate | | | | Refer to EEI -- item 7.7.2 |
| 3.3 | Days Away, restricted, and Transfer (DART) Rate | | | | Refer to EEI -- item 7.7.3 |
| 3.4 | Work-Related Fatalities | | | | Refer to EEI -- item 7.7.4 |
| *Numbers updated after publication of 2021 Sustainability Report | | | | | |

Climate goals

| Goal Applicability | Baseline Year | Target Year | Reduction Goal Description (Short) | GHG Protocol Scope | Source (URL) | Progress on Goal Through 2022 |
|--------------------|---------------|-------------|---|---|--|---|
| DTE Electric | 2005 | 2023 | 32% reduction in the carbon emissions of electricity delivered to DTE Electric customers. | Currently DTE Electric uses the Annual Net Short Method to set and track carbon reduction goals | DTE Energy - Net Zero Carbon Emissions DTE IRP CleanVision and Improving Reliability | <p>DTE measures progress on this goal using the annual net short method of calculating emissions associated with electricity delivered to customers (See Notes 2 and 3). Carbon emissions of electricity delivered to customers using annual net short method:</p> <p>2005 (baseline): 37, 150,000 metric tons</p> <p>2022: 27,830,000 metric tons</p> <p>Reduction in 2022 from 2005 baseline: 25 percent</p> |
| DTE Electric | 2005 | 2028 | 65% reduction in the carbon emissions of electricity delivered to DTE Electric customers. | | | |
| DTE Electric | 2005 | 2032 | 85% reduction in the carbon emissions of electricity delivered to DTE Electric customers. | | | |
| DTE Electric | 2005 | 2040 | 90% reduction in the carbon emissions of electricity delivered to DTE Electric customers. | | | |
| DTE Electric | 2005 | 2050 | Net zero carbon emissions of electricity delivered to DTE Electric customers. | | | |
| DTE Gas Suppliers | 2005 | 2050 | Net zero carbon emissions for natural gas procured by DTE Gas | Scope 3 (Upstream Suppliers) | Achieving our CleanVision and Improving Reliability | DTE Gas expects to achieve this goal by encouraging transparent and consistent reporting of methane emissions intensity (e.g. via ONE Future), working to source gas with lower methane intensities, and pursuing programs that promote a cleaner natural gas product such as EPA's Natural Gas STAR program. |
| DTE Gas Operations | 2005 | 2050 | Net zero carbon emissions (fugitive and combustion) from DTE Gas operations | Scope 1 (Stationary combustion and fugitive emissions) | Achieving our CleanVision and Improving Reliability | DTE Gas has been reducing emissions in our internal local distribution company (LDC) by replacing aging steel and cast-iron pipe with durable plastic pipe across the service territory. DTE Gas also is implementing new technologies to upgrade compressor station components, detect leaks more quickly, and to reduce gas being vented to the atmosphere during pipeline and compressor station maintenance activities. |

| Goal Applicability | Baseline Year | Target Year | Reduction Goal Description (Short) | GHG Protocol Scope | Source (URL) | Progress on Goal Through 2022 |
|--------------------|---------------|-------------|---|------------------------|---|---|
| DTE Gas Customers | 2005 | 2040 | 35% reduction in carbon emissions from the combustion of natural gas by DTE Gas customers | Scope 3 (Customer Use) | Achieving our CleanVision and Improving Reliability | DTE launched its voluntary customer Natural Gas Balance program in 2021 that provides residential and small commercial customers the option of addressing up to 100 percent of their combustion emissions through forestry offsets and renewable natural gas (RNG). More than 5,300 customers have enrolled in the program. DTE's energy waste reduction offerings also help customers reduce their natural gas consumption. DTE has committed to increasing its natural gas annual energy savings goals from 1.00 percent to 1.05 percent in 2023. In 2022, 110,686 metric tons of CO2 emissions were avoided as a result of 2,086 MMcf of DTE Gas customer savings. DTE Gas is also exploring opportunities to incorporate more renewable natural gas into the distribution system as well as advanced fuel technologies such as hydrogen blending. We are working to develop a GHG accounting method that will demonstrate progress on our customer end-use goal and will provide more information as that is developed. |

Notes:

1. Additional information on the DTE Electric and DTE Gas aspirational emissions goals listed above can be found in our sustainability report.
2. DTE Electric uses the annual net short method to establish and track its carbon reduction goals, as detailed in the 2019 and 2022 Integrated Resource Plans.
3. A summary of the annual net short method is provided in the following EPRI publication: Methods to Account for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases, <https://www.epri.com/research/products/000000003002015044>

GRI index

| Standard # | Standard Description | DTE Response to Standard |
|--------------|--|--|
| GRI 2 | General Disclosures | |
| GRI 2-1 | Organizational details | <p>a. DTE Energy Company</p> <p>b. Please see DTE Energy's 10-k for the fiscal year ending Dec. 31, 2022, pages 6-7</p> <p>c. Detroit, Michigan, United States</p> <p>d. United States and Ontario, Canada</p> |
| GRI 2-2 | Entities included in the organization's sustainability reporting | <p>Entities in DTE Energy's consolidated financial statements or equivalent documents are generally covered in this GRI report and DTE's 10-K.</p> <p>See DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022, Consolidated Statements pages 56-62.</p> |
| GRI 2-3 | Reporting period, frequency and contact point | <p>Annual Reporting Calendar year 2022 impact@dteenergy.com</p> |
| GRI 2-4 | Restatements of information | There are no restatements of information in DTE Energy's report covering 2022. |
| GRI 2-5 | External assurance | DTE Energy applied the GRI Standards as the basis for this Corporate Citizenship Report, in accordance with the Core option. This report was reviewed by internal subject matter experts in each GRI disclosure area. |
| GRI 2-6 | Activities, value chain and other business relationships | <p>Please see DTE Energy's 10-k for the fiscal year ending Dec. 31, 2022, pages 6-7.</p> <p>For a description of DTE Electric operations, please see DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022 page 7 and for DTE Gas operations, please see DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022 page 11.</p> <p>In addition to utility operations in Michigan, the DTE Energy portfolio includes non-utility operations focused on renewable natural gas projects and providing custom energy solutions to industrial, commercial, and institutional customers, and energy marketing and trading operations. For more information, please see our webpages below.</p> <p>DTE Vantage</p> <p>Energy Trading</p> <p>Citizens Gas Fuel</p> <p>MERC</p> <p>For a description of DTE's supply chain please see Supply Chain section within this report and our Supply Chain page.</p> <p>No significant changes reported</p> |

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|--|-------------------------|--------|------|---------|-------|-------|-----------|-----|-----|------------------------------------|--------|------|-------------------|-------|-------|-------------------|----|---|
| GRI 2-7 | Employees | <p>DTE Energy's workforce in 2022 totaled approximately 10,678 full time employees including students and temporary workers, with unions representing 50% of the workforce. All DTE Energy employees work in the United States, primarily in Michigan.</p> <table border="1"> <thead> <tr> <th>Permanent and Temporary</th> <th>Female</th> <th>Male</th> </tr> </thead> <tbody> <tr> <td>Regular</td> <td>2,938</td> <td>7,281</td> </tr> <tr> <td>Temporary</td> <td>140</td> <td>220</td> </tr> <tr> <td>Full-time and part- time by gender</td> <td>Female</td> <td>Male</td> </tr> <tr> <td>Full-time regular</td> <td>3,066</td> <td>7,495</td> </tr> <tr> <td>Part-time regular</td> <td>12</td> <td>6</td> </tr> </tbody> </table> | Permanent and Temporary | Female | Male | Regular | 2,938 | 7,281 | Temporary | 140 | 220 | Full-time and part- time by gender | Female | Male | Full-time regular | 3,066 | 7,495 | Part-time regular | 12 | 6 |
| Permanent and Temporary | Female | Male | | | | | | | | | | | | | | | | | | |
| Regular | 2,938 | 7,281 | | | | | | | | | | | | | | | | | | |
| Temporary | 140 | 220 | | | | | | | | | | | | | | | | | | |
| Full-time and part- time by gender | Female | Male | | | | | | | | | | | | | | | | | | |
| Full-time regular | 3,066 | 7,495 | | | | | | | | | | | | | | | | | | |
| Part-time regular | 12 | 6 | | | | | | | | | | | | | | | | | | |
| GRI 2-8 | Workers who are not employees | Information unavailable - this data is not readily available and is not tracked today | | | | | | | | | | | | | | | | | | |
| GRI 2-9 | Governance structure and composition | <p>The DTE Energy governance structure consists of a board of directors and committees of the board of directors. The full Board of Directors, along with Organization and Compensation and Public Policy and Responsibility Committees are responsible for decision-making and oversight of the management organization's impacts on the economy, environment, and people.</p> <p>Information on DTE Energy's governance structure, committees, bylaws, and other governance resources is located on the Corporate Governance page of DTE Energy's public website and in the 2023 Proxy Statement, beginning on page 8.</p> | | | | | | | | | | | | | | | | | | |
| GRI 2-10 | Nomination and selection of the highest governance body | Details can be found in DTE Energy's 2023 Proxy Statement under "Election of Directors and Vacancies" on page 16. | | | | | | | | | | | | | | | | | | |
| GRI 2-11 | Chair of the highest governance body | Details can be found in DTE Energy's 2023 Proxy Statement under "Election on the Chairman and CEO; Lead Independent Director" on page 18. | | | | | | | | | | | | | | | | | | |
| GRI 2-12 | Role of the highest governance body in overseeing the management of impacts | Details can be found in DTE Energy's 2023 Proxy Statement under " Environmental, Social and Governance ("ESG") Commitment ," starting on page 3, " Board of Directors Risk Oversight Functions " on page 22, " Corporate Governance Committee " on page 21, " Public Policy and Responsibility Committee " on page 22, and 2021 Sustainability Priority Assessment | | | | | | | | | | | | | | | | | | |
| GRI 2-13 | Delegation of responsibility for managing impacts | Details on the delegation of responsibility for managing impacts can be found in the 2023 Proxy Statement under " Board Of Directors Risk Oversight Functions " on page 22, and Board Committee Descriptions , beginning on page 21. | | | | | | | | | | | | | | | | | | |
| GRI 2-14 | Role of the highest governance body in sustainability reporting | Details can be found in DTE Energy's 2023 Proxy Statement under " Public Policy and Responsibility Committee " on page 22 | | | | | | | | | | | | | | | | | | |
| GRI 2-15 | Conflicts of interest | Details can be found on DTE Energy's Corporate Governance page , under "Code of Ethics." | | | | | | | | | | | | | | | | | | |
| GRI 2-16 | Communication of critical concerns | Details can be found in DTE Energy's 2023 Proxy Statement under " Communications with the Board " on page 19 | | | | | | | | | | | | | | | | | | |
| GRI 2-17 | Collective knowledge of the highest governance body | Details can be found in DTE Energy's 2022 Proxy Statement under " Election of Directors " on page 8. Also, refer to the Board Missions and Responsibilities on the DTE Energy Governance website . | | | | | | | | | | | | | | | | | | |

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | |
|---------------------------------------|--|---|-------------|--------------|---------|-------------|---------------------------------------|-----|-----|----------|-----------------------------------|---|---|----|
| GRI 2-18 | Evaluation of the performance of the highest governance body | Details can be found in the DTE Energy 2023 Proxy Statement under " Assessment of Board and Committee Performance " on page 17. | | | | | | | | | | | | |
| GRI 2-19 | Remuneration policies | Details can be found in the DTE Energy 2023 Proxy Statement. For Board see " Board of Directors Compensation " on page 23 and for Executives see " Executive Compensation " on page 36 | | | | | | | | | | | | |
| GRI 2-20 | Process to determine remuneration | Details can be found in the DTE Energy 2023 Proxy Statement. For Board see " Board of Directors Compensation " on page 23 and for Executives see " Executive Compensation " on page 36 and " Proposal No. 3-Advisory Proposal- Nonbinding Vote to Approve Executive Compensation " on page 34. At the 2023 annual meeting, shareholders supported an advisory vote on executive compensation with 96.2% of those voting in favor. See the full results in DTE Energy's Form 8-K filed on May 10, 2023. | | | | | | | | | | | | |
| GRI 2-21 | Annual total compensation ratio | Details can be found in DTE Energy's 2023 Proxy Statement under " CEO Pay Ratio " on page 62 Information on annual remuneration change is not tracked or reported. | | | | | | | | | | | | |
| GRI 2-22 | Statement on sustainable development strategy | Refer to letter from Jerry Norcia , CEO. | | | | | | | | | | | | |
| GRI 2-23 | Policy commitments | Learn more about DTE Energy's Aspiration and Priorities in the 2023 Proxy Statement , page 1. Learn more about DTE Energy's purpose, values and Code of Conduct in the DTE Energy Way Code of Conduct and our Corporate Governance webpage . | | | | | | | | | | | | |
| GRI 2-24 | Embedding policy commitments | Learn more in our DTE Code of Conduct , Supplier Code of Conduct , and from our Environmental Policies . | | | | | | | | | | | | |
| GRI 2-25 | Processes to remediate negative impacts | See DTE's Code of Conduct , DTE Proxy , and DTE 10k . | | | | | | | | | | | | |
| GRI 2-26 | Mechanisms for seeking advice and raising concerns | DTE Energy promotes an ethical culture among employees firmly grounded in company values. This emphasis on ethics and values starts with DTE Energy's board of directors, its executive leadership, and extends throughout the company. The DTE Energy Code of Conduct is available on DTE Energy's public website, along with the Board of Directors Mission and Guidelines , Board Codes and Policies , and Categorical Standards for Director Independence . An Officer Code of Business Conduct also exists for executive officers leading the company. Led by an independent Chief Ethics and Compliance Officer, DTE Energy's Ethics and Compliance Office promotes a culture of integrity, respect and compliance with laws and regulations. In addition to training and communicating with all employees to provide guidance and reinforcement of DTE's policies, ethics ambassadors are embedded within business groups companywide. These ambassadors are an in-department resource for employees seeking guidance. Learn more about DTE Energy's Board And Employee Ethics . | | | | | | | | | | | | |
| GRI 2-27 | Compliance with laws and regulations | <table border="1"> <thead> <tr> <th></th> <th>DTE Electric</th> <th>DTE Gas</th> <th>DTE Vantage</th> </tr> </thead> <tbody> <tr> <td>Total monetary value of fines in 2022</td> <td>\$0</td> <td>\$0</td> <td>\$12,161</td> </tr> <tr> <td>Total number of sanctions in 2022</td> <td>2</td> <td>1</td> <td>10</td> </tr> </tbody> </table> | | DTE Electric | DTE Gas | DTE Vantage | Total monetary value of fines in 2022 | \$0 | \$0 | \$12,161 | Total number of sanctions in 2022 | 2 | 1 | 10 |
| | DTE Electric | DTE Gas | DTE Vantage | | | | | | | | | | | |
| Total monetary value of fines in 2022 | \$0 | \$0 | \$12,161 | | | | | | | | | | | |
| Total number of sanctions in 2022 | 2 | 1 | 10 | | | | | | | | | | | |
| GRI 2-28 | Membership associations | DTE Energy is represented in various associations, councils and organizations. These memberships allow DTE Energy to communicate operational plans to peers and stakeholders, benchmark best practices for organizational management, and understand and influence legislative and policy agendas. The list of organizations to which DTE Energy belongs represents affiliations with leading utility-relevant industry and professional groups. DTE Energy representatives are board members in some of these organizations. Industry Associations and National Advocacy Organizations | | | | | | | | | | | | |
| GRI 2-29 | Approach to stakeholder engagement | DTE conducted a priority assessment in 2021 which informed our programming, priorities and engagement. We also consult with stakeholders on a regular basis to solicit their input and feedback. Some examples of this engagement include utilizing the Gallup employee engagement survey, implementing a Net Promoter Score measurement system to evaluate customer satisfaction, and annual community partners meetings. | | | | | | | | | | | | |

| Standard # | Standard Description | DTE Response to Standard |
|----------------|--|---|
| GRI 2-30 | Collective bargaining agreements | 4,872 (50%) excludes temps/interns Learn more about DTE Energy's Labor relations |
| GRI 3-1 | Process to determine material topics | <p>This report is built around DTE Energy's material aspects and topics that have a direct or indirect impact on the company's ability to create, preserve or erode economic, environmental and social value for DTE Energy, its stakeholders and society at large.</p> <p>DTE Energy completed its most recent Sustainability Priority (materiality) Assessment in 2021 to understand the priorities, and changing needs and expectations, of stakeholders and business within 25 sustainability priorities. Stakeholder feedback on priorities was identified through 10 stakeholder interviews and survey responses from 234 stakeholders. Internal feedback from 36 employees informed the business priorities.</p> <p>In determining the content for the 2022 report, DTE Energy applied the principles laid out in the Global Reporting Initiative (GRI) Standards. Issued by the Global Sustainability Standards Board, the GRI Standards are a voluntary global framework, intended for use by organizations to report about their impacts on the economy, the environment and society.</p> |
| GRI 3-2 | List of material topics | See the 2021 Sustainability Priority Assessment |
| GRI 3-3 | Management of material topics | <p>Learn more about DTE Energy's Aspiration and Priorities in the 2023 Proxy Statement, page 1.</p> <p>Learn more about DTE Energy's purpose, values and Code of Conduct in the DTE Energy Way Code of Conduct and our Corporate Governance webpage.</p> |
| GRI 200 | Economic | |
| GRI 201 | Economic Performance | |
| GRI 3-3 | Management of material topics | DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022 |
| GRI 201-1 | Direct economic value generated and distributed | Direct economic value generated (revenues), economic value distributed (operating costs, employee wages and benefits, payments to providers of capital, etc.) and economic value retained ("direct economic value generated" less "economic value distributed") can be found in DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022 . |
| GRI 201-2 | Financial implications and risks and opportunities due to climate change | <p>Learn more in DTE's IRP.</p> <p>Learn more in the 10-K section on Risk Factors, starting on page 19.</p> |
| GRI 201-3 | Defined benefit plan obligations and other retirement plans | Refer to DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022 , Note 20 to the Consolidated Financial Statements, "Retirement Benefits and Trusteed Assets". |
| GRI 203 | Indirect Economic Impacts | |
| GRI 3-3 | Management of material topics | <p>See Environment Section of this Report</p> <p>See DTE's IRP</p> |
| GRI 203-1 | Infrastructure investments and services supported | <p>Learn more in Environment Section of this report</p> <p>Learn more in DTE's IRP.</p> |

| Standard # | Standard Description | DTE Response to Standard |
|----------------|---|--|
| GRI 203-2 | Significant indirect economic impacts | <p>DTE Energy is committed to the communities it serves statewide and works to make all of Michigan a better place to live, work and play. DTE Energy's efforts to foster stronger and more prosperous communities includes:</p> <ul style="list-style-type: none"> • Corporate volunteerism, which provides direct support to local nonprofits and organizational capacity building through skills-based volunteerism. Learn more in the volunteerism section. • Intentionally supporting and developing Michigan-based and diverse businesses, particularly women and minority-owned businesses. Learn more in the Supply Chain Management section. • Creating workforce development programming, fostering skill-building and career pathways for local communities, that enhances access to good jobs for all - learn more in the Human Capital Management section. • Working in neighborhoods in and around DTE Energy's facilities, including Beacon Park, a former industrial site, and partnering with neighbors in the historic North End neighborhood of Detroit on community development efforts - learn more at DTEBeaconPark.com. <p>Giving through the DTE Foundation, which supports the most vulnerable populations. Learn more about Foundation giving at DTEFoundation.com.</p> <ul style="list-style-type: none"> • Offering programs and assistance for low-income customers, including distributing energy assistance, providing low-income energy efficiency options. <p>To learn more about what DTE Energy is doing to be a force for growth and prosperity, visit DTEImpact.com.</p> |
| GRI 204 | Procurement Practices | |
| GRI 3-3 | Management of material topics | See Supply Chain section of this report |
| GRI 204-1 | Proportion of spending on local suppliers | <p>(1) Dollar spend on Michigan suppliers: \$2,487,6421,576</p> <p>(2) Dollar spend on Michigan suppliers as a percentage of total procurement: 58.3%</p> |
| GRI 207 | Tax | |
| GRI 3-3 | Management of material topics | DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022 |
| GRI 207-1 | Approach to tax | <p>DTE Energy has a formal tax policy requiring compliance with all federal, state and local tax laws. The policy requires that all tax plans and strategies be approved and implemented only if they are aligned with the overall corporate tax strategy. The Vice President and Chief Tax Officer is responsible for overseeing compliance with this formal tax policy. For a description of DTE Energy's overall tax position, see DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022, Note 10 to the Consolidated Financial Statements, "Income Taxes".</p> |

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--|--|------------------|-------|------|------|------|------------|-------------|-----|------------|-------------------|-----|---|---------------|-----|---|-----------|---------|-----------|-----------|---------|-------|-----------------|---------|-----|
| GRI 300 | Environmental | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 301 | Materials | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See Environment Section of this Report | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 301-1 | Materials used by weight or volume | <table border="1"> <thead> <tr> <th>Materials/ Fuels</th> <th>Units</th> <th>2022</th> </tr> </thead> <tbody> <tr> <td>Coal</td> <td>Tons</td> <td>12,467,661</td> </tr> <tr> <td>Natural Gas</td> <td>Mcf</td> <td>71,124,869</td> </tr> <tr> <td>Blast furnace gas</td> <td>tcf</td> <td>0</td> </tr> <tr> <td>Coke oven gas</td> <td>tcf</td> <td>0</td> </tr> <tr> <td>No. 2 oil</td> <td>Gallons</td> <td>4,465,915</td> </tr> <tr> <td>No. 6 oil</td> <td>Gallons</td> <td>7,971</td> </tr> <tr> <td>High sulfur oil</td> <td>Gallons</td> <td>517</td> </tr> </tbody> </table> | Materials/ Fuels | Units | 2022 | Coal | Tons | 12,467,661 | Natural Gas | Mcf | 71,124,869 | Blast furnace gas | tcf | 0 | Coke oven gas | tcf | 0 | No. 2 oil | Gallons | 4,465,915 | No. 6 oil | Gallons | 7,971 | High sulfur oil | Gallons | 517 |
| Materials/ Fuels | Units | 2022 | | | | | | | | | | | | | | | | | | | | | | | | |
| Coal | Tons | 12,467,661 | | | | | | | | | | | | | | | | | | | | | | | | |
| Natural Gas | Mcf | 71,124,869 | | | | | | | | | | | | | | | | | | | | | | | | |
| Blast furnace gas | tcf | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Coke oven gas | tcf | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| No. 2 oil | Gallons | 4,465,915 | | | | | | | | | | | | | | | | | | | | | | | | |
| No. 6 oil | Gallons | 7,971 | | | | | | | | | | | | | | | | | | | | | | | | |
| High sulfur oil | Gallons | 517 | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 301-2 | Recycled input materials used | In 2022, St. Clair Power Plant fired 48,846 gallons No. 6 fuel (used oil). | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 302 | Energy | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See DTE GHG Summary Table See DTE's Energy's 2022 Energy Waste Reduction Report | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 302-1 | Energy consumption within the organization | 1.67 million MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 302-2 | Energy consumption outside of the organization | DTE Energy does not measure energy consumption outside of the organization. DTE's relevant Scope 3 emissions associated with value chain emissions are provided in the Greenhouse Gas Summary Table . | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 302-4 | Reduction of energy consumption | <p>DTE Energy has committed to reducing its utilization of energy at company headquarters, administrative offices, and service centers by 30% by year-end 2022 from the baseline year of 2017. The annual savings from energy efficiency projects in 2022 was approximately 2,570 MWh which translates to approximately 1,821 metric tons of CO2 savings, bringing the total for period 2018-2022 to a reduction of 21,302 MWh and 15,097 metric tons of carbon reduced or avoided. This reduction in greenhouse gas emissions is equivalent to switching 572,177 incandescent bulbs to LED or removing 3,359 cars from the road for a year (source: epa.gov). Between 2018 and 2022, DTE reduced overall energy usage (electric, steam, and natural gas) by 30%.</p> <p>DTE Energy utilizes industry standards and methodologies from various organizations such as ASHRAE (The American Society of Heating, Refrigerating and Air-Conditioning Engineers, a global professional association seeking to advance heating, ventilation, air conditioning and refrigeration systems design and construction) and IESNA (Illuminating Engineering Society of North America, a recognized technical and educational authority on illumination) to develop baseline consumption and calculate energy savings. Measurement and verification are also implemented via actual metered consumption.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 302-5 | Reductions in energy requirements of products and services | Refer to DTE Energy's 2022 Energy Waste Reduction Report . | | | | | | | | | | | | | | | | | | | | | | | | |

| Standard # | Standard Description | DTE Response to Standard |
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| GRI 303 | Water and Effluents | |
| GRI 3-3 | Management of material topics | See DTE's 2023 CDP Water Security DTE Energy strives to eliminate the unnecessary use of water in its facilities and to improve the quality of water discharges. Water stewardship starts with operating facilities and equipment in a manner that complies with or exceeds governmental standards and protects employees, customers, and surrounding communities. DTE employs practical land-management and conservation techniques to protect and conserve water resources at facilities and properties. DTE Electric's goal is to reduce water withdrawal at our electric and nuclear generating facilities by 40% in 2023, and 90% by 2040. Since 2005, DTE has reduced surface water withdrawals for power generation by 30% by retiring coal-fired power plants (e.g., Connors Creek, Harbor Beach and River Rouge Power Plants) that utilize water for cooling, which accomplishes 74% of the 2023 target. DTE projects that surface water withdrawals will continue to decrease in the future as more water efficient systems are installed (e.g., Blue Water Energy Center) and coal-fired power plants are retired. These water goals are aligned with the company's goals to reduce carbon emissions from electric generating facilities 32% from a 2005 baseline by 2023, 50% by 2030 and 80% by 2040. These numbers represent current projections and are subject to change in the future. See DTE's 2023 CDP Water Security, CDP W1 See DTE's Water Policy |
| GRI 303-1 | Interactions with water as a shared resource | See DTE's 2023 CDP Water Security CDP W1 CDP W3 CDP W5 CDP W8 |
| GRI 303-2 | Management of water discharge-related impacts | See DTE's 2023 CDP Water Security, CDP W1 |
| GRI 303-3 | Water withdrawal | See DTE Energy's EEI Section 8 See DTE's 2023 CDP Water Security, CDP W5.1 |
| GRI 303-4 | Water discharge | See DTE Energy's EEI Section 8 See DTE's 2023 CDP Water Security, CDP W5.1 |
| GRI 303-5 | Water consumption | See DTE Energy's EEI Section 8 See DTE's 2023 CDP Water Security, CDP W5.1 |
| GRI 304 | Biodiversity | |
| GRI 3-3 | Management of material topics | See Biodiversity section of this report |
| GRI 304-1 | Operations sights owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | The Trenton Channel Power Plant, located in Trenton, Mich., and the Enrico Fermi 2 Nuclear Generating Station, located in Newport, Mich., are both adjacent to the U.S. Fish and Wildlife Service (USFWS) International Wildlife Refuge. DTE Energy is part of a cooperative management agreement with the Refuge for a total of 656 acres. This property is owned by the DTE Energy and managed by USFWS. Part of the refuge includes areas of high biodiversity including important coastal wetlands and forested habitat. |

| Standard # | Standard Description | DTE Response to Standard |
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| GRI 304-2 | Significant impacts of activities, products, and services on biodiversity | <p>DTE Energy performs due diligence evaluations on real estate acquisitions or before major construction projects begin on existing properties owned and/ or maintained by DTE Energy. These due diligence evaluations include reviews of potential impacts to threatened and endangered species and other protected natural features, as applicable. If threatened and endangered species or other regulated features are detected at a site, DTE Energy conducts mitigation activities to avoid and or minimize the impacts in accordance with state or federal law.</p> <p>Activities that positively impact biodiversity, such as installation of pollinator gardens, native prairie plantings, birdhouses, or bat houses are captured in reports that are submitted to the Wildlife Habitat Council (WHC), a nonprofit organization that helps companies manage their property for the benefit of wildlife.</p> <p>See Wildlife Habitat Council.</p> |
| GRI 304-3 | Habitat protected or restored | <p>DTE Energy takes care of the land, water and living creatures on its properties and beyond. Among the largest landowners in Michigan, DTE Energy voluntarily maintains 8,000 acres of land in its natural state, thereby providing habitat for hundreds of species of birds, mammals, fish and insects. The company also reclaims previously disturbed land to create and manage habitat featuring native Michigan plants, such as gardens that benefit the monarch butterfly and other pollinators. The company also manages about 150 acres to support biodiversity required for mitigation.</p> <p>DTE Energy properties are home to hundreds of species of wildlife, some of which are endangered or threatened. DTE Energy facilities are often located on properties with abundant opportunities for wildlife and DTE Energy is helping to attract and increase wildlife populations at these sites. To this end, DTE Energy has 30 sites certified under the Wildlife Habitat Council (WHC), a nonprofit organization that helps companies manage their property for the benefit of wildlife.</p> <p>See Wildlife Habitat Council.</p> |
| GRI 304-4 | IUCN Red List species and national conservation list species with habitat in areas affected by operations | <p>There are currently four federally listed species that could potentially be impacted by DTE Energy's operations: Indiana bat, northern long-eared bat, eastern massasauga rattle snake, and Karner blue butterfly. DTE has a long history of environmental stewardship, and avoids or minimizes potential impacts to sensitive species and their habitat to the extent practicable.</p> |
| GRI 305 Emissions | | |
| GRI 3-3 | Management of material topics | <p>See DTE GHG Summary Table, Climate Goals, and EEI/AGA Section of this report</p> <p>Visit DTECleanEnergy.com</p> <p>For more information on the journey to Net Zero, visit DTECleanEnergy.com and DTE Energy's EEI/AGA template</p> |
| GRI 305-1 | Direct (Scope 1) GHG emissions | <p>For a breakdown of DTE Electric's direct GHG emissions refer to the DTE Energy's annual EEI/AGA ESG Template and the Greenhouse Gas Emissions Summary</p> |
| GRI 305-2 | Energy indirect (Scope 2) GHG emissions | <p>Refer to the Greenhouse Gas Emissions Summary</p> |
| GRI 305-3 | Other indirect (Scope 3) GHG emissions | <p>Refer to the Greenhouse Gas Emissions Summary</p> |
| GRI 305-4 | GHG emissions intensity | <p>Refer to DTE Energy's DTE Energy's EEI/ AGA template</p> |
| GRI 305-5 | Reduction of GHG emissions | <p>Refer to DTE Energy's EEI/ AGA template</p> <p>DTE Energy's Climate goals.</p> <p>Refer to Greenhouse Gas Emissions Summary</p> <p>For more information on the journey to Net Zero, visit DTECleanEnergy.com.</p> |
| GRI 305-6 | Emissions of ozone-depleting substances (ODS) | <p>Zero, DTE does not import, export or produce ODS.</p> |

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| GRI 305-7 | Nitrogen oxides (Nox), sulfur oxides (SOx), and other significant air emissions | a) So ₂ - 86.4% b) Nox - 79.4% c) HG - 92.1% d) PM - 84.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 306 | Waste | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See Environment Section of this report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 306-1 | Waste generation and significant waste-related impacts | Refer to Reducing Waste section of this report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 306-2 | Management of significant waste-related impacts | Refer to Reducing Waste section of this report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 306-3 | Waste generated | <table border="1"> <thead> <tr> <th>Hazardous Waste</th> <th>Tons</th> <th>Non-Hazardous Wastes (recycled)</th> <th>Tons</th> </tr> </thead> <tbody> <tr> <td>Recycling</td> <td>0</td> <td>Gypsum</td> <td>473,143</td> </tr> <tr> <td>Recovery</td> <td>0</td> <td>Fly and bottom ash</td> <td>576,189</td> </tr> <tr> <td>Fuel blending</td> <td>0.22</td> <td>Copper</td> <td>904.2</td> </tr> <tr> <td>Incineration</td> <td>0.23</td> <td>Lead</td> <td>587.6</td> </tr> <tr> <td>Landfill</td> <td>2.52</td> <td>Aluminum</td> <td>227.6</td> </tr> <tr> <td>Uncategorized</td> <td>56.37</td> <td>Steel/ ferrous- electric operations</td> <td>2,137.90</td> </tr> <tr> <td>TOTAL</td> <td>59.34</td> <td>Steel/ ferrous- gas operations</td> <td>494.9</td> </tr> <tr> <td></td> <td></td> <td>Non-ferrous/ wire bundles</td> <td>160.3</td> </tr> <tr> <td></td> <td></td> <td>Non-ferrous/ (e.g. transformers)</td> <td>2,001.40</td> </tr> <tr> <td></td> <td></td> <td>Miscellaneous materials</td> <td>1,503.70</td> </tr> <tr> <td></td> <td></td> <td>Meters- electric</td> <td>42</td> </tr> <tr> <td></td> <td></td> <td>Meters- gas</td> <td>212.4</td> </tr> <tr> <td></td> <td></td> <td>Outage materials (e.g. poles, wires, equipment from storms)</td> <td>1,576.70</td> </tr> <tr> <td></td> <td></td> <td>Plastic (HDPE)</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>Scrap electronics</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>Transformer oil</td> <td>72.1</td> </tr> <tr> <td></td> <td></td> <td>Cardboard</td> <td>65.7</td> </tr> <tr> <td></td> <td></td> <td>Wood (e.g. poles, pallets)</td> <td>97</td> </tr> <tr> <td></td> <td></td> <td>Paper</td> <td>20</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Other Wastes</th> <th>Tons</th> </tr> </thead> <tbody> <tr> <td>Polychlorinated biphenyl (PCB)</td> <td>204.87</td> </tr> <tr> <td>Asbestos</td> <td>723.47</td> </tr> <tr> <td>Universal Waste</td> <td>44.44</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Other Waste Diversions</th> <th>Tons</th> </tr> </thead> <tbody> <tr> <td>Composting</td> <td>0</td> </tr> <tr> <td>Waste to energy (incineration)</td> <td>0</td> </tr> <tr> <td>Used oil</td> <td>62</td> </tr> </tbody> </table> | Hazardous Waste | Tons | Non-Hazardous Wastes (recycled) | Tons | Recycling | 0 | Gypsum | 473,143 | Recovery | 0 | Fly and bottom ash | 576,189 | Fuel blending | 0.22 | Copper | 904.2 | Incineration | 0.23 | Lead | 587.6 | Landfill | 2.52 | Aluminum | 227.6 | Uncategorized | 56.37 | Steel/ ferrous- electric operations | 2,137.90 | TOTAL | 59.34 | Steel/ ferrous- gas operations | 494.9 | | | Non-ferrous/ wire bundles | 160.3 | | | Non-ferrous/ (e.g. transformers) | 2,001.40 | | | Miscellaneous materials | 1,503.70 | | | Meters- electric | 42 | | | Meters- gas | 212.4 | | | Outage materials (e.g. poles, wires, equipment from storms) | 1,576.70 | | | Plastic (HDPE) | 0 | | | Scrap electronics | 0 | | | Transformer oil | 72.1 | | | Cardboard | 65.7 | | | Wood (e.g. poles, pallets) | 97 | | | Paper | 20 | Other Wastes | Tons | Polychlorinated biphenyl (PCB) | 204.87 | Asbestos | 723.47 | Universal Waste | 44.44 | Other Waste Diversions | Tons | Composting | 0 | Waste to energy (incineration) | 0 | Used oil | 62 |
| Hazardous Waste | Tons | Non-Hazardous Wastes (recycled) | Tons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Recycling | 0 | Gypsum | 473,143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Recovery | 0 | Fly and bottom ash | 576,189 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel blending | 0.22 | Copper | 904.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Incineration | 0.23 | Lead | 587.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Landfill | 2.52 | Aluminum | 227.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uncategorized | 56.37 | Steel/ ferrous- electric operations | 2,137.90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | 59.34 | Steel/ ferrous- gas operations | 494.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Non-ferrous/ wire bundles | 160.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Non-ferrous/ (e.g. transformers) | 2,001.40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Miscellaneous materials | 1,503.70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Meters- electric | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Meters- gas | 212.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Outage materials (e.g. poles, wires, equipment from storms) | 1,576.70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Plastic (HDPE) | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Scrap electronics | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Transformer oil | 72.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Cardboard | 65.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Wood (e.g. poles, pallets) | 97 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Paper | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Wastes | Tons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polychlorinated biphenyl (PCB) | 204.87 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asbestos | 723.47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Universal Waste | 44.44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Waste Diversions | Tons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Composting | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste to energy (incineration) | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Used oil | 62 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 306-4 | Waste diverted from disposal | Refer to the table above, in GRI 306-3 . | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|--|-----------------------------|---|--|--|--|--|-----------|---|--------------------------|------------------------|---|--|----------|-----|-------|-----|-------|-----|-------|-----|---------|-----|-------|----|-----------|--|----------------------------|------------------------|---|---|--------|-----|-------|-----|------|-----|-------|----|-----------|--|-------------------------------|-----------------------------|---|---|----------|-----|-------|-----|-------|-----|-------|----|---------|-----|-------|-----|-----------|---|----------------------------------|-----------------------------|---|--|--------|-----|-------|-----|------|-----|-------|-----|
| GRI 306-5 | Waste directed to disposal | Refer to the table above, in GRI 306-3 . | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 307 | Environmental Compliance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See DTE's Proxy Statement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 308 | Supplier Environmental Assessment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See DTE Supplier Resource Center | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 308-1 | New suppliers that were screened using environmental criteria | 5% Learn more about DTE's Supply chain management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 400 | Social | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 401 | Employment | Learn more about DTE's Human Capital Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See Human Capital Management section of this report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 401-1 | New employee hires and employee turnover | <table border="1"> <thead> <tr> <th>GRI Metric #</th> <th>Metric Description</th> <th colspan="4">2022 Hiring and Turnover Data*</th> </tr> </thead> <tbody> <tr> <td rowspan="4">GRI 401-1</td> <td rowspan="4">Total number and rate of new employee hires during the reporting period, by age group</td> <td>Age of New Hires*</td> <td>Number of Hires</td> <td>Headcount (total workers in age group)</td> <td>Percent of Total Workers in Age Group</td> </tr> <tr> <td>Under 30</td> <td>347</td> <td>1,142</td> <td>30%</td> </tr> <tr> <td>30-50</td> <td>571</td> <td>5,608</td> <td>10%</td> </tr> <tr> <td>Over 50</td> <td>125</td> <td>3,466</td> <td>4%</td> </tr> <tr> <td rowspan="3">GRI 401-1</td> <td rowspan="3">Total number and rate of new employee hires during the reporting period, by gender</td> <td>Gender of New Hires</td> <td>Number of Hires</td> <td>Headcount (total workers in group)</td> <td>Percent of Total Workers in Group, by Gender</td> </tr> <tr> <td>Female</td> <td>476</td> <td>3,077</td> <td>15%</td> </tr> <tr> <td>Male</td> <td>565</td> <td>7,496</td> <td>8%</td> </tr> <tr> <td rowspan="4">GRI 401-1</td> <td rowspan="4">Total number and rate of employee turnover during the reporting period, by age group</td> <td>Employee Turnover: Age</td> <td>Number of Departures</td> <td>Headcount (total workers in age group)</td> <td>Percent of Departures by Age Group (using beginning of 2022 headcount)</td> </tr> <tr> <td>Under 30</td> <td>164</td> <td>1,142</td> <td>14%</td> </tr> <tr> <td>30-50</td> <td>377</td> <td>5,608</td> <td>7%</td> </tr> <tr> <td>Over 50</td> <td>633</td> <td>3,466</td> <td>18%</td> </tr> <tr> <td rowspan="3">GRI 401-1</td> <td rowspan="3">Total number and rate of employee turnover during the reporting period, by gender</td> <td>Employee Turnover: Gender</td> <td>Number of Departures</td> <td>Headcount (total workers in group)</td> <td>Percent of Departures in Group, by Gender (using beginning of 2022 headcount)</td> </tr> <tr> <td>Female</td> <td>447</td> <td>3,077</td> <td>15%</td> </tr> <tr> <td>Male</td> <td>727</td> <td>7,496</td> <td>10%</td> </tr> </tbody> </table> | GRI Metric # | Metric Description | 2022 Hiring and Turnover Data* | | | | GRI 401-1 | Total number and rate of new employee hires during the reporting period, by age group | Age of New Hires* | Number of Hires | Headcount (total workers in age group) | Percent of Total Workers in Age Group | Under 30 | 347 | 1,142 | 30% | 30-50 | 571 | 5,608 | 10% | Over 50 | 125 | 3,466 | 4% | GRI 401-1 | Total number and rate of new employee hires during the reporting period, by gender | Gender of New Hires | Number of Hires | Headcount (total workers in group) | Percent of Total Workers in Group, by Gender | Female | 476 | 3,077 | 15% | Male | 565 | 7,496 | 8% | GRI 401-1 | Total number and rate of employee turnover during the reporting period, by age group | Employee Turnover: Age | Number of Departures | Headcount (total workers in age group) | Percent of Departures by Age Group (using beginning of 2022 headcount) | Under 30 | 164 | 1,142 | 14% | 30-50 | 377 | 5,608 | 7% | Over 50 | 633 | 3,466 | 18% | GRI 401-1 | Total number and rate of employee turnover during the reporting period, by gender | Employee Turnover: Gender | Number of Departures | Headcount (total workers in group) | Percent of Departures in Group, by Gender (using beginning of 2022 headcount) | Female | 447 | 3,077 | 15% | Male | 727 | 7,496 | 10% |
| GRI Metric # | Metric Description | 2022 Hiring and Turnover Data* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 401-1 | Total number and rate of new employee hires during the reporting period, by age group | Age of New Hires* | Number of Hires | Headcount (total workers in age group) | Percent of Total Workers in Age Group | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Under 30 | 347 | 1,142 | 30% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 30-50 | 571 | 5,608 | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Over 50 | 125 | 3,466 | 4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 401-1 | Total number and rate of new employee hires during the reporting period, by gender | Gender of New Hires | Number of Hires | Headcount (total workers in group) | Percent of Total Workers in Group, by Gender | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Female | 476 | 3,077 | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Male | 565 | 7,496 | 8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 401-1 | Total number and rate of employee turnover during the reporting period, by age group | Employee Turnover: Age | Number of Departures | Headcount (total workers in age group) | Percent of Departures by Age Group (using beginning of 2022 headcount) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Under 30 | 164 | 1,142 | 14% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 30-50 | 377 | 5,608 | 7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Over 50 | 633 | 3,466 | 18% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 401-1 | Total number and rate of employee turnover during the reporting period, by gender | Employee Turnover: Gender | Number of Departures | Headcount (total workers in group) | Percent of Departures in Group, by Gender (using beginning of 2022 headcount) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Female | 447 | 3,077 | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Male | 727 | 7,496 | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*Includes affiliates / Non-Regulated; does not include students/ NonEEs

*Excludes temporary employees and students

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | | | | |
|--|---|---|--|--------|------|--|----|-----|--|----|-----|--|----|-----|--|-----|-----|
| GRI 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | DTE takes great pride in offering employees and their family members equitable and comprehensive benefits, including a variety of medical plans, parental leave and 401(k), among others. For additional benefits for full-time employees, please refer to the Benefits page . For additional health and wellness benefits for all employees, please see our 2022 Culture of Health & Wellbeing Annual Report . | | | | | | | | | | | | | | | |
| GRI 401-3 | Parental leave | <div style="background-color: #0070C0; color: white; padding: 5px;">Parental Leave</div> <p>Total number of employees that were entitled to parental leave</p> <p style="text-align: right;">The total number eligible is 187. Based on those that reported a birth and requested leave.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Female</th> <th style="text-align: center;">Male</th> </tr> </thead> <tbody> <tr> <td>Total number of employees that took parental leave</td> <td style="text-align: center;">80</td> <td style="text-align: center;">107</td> </tr> <tr> <td>Total number of employees that returned to work in the reporting period after parental leave ended</td> <td style="text-align: center;">79</td> <td style="text-align: center;">103</td> </tr> <tr> <td>Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work</td> <td style="text-align: center;">77</td> <td style="text-align: center;">101</td> </tr> <tr> <td>Return to work and retention rates of employees that took parental leave</td> <td style="text-align: center;">96%</td> <td style="text-align: center;">94%</td> </tr> </tbody> </table> | | Female | Male | Total number of employees that took parental leave | 80 | 107 | Total number of employees that returned to work in the reporting period after parental leave ended | 79 | 103 | Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work | 77 | 101 | Return to work and retention rates of employees that took parental leave | 96% | 94% |
| | Female | Male | | | | | | | | | | | | | | | |
| Total number of employees that took parental leave | 80 | 107 | | | | | | | | | | | | | | | |
| Total number of employees that returned to work in the reporting period after parental leave ended | 79 | 103 | | | | | | | | | | | | | | | |
| Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work | 77 | 101 | | | | | | | | | | | | | | | |
| Return to work and retention rates of employees that took parental leave | 96% | 94% | | | | | | | | | | | | | | | |
| GRI 402 | Labor/ Management Relations | Learn more about DTE's section on Labor relations | | | | | | | | | | | | | | | |
| GRI 403 | Occupational Health and Safety | Learn more about DTE's Safety | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See Safety section of this report 2022 Culture of Health & Wellbeing Report | | | | | | | | | | | | | | | |
| GRI 403-1 | Occupational health and safety management system | Learn more about DTE's Safety | | | | | | | | | | | | | | | |
| GRI 403-2 | Hazard identification, risk assessment, and incident investigation | Learn more about DTE's Safety | | | | | | | | | | | | | | | |
| GRI 403-3 | Occupational health services | Learn more about DTE's Safety and promotion of worker health in the 2022 Culture of Health & Wellbeing Report . | | | | | | | | | | | | | | | |
| GRI 403-4 | Worker participation, consultation, and communication on occupational health and safety | Learn more about DTE's Safety and promotion of worker health in the 2022 Culture of Health & Wellbeing Report . | | | | | | | | | | | | | | | |
| GRI 403-5 | Worker training on occupational health and safety | Learn more about DTE's Safety and promotion of worker health in the 2022 Culture of Health & Wellbeing Report . | | | | | | | | | | | | | | | |
| GRI 403-6 | Promotion of worker health | Learn more about DTE's Safety and promotion of worker health in the 2022 Culture of Health & Wellbeing Report . | | | | | | | | | | | | | | | |
| GRI 403-7 | Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | Learn more about DTE's Safety and promotion of worker health in the 2022 Culture of Health & Wellbeing Report . | | | | | | | | | | | | | | | |
| GRI 403-8 | Workers covered by an occupational health and safety management system | Learn more about DTE's Safety All our workers are covered by DTE's occupational health and safety management system. | | | | | | | | | | | | | | | |

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|------------------|-----------------|-----------------------------------|---------|--|------|------------|---|-------------|----------------|-------|---|-----------------------------|---|---------------|---|--------------------|---|---------------------------------------|---|-------------------|---|------------|---|---------------------|---|--------------|----|------------------|---|--------------------|----|
| GRI 403-9 | Work-related injuries | <table border="1"> <thead> <tr> <th colspan="2">2022</th> </tr> </thead> <tbody> <tr> <td>OSHA recordable incident</td> <td>0.55</td> </tr> <tr> <td>DART</td> <td>0.39</td> </tr> <tr> <td>Fatalities</td> <td>0</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Injury Type</th> <th>2022 Incidents</th> </tr> </thead> <tbody> <tr> <td>Burns</td> <td>0</td> </tr> <tr> <td>Caught in, crushed, pinched</td> <td>5</td> </tr> <tr> <td>Cut by object</td> <td>0</td> </tr> <tr> <td>Exposure-arc flash</td> <td>1</td> </tr> <tr> <td>Exposure- caustics, noxious, or toxic</td> <td>0</td> </tr> <tr> <td>Exposure- insects</td> <td>0</td> </tr> <tr> <td>Eye injury</td> <td>0</td> </tr> <tr> <td>Fall from elevation</td> <td>1</td> </tr> <tr> <td>Overexertion</td> <td>11</td> </tr> <tr> <td>Slip, trip, fall</td> <td>4</td> </tr> <tr> <td>Struck by/ against</td> <td>14</td> </tr> </tbody> </table> | 2022 | | OSHA recordable incident | 0.55 | DART | 0.39 | Fatalities | 0 | Injury Type | 2022 Incidents | Burns | 0 | Caught in, crushed, pinched | 5 | Cut by object | 0 | Exposure-arc flash | 1 | Exposure- caustics, noxious, or toxic | 0 | Exposure- insects | 0 | Eye injury | 0 | Fall from elevation | 1 | Overexertion | 11 | Slip, trip, fall | 4 | Struck by/ against | 14 |
| 2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OSHA recordable incident | 0.55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DART | 0.39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatalities | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Injury Type | 2022 Incidents | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Burns | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Caught in, crushed, pinched | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cut by object | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exposure-arc flash | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exposure- caustics, noxious, or toxic | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exposure- insects | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye injury | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fall from elevation | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overexertion | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Slip, trip, fall | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Struck by/ against | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 404 | Training and Education | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See Human Capital Management section of this report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 404-1 | Average hours of training per year per employee | <table border="1"> <thead> <tr> <th>Type of Training</th> <th>Number of Hours</th> </tr> </thead> <tbody> <tr> <td>Technical and compliance training</td> <td>458,767</td> </tr> <tr> <td>Average number of hours per employee (including full time and contractors)</td> <td>26</td> </tr> </tbody> </table> <p>Average hours are based on 17,446 employees, including contractors, co-ops, and those who retired in 2022.</p> | Type of Training | Number of Hours | Technical and compliance training | 458,767 | Average number of hours per employee (including full time and contractors) | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of Training | Number of Hours | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical and compliance training | 458,767 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average number of hours per employee (including full time and contractors) | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 404-2 | Programs for upgrading employee skills and transition assistance programs | For more information on developing talent see DTE's human capital management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 404-3 | Percentage of employees receiving regulate performance reviews and career development reviews | 100% of non-represented, regular employees have an opportunity to participate in goal setting at the beginning of the year, mid-year evaluations to review progress toward performance and development goals, and year-end reviews that focus on performance and development. Depending upon when an employee is hired into the company, the full, annual review process may be pushed to the next review period. "Regular" employees do not include temporary personnel, contractors, interns, students or seasonal staff. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 405 | Diversity and Equal Opportunity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI 3-3 | Management of material topics | See DTE's DE&I Page EEI Section of this report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Standard # | Standard Description | DTE Response to Standard | | | | | |
|----------------|---|---|------|--------|-----------------------|-------------------|----------------------|
| GRI 405-1 | Diversity of governance bodies and employees | | Male | Female | Under 30 years of age | 30-50 years of ag | Over 50 years of age |
| | | DTE Energy Board | 80% | 20% | 0% | 0% | 100% |
| | | Executives and senior leaders | 72% | 28% | 0% | 24% | 76% |
| GRI 405-2 | Ratio of basic salary and remuneration of women to men | DTE Energy is committed to offering compensation that is competitive, market driven and internally equitable. To ensure this, DTE Energy conducts an annual review of compensation practices as part of its affirmative action programs. Approximately half of DTE Energy's employees are represented by unions through which pay is uniformly determined through contracts regardless of an employee's gender. For non-represented employees, DTE Energy's human resources professionals establish pay ranges for each job classification and work with hiring leaders to make competitive offers within the range to candidates based on objective factors like years of experience and strength of skills relevant to the job. | | | | | |
| | | Section 7 of EEI Report | | | | | |
| GRI 406 | Non-Discrimination | | | | | | |
| GRI 3-3 | Management of material topics | See DTE's Proxy Statement | | | | | |
| GRI 406-1 | Incidents of discrimination and corrective actions taken | DTE Energy takes all reports of discrimination, harassment, and retaliation seriously. All reported concerns are fully investigated, and appropriate action is taken in every situation where inappropriate behavior is substantiated. Refer to 2-26 for DTE's policy on ethics and compliance. | | | | | |
| GRI 407 | Freedom of Association and Collective Bargaining | Learn more about the company's commitment to employees in the Labor relations | | | | | |
| GRI 413 | Local Communities | | | | | | |
| GRI 3-3 | Management of material topics | See DTE's Impact website | | | | | |
| GRI 413-1 | Operations with local community engagement, impact assessment, and development programs | 100% of DTE Gas and DTE Electric operations perform local community engagement, impact assessment, and/ or development programs. Additional information can on DTE's Impact website . | | | | | |
| GRI 414 | Supplier Social Assessment | | | | | | |
| GRI 3-3 | Management of material topics | See DTE's Impact website | | | | | |
| GRI 414-1 | New suppliers that were screened using social criteria | Learn about supplier safety in the Safety Management and Supply Chain Management sections. | | | | | |
| GRI 415 | Public Policy | | | | | | |
| GRI 3-3 | Management of material topics | See DTE's Political Participation page | | | | | |
| GRI 415-1 | Political contributions | Learn more about DTE's political contribution in the Political Participation section and on the Political Participation page on DTE's Corporate Governance website. | | | | | |
| GRI 416 | Customer Health Safety | | | | | | |
| GRI 3-3 | Management of material topics | See Safety section of this report | | | | | |
| GRI 416-1 | Assessment of the health and safety impacts of product and service categories | 100% of DTE's gas and electric operations are continuously being monitored for health and safety improvements. Learn more about DTE's Safety Management | | | | | |
| GRI 418 | Customer Privacy | | | | | | |
| GRI 3-3 | Management of material topics | See Cybersecurity section of this report | | | | | |

| Standard # | Standard Description | DTE Response to Standard |
|------------|--|--|
| GRI 418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data | <p>DTE Energy's Information Technology (IT) and Ethics personnel hold an annual meeting with members of the Michigan Public Service Commission (MPSC) staff to provide a verbal report that addresses the company's cybersecurity and IT risk planning. In addition, DTE Energy communicates any exposures of customers' personally identifiable information, or PII, to MPSC staff, and any cyber-attacks to both MPSC staff and the Michigan Fusion Center, which is a collaboration between the Michigan State Police, FBI, Michigan Department of Health and Human Services, and other organizations. The timing of these communications, per the order, are to occur as soon as reasonable, practicable and prior to any public notification. In practice, DTE Energy has these communications with MPSC staff once DTE Energy is reasonably certain of the following:</p> <ul style="list-style-type: none"> -How the incident happened -How the incident was discovered. -What specific information was exposed or accessed. -How many customers were affected. -What is being done to remedy the situation for customers. -How DTE Energy will ensure that it doesn't occur again. |

| Standard # | Standard Description | |
|------------------------|--|--|
| Sector Specific | Electric Utilities Sector Supplement | |
| GRI EU1 | Installed capacity | Refer to DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022, Properties-page 9. |
| GRI EU2 | Net energy output | Refer to DTE Energy's DTE Energy's EEI/ AGA template |
| GRI EU3 | Number of residential, industrial, institutional and commercial customer accounts | <p>For electric customers, refer to EEI 4</p> <p>For gas customers, refer to AGA 1.1</p> |
| GRI EU4 | Length of above and underground transmission and distribution lines | Refer to DTE Energy's 10-K for the fiscal year ending Dec. 31, 2022, Properties-page 10. |
| GRI EU5 | Allocation of CO2e emissions allowances | DTE Electric operates entirely within the state of Michigan and is not covered by CO ₂ e emissions trading program. |
| GRI EU10 | Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime | <p>DTE Electric Company's planned capacity and projected electricity demand is discussed in the regulatory proceedings related to the company's Integrated Resource Plan (IRP) that was submitted to the Michigan Public Service Commission (MPSC) IRP_Executive_Summary.pdf (dtecleanenergy.com). A graphical summary of the pathways to meet future generations needs that were proposed in the 2021 IRP is provided on pages 8 and 9 of the IRP Summary document located here: IRP_Executive_Summary.pdf (dtecleanenergy.com). This summary describes planned generation additions, energy efficiency and demand response to meet projected load demand in the short-term (2019-2024), medium-term (2025-2030), long-term (2031-2040). DTE Electric continues to refine the company's generation planning strategy and is required to submit its next IRP in 2024.</p> <p>For most up to date IRP information see DTE's IRP settlement here</p> |

| Standard # | Standard Description | DTE Response to Standard | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|--|--------------------------|-----------------------|---------------|--------|---------------|--------|----------|-------|----------|--------|----------|--------|----------|--------|----------|--------|---------------------|----|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------------|--------|---------|--------|
| GRI EU11 | Average generation efficiency of thermal plants by energy source and by regulatory regime | <table border="1"> <thead> <tr> <th>Generator or Power Plant</th> <th>Heat Rate Net [BTUKW]</th> </tr> </thead> <tbody> <tr><td>Belle River 1</td><td>10,478</td></tr> <tr><td>Belle River 2</td><td>10,914</td></tr> <tr><td>Dearborn</td><td>8,549</td></tr> <tr><td>Monroe 1</td><td>10,223</td></tr> <tr><td>Monroe 2</td><td>10,182</td></tr> <tr><td>Monroe 3</td><td>10,272</td></tr> <tr><td>Monroe 4</td><td>10,243</td></tr> <tr><td>River Rogue Plant *</td><td>NA</td></tr> <tr><td>St. Clair 2</td><td>12,378</td></tr> <tr><td>St. Clair 3</td><td>13,149</td></tr> <tr><td>St. Clair 6</td><td>11,267</td></tr> <tr><td>St. Clair 7</td><td>10,584</td></tr> <tr><td>Trenton Channel 9</td><td>10,647</td></tr> <tr><td>Fermi 2</td><td>10,566</td></tr> </tbody> </table> | Generator or Power Plant | Heat Rate Net [BTUKW] | Belle River 1 | 10,478 | Belle River 2 | 10,914 | Dearborn | 8,549 | Monroe 1 | 10,223 | Monroe 2 | 10,182 | Monroe 3 | 10,272 | Monroe 4 | 10,243 | River Rogue Plant * | NA | St. Clair 2 | 12,378 | St. Clair 3 | 13,149 | St. Clair 6 | 11,267 | St. Clair 7 | 10,584 | Trenton Channel 9 | 10,647 | Fermi 2 | 10,566 |
| Generator or Power Plant | Heat Rate Net [BTUKW] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Belle River 1 | 10,478 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Belle River 2 | 10,914 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dearborn | 8,549 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monroe 1 | 10,223 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monroe 2 | 10,182 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monroe 3 | 10,272 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monroe 4 | 10,243 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| River Rogue Plant * | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Clair 2 | 12,378 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Clair 3 | 13,149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Clair 6 | 11,267 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Clair 7 | 10,584 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trenton Channel 9 | 10,647 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fermi 2 | 10,566 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI EU12 | Distribution line losses | A loss factor of 7.31% was approved by the Michigan Public Service Commission, on November 25th, 2022 (U-20836, T-6 920) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI EU13 | Biodiversity of offset habitats compared to the biodiversity of the affected areas | DTE Energy has been required by the Michigan Department of Environment, Great Lakes, and Energy, to offset impacts to habitats, specifically wetland impacts, due to construction activities. DTE's mitigation activities have included creation of wetland habitat as well as placing large DTE owned parcels in conversation easements. The mitigation wetlands require at least 5 years of monitoring and need to meet specific biodiversity targets (e.g. number of native wetland species). The largest of the mitigation wetland projects include the creation of more than a combined total 30 acres of wetland habitat and 40 acres of forested wetland (0.3 km ²) in conservation easements. Where temporary impacts are part of construction projects, DTE includes a diverse native seed mix to be used in order to restore habitat to its original state and in most instances exceeds the original habitat quality. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI EU15 | Percentage of employees eligible to retire in the next 5-10 years | Using Social Security requirements (which identify retirement age as between 65-67), about 22% will be at or above retirement age within 10 years; 11% within 5 years. (This does not take into consideration DTE specific retirement benefits/policy) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI EU28 | Power outage frequency | <p>The System Average Interruption Frequency Index (SAIFI) measures the average number of power outages that a customer experienced in a year.</p> <ul style="list-style-type: none"> -All-weather SAIFI: 1.25 -Excluding major event days: .98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRI EU29 | Average power outage duration | <p>The System Average Interruption Duration Index (SAIDI) measures the average number of minutes a customer was without power in a year</p> <p>SAIDI: 584 minutes</p> <p>The Customer Average Interruption Duration Index (CAIDI) measures the average number of minutes a customer experiences interruption.</p> <p>CAIDI (Including major events): 467 minutes</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Non-priority issues

Not identified as a priority (material) issue for DTE Energy

DTE Energy is not reporting on the following topics as they are not identified as priority (material) sustainability issues for DTE.

| | |
|------------|---|
| GRI 201-4 | Financial assistance received from government |
| GRI 202-2 | Ratios of standard entry level wage by gender compared to local minimum wage |
| GRI 205-1 | Proportion of senior management hired from the local community |
| GRI 205-2 | Operations assessed for risks related to corruption |
| GRI 205-3 | Confirmed incidents of corruption and action taken |
| GRI 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices |
| GRI 207-2 | Tax governance, control, and risk management |
| GRI 207-3 | Stakeholder engagement and management of concerns related to tax |
| GRI 207-4 | Country-by-country reporting |
| GRI 301-3 | Reclaimed products and their packaging materials |
| GRI 302-3 | Energy intensity |
| GRI 305-6 | Emissions of ozone-depleting substances (ODS) |
| GRI 308-2 | Negative environmental impacts in the supply chain and actions taken |
| GRI 402-1 | Minimum notice periods regarding operational changes |
| GRI 403-10 | Work-related ill health |
| GRI 407-1 | Operations and suppliers in which the right to freedom association and collective bargaining may be at risk |

| | |
|-----------|---|
| GRI 408-1 | Operations and suppliers at significant risk for incidents of child labor |
| GRI 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labor |
| GRI 410-1 | Security personnel trained in human rights policies or procedures |
| GRI 411-1 | Incidents of violations involving rights of indigenous peoples |
| GRI 412-1 | Operations that have been subject to human rights reviews or impact assessments |
| GRI 412-2 | Employee training on human rights policies or procedures |
| GRI 412-3 | Significant investment agreements and contracts that include human right clauses or that underwent human rights screening |
| GRI 414-2 | Negative social impacts in the supply chain and actions taken |
| GRI 417-1 | Requirements for product and service information and labeling |
| GRI 417-2 | Incidents of non-compliance concerning product and service information and labeling |
| GRI 417-3 | Incidents of non-compliance concerning marketing communications |
| GRI 419-1 | Non-compliance with laws and regulations in the social and economic area |

DTE Energy does not report this information at this time

| | |
|-----------|---|
| GRI 413-2 | Operations with significant actual and potential negative impacts on local communities |
| GRI 416-2 | Incidents of non-compliance concerning the health and safety impacts of products and services |

Industry Associations and National Advocacy Organizations

| Name of Organization | Stakeholder Group |
|---|----------------------|
| American Biogas Council | Industry Association |
| American Clean Power | Industry Association |
| American Gas Association | Industry Association |
| American Iron and Steel Institute | Industry Association |
| Ann Arbor Spark | Business Partner |
| Biomass Power Association | Industry Association |
| Business Leaders for Michigan | Business Partner |
| California Biomass Energy Alliance | Industry Association |
| Carbon Capture Coalition | Industry Association |
| Center on Executive Compensation | Business Partner |
| Chamber of Commerce of the US | Chamber of Commerce |
| Citizens Research Council | Business Partner |
| Coalition to Keep Michigan Warm | Nonprofit |
| Coalition for Renewable Natural Gas | Industry Association |
| Detroit Regional Chamber | Chamber of Commerce |
| Edison Electric Institute | Industry Association |
| Energy Storage Association | Industry Association |
| Human Resources Policy Association | Business Partner |
| Interstate Natural Gas Association of America | Industry Association |
| Local Chambers- Over 65 across the state | Chamber of Commerce |
| Metro Detroit Visitors & Convention Bureau | Business Partner |

| Name of Organization | Stakeholder Group |
|---|----------------------|
| Metropolitan Affairs Coalition | Nonprofit |
| Michigan Association of Counties | Government |
| Michigan Association of Planning | Government |
| Michigan Chamber of Commerce | Chamber of Commerce |
| Michigan Economic Development Corporation | Econ Development |
| Michigan Electric and Gas Association | Industry Association |
| Michigan Manufacturers Association | Business Partner |
| Michigan Municipal Electric Association | Industry Association |
| Michigan Municipal League | Government |
| Michigan Retailers Association | Business Partner |
| Michigan Township Association | Government |
| National Association of Manufacturers | Business Partner |
| Nuclear Energy Institute | Industry Association |
| National Energy and Utility Affordability Coalition | Nonprofit |
| Northern Michigan Chamber Alliance | Chamber of Commerce |
| Nuclear Energy Institute | Industry Association |
| Nuclear Waste Strategy Coalition | Industry Association |
| Public Affairs Council | Business Partner |
| Small Business Association of Michigan | Business Partner |
| The Right Place | Nonprofit |
| West Michigan Policy Forum | Business Partner |

Wildlife Habitat Council Certified Sites

GRI Standard 304-3

| Wildlife Habitat Council Site | Location | Initial Certification | Certified Through | Certification Status |
|---|-----------------|-----------------------|-------------------|----------------------|
| Allen Road Service Center Complex | Melvindale | 2008 | 2021 | Certified |
| Alpena Service Center | Alpena | 2009 | 2021 | Certified |
| Ashley Mews | Ann Arbor | 2007 | 2021 | Silver |
| Belle River Mills Compressor Station | East China Twp. | 2008 | 2021 | Certified |
| Belle River Power Plant | East China Twp. | 1996 | 2021 | Silver |
| Big Rapids Service Station | Big Rapids | 2010 | 2021 | Certified |
| Cadillac Service Center | Cadillac | 2010 | 2021 | Certified |
| Citizen's Gas | Adrian | 2016 | 2022 | Certified |
| Detroit Headquarters Complex | Detroit | 2000 | 2002 | Silver |
| Escanaba Service Center | Escanaba | 2015 | 2021 | Certified |
| Fermi 2 Nuclear Power Plant | Newport | 2000 | 2021 | Certified |
| Gaylord Transmission & Storage Operations Service Station | Gaylord | 2012 | 2021 | Silver |
| Greenwood Energy Center | Kenockee | 2004 | 2021 | Gold |
| Huron Renewable Energy Center | Bad Axe | 2018 | 2022 | Certified |
| Kalkaska T&SO | Kalkaska | 2009 | 2022 | Silver |
| Kingsford Service Center | Kingsford | 2015 | 2022 | Certified |
| Ludington Service Center | Ludington | 2009 | 2021 | Silver |

| Wildlife Habitat Council Site | Location | Initial Certification | Certified Through | Certification Status |
|---|---------------|-----------------------|-------------------|----------------------|
| Lynch Road Service Center | Detroit | 2019 | 2021 | Silver |
| Michigan Avenue Service Center | Ypsilanti | 2008 | 2022 | Certified |
| Milford Compressor Station | Milford | 2009 | 2021 | Silver |
| Monroe Power Plant | Monroe | 1999 | 2021 | Gold |
| Mt. Pleasant Service Center | Mt. Pleasant | 2008 | 2021 | Silver |
| Muskegon Service Center | Muskegon | 2009 | 2023 | Silver |
| Newport Service Center | Monroe | 2016 | 2022 | Certified |
| Petoskey Service Center | Petoskey | 2015 | 2021 | Certified |
| River Rouge Power Plant | River Rouge | 2004 | 2021 | Gold |
| Tawas Service Center | Tawas | 2009 | 2021 | Certified |
| Traverse City Gas Operations | Traverse City | 2009 | 2021 | Certified |
| Trenton Channel Power Plant and Sibley Quarry | Trenton | 2002 | 2022 | Certified |
| W.C. Taggart Compressor Station | Six Lakes | 2003 | 2022 | Certified |
| Western Wayne Service Center | Belleville | 2005 | 2023 | Silver |
| W.C. Taggart Compressor Station | Six Lakes | 2003 | 2022 | Certified |
| Western Wayne Service Center | Belleville | 2005 | 2023 | Silver |

2022-2023 Sustainability Accounting Standards Board (SASB)

| Disclosures | SASB Code | Accounting Metric | 2022-2023 Response | |
|---|--------------|--|--|--|
| Greenhouse Gas Emissions & Energy Resource Planning | IF-EU-110a.1 | (1) Gross global Scope 1 emissions, percentage covered under, (2) emissions-limiting regulations and (3) emissions-reporting regulations | (1) Refer to Greenhouse Gas Emissions Summary (2) 0% - DTE Electric, which operates only in Michigan, is not subject to broad-based GHG emissions limiting regulations such as a mandatory GHG reduction requirement or a cap and trade system. (3) The majority of reported Scope 1 emissions from DTE Electric are subject to EPA's mandatory GHG reporting rule. Emissions from small sources (e.g. peaking units) that do not meet the 25,000 metric ton threshold for reporting and fleet vehicles are not subject to GHG reporting requirements. | |
| | | IF-EU-110a.2 | Greenhouse gas (GHG) emissions associated with power deliveries. | 27,833,104 |
| | | IF-EU-110a.3 | Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets and an analysis of performance against those targets. | The majority of reported Scope 1 emissions from DTE Electric are subject to EPA's mandatory GHG reporting rule. Emissions from small sources (e.g. peaking units) that do not meet the 25,000 metric ton threshold for reporting and fleet vehicles are not subject to GHG reporting requirements. |
| | | IF-EU-110a.4 | (1) Number of customers served in markets subject to renewable portfolio standards (RPS) and (2) percentage fulfillment of RPS target by market. | EEI - 4.1 , EEI - 4.2 , EEI - 4.3 |
| Air Quality | IF-EU-120a.1 | Air emissions from the following pollutants: (1) Nox (excluding N2O), | EEI 6.2.1 | |
| | | (2) SOx, | EEI 6.3.1 | |
| | | (3) particulate matter (PM10), | N/A | |
| | | (4) lead (Pb), and | N/A | |
| | | (5) mercury (Hg); percentage of each in or near areas of dense population | EEI 6.4.1 | |
| Water Management | IF-EU-140a.1 | (1) Total water withdrawn, | (1) 946,910 | |
| | | (2) total water consumed; percentage of each in regions with high or extremely high baseline water stress. | (2) 17,801 | |
| | IF-EU-140a.2 | Number of incidents of non-compliance associated with water quantity and/ or quality permits, standards, and regulations. | For 2022, 0 incidents of non-compliance associated with water permits and \$0 in fines for DTE Electric. | |
| | IF-EU-140a.3 | Description of water-management risks and discussion of strategies and practices to mitigate those risks. | See DTE's 2023 CDP Water Security, CDP W4 | |
| Coal Ash Management | IF-EU-150a.1 | Amount of combustion residuals (CCR) generated | 1,049,332 tons | |
| | | and percentage recycled. | 55.48% | |

| Disclosures | SASB Code | Accounting Metric | 2022-2023 Response |
|---------------------------------------|--------------|--|---|
| | IF-EU-150a.2 | Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment. | Coal Combustion Residual Rule Compliance Data And Information |
| Energy Affordability | IF-EU-240a.1 | Average retail electric rate for (USD/ kwh): (1) residential (2) commercial and (3) industrial customers. | (1) \$0.184 (2) \$0.122 (3) \$0.077 |
| | IF-EU-240a.2 | Typical monthly electric bill for residential customers for (USD/ month) (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month. | (1) \$92.53 (2) \$185.79 |
| | IF-EU-240a.3 | Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days (meter level). | 208,993 (meter level) Reconnect data not reported because restores are not directly correlated to disconnects for non-payment. |
| | IF-EU-240a.4 | Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory. | Refer to our Managing Affordability section in this report |
| Workforce Health and Safety | IF-EU-320a.1 | (1) Total recordable incident rate (TRIR), (2) fatality rate and (3) near miss frequency rate (NMFR) | EEI Report- 7.7.1 EEI Report- 7.7.4 EEI - Section 7 |
| End-Use Efficiency and Demand | IF-EU-420a.1 | Percentage of utility revenues from the rate structures that are (1) decoupled and (2) contain a lost revenue adjustment mechanism (LRAM) | We do not, by law, have such mechanisms at the electric company. |
| | IF-EU-420a.2 | Percentage of electric load served by smart grid technology. | EEI - Section 3 |
| | IF-EU-420a.3 | Customer electricity savings from efficiency measures by market. | 2022 Energy Efficiency Report |
| Nuclear Safety & Emergency Management | IF-EU-540a.1 | Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column. | Refer to our Fermi page and our Emergency Preparedness booklet |
| | IF-EU-540a.2 | Description of efforts to manage nuclear safety and emergency preparedness. | Refer to our Fermi page and our Emergency Preparedness booklet |
| Grid Resilience | IF-EU-550a.1 | Number of incidents of non-compliance with physical and/ or cybersecurity standards or regulations. | GRI 418-1 |
| | IF-EU-550a.2 | (1) System Average Interruption Duration Index (SAIDI) (2) System Average Interruption Frequency Index (SAIFI) and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days | GRI EU29 GRI EU28 GRI EU29 |

| Disclosures | SASB Code | Accounting Metric | 2022-2023 Response |
|-------------|-----------|-------------------|--------------------|
|-------------|-----------|-------------------|--------------------|

Activity metrics

| Topic | SASB Code | Accounting Metric | |
|-------|-------------|--|---|
| | IF-EU-000.A | Number of: (1) residential, (2) commercial and (3) industrial customers served. | Refer to EEI Section 4 |
| | IF-EU-000.B | Total electricity delivered to (MWh): (1) residential, (2) commercial, (3) industrial, (4) all other retail customers, and (5) wholesale customers. | DTE Energy's 10-K for fiscal year ending Dec. 31, 2022, page 33 |
| | IF-EU-000.C | Length of transmission and distribution lines (km). | DTE Energy's 10-K for fiscal year ending Dec. 31, 2022, page 10 |
| | IF-EU-000.D | Total electricity generated, percentage by major energy source, percentage in regulated markets. | EEI - section 2 |
| | IF-EU-000.E | Total wholesale electricity purchased (MWh). | 8,692,357 |

Activity metrics

| Topic | SASB Code | Accounting Metric | |
|--|--------------|---|--|
| Energy Affordability | IF-GU-240a.1 | Average retail gas rate for (USD. MMBtu): (1) residential, (2) commercial, (3) industrial customers and (4) transportation services only. | (1) \$8.75 (2) \$8.39 (3) N/A (4) N/A |
| | IF-GU-240a.2 | Typical monthly gas bill for residential customers for (USD/ month) (1) 50 MMBtu and (2) 100 MMBtu of gas delivered per year. | (1) \$49 per month (2) \$84 per month |
| | IF-GU-240a.3 | Number of residential customer gas disconnections for non-payment, percentage reconnected within 30 days (meter level). | 16,985 (Meter Level) Reconnect data not reported because restores are not directly correlated to disconnects for non-payment. |
| | IF-GU-240a.4 | Discussion of impact of external factors on customer affordability of gas, including the economic conditions of the service territory. | Refer to our Managing Affordability section in this report |
| End-Use Efficiency | IF-GU-420a.1 | Percentage of gas utility revenues from rate structures that (1) are decoupled or (2) contain a lost revenue adjustment mechanism (LRAM). | 90% |
| | IF-GU-420a.2 | Customer gas savings from efficiency measures by market (MMBtu). | 2,072,109 |
| Integrity of Gas Delivery and Infrastructure | IF-GU-540a.1 | Number of (1) reportable pipeline incidents, (2) Corrective Action Orders (CAO) and (3) Notices of Probable Violation (NOPV). | (1) 2 (2) 0 (3) 1 |

| Disclosures | SASB Code | Accounting Metric | 2022-2023 Response |
|-------------|--------------|---|---|
| | IF-GU-540a.2 | Percentage of distribution pipeline that is (1) cast and/ or wrought iron and (2) unprotected steel. | (1) 6.5% (2) 5.2% |
| | IF-GU-540a.3 | Percentage of gas (1) transmission and (2) distribution pipelines inspected. | (1) 61.70% (2) N/A |
| | IF-GU-540a.4 | Description of efforts to manage the integrity of gas delivery infrastructure, including risks related to safety and emissions. | Refer to EEI/AGA Template Refer to Gas Graphic . |

Activity Metrics

| SASB Code | Activity Metric | Response |
|-------------|--|---|
| IF-GU-000.A | Number of: (1) residential, (2) commercial and (3) industrial customers served. | (1) Residential: 1,232,831 (2) Commercial: 90,712 (3) Industrial: 411 |
| IF-GU-000.B | Amount of natural gas delivered to: (1) residential customers, (2) commercial customers, (3) industrial customers, and (4) transferred to a third party. | DTE Energy's 10-K for fiscal year ending Dec. 31, 2022, page 35 |
| IF-GU-000.C | Length of gas (km) (1) transmission and (2) distribution pipelines | DTE Energy's 10-K for fiscal year ending Dec. 31, 2022, page 12 |

2022-2023 Task Force on Climate-related Financial Disclosures (TCFD) Report

All Sector Financial Disclosures

| Disclosure Focus Area | Recommended Disclosure | Source |
|---|--|---|
| Governance | | |
| Disclose the organization's governance around climate-related risks and opportunities. | Describe the board's oversight of climate related risks and opportunities. | 2023 CDP Climate Change, CDP C1.1 See Governance section of this report See DTE's Proxy Statement |
| | Describe the management's role in assessing and managing climate-related risks and opportunities. | 2023 CDP Climate Change, CDP C1.2 See Governance section of this report See DTE's Proxy Statement |
| Strategy | | |
| Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning. | Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term. | 2023 CDP Climate Change, CDP C2 See DTE's 10k See Environment section of this report |
| | Describe the impact of climate-related risks and opportunities on the organization's businesses. | 2023 CDP Climate Change, CDP C2.3a See DTE's 10k See Environment and Supply Chain section of this report |
| | Describe the potential impact of different scenarios, including a 2 degrees C scenario, on the organization's businesses, strategy and financial planning. | 2023 CDP Climate Change, CDP3 See DTE's IRP |
| Risk Management | | |
| Disclose how the organization identifies, assesses and manages climate-related risks. | Describe the organization's process for identifying and assessing climate-related risks. | 2023 CDP Climate Change, CDP C2.2 See DTE's 10k See DTE's Proxy Statement See Risk Governance section in this report |
| | Describe the organization's processes for managing climate-related risks. | 2023 CDP Climate Change, CDP C2.2 See DTE's 10k See DTE's Proxy Statement See Risk Governance section in this report |

| Disclosure Focus Area | Recommended Disclosure | Source |
|-----------------------|--|---|
| | Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management. | 2023 CDP Climate Change, CDP C2.2 See DTE's 10k See DTE's Proxy Statement See Risk Governance section in this report |

| Metrics and Targets | | |
|--|--|--|
| Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities. | Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk-management process. | 2023 CDP Climate Change, C4 See the EEI/AGA and Climate Goals section of this report See DTE's 10k See Environment Section of this report See the GHG Emissions Summary in this report |
| | Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks. | 2023 CDP Climate Change, CDP C6 See the GHG Emissions Summary in this report See the EEI/AGA section of this report |
| | Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets. | CDP C4 See the EEI/AGA and Climate Goals section of this report See DTE's 10k See Environment Section of this report |

| Financial Category | Climate-Related Category | Recommended Disclosure | DTE's Response Mapping |
|--------------------|------------------------------|--|---|
| Revenues | GHG Emissions | Estimated Scope 3 emissions, including methodologies and emissions used. | 2023 CDP Climate Change, CDP C6.5 See the GHG Emissions Summary in this report |
| Revenues | Risk Adaptation & Mitigation | Revenues/ savings from investments in low-carbon alternatives (e.g. R&D, equipment, products or services). | See DTE's 10k See Environment Section of this report |
| Expenditures | GHG Emissions | Describe current carbon price or range of prices used. | 2023 CDP Climate Change, CDP C11 |
| Expenditures | Water | Percent water withdrawn in regions with high or extremely high baseline water stress. | 2023 CDP Water Security, CDP W1.2d See the EEI/AGA section of this report |
| Assets | Water | Assets committed in regions with high or extremely high baseline water stress. | 2023 CDP Water Security, CDP W1.2d See the EEI/AGA section of this report |
| Assets | Risk Adaptation & Mitigation | Investment (CapEx) in low-carbon alternatives (e.g., capital equipment or assets). | See DTE's 10k See Environment Section of this report |
| Capital | Risk Adaptation & Mitigation | Capital payback periods or return on capital deployed. | See DTE's 10k See Environment Section of this report |

2022 DTE Energy Greenhouse Gas Emissions Summary

(metric tons CO₂e, unless otherwise noted)

| DTE Electric Company | 2005 Baseline | 2022 |
|--|----------------------|-------------|
| Scope 1 - Stationary Combustion from DTE Electric Company | 38,010,000 | 25,424,000 |
| Scope 1 - Mobile Combustion from DTE Electric Company | ----- | 33,000 |
| Scope 2 - Purchased Power T&D Line Loss on DTE System | 253,000 | 197,000 |
| Scope 3 - Purchased Power Emissions | 3,396,000 | 3,666,000 |
| <hr/> | | |
| DTE Gas Company | | |
| Scope 1 - Combustion and Fugitive Emissions from DTE Gas Company | ----- | 777,000 |
| Scope 1 - Mobile Combustion from DTE Gas Company | ----- | 15,000 |
| Scope 3 - Upstream DTE Gas Supplier Emissions | ----- | 564,000 |
| Scope 3 - Combustion of gas sold to DTE customers | ----- | 8,869,000 |
| <hr/> | | |
| DTE Non-utility Operations | | |
| Scope 1 - Stationary Combustion from DTE Vantage | ----- | 833,000 |

Standards, protocols and methodologies used to collect activity data and calculate emissions:

[The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard \(Revised Edition\)](#)

[US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources](#)

[US EPA Mandatory Greenhouse Gas Reporting Rule](#)

[US EPA Emissions & Generation Resource Integrated Database \(eGRID\)](#)

[US EPA GHG Emissions Factors Hub](#)

[Greenhouse Gas Emissions Accounting for Electric Companies: A Compendium of Technical Briefing Papers and Frequently Asked Questions.](#) EPRI, Palo Alto, CA: 2021. 3002022366.

[California Mandatory Greenhouse Gas Reporting Regulation](#)

MPSC Case No: U-21291

Requester: AG

Question No.: AGDG-4.73a

Respondent: H. J. Decker

Page: 1 of 1

Question: 73. Refer to Table 2 on page 17 of Mr. Decker's direct testimony on power generation volumes. Please:

- a. Provide the same information with actual volumes for the 12 months ended March 2024.

Answer: Please see the table below for the same information with actual volumes for the 12 months ended March 2024

| 12 Month Period | Customer Count at End of 12-Month Period | Actual (Bcf) | Variance (Bcf) to 5-yr average | Cooling Degree Days | Variance to 15 yr Avg. |
|----------------------|--|--------------|--------------------------------|---------------------|------------------------|
| Apr '23 ~ Mar '24 | 11 | 72.4 | 10.9 | 736 | (24%) |
| Current 5-yr average | | 61.5 | | 983 | |
| 15 Yr Avg CDD | | | | 969 | |

Attachment: None

U-21291 AGDG-4.89a, d-g HPP Variance Explanations, page 1

**DTE Gas Company
U-21291 Discovery
AGDG-4**

| HPP Audit and Discovery - Variance Explanations | | | | | | | | |
|---|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|
| Description | Historical | Historical | Historical | Historical | Historical | Historical | Fcst | Fcst |
| | Net Oper. Income | Net Oper. Income | Net Oper. Income | Net Oper. Income | Net Oper. Income | Net Oper. Income | Net Oper. Income | Net Oper. Income |
| | For the Year Ended 12/31/2018 | For the Year Ended 12/31/2019 | For the Year Ended 12/31/2020 | For the Year Ended 12/31/2021 | For the Year Ended 12/31/2022 | For the Year Ended 12/31/2023 | Fore the year Ended 12/31/2024 | Fore the year Ended 12/31/2025 |
| Operating Revenue | | | | | | | | |
| 1 Other Operating Revenues | <u>\$75,434</u> | <u>\$82,198</u> | <u>\$86,578</u> | <u>\$92,906</u> | <u>\$99,257</u> | <u>\$103,901</u> | <u>\$99,257</u> | <u>\$99,257</u> |
| 2 Total Operating Revenues | <u>\$75,434</u> | <u>\$82,198</u> | <u>\$86,578</u> | <u>\$92,906</u> | <u>\$99,257</u> | <u>\$103,901</u> | <u>\$99,257</u> | <u>\$99,257</u> |
| | 2.80% | 8.97% | 5.33% | 7.31% | 6.84% | 4.68% | -4.47% | 0.00% |
| 3 Operating Expenses | | | | | | | | |
| 4 Operation & Maintenance | \$59,848 | \$62,150 | \$60,023 | \$64,334 | \$66,359 | \$64,100 | \$66,359 | \$66,359 |
| 5 State and Local Income Taxes | \$935 | \$1,203 | \$1,593 | \$1,737 | \$1,718 | \$2,262 | \$1,718 | \$1,718 |
| 6 Federal Income Taxes | <u>\$4,512</u> | <u>\$4,730</u> | <u>\$5,067</u> | <u>\$4,242</u> | <u>\$5,498</u> | <u>\$7,241</u> | <u>\$5,498</u> | <u>\$5,498</u> |
| 7 Total Operating Expenses | <u>\$65,296</u> | <u>\$68,083</u> | <u>\$66,684</u> | <u>\$70,313</u> | <u>\$73,575</u> | <u>\$73,602</u> | <u>\$73,575</u> | <u>\$73,575</u> |
| | <u>6.30%</u> | <u>4.27%</u> | <u>-2.06%</u> | <u>5.44%</u> | <u>4.64%</u> | <u>0.04%</u> | <u>-0.04%</u> | <u>0.00%</u> |
| 8 Net Operating Income | <u>\$10,138</u> | <u>\$14,114</u> | <u>\$19,894</u> | <u>\$22,593</u> | <u>\$25,682</u> | <u>\$30,299</u> | <u>\$25,682</u> | <u>\$25,682</u> |
| | 13.44% | 17.17% | 22.98% | 24.32% | 25.87% | 29.16% | 25.87% | 25.87% |
| 9 3 Year Rolling Average | | | | \$18,867 | \$22,723 | \$26,191 | \$27,221 | \$27,221 |
| 10 5 Year Rolling Average | | | | | \$18,484 | \$22,517 | \$24,830 | \$25,987 |
| 11 Average Contracts | 210,736 | 218,629 | 222,004 | 221,766 | 223,627 | 223,307 | 223,627 | 223,627 |
| 12 Average Headcount | 82 | 84 | 82 | 83 | 81 | 76 | 81 | 81 |
| Variance Explanations | | | | | | | | |
| 2018 - 2019 | 9% increase in revenue due to increased revenue per contract and higher contracts 4% increase in operating expenses due to increased repairs due to increased contracts | | | | | | | |
| 2019 - 2020 | 5% increase in revenue due to increased revenue per contract and higher contracts 2% decrease in operating expenses due to decrease repairs due to covid restrictions | | | | | | | |
| 2020 - 2021 | 7% increase in revenue due to increased revenue per contract 5% increase in operating expenses due to increased volume of repairs and higher cost per repair | | | | | | | |
| 2021 - 2022 | 7% increase in revenue due to increased revenue per contract and higher contracts 5% increase in operating expenses due to increased cost per repairs | | | | | | | |

21291 AGDG-4.89a, d-g HPP Variance Explanations, page 2

| HPP Headcount by Month | | | | | | |
|-------------------------------|----------|----------|----------|----------|----------|-------|
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Jan | 84 | 83 | 84 | 81 | 86 | 74 |
| Feb | 83 | 84 | 82 | 83 | 85 | 74 |
| Mar | 83 | 84 | 81 | 84 | 85 | 73 |
| Apr | 83 | 84 | 81 | 83 | 84 | 72 |
| May | 84 | 85 | 81 | 83 | 83 | 75 |
| Jun | 83 | 84 | 81 | 83 | 83 | 76 |
| Jul | 80 | 83 | 81 | 84 | 80 | 78 |
| Aug | 81 | 85 | 82 | 84 | 80 | 77 |
| Sep | 81 | 84 | 82 | 84 | 81 | 78 |
| Oct | 82 | 85 | 84 | 84 | 81 | 79 |
| Nov | 82 | 83 | 83 | 84 | 75 | 79 |
| Dec | 82 | 83 | 83 | 84 | 74 | 80 |
| Avg | 82.33333 | 83.91667 | 82.08333 | 83.41667 | 81.41667 | 76.25 |
| Rounded | 82 | 84 | 82 | 83 | 81 | 76 |

U-21291 AGDG-4.89a, d-g HPP Variance Explanations, page 3

**Home Protection Plus
Financial Detail
2021 - 2023 Summary**

| | 2021 | 2022 | 2023 |
|--------------------------------|---------------------|---------------------|----------------------|
| Operating Revenue | | | |
| Total Operating Revenue | \$92,906,468 | \$99,256,889 | 103,901,296.53 |
| Avg Contracts | 221,766 | 223,627 | 223,307 |
| Operating Expenses | | | |
| Labor and Benefits | \$15,933,268 | \$15,812,773 | \$13,454,384 |
| Vendor Repairs | \$30,326,354 | \$32,407,113 | \$31,864,020 |
| Advertising | \$4,420,128 | \$5,230,653 | \$5,409,418 |
| Material | \$4,245,435 | \$2,982,737 | \$4,234,881 |
| Other | <u>\$9,409,065</u> | <u>\$9,925,832</u> | <u>\$9,137,270</u> |
| Total Direct Expenses | \$64,334,250 | \$66,359,109 | \$64,099,972 |
| Indirect Expenses | | | |
| Corporate Allocations | \$6,307,940 | \$6,714,492 | \$5,322,083 |
| Federal Taxes | \$4,242,175 | \$5,498,491 | \$7,240,641 |
| State Taxes | <u>\$1,736,730</u> | <u>\$1,717,624</u> | <u>\$2,261,838</u> |
| Total Indirect Expenses | \$12,286,845 | \$13,930,606 | \$14,824,562 |
| Total Expenses | \$76,621,095 | \$80,289,715 | \$78,924,534 |
| Profit | \$16,285,372 | \$18,967,174 | 24,976,762.55 |
| Federal Tax | 21% | 21% | 21% |
| State Tax | 6.56% | 6.56% | 6.56% |
| Profit Margin % | 17.53% | 19.11% | 24.04% |

A - Includes corporate allocations from the Gas utility using the Massachusetts formula

B - Federal taxes are based on a 21.0% tax rate.