

**Table ET1. Primary Energy, Electricity, and Total Energy Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan**

| Year                            | Primary Energy |            |         |                          |                                  |                  |                       |                             |                   |                    |            |              |                               | Electric Power Sector <sup>i,k,l</sup> | Electricity Retail Sales | Total Energy <sup>h,i,j</sup> |                          |
|---------------------------------|----------------|------------|---------|--------------------------|----------------------------------|------------------|-----------------------|-----------------------------|-------------------|--------------------|------------|--------------|-------------------------------|--|--------------------------|-------------------------------|--------------------------|
|                                 | Coal           |            |         | Natural Gas <sup>a</sup> | Petroleum                        |                  |                       |                             |                   |                    |            | Nuclear Fuel | Biomass                       |  |                          |                               |                          |
|                                 | Coking Coal    | Steam Coal | Total   |                          | Distillate Fuel Oil <sup>b</sup> | HGL <sup>c</sup> | Jet Fuel <sup>d</sup> | Motor Gasoline <sup>e</sup> | Residual Fuel Oil | Other <sup>f</sup> | Total      |              | Wood and Waste <sup>g,h</sup> |  |                          |                               | Total <sup>h,i,j,k</sup> |
|                                 |                |            |         |                          |                                  |                  |                       |                             |                   |                    |            |              |                               |  |                          |                               |                          |
| 1970                            | 0.55           | 0.42       | 0.44    | 0.77                     | 1.09                             | 1.91             | 0.74                  | 2.71                        | 0.59              | 2.10               | 2.04       | 0.36         | 1.01                          | 1.13                                   | 0.39                     | 5.55                          | 1.71                     |
| 1975                            | 2.07           | 1.04       | 1.23    | 1.42                     | 2.49                             | 3.89             | 2.08                  | 4.72                        | 1.96              | 3.85               | 3.75       | 0.28         | 1.29                          | 2.23                                   | 1.04                     | 9.78                          | 3.34                     |
| 1980                            | 2.27           | 1.61       | 1.71    | 3.05                     | 6.76                             | 6.85             | 6.38                  | 10.09                       | 3.90              | 8.74               | 8.57       | 0.49         | 2.16                          | 4.35                                   | 1.71                     | 15.40                         | 6.57                     |
| 1985                            | 2.08           | 1.90       | 1.92    | 5.70                     | 7.69                             | 9.29             | 6.09                  | 9.10                        | 4.45              | 10.98              | 8.76       | 0.80         | 2.30                          | 5.18                                   | 1.74                     | 19.88                         | 8.46                     |
| 1990                            | 1.80           | 1.62       | 1.63    | 4.16                     | 7.40                             | 10.78            | 5.65                  | 8.78                        | 3.00              | 9.88               | 8.45       | 0.79         | 1.52                          | 4.46                                   | 1.45                     | 20.85                         | 8.08                     |
| 1995                            | 1.57           | 1.48       | 1.48    | 3.93                     | 6.90                             | 8.98             | 3.93                  | 8.47                        | 2.61              | 9.31               | 7.99       | 0.65         | 1.20                          | 4.21                                   | 1.40                     | 20.72                         | 7.96                     |
| 2000                            | 1.66           | 1.32       | 1.35    | 4.44                     | 9.90                             | 12.00            | 6.51                  | 11.90                       | 3.41              | 10.45              | 11.09      | 0.61         | 1.26                          | 5.52                                   | 1.56                     | 20.89                         | 9.74                     |
| 2005                            | 3.37           | 1.63       | 1.70    | 8.99                     | 16.53                            | 17.69            | 13.03                 | 17.69                       | 6.78              | 14.29              | 17.00      | 0.43         | 3.15                          | 8.60                                   | 1.80                     | 21.25                         | 14.53                    |
| 2006                            | 3.76           | 1.72       | 1.81    | 10.20                    | 18.69                            | 19.67            | 14.94                 | 19.99                       | 7.67              | 19.92              | 19.50      | 0.40         | 3.20                          | 9.78                                   | 1.79                     | 23.90                         | 16.66                    |
| 2007                            | 3.70           | 1.77       | 1.85    | 9.62                     | 20.02                            | 21.71            | 16.47                 | 22.32                       | 8.16              | 20.93              | 21.41      | 0.47         | 3.40                          | 10.10                                  | 1.99                     | 25.04                         | 17.57                    |
| 2008                            | 4.56           | 2.03       | 2.17    | 10.69                    | 26.39                            | 25.63            | 22.76                 | 25.57                       | 11.84             | 26.63              | 25.55      | 0.51         | 4.02                          | 11.50                                  | 2.42                     | 26.24                         | 19.53                    |
| 2009                            | 5.67           | 2.13       | 2.26    | 9.53                     | 16.60                            | 22.98            | 12.60                 | 18.58                       | 7.79              | R 24.32            | 18.59      | 0.66         | 3.08                          | R 9.47                                 | 2.20                     | 27.63                         | 16.80                    |
| 2010                            | 6.18           | 2.18       | 2.39    | 9.24                     | 21.14                            | R 22.44          | 16.23                 | 22.04                       | 9.61              | R 21.04            | R 21.45    | 0.78         | 3.32                          | R 10.06                                | 2.25                     | 29.05                         | R 18.31                  |
| 2011                            | 7.32           | 2.74       | 3.00    | 8.76                     | 27.34                            | R 24.79          | 22.39                 | 28.03                       | 13.26             | R 25.49            | R 27.21    | 0.76         | 3.51                          | R 11.79                                | 2.44                     | 30.57                         | R 20.73                  |
| 2012                            | 6.96           | 2.85       | 3.09    | 7.38                     | 28.00                            | R 21.70          | 22.99                 | 28.62                       | 14.67             | R 25.31            | R 27.65    | 0.79         | 3.31                          | R 11.85                                | 2.42                     | 32.29                         | R 21.33                  |
| 2013                            | 5.52           | 2.73       | 2.89    | 7.56                     | 27.98                            | R 21.58          | 21.97                 | 27.92                       | 13.60             | R 23.45            | R 26.96    | 0.80         | 3.50                          | R 11.77                                | 2.51                     | 32.89                         | R 20.31                  |
| 2014                            | 5.10           | 2.66       | 2.81    | 8.27                     | 27.16                            | 25.92            | 20.70                 | 26.69                       | 12.74             | R 19.89            | R 25.93    | 0.70         | 3.89                          | R 11.69                                | 2.67                     | 32.38                         | R 19.84                  |
| 2015                            | 4.75           | 2.43       | 2.58    | 6.73                     | 18.50                            | 18.25            | 11.88                 | 19.16                       | 7.37              | R 18.21            | R 18.45    | 0.78         | 3.85                          | R 8.90                                 | 2.28                     | 31.57                         | R 16.43                  |
| 2016                            | 3.94           | 2.29       | 2.37    | 5.74                     | 15.73                            | R 16.46          | 9.72                  | 17.04                       | 4.66              | R 15.14            | R 16.14    | 0.73         | 3.30                          | R 8.01                                 | 2.06                     | 32.44                         | 15.57                    |
| 2017                            | 4.75           | 2.22       | 2.40    | 6.09                     | 18.19                            | R 19.52          | 12.27                 | 19.13                       | 6.44              | R 13.87            | R 18.10    | 0.68         | 3.36                          | R 8.68                                 | 2.04                     | 33.12                         | 16.50                    |
| 2018                            | 5.14           | 2.17       | 2.39    | 5.95                     | 21.92                            | R 20.61          | 15.64                 | 21.21                       | 8.02              | R 16.35            | R 20.57    | 0.63         | 3.48                          | R 9.48                                 | 2.15                     | 33.46                         | R 17.47                  |
| 2019                            | 5.89           | 2.15       | 2.46    | 5.62                     | 20.69                            | R 17.68          | 14.37                 | 20.21                       | 7.53              | R 17.12            | R 19.51    | 0.58         | 3.67                          | R 8.98                                 | 1.90                     | 33.93                         | R 16.89                  |
| 2020                            | 5.13           | 2.07       | 2.30    | 5.30                     | 16.75                            | 15.70            | 9.10                  | 16.59                       | 5.54              | 14.73              | 16.08      | 0.51         | 2.93                          | 7.64                                   | 1.67                     | 35.85                         | 16.00                    |
| Expenditures in Million Dollars |                |            |         |                          |                                  |                  |                       |                             |                   |                    |            |              |                               |  |                          |                               |                          |
| 1970                            | 73.4           | 294.1      | 367.5   | 620.2                    | 240.6                            | 44.8             | 30.4                  | 1,378.2                     | 33.7              | 176.9              | 1,904.7    | 1.5          | 6.3                           | 2,906.9                                | -230.3                   | 1,041.7                       | 3,718.3                  |
| 1975                            | 290.3          | 634.0      | 924.3   | 1,235.6                  | 610.6                            | 109.7            | 66.8                  | 2,686.4                     | 217.0             | 273.1              | 3,963.6    | 22.2         | 7.9                           | 6,178.5                                | -757.9                   | 2,139.6                       | 7,560.3                  |
| 1980                            | 250.1          | 1,047.1    | 1,297.2 | 2,596.2                  | 1,087.9                          | 171.3            | 236.9                 | 5,144.7                     | 315.1             | 681.2              | 7,637.1    | 85.1         | 33.4                          | 11,787.9                               | -1,385.2                 | 3,647.5                       | 14,050.2                 |
| 1985                            | 149.7          | 1,348.3    | 1,498.1 | 3,954.1                  | 1,164.6                          | 465.9            | 223.6                 | 4,466.4                     | 56.0              | 597.7              | 6,974.3    | 115.0        | 39.1                          | 12,628.5                               | -1,325.6                 | 4,993.3                       | 16,296.2                 |
| 1990                            | 51.3           | 1,233.5    | 1,284.8 | 3,569.5                  | 1,050.2                          | 575.4            | 319.7                 | 4,608.3                     | 43.8              | 630.7              | 7,228.1    | 179.7        | 58.4                          | 12,358.4                               | -1,421.6                 | 5,797.5                       | 16,734.2                 |
| 1995                            | 59.1           | 1,107.3    | 1,168.3 | 3,708.4                  | 1,101.7                          | 479.3            | 196.3                 | 4,875.1                     | 23.1              | 650.9              | 7,326.3    | 167.9        | 70.8                          | 12,562.6                               | -1,514.3                 | 6,636.2                       | 17,684.5                 |
| 2000                            | 91.0           | 987.1      | 1,078.1 | 4,143.6                  | 1,776.1                          | 734.5            | 266.3                 | 7,310.1                     | 44.9              | 850.5              | 10,982.4   | 119.6        | 77.7                          | 16,477.5                               | -1,658.1                 | 7,400.3                       | 22,219.7                 |
| 2005                            | 106.9          | 1,252.6    | 1,359.5 | 7,867.7                  | 2,915.6                          | 1,523.0          | 253.5                 | 10,984.2                    | 93.2              | 969.4              | 16,738.9   | 146.7        | 198.3                         | 26,406.0                               | -2,213.4                 | 7,934.7                       | 32,127.3                 |
| 2006                            | 133.2          | 1,268.9    | 1,402.1 | 7,832.7                  | 3,246.2                          | 1,096.7          | 349.4                 | 12,242.4                    | 56.6              | 1,200.9            | 18,192.1   | 122.2        | 193.5                         | 27,763.6                               | -2,031.2                 | 8,724.5                       | 34,457.0                 |
| 2007                            | 116.9          | 1,362.5    | 1,479.5 | 7,384.5                  | 3,401.4                          | 1,307.5          | 492.3                 | 13,317.1                    | 89.5              | 1,307.7            | 19,915.5   | 154.0        | 206.2                         | 29,244.3                               | -2,407.0                 | 9,251.2                       | 36,088.5                 |
| 2008                            | 188.6          | 1,543.4    | 1,732.0 | 8,066.1                  | 4,074.3                          | 1,216.9          | 598.8                 | 14,543.0                    | 107.3             | 1,346.0            | 21,886.3   | 166.9        | 254.5                         | 32,499.2                               | -2,872.4                 | 9,378.2                       | 39,005.0                 |
| 2009                            | 144.7          | 1,515.3    | 1,660.0 | 6,736.4                  | 2,456.9                          | 1,029.3          | 305.0                 | 10,376.1                    | 29.2              | R 1,211.1          | R 15,407.7 | 150.3        | 162.1                         | R 24,429.4                             | -2,306.2                 | 9,158.8                       | R 31,281.9               |
| 2010                            | 243.3          | 1,550.0    | 1,793.3 | 6,595.8                  | 3,227.9                          | R 938.6          | R 789.8               | 12,109.9                    | 35.4              | R 859.4            | R 17,960.9 | 242.0        | 202.2                         | R 27,072.0                             | -2,586.7                 | 10,171.9                      | R 34,657.3               |
| 2011                            | 291.7          | 1,782.7    | 2,074.4 | 6,520.7                  | 4,210.1                          | R 1,014.1        | R 1,116.9             | 15,027.2                    | 57.0              | R 916.0            | R 22,341.3 | 260.4        | 228.9                         | R 31,603.7                             | -2,731.9                 | 10,846.5                      | R 39,718.4               |
| 2012                            | 246.4          | 1,671.4    | 1,917.8 | 5,628.3                  | 4,145.1                          | R 766.5          | R 1,028.4             | 15,219.1                    | 46.9              | R 919.3            | R 22,225.3 | 231.8        | 215.5                         | R 30,367.1                             | -2,606.0                 | 11,422.9                      | R 39,184.0               |
| 2013                            | 209.9          | 1,691.7    | 1,901.6 | 6,047.9                  | 4,609.4                          | R 1,009.6        | R 1,090.1             | 15,407.8                    | 34.7              | R 1,075.8          | R 23,227.4 | 243.2        | 237.4                         | R 31,893.9                             | -2,642.6                 | 11,520.6                      | R 40,771.9               |
| 2014                            | 183.1          | 1,552.1    | 1,735.2 | 6,985.8                  | 4,546.0                          | R 1,271.9        | R 1,028.3             | 14,733.8                    | 21.9              | R 1,138.3          | R 22,740.3 | 227.6        | 268.7                         | R 32,237.9                             | -2,815.7                 | 11,364.3                      | R 40,786.5               |
| 2015                            | 183.1          | 1,408.5    | 1,591.6 | 5,649.7                  | 3,193.1                          | 763.1            | R 659.9               | 10,794.2                    | 11.8              | R 1,039.1          | R 16,461.3 | 240.5        | 268.2                         | R 24,516.2                             | -2,490.5                 | 10,992.2                      | R 33,018.0               |
| 2016                            | 84.4           | 1,030.6    | 1,115.0 | 5,157.2                  | 2,697.0                          | R 734.3          | R 551.8               | 9,774.1                     | 15.0              | R 905.2            | R 14,677.3 | 241.2        | 223.9                         | R 21,648.2                             | -2,211.0                 | 11,512.6                      | R 30,949.8               |
| 2017                            | 169.0          | 1,030.7    | 1,199.7 | 5,336.7                  | 2,893.4                          | R 872.4          | R 715.6               | 10,852.6                    | 29.6              | R 879.5            | R 16,243.2 | 231.7        | 225.3                         | R 23,416.4                             | -2,172.1                 | 11,462.3                      | R 32,706.7               |
| 2018                            | 196.2          | 1,015.3    | 1,211.5 | 5,812.4                  | 3,948.2                          | R 1,071.4        | R 891.0               | 12,060.9                    | 41.9              | R 995.4            | R 19,008.8 | 201.6        | R 245.1                       | R 26,719.1                             | -2,359.0                 | 11,921.5                      | R 36,281.5               |
| 2019                            | 213.5          | 886.6      | 1,100.2 | R 5,694.2                | 3,585.5                          | R 947.8          | R 814.1               | R 11,332.1                  | 43.8              | R 1,008.5          | R 17,731.9 | 200.0        | R 243.4                       | R 25,159.6                             | R 2,062.3                | 11,670.1                      | R 34,767.4               |
| 2020                            | 127.3          | 641.0      | 768.3   | 5,133.1                  | 2,622.3                          | 767.9            | 268.6                 | 7,952.8                     | 23.3              | 869.5              | 12,504.3   | 162.3        | 174.4                         | 18,908.0                               | -1,653.9                 | 11,816.1                      | 29,070.2                 |

<sup>a</sup> Includes supplemental gaseous fuels that are commingled with natural gas.  
<sup>b</sup> Beginning in 2009, includes biodiesel blended into distillate fuel oil.  
<sup>c</sup> Hydrocarbon gas liquids, include natural gas liquids and refinery olefins.  
<sup>d</sup> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other Petroleum."  
<sup>e</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.  
<sup>f</sup> Includes asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and the "other petroleum products" category. See Technical Notes, Section 4.  
<sup>g</sup> Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of the use of wood and biomass waste beginning in 1989.  
<sup>i</sup> There are no direct fuel costs for hydroelectric, geothermal, solar, or wind energy.

<sup>j</sup> For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline column.  
<sup>k</sup> Electricity imports are included in total primary energy and electric power sector but are not shown separately.  
<sup>l</sup> Expenditures for fuels purchased for electric power generation, included in the expenditure columns for the primary energy sources, are shown as negative expenditures because they need to be removed from total energy expenditures, to avoid double-counting.  
Where shown, R = Revised data and (s) = Value less than 0.05 million dollars.  
Where shown, — = No consumption, including cases where adjustments were made. See explanation of adjustments in Section 7 of the Technical Notes.  
Note: Expenditure totals may not equal sum of components due to independent rounding.  
Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.  
Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

**M I C H I G A N** Table ET2. Total End-Use Energy Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan

| Year                              | Primary Energy |                          |                                  |                  |                       |                             |                   |                    |         |                        | Electricity Retail Sales | Total Energy <sup>h,i,j</sup> |                               |
|-----------------------------------|----------------|--------------------------|----------------------------------|------------------|-----------------------|-----------------------------|-------------------|--------------------|---------|------------------------|--------------------------|-------------------------------|-------------------------------|
|                                   | Coal           | Natural Gas <sup>a</sup> | Petroleum                        |                  |                       |                             |                   |                    | Biomass | Total <sup>h,i,j</sup> |                          |                               |                               |
|                                   |                |                          | Distillate Fuel Oil <sup>b</sup> | HGL <sup>c</sup> | Jet Fuel <sup>d</sup> | Motor Gasoline <sup>e</sup> | Residual Fuel Oil | Other <sup>f</sup> |         |                        |                          |                               | Wood and Waste <sup>g,h</sup> |
| Prices in Dollars per Million Btu |                |                          |                                  |                  |                       |                             |                   |                    |         |                        |                          |                               |                               |
| 1970                              | 0.57           | 0.80                     | 1.10                             | 1.91             | 0.74                  | 2.71                        | 0.56              | 2.10               | 2.09    | 1.01                   | 1.35                     | 5.55                          | 1.71                          |
| 1975                              | 1.83           | 1.42                     | 2.50                             | 3.89             | 2.08                  | 4.72                        | 1.95              | 3.85               | 3.93    | 1.29                   | 2.65                     | 9.78                          | 3.34                          |
| 1980                              | 2.05           | 3.05                     | 6.78                             | 6.85             | 6.38                  | 10.09                       | 3.30              | 8.74               | 8.91    | 2.16                   | 5.47                     | 15.40                         | 6.57                          |
| 1985                              | 2.05           | 5.71                     | 7.74                             | 9.29             | 6.09                  | 9.10                        | 4.39              | 10.98              | 8.79    | 2.30                   | 6.75                     | 19.88                         | 8.46                          |
| 1990                              | 1.80           | 4.35                     | 7.44                             | 10.78            | 5.65                  | 8.78                        | 3.10              | 9.88               | 8.51    | 1.84                   | 6.10                     | 20.85                         | 8.08                          |
| 1995                              | 1.68           | 4.17                     | 6.95                             | 8.98             | 3.93                  | 8.47                        | 2.60              | 9.31               | 8.04    | 1.45                   | 5.81                     | 20.72                         | 7.96                          |
| 2000                              | 1.64           | 4.52                     | 9.95                             | 12.00            | 6.51                  | 11.90                       | 3.64              | 10.46              | 11.18   | 1.68                   | 7.69                     | 20.89                         | 9.74                          |
| 2005                              | 3.03           | 9.61                     | 16.59                            | 17.69            | 13.03                 | 17.69                       | 6.73              | 14.47              | 17.10   | 3.65                   | 13.16                    | 21.25                         | 14.53                         |
| 2006                              | 3.26           | 10.92                    | 18.74                            | 19.67            | 14.94                 | 19.99                       | 7.78              | 20.31              | 19.56   | 3.74                   | 15.11                    | 23.90                         | 16.66                         |
| 2007                              | 3.26           | 10.22                    | 20.06                            | 21.71            | 16.47                 | 22.32                       | 8.43              | 21.38              | 21.50   | 3.96                   | 15.93                    | 25.04                         | 17.57                         |
| 2008                              | 4.05           | 10.99                    | 26.41                            | 25.63            | 22.76                 | 25.57                       | 12.06             | 27.32              | 25.61   | 4.78                   | 18.06                    | 26.24                         | 19.53                         |
| 2009                              | 5.14           | 10.22                    | 16.64                            | 22.98            | 12.60                 | 18.58                       | 7.87              | R 24.94            | 18.64   | 3.72                   | 14.45                    | 27.63                         | 16.80                         |
| 2010                              | 5.23           | 10.08                    | 21.18                            | R 22.44          | 16.23                 | 22.04                       | 9.78              | R 21.66            | R 21.50 | 3.85                   | 15.87                    | 29.05                         | R 18.31                       |
| 2011                              | 5.97           | 9.50                     | 27.40                            | R 24.79          | 22.39                 | 28.03                       | 13.26             | R 26.07            | R 27.25 | 4.09                   | R 18.49                  | 30.57                         | 20.73                         |
| 2012                              | 5.84           | 8.73                     | 28.04                            | R 21.70          | 22.99                 | 28.62                       | 14.63             | R 25.92            | R 27.70 | 3.87                   | R 18.71                  | 32.29                         | 21.33                         |
| 2013                              | 4.83           | 8.07                     | 28.02                            | R 21.58          | 21.97                 | 27.92                       | 13.56             | R 25.31            | R 27.08 | 4.14                   | R 17.65                  | 32.89                         | R 20.31                       |
| 2014                              | 4.57           | 8.53                     | 27.22                            | 25.92            | 20.70                 | 26.69                       | 12.73             | R 24.11            | R 26.24 | 4.53                   | R 17.26                  | 32.38                         | R 19.84                       |
| 2015                              | 4.27           | 7.65                     | 18.54                            | 18.25            | 11.88                 | 19.16                       | 7.43              | R 21.06            | R 18.62 | 4.38                   | 13.25                    | 31.57                         | R 16.43                       |
| 2016                              | 3.61           | 6.91                     | 15.77                            | R 16.46          | 9.72                  | 17.04                       | 4.60              | R 17.31            | R 16.28 | 3.66                   | 11.91                    | 32.44                         | 15.57                         |
| 2017                              | 4.30           | 7.07                     | 18.22                            | R 19.52          | 12.27                 | 19.13                       | 6.38              | R 17.08            | R 18.35 | 3.85                   | R 12.98                  | 33.12                         | 16.50                         |
| 2018                              | 4.66           | 6.96                     | 21.96                            | R 20.61          | 15.64                 | 21.21                       | 8.00              | R 21.07            | R 20.89 | 4.08                   | R 14.16                  | 33.46                         | R 17.47                       |
| 2019                              | 5.35           | 6.84                     | 20.72                            | R 17.68          | 14.37                 | 20.21                       | 7.51              | R 20.32            | R 19.72 | 4.33                   | 13.48                    | 33.93                         | R 16.89                       |
| 2020                              | 4.90           | 6.89                     | 16.80                            | 15.70            | 9.10                  | 16.59                       | 5.51              | 17.61              | 16.29   | 3.50                   | 11.60                    | 35.85                         | 16.00                         |

  

| Expenditures in Million Dollars |       |         |         |           |           |            |      |           |            |         |            |          |            |
|---------------------------------|-------|---------|---------|-----------|-----------|------------|------|-----------|------------|---------|------------|----------|------------|
| 1970                            | 194.1 | 593.0   | 237.0   | 44.8      | 30.4      | 1,378.2    | 15.8 | 176.9     | 1,883.2    | 6.3     | 2,676.6    | 1,041.7  | 3,718.3    |
| 1975                            | 467.5 | 1,174.9 | 593.3   | 109.7     | 65.8      | 2,686.4    | 42.2 | 273.1     | 3,770.4    | 7.9     | 5,420.6    | 2,139.6  | 7,560.3    |
| 1980                            | 464.9 | 2,543.0 | 1,060.3 | 171.3     | 236.9     | 5,144.7    | 66.9 | 681.2     | 7,361.3    | 33.4    | 10,402.6   | 3,647.5  | 14,050.2   |
| 1985                            | 359.8 | 3,933.4 | 1,143.6 | 465.9     | 223.6     | 4,466.4    | 40.8 | 597.7     | 6,938.0    | 39.1    | 11,302.9   | 4,993.3  | 16,296.2   |
| 1990                            | 223.9 | 3,423.9 | 1,041.1 | 575.4     | 319.7     | 4,608.3    | 22.9 | 630.7     | 7,198.1    | 54.2    | 10,936.7   | 5,797.5  | 16,734.2   |
| 1995                            | 193.7 | 3,498.7 | 1,092.3 | 479.3     | 196.3     | 4,875.1    | 4.9  | 650.9     | 7,298.9    | 57.0    | 11,048.3   | 6,636.2  | 17,684.5   |
| 2000                            | 172.4 | 3,652.4 | 1,763.2 | 734.5     | 266.3     | 7,310.1    | 9.5  | 850.5     | 10,934.1   | 60.6    | 14,819.4   | 7,400.3  | 22,219.7   |
| 2005                            | 245.8 | 7,136.4 | 2,890.1 | 1,523.0   | 253.5     | 10,984.2   | 46.0 | 968.2     | 16,665.0   | 145.3   | 24,192.6   | 7,934.7  | 32,127.3   |
| 2006                            | 261.7 | 7,176.3 | 3,221.0 | 1,096.7   | 349.4     | 12,242.4   | 46.1 | 1,199.2   | 18,154.8   | 139.7   | 25,732.5   | 8,724.5  | 34,457.0   |
| 2007                            | 260.0 | 6,564.7 | 3,373.4 | 1,307.5   | 492.3     | 13,317.1   | 64.4 | 1,305.1   | 19,859.9   | 152.7   | 26,837.3   | 9,251.2  | 36,088.5   |
| 2008                            | 354.7 | 7,248.4 | 4,033.9 | 1,216.9   | 598.8     | 14,543.0   | 93.0 | 1,344.0   | 21,829.6   | 194.0   | 29,626.8   | 9,378.2  | 39,005.0   |
| 2009                            | 274.6 | 6,355.1 | 2,437.6 | 1,029.3   | 305.0     | 10,376.1   | 23.2 | R 1,208.6 | R 15,379.9 | 113.6   | R 22,123.1 | 9,158.8  | R 31,281.9 |
| 2010                            | 375.3 | 6,033.0 | 3,203.2 | R 938.6   | R 789.8   | 12,109.9   | 28.8 | R 857.3   | R 17,927.5 | 149.6   | R 24,485.4 | 10,171.9 | R 34,657.3 |
| 2011                            | 422.3 | 5,983.8 | 4,169.1 | R 1,014.1 | R 1,116.9 | 15,027.2   | 53.3 | R 912.2   | R 22,292.8 | 172.9   | R 28,871.8 | 10,846.5 | R 39,718.4 |
| 2012                            | 361.2 | 5,046.5 | 4,115.9 | R 766.5   | R 1,128.4 | 15,219.1   | 42.2 | R 915.1   | R 22,187.2 | 166.1   | R 27,761.1 | 11,422.9 | R 39,184.0 |
| 2013                            | 334.9 | 5,540.9 | 4,580.2 | R 1,009.6 | R 1,090.1 | 15,407.8   | 32.2 | R 1,070.7 | R 23,190.6 | 184.9   | R 29,251.3 | 11,520.6 | R 40,771.9 |
| 2014                            | 294.1 | 6,235.5 | 4,514.0 | R 1,271.9 | R 1,028.3 | 14,733.8   | 20.6 | R 1,122.9 | R 22,691.5 | 201.1   | R 29,422.2 | 11,364.3 | R 40,786.5 |
| 2015                            | 265.9 | 5,116.2 | 3,178.7 | 763.1     | R 659.9   | 10,794.2   | 10.9 | R 1,024.3 | R 16,431.2 | 212.5   | R 22,025.8 | 10,992.2 | R 33,018.0 |
| 2016                            | 140.8 | 4,475.0 | 2,684.1 | R 734.3   | R 551.8   | 9,774.1    | 14.0 | R 894.7   | R 14,652.8 | 168.6   | R 19,437.2 | 11,512.6 | R 30,949.8 |
| 2017                            | 229.9 | 4,634.4 | 2,880.1 | R 872.4   | R 715.6   | 10,852.6   | 27.9 | R 860.7   | R 16,209.3 | R 170.8 | R 21,244.4 | 11,462.3 | R 32,706.7 |
| 2018                            | 250.1 | 4,947.7 | 3,929.2 | R 1,071.4 | R 891.0   | 12,060.9   | 40.9 | R 973.7   | R 18,967.1 | R 195.2 | R 24,360.1 | 11,921.5 | R 36,281.5 |
| 2019                            | 267.5 | 4,935.0 | 3,572.4 | R 947.8   | R 814.1   | R 11,332.1 | 43.0 | R 993.1   | R 17,702.6 | R 192.2 | R 23,097.3 | 11,670.1 | R 34,767.4 |
| 2020                            | 154.1 | 4,480.1 | 2,612.7 | 767.9     | 268.6     | 7,952.8    | 22.6 | 857.2     | 12,481.7   | 138.1   | 17,254.1   | 11,816.1 | 29,070.2   |

<sup>a</sup> Includes supplemental gaseous fuels that are commingled with natural gas.  
<sup>b</sup> Beginning in 2009, includes biodiesel blended into distillate fuel oil.  
<sup>c</sup> Hydrocarbon gas liquids, include natural gas liquids and refinery olefins.  
<sup>d</sup> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other Petroleum."  
<sup>e</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.  
<sup>f</sup> Includes asphalt and road oil, aviation gasoline, kerosene, lubricants, petroleum coke, and the "other petroleum products" category. See Technical Notes, Section 4.  
<sup>g</sup> Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.  
<sup>h</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of the use of wood and biomass waste beginning in 1989.

<sup>i</sup> There are no direct fuel costs for hydroelectric, geothermal, solar, or wind energy.  
<sup>j</sup> For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline column.  
Where shown, R = Revised data and (s) = Value less than 0.05 million dollars.  
Where shown, — = No consumption, including cases where adjustments were made. See explanation of adjustments in Section 7 of the Technical Notes.  
Notes: Price estimates are weighted averages of price estimates and expenditure estimates are the sum of expenditure estimates for the residential, commercial, industrial, and transportation sectors. Expenditure totals may not equal sum of components due to independent rounding.  
Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.  
Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

**Table ET3. Residential Sector Energy Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan**

| Year                              | Primary Energy    |                          |                     |                  |          |                   |                    | Electricity Retail Sales | Total Energy <sup>e</sup> |           |
|-----------------------------------|-------------------|--------------------------|---------------------|------------------|----------|-------------------|--------------------|--------------------------|---------------------------|-----------|
|                                   | Coal <sup>a</sup> | Natural Gas <sup>b</sup> | Petroleum           |                  |          | Biomass           | Total <sup>e</sup> |                          |                           |           |
|                                   |                   |                          | Distillate Fuel Oil | HGL <sup>c</sup> | Kerosene | Wood <sup>d</sup> |                    |                          |                           |           |
| Prices in Dollars per Million Btu |                   |                          |                     |                  |          |                   |                    |                          |                           |           |
| 1970                              | 1.43              | 1.00                     | 1.23                | 2.04             | 1.56     | 1.36              | 0.57               | 1.10                     | 6.99                      | 1.73      |
| 1975                              | 3.07              | 1.58                     | 2.51                | 4.29             | 3.12     | 2.80              | 1.12               | 1.93                     | 11.32                     | 3.13      |
| 1980                              | 3.70              | 3.13                     | 7.05                | 8.08             | 8.43     | 7.27              | 2.87               | 3.72                     | 16.76                     | 5.53      |
| 1985                              | 3.86              | 6.14                     | 7.66                | 9.63             | 8.47     | 8.33              | 3.24               | 6.38                     | 21.62                     | 8.74      |
| 1990                              | 3.39              | 4.81                     | 7.57                | 11.37            | 9.53     | 9.43              | 3.56               | 5.42                     | 22.95                     | 8.48      |
| 1995                              | 3.08              | 4.53                     | 6.58                | 9.53             | 8.79     | 8.36              | 2.90               | 4.99                     | 24.44                     | 8.41      |
| 2000                              | 3.06              | 4.93                     | 9.12                | 12.07            | 9.38     | 11.21             | 4.41               | 5.83                     | 24.98                     | 9.46      |
| 2005                              | 4.27              | 10.39                    | 15.71               | 17.68            | 15.49    | 17.33             | 6.91               | 11.45                    | 24.63                     | 14.31     |
| 2006                              | 4.66              | 11.76                    | 17.87               | 19.79            | 19.69    | 19.42             | 7.96               | 12.63                    | 28.63                     | 16.46     |
| 2007                              | 4.31              | 10.82                    | 19.92               | 21.70            | 22.33    | 21.42             | 8.79               | 12.13                    | 29.93                     | 16.30     |
| 2008                              | —                 | 11.65                    | 23.62               | 25.72            | 23.47    | 25.39             | 10.83              | 13.21                    | 31.49                     | 17.30     |
| 2009                              | —                 | 11.03                    | 16.15               | 23.48            | 23.70    | 22.61             | 8.13               | 12.31                    | 34.01                     | 17.21     |
| 2010                              | —                 | 11.14                    | 20.48               | 22.90            | 25.17    | 22.68             | 9.60               | 12.39                    | 36.51                     | 18.42     |
| 2011                              | —                 | 10.33                    | 27.36               | 25.16            | 28.49    | 25.41             | 11.54              | 11.89                    | 38.91                     | 18.51     |
| 2012                              | —                 | 9.78                     | 27.27               | 23.20            | 29.88    | 23.58             | 12.85              | 11.13                    | 41.43                     | 19.34     |
| 2013                              | —                 | 8.90                     | 28.29               | 22.56            | 30.54    | 23.05             | 12.58              | 10.43                    | 42.76                     | 17.87     |
| 2014                              | —                 | 9.16                     | 27.34               | 27.28            | 32.87    | 27.31             | 12.27              | 11.14                    | 42.38                     | 17.93     |
| 2015                              | —                 | 8.53                     | 17.90               | 20.22            | 16.97    | 20.02             | 8.45               | 9.64                     | 42.27                     | 17.31     |
| 2016                              | —                 | 7.87                     | 15.49               | 18.27            | 13.53    | 18.05             | 7.22               | 8.94                     | 44.61                     | 17.85     |
| 2017                              | —                 | 8.01                     | 17.64               | 21.04            | 16.92    | 20.81             | 8.08               | 9.35                     | 45.13                     | 17.87     |
| 2018                              | —                 | 7.82                     | 19.24               | 21.92            | 26.07    | 21.76             | 8.94               | 9.44                     | 45.27                     | 17.71     |
| 2019                              | —                 | 7.64                     | 18.39               | 19.15            | 22.82    | 19.11             | 8.60               | 8.97                     | 46.14                     | 17.08     |
| 2020                              | —                 | 7.78                     | 15.35               | 17.49            | 14.82    | 17.33             | 7.11               | 8.77                     | 47.66                     | 18.41     |
| Expenditures in Million Dollars   |                   |                          |                     |                  |          |                   |                    |                          |                           |           |
| 1970                              | 16.3              | 345.1                    | 135.5               | 37.9             | 4.8      | 178.2             | 1.7                | 541.4                    | 408.1                     | 949.5     |
| 1975                              | 8.6               | 542.8                    | 284.4               | 92.8             | 5.3      | 382.5             | 3.2                | 937.2                    | 806.7                     | 1,743.9   |
| 1980                              | 5.8               | 1,236.0                  | 377.7               | 112.8            | 4.0      | 494.5             | 22.0               | 1,758.3                  | 1,273.3                   | 3,031.6   |
| 1985                              | 5.3               | 2,143.5                  | 276.2               | 176.5            | 20.4     | 473.0             | 25.8               | 2,647.6                  | 1,645.1                   | 4,292.7   |
| 1990                              | 4.5               | 1,644.2                  | 213.4               | 307.7            | 11.7     | 532.9             | 30.9               | 2,212.5                  | 1,982.5                   | 4,195.0   |
| 1995                              | 2.5               | 1,792.2                  | 146.1               | 316.1            | 11.6     | 473.7             | 13.6               | 2,282.0                  | 2,387.3                   | 4,669.3   |
| 2000                              | 0.1               | 1,879.1                  | 154.0               | 553.4            | 18.9     | 726.3             | 13.8               | 2,619.3                  | 2,617.7                   | 5,237.0   |
| 2005                              | 1.3               | 3,783.5                  | 177.8               | 1,048.1          | 19.2     | 1,245.1           | 55.4               | 5,085.3                  | 3,032.8                   | 8,118.1   |
| 2006                              | 0.1               | 3,779.8                  | 155.9               | 720.7            | 17.1     | 893.7             | 56.6               | 4,730.1                  | 3,381.9                   | 8,112.1   |
| 2007                              | 1.8               | 3,632.5                  | 158.0               | 909.7            | 12.1     | 1,079.8           | 69.1               | 4,783.2                  | 3,611.8                   | 8,395.0   |
| 2008                              | —                 | 4,077.1                  | 164.9               | 1,009.2          | 6.5      | 1,180.6           | 95.3               | 5,353.0                  | 3,685.4                   | 9,038.4   |
| 2009                              | —                 | 3,686.6                  | 84.8                | 895.2            | 9.6      | 989.5             | 48.0               | 4,724.0                  | 3,812.7                   | 8,536.7   |
| 2010                              | —                 | 3,445.0                  | 79.7                | 804.0            | 9.1      | 892.7             | 60.7               | 4,398.4                  | 4,320.8                   | 8,719.2   |
| 2011                              | —                 | 3,329.5                  | 105.8               | 837.7            | 7.5      | 951.0             | 70.8               | 4,351.3                  | 4,621.2                   | 8,972.4   |
| 2012                              | —                 | 2,753.9                  | 72.2                | 628.7            | 2.6      | 703.5             | 65.8               | 3,523.2                  | 4,871.0                   | 8,394.3   |
| 2013                              | —                 | 3,038.0                  | 91.4                | 831.7            | 3.9      | 927.0             | 84.1               | 4,049.2                  | 4,962.4                   | 9,011.5   |
| 2014                              | —                 | 3,309.5                  | 110.4               | 1,078.5          | 6.6      | 1,195.5           | 83.0               | 4,588.0                  | 4,846.5                   | 9,434.5   |
| 2015                              | —                 | 2,749.6                  | 52.8                | 666.5            | 2.8      | 722.1             | 100.5              | 3,572.1                  | 4,810.8                   | 8,382.9   |
| 2016                              | —                 | 2,415.0                  | 41.1                | 633.9            | 2.2      | 677.2             | 68.5               | 3,160.7                  | 5,258.1                   | 8,418.8   |
| 2017                              | —                 | 2,506.9                  | 44.0                | 734.0            | 1.2      | 779.0             | 76.2               | 3,362.3                  | 5,078.0                   | 8,440.3   |
| 2018                              | —                 | 2,677.8                  | 53.0                | 935.2            | 1.7      | 990.0             | R 102.5            | R 3,770.3                | 5,426.8                   | R 9,197.1 |
| 2019                              | —                 | 2,684.6                  | 56.5                | 829.9            | 2.5      | 888.9             | R 101.2            | R 3,674.7                | 5,273.1                   | R 8,947.8 |
| 2020                              | —                 | 2,509.6                  | 43.8                | 635.6            | 1.6      | 680.9             | 67.6               | 3,258.2                  | 5,831.5                   | 9,089.6   |

<sup>a</sup> Beginning in 2008, consumption data are no longer collected and are assumed to be zero.  
<sup>b</sup> Includes supplemental gaseous fuels that are commingled with natural gas.  
<sup>c</sup> Hydrocarbon gas liquids, assumed to be propane only.  
<sup>d</sup> Wood and wood-derived fuels.  
<sup>e</sup> There are no direct fuel costs for geothermal or solar energy.

Where shown, R = Revised data, — = No consumption, and (s) = Value less than 0.05 million dollars.  
 Note: Expenditure totals may not equal sum of components due to independent rounding.  
 Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.  
 Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

**M I C H I G A N** Table ET4. Commercial Sector Energy Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan

| Year                              | Primary Energy |                          |                     |                  |          |                             |                   |         |                        | Electricity Retail Sales | Total Energy <sup>f,g,h</sup> |                               |
|-----------------------------------|----------------|--------------------------|---------------------|------------------|----------|-----------------------------|-------------------|---------|------------------------|--------------------------|-------------------------------|-------------------------------|
|                                   | Coal           | Natural Gas <sup>a</sup> | Petroleum           |                  |          |                             |                   | Biomass | Total <sup>f,g,h</sup> |                          |                               |                               |
|                                   |                |                          | Distillate Fuel Oil | HGL <sup>b</sup> | Kerosene | Motor Gasoline <sup>c</sup> | Residual Fuel Oil |         |                        |                          |                               | Wood and Waste <sup>e,f</sup> |
| Prices in Dollars per Million Btu |                |                          |                     |                  |          |                             |                   |         |                        |                          |                               |                               |
| 1970                              | 0.53           | 0.83                     | 1.05                | 1.37             | 0.74     | 2.71                        | 0.64              | 1.22    | 0.57                   | 0.88                     | 7.12                          | 2.14                          |
| 1975                              | 1.49           | 1.45                     | 2.33                | 2.42             | 2.44     | 4.72                        | 1.97              | 2.69    | 1.12                   | 1.62                     | 11.41                         | 3.40                          |
| 1980                              | 1.82           | 3.13                     | 6.53                | 4.94             | 6.14     | 10.09                       | 3.97              | 6.91    | 2.87                   | 3.52                     | 17.60                         | 6.37                          |
| 1985                              | 2.00           | 5.61                     | 6.30                | 8.12             | 8.47     | 9.10                        | 4.39              | 6.78    | 3.24                   | 5.65                     | 23.36                         | 10.09                         |
| 1990                              | 1.77           | 4.44                     | 5.63                | 9.19             | 9.53     | 8.78                        | 3.15              | 6.74    | 2.34                   | 4.57                     | 24.21                         | 10.07                         |
| 1995                              | 1.71           | 4.28                     | 4.48                | 7.78             | 8.79     | 8.47                        | 2.57              | 5.52    | 1.37                   | 4.25                     | 23.27                         | 10.50                         |
| 2000                              | 1.61           | 4.63                     | 7.42                | 11.06            | 9.38     | 11.90                       | 3.70              | 8.76    | 1.41                   | 4.86                     | 23.36                         | 11.75                         |
| 2005                              | 2.80           | 9.24                     | 14.44               | 16.32            | 15.49    | 17.69                       | 6.70              | 15.27   | 3.58                   | 9.38                     | 22.98                         | 14.90                         |
| 2006                              | 2.87           | 10.56                    | 16.66               | 18.12            | 19.69    | 19.99                       | 7.89              | 17.25   | 3.30                   | 10.81                    | 24.94                         | 16.97                         |
| 2007                              | 2.96           | 9.80                     | 18.37               | 19.57            | 22.33    | 22.32                       | —                 | 18.95   | 3.80                   | 10.02                    | 25.72                         | 16.65                         |
| 2008                              | 4.61           | 10.41                    | 24.66               | 23.30            | 23.47    | 25.57                       | 12.41             | 23.80   | 4.38                   | 10.83                    | 26.89                         | 17.30                         |
| 2009                              | 5.95           | 9.18                     | 14.68               | 18.64            | 23.70    | 18.58                       | 7.98              | 15.83   | 2.67                   | 9.31                     | 27.09                         | 16.52                         |
| 2010                              | 5.07           | 8.81                     | 18.49               | 19.61            | 25.17    | 22.04                       | 11.66             | 18.65   | 2.95                   | 9.11                     | 28.76                         | 17.50                         |
| 2011                              | 5.04           | 9.02                     | 24.65               | 22.93            | 28.49    | 28.03                       | 15.63             | 23.88   | 3.26                   | 9.63                     | 30.28                         | 18.20                         |
| 2012                              | 5.37           | 8.21                     | 24.51               | 16.88            | 29.88    | 28.62                       | 16.91             | 22.34   | 2.77                   | 8.85                     | 32.05                         | 19.11                         |
| 2013                              | 5.14           | 7.66                     | 24.68               | 17.98            | 30.54    | 27.92                       | 16.68             | 22.75   | 2.99                   | 8.42                     | 32.43                         | 17.99                         |
| 2014                              | 5.10           | 8.13                     | 23.28               | 20.20            | 32.87    | 26.69                       | 15.95             | 24.96   | 3.18                   | 9.98                     | 31.86                         | 17.92                         |
| 2015                              | 4.42           | 7.27                     | 13.83               | 11.30            | 16.97    | 19.16                       | 10.27             | 16.09   | 3.23                   | 8.02                     | 30.93                         | 17.02                         |
| 2016                              | 4.27           | 6.62                     | 11.25               | 10.51            | 13.53    | 17.04                       | 7.32              | 14.02   | 2.19                   | 7.22                     | 31.17                         | 16.97                         |
| 2017                              | —              | 6.71                     | 14.02               | 14.10            | 16.92    | 19.13                       | 9.80              | 16.42   | 2.37                   | 7.64                     | 32.25                         | 17.38                         |
| 2018                              | —              | 6.60                     | 17.15               | 14.63            | 26.07    | 21.21                       | 11.12             | 18.64   | 2.78                   | 7.65                     | 32.67                         | 17.16                         |
| 2019                              | —              | 6.44                     | 15.69               | 11.65            | 22.82    | 20.21                       | —                 | 17.01   | 4.79                   | 7.53                     | 33.39                         | 17.13                         |
| 2020                              | —              | 6.47                     | 10.60               | 10.77            | 14.82    | 16.59                       | —                 | 13.32   | 4.93                   | 7.28                     | 34.32                         | 17.58                         |
| Expenditures in Million Dollars   |                |                          |                     |                  |          |                             |                   |         |                        |                          |                               |                               |
| 1970                              | 4.8            | 111.4                    | 21.4                | 2.3              | 1.7      | 11.4                        | 2.2               | 39.1    | (s)                    | 155.3                    | 316.4                         | 471.7                         |
| 1975                              | 9.8            | 269.8                    | 48.7                | 4.8              | 3.1      | 23.7                        | 4.8               | 85.1    | 0.1                    | 364.7                    | 568.1                         | 932.8                         |
| 1980                              | 10.8           | 606.7                    | 118.8               | 6.3              | 0.5      | 43.6                        | 5.6               | 174.9   | 0.5                    | 792.9                    | 1,006.9                       | 1,799.7                       |
| 1985                              | 9.6            | 905.1                    | 89.9                | 13.6             | 0.6      | 33.4                        | 7.6               | 145.1   | 0.6                    | 1,060.7                  | 1,468.2                       | 2,528.8                       |
| 1990                              | 9.4            | 738.5                    | 65.9                | 22.8             | 1.0      | 35.5                        | 1.4               | 126.6   | 4.4                    | 879.3                    | 1,815.9                       | 2,695.2                       |
| 1995                              | 9.3            | 864.6                    | 42.7                | 23.7             | 5.1      | 3.4                         | 0.1               | 75.0    | 4.4                    | 953.3                    | 2,552.9                       | 3,506.2                       |
| 2000                              | 0.5            | 896.6                    | 68.1                | 46.5             | 1.7      | 9.8                         | 0.1               | 126.3   | 4.7                    | 1,028.1                  | 2,932.2                       | 3,960.2                       |
| 2005                              | 9.6            | 1,638.0                  | 106.4               | 58.5             | 2.5      | 19.1                        | 0.2               | 186.6   | 16.0                   | 1,850.2                  | 3,104.6                       | 4,954.8                       |
| 2006                              | 0.5            | 1,654.4                  | 129.2               | 63.7             | 2.9      | 9.4                         | 0.1               | 205.3   | 15.7                   | 1,875.9                  | 3,344.5                       | 5,220.4                       |
| 2007                              | 11.2           | 1,640.7                  | 119.9               | 68.4             | 1.0      | 9.4                         | —                 | 198.7   | 19.1                   | 1,869.7                  | 3,513.9                       | 5,383.6                       |
| 2008                              | 22.4           | 1,834.7                  | 150.3               | 89.3             | 1.0      | 10.9                        | 4.4               | 255.9   | 23.6                   | 2,136.6                  | 3,575.2                       | 5,711.8                       |
| 2009                              | 38.0           | 1,535.3                  | 115.2               | 49.4             | 1.1      | 12.0                        | 0.6               | 178.2   | 12.4                   | 1,763.9                  | 3,500.7                       | 5,264.7                       |
| 2010                              | 23.3           | 1,363.5                  | 120.6               | 51.7             | 1.9      | 9.2                         | 5.6               | 189.0   | 15.0                   | 1,590.8                  | 3,740.7                       | 5,331.5                       |
| 2011                              | 20.5           | 1,495.0                  | 176.4               | 57.6             | 1.5      | 11.3                        | 9.7               | 256.4   | 16.7                   | 1,788.5                  | 3,989.0                       | 5,777.5                       |
| 2012                              | 11.4           | 1,207.5                  | 165.7               | 48.7             | 0.6      | 11.4                        | 5.0               | 231.3   | 17.4                   | 1,467.7                  | 4,211.4                       | 5,679.0                       |
| 2013                              | 8.9            | 1,341.3                  | 190.2               | 65.1             | 1.2      | 11.4                        | 0.1               | 268.0   | 16.2                   | 1,634.4                  | 4,170.8                       | 5,805.2                       |
| 2014                              | 8.1            | 1,543.5                  | 155.8               | 72.1             | 1.8      | 432.0                       | 0.4               | 662.0   | 18.2                   | 2,231.8                  | 4,060.0                       | 6,291.8                       |
| 2015                              | 5.2            | 1,264.4                  | 106.4               | 31.8             | 0.8      | 193.6                       | 0.2               | 332.8   | 22.1                   | 1,624.4                  | 4,057.3                       | 5,681.7                       |
| 2016                              | 1.5            | 1,094.4                  | 73.3                | 38.3             | 0.8      | 173.7                       | (s)               | 286.2   | 16.8                   | 1,398.9                  | 4,146.8                       | 5,545.6                       |
| 2017                              | —              | 1,141.7                  | 108.0               | 58.0             | 1.0      | 197.9                       | (s)               | 364.9   | 17.1                   | 1,523.7                  | 4,217.0                       | 5,740.7                       |
| 2018                              | —              | 1,246.1                  | 105.8               | 64.5             | 0.8      | 223.0                       | 0.5               | 394.6   | 18.8                   | 1,659.5                  | 4,339.3                       | 5,998.8                       |
| 2019                              | —              | 1,238.2                  | 128.1               | 50.8             | 1.2      | 214.0                       | —                 | 394.1   | 16.6                   | 1,648.9                  | 4,313.0                       | 5,962.0                       |
| 2020                              | —              | 1,100.9                  | 68.1                | 73.8             | 0.9      | 176.9                       | —                 | 319.8   | 12.9                   | 1,433.6                  | 4,156.5                       | 5,590.1                       |

<sup>a</sup> Includes supplemental gaseous fuels that are commingled with natural gas.  
<sup>b</sup> Hydrocarbon gas liquids, assumed to be propane only.  
<sup>c</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline. There is a discontinuity in the expenditure series between 2014 and 2015 because of changes in consumption estimates from the source. See Consumption Technical Notes, Section 4.  
<sup>d</sup> Includes small amounts of petroleum coke not shown separately.  
<sup>e</sup> Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.  
<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of the use of wood and biomass waste beginning in 1989.  
<sup>g</sup> There are no direct fuel costs for hydroelectric, geothermal, solar, or wind energy.

<sup>h</sup> For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline column.  
Where shown, R = Revised data and (s) = Value less than 0.05 million dollars.  
Where shown, — = No consumption, including cases where adjustments were made. See explanation of adjustments in Section 7 of the Technical Notes.  
Notes: Expenditure totals may not equal sum of components due to independent rounding. The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants.  
Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.  
Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

**Table ET5. Industrial Sector Energy Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan**

| Year                              | Primary Energy |            |       |                          |                     |                  |                             |                   |                    |           |                        |           | Electricity Retail Sales | Total Energy <sup>f,g,h</sup> |
|-----------------------------------|----------------|------------|-------|--------------------------|---------------------|------------------|-----------------------------|-------------------|--------------------|-----------|------------------------|-----------|--------------------------|-------------------------------|
|                                   | Coal           |            |       | Natural Gas <sup>a</sup> | Petroleum           |                  |                             |                   |                    | Biomass   | Total <sup>f,g,h</sup> |           |                          |                               |
|                                   | Coking Coal    | Steam Coal | Total |                          | Distillate Fuel Oil | HGL <sup>b</sup> | Motor Gasoline <sup>c</sup> | Residual Fuel Oil | Other <sup>d</sup> |           |                        | Total     |                          |                               |
| Prices in Dollars per Million Btu |                |            |       |                          |                     |                  |                             |                   |                    |           |                        |           |                          |                               |
| 1970                              | 0.55           | 0.53       | 0.54  | 0.53                     | 0.68                | 1.44             | 2.71                        | 0.54              | 1.81               | 1.35      | 1.44                   | 0.71      | 3.74                     | 1.02                          |
| 1975                              | 2.07           | 1.49       | 1.82  | 1.22                     | 2.27                | 2.63             | 4.72                        | 1.98              | 3.41               | 2.90      | 1.44                   | 1.78      | 7.83                     | 2.54                          |
| 1980                              | 2.27           | 1.82       | 2.04  | 2.87                     | 5.56                | 5.38             | 10.09                       | 3.23              | 7.97               | 6.67      | 1.43                   | 3.35      | 13.18                    | 4.81                          |
| 1985                              | 2.08           | 2.00       | 2.03  | 4.95                     | 6.38                | 9.12             | 9.10                        | 4.39              | 9.78               | 8.44      | 1.43                   | 4.65      | 16.75                    | 6.99                          |
| 1990                              | 1.80           | 1.77       | 1.78  | 3.72                     | 5.54                | 10.24            | 8.78                        | 3.15              | 8.02               | 7.71      | 1.00                   | 4.02      | 17.15                    | 6.40                          |
| 1995                              | 1.57           | 1.71       | 1.67  | 3.48                     | 4.67                | 7.91             | 8.47                        | 2.57              | 7.47               | 7.00      | 1.24                   | 3.67      | 15.02                    | 5.81                          |
| 2000                              | 1.66           | 1.61       | 1.64  | 3.76                     | 9.30                | 11.76            | 11.90                       | 3.70              | 8.75               | 9.20      | 1.42                   | 4.41      | 14.93                    | 6.58                          |
| 2005                              | 3.37           | 2.80       | 3.03  | 8.50                     | 15.08               | 17.68            | 17.69                       | 6.70              | 11.56              | 13.68     | 2.71                   | 8.54      | 15.61                    | 10.06                         |
| 2006                              | 3.76           | 2.87       | 3.26  | 9.72                     | 17.22               | 19.59            | 19.99                       | 7.89              | 16.69              | 17.24     | 2.65                   | 9.85      | 17.72                    | 11.64                         |
| 2007                              | 3.70           | 2.96       | 3.27  | 9.26                     | 18.71               | 22.05            | 22.32                       | 8.59              | 17.43              | 18.33     | 2.52                   | 10.12     | 18.96                    | 12.30                         |
| 2008                              | 4.56           | 3.47       | 4.02  | 10.02                    | 25.37               | 26.36            | 25.57                       | 12.41             | 22.38              | 22.92     | 2.84                   | 11.08     | 19.71                    | 13.24                         |
| 2009                              | 5.67           | 4.27       | 5.03  | 9.43                     | 15.02               | 20.42            | 18.58                       | 7.98              | R 19.97            | R 18.27   | 2.66                   | R 10.55   | 20.47                    | R 13.11                       |
| 2010                              | 6.18           | 3.92       | 5.24  | 9.10                     | 18.88               | 20.03            | 22.04                       | 11.66             | R 17.11            | R 18.21   | 2.69                   | 9.61      | 20.75                    | 12.48                         |
| 2011                              | 7.32           | 4.10       | 6.03  | 8.16                     | 25.50               | 23.12            | 28.03                       | 15.63             | R 20.26            | R 22.76   | 2.75                   | 10.09     | 21.46                    | 13.02                         |
| 2012                              | 6.96           | 4.24       | 5.85  | 7.26                     | 25.70               | 16.58            | 28.62                       | 16.91             | R 20.40            | 22.34     | 2.63                   | 9.52      | 22.34                    | R 12.84                       |
| 2013                              | 5.52           | 3.93       | 4.82  | 6.83                     | 25.10               | 17.77            | 27.92                       | 16.68             | R 20.54            | R 22.21   | 2.60                   | 9.23      | 22.61                    | 12.39                         |
| 2014                              | 5.10           | 3.83       | 4.56  | 7.70                     | 23.42               | 20.17            | 26.69                       | 15.95             | R 19.63            | R 21.10   | 3.13                   | R 9.48    | 22.50                    | R 12.61                       |
| 2015                              | 4.75           | 3.44       | 4.27  | 6.39                     | 15.04               | 10.56            | 19.16                       | 10.27             | R 16.30            | R 15.78   | 3.02                   | R 7.90    | 20.59                    | R 10.84                       |
| 2016                              | 3.94           | 3.17       | 3.60  | 5.51                     | 12.10               | 9.71             | 17.04                       | 7.32              | R 12.88            | R 12.84   | 2.88                   | R 6.93    | 20.25                    | R 10.15                       |
| 2017                              | 4.75           | 3.40       | 4.30  | 5.71                     | 14.63               | 13.59            | 19.13                       | 9.80              | R 12.92            | R 14.02   | 2.79                   | R 7.23    | 21.09                    | R 10.49                       |
| 2018                              | 5.14           | 3.48       | 4.66  | 5.71                     | 17.76               | 14.15            | 21.21                       | 11.12             | R 16.35            | R 17.14   | 2.49                   | R 7.84    | 20.81                    | R 10.87                       |
| 2019                              | 5.89           | 3.92       | 5.35  | 5.68                     | 16.73               | 10.94            | 20.21                       | 11.32             | R 15.95            | R 16.24   | 2.55                   | R 7.87    | 20.73                    | R 10.82                       |
| 2020                              | 5.13           | 4.03       | 4.90  | 5.52                     | 12.33               | 9.98             | 16.59                       | 8.38              | 13.73              | 13.42     | 2.11                   | 7.23      | 21.23                    | 10.40                         |
| Expenditures in Million Dollars   |                |            |       |                          |                     |                  |                             |                   |                    |           |                        |           |                          |                               |
| 1970                              | 73.4           | 99.3       | 172.7 | 136.5                    | 33.3                | 4.3              | 39.2                        | 12.0              | 121.7              | 210.6     | 4.5                    | 524.3     | 317.2                    | 841.5                         |
| 1975                              | 290.3          | 158.8      | 449.1 | 362.3                    | 115.9               | 11.2             | 46.9                        | 32.6              | 198.7              | 405.3     | 4.6                    | 1,221.3   | 764.8                    | 1,986.1                       |
| 1980                              | 250.1          | 198.2      | 448.3 | 700.3                    | 155.7               | 49.7             | 51.3                        | 56.3              | 525.9              | 838.9     | 10.8                   | 1,998.3   | 1,367.4                  | 3,365.7                       |
| 1985                              | 149.7          | 195.2      | 344.9 | 884.9                    | 163.4               | 264.8            | 57.0                        | 30.5              | 418.4              | 934.1     | 12.7                   | 2,177.0   | 1,880.0                  | 4,057.0                       |
| 1990                              | 51.3           | 158.6      | 209.9 | 1,041.2                  | 127.7               | 232.9            | 45.0                        | 20.1              | 418.8              | 844.4     | 18.8                   | 2,114.8   | 1,999.1                  | 4,113.9                       |
| 1995                              | 59.1           | 122.8      | 181.9 | 841.7                    | 93.6                | 128.3            | 57.8                        | 3.3               | 434.1              | 717.1     | 39.1                   | 1,779.8   | 1,695.7                  | 3,475.4                       |
| 2000                              | 91.0           | 80.8       | 171.8 | 875.1                    | 219.3               | 118.9            | 65.6                        | 8.4               | 601.7              | 1,014.0   | 42.1                   | 2,102.9   | 1,850.1                  | 3,953.0                       |
| 2005                              | 106.9          | 128.0      | 234.9 | 1,713.7                  | 304.6               | 375.8            | 205.5                       | 37.3              | 660.8              | 1,584.1   | 73.9                   | 3,606.7   | 1,796.7                  | 5,403.4                       |
| 2006                              | 133.2          | 127.9      | 261.1 | 1,741.0                  | 301.6               | 292.4            | 246.5                       | 35.1              | 834.5              | 1,710.2   | 67.4                   | 3,779.6   | 1,997.7                  | 5,777.3                       |
| 2007                              | 116.9          | 130.0      | 246.9 | 1,291.0                  | 341.0               | 303.0            | 254.5                       | 50.1              | 908.8              | 1,857.5   | 64.5                   | 3,459.9   | 2,125.0                  | 5,584.9                       |
| 2008                              | 188.6          | 143.7      | 332.3 | 1,335.3                  | 500.4               | 86.7             | 245.8                       | 74.3              | 920.3              | 1,827.5   | 75.1                   | 3,570.2   | 2,117.1                  | 5,687.3                       |
| 2009                              | 144.7          | 92.0       | 236.6 | 1,132.2                  | 267.9               | 64.3             | 136.4                       | 16.2              | R 820.2            | R 1,305.0 | 53.2                   | R 2,727.0 | 1,844.8                  | R 4,571.9                     |
| 2010                              | 243.3          | 108.8      | 352.0 | 1,223.1                  | 351.3               | R 78.8           | 140.0                       | 10.8              | R 588.8            | R 1,169.7 | 73.8                   | R 2,818.7 | 2,109.9                  | R 4,928.6                     |
| 2011                              | 291.7          | 110.1      | 401.8 | 1,154.9                  | 472.1               | R 114.3          | 171.1                       | 20.9              | R 611.5            | R 1,389.8 | 85.4                   | R 3,032.0 | 2,235.9                  | R 5,268.0                     |
| 2012                              | 246.4          | 103.3      | 349.8 | 1,081.0                  | 418.1               | R 86.4           | 190.6                       | 19.8              | R 633.9            | R 1,348.7 | 82.9                   | R 2,862.4 | 2,340.0                  | R 5,202.3                     |
| 2013                              | 209.9          | 116.1      | 326.0 | 1,158.9                  | 480.2               | R 109.1          | 195.6                       | 14.3              | R 774.0            | R 1,573.2 | 84.6                   | R 3,142.8 | 2,386.9                  | R 5,529.7                     |
| 2014                              | 183.1          | 102.8      | 286.0 | 1,378.8                  | 428.2               | R 117.4          | 129.5                       | 7.2               | R 823.5            | R 1,505.8 | 99.9                   | R 3,270.5 | 2,457.3                  | R 5,727.8                     |
| 2015                              | 183.1          | 77.6       | 260.7 | 1,099.9                  | 329.3               | R 61.5           | 151.0                       | 4.6               | R 710.3            | R 1,256.7 | 90.0                   | R 2,707.3 | 2,123.7                  | R 4,831.0                     |
| 2016                              | 84.4           | 54.9       | 139.3 | 963.4                    | 272.5               | R 58.4           | 137.6                       | 1.1               | R 603.2            | R 1,072.8 | 83.3                   | R 2,258.8 | 2,107.2                  | R 4,366.1                     |
| 2017                              | 169.0          | 60.8       | 229.8 | 985.8                    | 294.7               | R 70.5           | 155.8                       | 1.1               | R 595.7            | R 1,117.6 | 77.4                   | R 2,410.7 | 2,166.6                  | R 4,577.3                     |
| 2018                              | 196.2          | 54.0       | 250.1 | 1,023.7                  | 383.9               | R 64.3           | 176.1                       | 1.8               | R 685.1            | R 1,311.2 | 74.0                   | R 2,659.1 | 2,154.6                  | R 4,813.7                     |
| 2019                              | 213.5          | 54.0       | 267.5 | 1,012.1                  | 359.9               | R 60.7           | 166.0                       | 1.6               | R 713.7            | R 1,301.9 | 74.4                   | R 2,656.0 | 2,083.3                  | R 4,739.3                     |
| 2020                              | 127.3          | 26.9       | 154.1 | 869.6                    | 236.0               | 54.9             | 136.8                       | 1.3               | 619.7              | 1,048.7   | 57.6                   | 2,130.0   | 1,827.7                  | 3,957.7                       |

<sup>a</sup> Includes supplemental gaseous fuels that are commingled with natural gas.  
<sup>b</sup> Hydrocarbon gas liquids, include natural gas liquids and refinery olefins.  
<sup>c</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline. There is a discontinuity in the expenditure series between 2014 and 2015 because of changes in consumption estimates from the source. See Consumption Technical Notes, Section 4.  
<sup>d</sup> Includes asphalt and road oil, kerosene, lubricants, petroleum coke, and the "other petroleum products" category. See Technical Notes, Section 4.  
<sup>e</sup> Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.  
<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of the use of wood and biomass waste beginning in 1989.

<sup>g</sup> There are no direct fuel costs for hydroelectric, geothermal, solar, or wind energy.  
<sup>h</sup> For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline column. Where shown, R = Revised data and (s) = Value less than 0.05 million dollars.  
Where shown, — = No consumption, including cases where adjustments were made. See explanation of adjustments in Section 7 of the Technical Notes.  
Notes: Expenditure totals may not equal sum of components due to independent rounding. The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants.  
Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.  
Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

**Table ET6. Transportation Sector Energy Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan**

| Year                              | Primary Energy |                          |                   |                                  |                  |                       |            |                             |                   |                    | Electricity Retail Sales | Total Energy <sup>f</sup> |         |
|-----------------------------------|----------------|--------------------------|-------------------|----------------------------------|------------------|-----------------------|------------|-----------------------------|-------------------|--------------------|--------------------------|---------------------------|---------|
|                                   | Coal           | Natural Gas <sup>a</sup> | Petroleum         |                                  |                  |                       |            |                             |                   | Total <sup>f</sup> |                          |                           |         |
|                                   |                |                          | Aviation Gasoline | Distillate Fuel Oil <sup>b</sup> | HGL <sup>c</sup> | Jet Fuel <sup>d</sup> | Lubricants | Motor Gasoline <sup>e</sup> | Residual Fuel Oil |                    |                          |                           | Total   |
| Prices in Dollars per Million Btu |                |                          |                   |                                  |                  |                       |            |                             |                   |                    |                          |                           |         |
| 1970                              | 0.53           | —                        | 2.17              | 1.27                             | 1.37             | 0.74                  | 5.08       | 2.71                        | 0.57              | 2.50               | 2.50                     | —                         | 2.50    |
| 1975                              | 1.49           | —                        | 3.45              | 2.77                             | 2.42             | 2.08                  | 7.48       | 4.72                        | 1.76              | 4.46               | 4.46                     | —                         | 4.46    |
| 1980                              | —              | —                        | 9.02              | 7.19                             | 4.94             | 6.38                  | 14.36      | 10.09                       | 3.49              | 9.63               | 9.63                     | —                         | 9.63    |
| 1985                              | —              | —                        | 9.99              | 8.55                             | 9.88             | 6.09                  | 18.18      | 9.10                        | 4.38              | 8.97               | 8.97                     | —                         | 8.97    |
| 1990                              | —              | 1.94                     | 9.32              | 8.24                             | 11.00            | 5.65                  | 20.61      | 8.78                        | 2.42              | 8.61               | 8.61                     | —                         | 8.61    |
| 1995                              | —              | 2.96                     | 8.36              | 7.68                             | 12.14            | 3.93                  | 21.75      | 8.47                        | 2.66              | 8.21               | 8.21                     | 21.13                     | 8.21    |
| 2000                              | —              | 6.82                     | 10.87             | 10.36                            | 15.36            | 6.51                  | 23.20      | 11.90                       | 3.23              | 11.50              | 11.50                    | 19.41                     | 11.50   |
| 2005                              | —              | 11.48                    | 18.56             | 17.01                            | 20.79            | 13.03                 | 35.22      | 17.69                       | 6.89              | 17.62              | 17.62                    | 38.32                     | 17.62   |
| 2006                              | —              | 10.80                    | 22.31             | 19.10                            | 22.43            | 14.94                 | 43.88      | 19.99                       | 7.46              | 19.90              | 19.90                    | 29.48                     | 19.90   |
| 2007                              | —              | 5.96                     | 23.70             | 20.33                            | 24.62            | 16.47                 | 47.16      | 22.32                       | 7.90              | 21.96              | 21.96                    | 28.60                     | 21.96   |
| 2008                              | —              | 7.75                     | 27.23             | 26.83                            | 28.57            | 22.76                 | 55.12      | 25.57                       | 10.46             | 25.96              | 25.96                    | 34.66                     | 25.96   |
| 2009                              | —              | 3.99                     | 20.32             | 17.04                            | 23.40            | 12.60                 | 56.07      | 18.58                       | 7.59              | 18.47              | 18.46                    | 31.62                     | 18.46   |
| 2010                              | —              | 5.11                     | 25.19             | 21.70                            | 25.72            | 16.23                 | 58.80      | 22.04                       | 8.07              | R 21.77            | R 21.77                  | 31.20                     | R 21.77 |
| 2011                              | —              | 13.06                    | 31.64             | 27.85                            | 28.95            | 22.39                 | 69.54      | 28.03                       | 11.02             | R 27.79            | R 27.78                  | 25.00                     | R 27.78 |
| 2012                              | —              | 12.09                    | 33.04             | 28.57                            | 21.78            | 22.99                 | 72.11      | 28.62                       | 12.27             | R 28.41            | R 28.40                  | 23.69                     | R 28.40 |
| 2013                              | —              | 7.66                     | 32.71             | 28.62                            | 23.09            | 21.97                 | 69.42      | 27.92                       | 11.78             | R 27.84            | R 27.83                  | 25.69                     | R 27.83 |
| 2014                              | —              | 8.13                     | 33.16             | 27.91                            | 25.71            | 20.70                 | 69.44      | 26.69                       | 11.38             | R 26.73            | R 26.72                  | 27.62                     | R 26.72 |
| 2015                              | —              | 7.27                     | 24.86             | 19.36                            | 15.17            | 11.88                 | 67.28      | 19.16                       | 6.13              | R 18.93            | R 18.92                  | 33.53                     | R 18.92 |
| 2016                              | —              | 5.20                     | 21.62             | 16.58                            | 14.24            | 9.72                  | 65.78      | 17.04                       | 4.45              | R 16.63            | R 16.63                  | 34.10                     | R 16.63 |
| 2017                              | —              | —                        | 24.13             | 19.06                            | 19.73            | 12.27                 | 67.25      | 19.13                       | 6.29              | R 18.75            | R 18.75                  | 35.14                     | R 18.75 |
| 2018                              | —              | —                        | 27.04             | 22.82                            | 20.35            | 15.64                 | 72.37      | 21.21                       | 7.86              | R 21.28            | R 21.28                  | 31.53                     | R 21.28 |
| 2019                              | —              | R 6.44                   | 25.57             | 21.69                            | 16.82            | 14.37                 | 74.92      | 20.21                       | 7.41              | R 20.21            | R 20.21                  | 30.94                     | R 20.21 |
| 2020                              | —              | 6.47                     | 22.34             | 17.81                            | 15.78            | 9.10                  | 75.34      | 16.59                       | 5.40              | 16.70              | 16.70                    | 33.37                     | 16.70   |

  

| Expenditures in Million Dollars |     |       |      |         |        |           |         |            |      |            |            |     |            |
|---------------------------------|-----|-------|------|---------|--------|-----------|---------|------------|------|------------|------------|-----|------------|
| 1970                            | 0.3 | —     | 7.9  | 46.9    | 0.3    | 30.4      | 40.8    | 1,327.5    | 1.5  | 1,455.3    | 1,455.6    | —   | 1,455.6    |
| 1975                            | 0.1 | —     | 6.0  | 144.2   | 0.9    | 65.8      | 60.0    | 2,615.8    | 4.7  | 2,897.4    | 2,897.5    | —   | 2,897.5    |
| 1980                            | —   | —     | 22.2 | 408.1   | 2.4    | 236.9     | 128.6   | 5,049.8    | 5.1  | 5,853.1    | 5,853.1    | —   | 5,853.1    |
| 1985                            | —   | —     | 10.1 | 614.1   | 11.0   | 223.6     | 148.2   | 4,376.0    | 2.7  | 5,385.8    | 5,417.7    | —   | 5,417.7    |
| 1990                            | —   | (s)   | 10.1 | 634.1   | 12.0   | 319.7     | 189.1   | 4,527.8    | 1.4  | 5,694.1    | 5,730.2    | —   | 5,730.2    |
| 1995                            | —   | 0.2   | 9.8  | 809.9   | 11.2   | 196.3     | 190.4   | 4,813.9    | 1.6  | 6,033.0    | 6,033.3    | 0.3 | 6,033.6    |
| 2000                            | —   | 1.6   | 11.2 | 1,321.7 | 15.7   | 266.3     | 216.9   | 7,234.7    | 1.0  | 9,067.5    | 9,069.1    | 0.3 | 9,069.4    |
| 2005                            | —   | 1.2   | 7.9  | 2,301.2 | 40.6   | 253.5     | 277.8   | 10,759.7   | 8.5  | 13,649.1   | 13,650.4   | 0.7 | 13,651.0   |
| 2006                            | —   | 1.2   | 7.6  | 2,634.3 | 19.9   | 349.4     | 337.2   | 11,986.5   | 10.9 | 15,345.7   | 15,346.8   | 0.4 | 15,347.2   |
| 2007                            | —   | 0.6   | 9.0  | 2,754.5 | 26.3   | 492.3     | 374.2   | 13,053.2   | 14.3 | 16,723.8   | 16,724.4   | 0.5 | 16,724.9   |
| 2008                            | —   | 1.3   | 10.1 | 3,218.2 | 31.7   | 598.8     | 406.1   | 14,286.3   | 14.4 | 18,565.7   | 18,566.9   | 0.6 | 18,567.5   |
| 2009                            | —   | 1.0   | 6.4  | 1,969.8 | 20.4   | 305.0     | 371.4   | 10,227.8   | 6.4  | 12,907.1   | 12,908.1   | 0.6 | 12,908.7   |
| 2010                            | —   | 1.3   | 15.0 | 2,651.6 | R 4.1  | R 789.8   | 242.5   | 11,960.6   | 12.5 | R 15,676.1 | R 15,677.5 | 0.5 | R 15,678.0 |
| 2011                            | —   | 4.4   | 17.7 | 3,414.9 | R 4.6  | R 1,116.9 | 274.0   | 14,844.8   | 22.7 | R 19,695.6 | R 19,700.0 | 0.5 | R 19,700.5 |
| 2012                            | —   | 4.1   | 17.1 | 3,459.9 | R 2.8  | R 1,128.4 | 261.0   | 15,017.2   | 17.4 | R 19,903.7 | R 19,907.8 | 0.6 | R 19,908.4 |
| 2013                            | —   | 2.7   | 15.3 | 3,818.5 | R 3.6  | R 1,090.1 | 276.2   | 15,200.8   | 17.8 | R 20,422.3 | R 20,425.0 | 0.5 | R 20,425.5 |
| 2014                            | —   | 3.7   | 11.0 | 3,819.6 | R 4.0  | R 1,028.3 | R 280.1 | 14,172.3   | 13.0 | R 19,328.2 | R 19,331.9 | 0.4 | R 19,332.3 |
| 2015                            | —   | 2.3   | 9.3  | 2,690.2 | R 3.3  | R 659.9   | 301.1   | 10,449.6   | 6.2  | R 14,119.6 | R 14,121.9 | 0.5 | R 14,122.4 |
| 2016                            | —   | 2.2   | 8.1  | 2,297.2 | R 3.6  | R 551.8   | 280.3   | 9,462.8    | 12.8 | R 12,616.6 | R 12,618.8 | 0.5 | R 12,619.3 |
| 2017                            | —   | —     | 9.1  | 2,433.4 | R 10.0 | R 715.6   | 253.8   | 10,498.9   | 26.8 | R 13,947.6 | R 13,947.6 | 0.7 | R 13,948.3 |
| 2018                            | —   | —     | 11.4 | 3,386.4 | R 7.4  | R 891.0   | 274.7   | 11,661.8   | 38.6 | R 16,271.3 | R 16,271.3 | 0.7 | R 16,272.0 |
| 2019                            | —   | R (s) | 11.3 | 3,028.0 | R 6.4  | R 814.1   | 264.5   | R 10,952.0 | 41.4 | R 15,117.7 | R 15,117.7 | 0.7 | R 15,118.4 |
| 2020                            | —   | (s)   | 8.6  | 2,264.8 | 3.6    | 268.6     | 226.4   | 7,639.1    | 21.2 | 10,432.3   | 10,432.3   | 0.5 | 10,432.8   |

<sup>a</sup> Transportation use of natural gas to operate pipelines and, since 1990, also includes vehicle fuel.

<sup>b</sup> Beginning in 2009, includes biodiesel blended into distillate fuel oil.

<sup>c</sup> Hydrocarbon gas liquids, assumed to be propane only.

<sup>d</sup> Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Industrial Sector, Other Petroleum."

<sup>e</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.

<sup>f</sup> For 1981 through 1992, includes fuel ethanol blended into motor gasoline that is not included in the motor gasoline

column.

Where shown, R = Revised data and (s) = Value less than 0.05 million dollars.

Where shown, — = No consumption, including cases where adjustments were made. See explanation of adjustments in Section 7 of the Technical Notes.

Note: Expenditure totals may not equal sum of components due to independent rounding.

Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

**Table ET7. Electric Power Sector Price and Expenditure Estimates, Selected Years, 1970-2020, Michigan**

| Year                              | Coal    | Natural Gas <sup>a</sup> | Petroleum           |                |                   |       | Nuclear Fuel | Biomass                     | Electricity Imports <sup>c</sup> | Total Energy <sup>d</sup> |
|-----------------------------------|---------|--------------------------|---------------------|----------------|-------------------|-------|--------------|-----------------------------|----------------------------------|---------------------------|
|                                   |         |                          | Distillate Fuel Oil | Petroleum Coke | Residual Fuel Oil | Total |              | Wood and Waste <sup>b</sup> |                                  |                           |
| Prices in Dollars per Million Btu |         |                          |                     |                |                   |       |              |                             |                                  |                           |
| 1970                              | 0.36    | 0.42                     | 0.65                | —              | 0.63              | 0.63  | 0.36         | —                           | 1.92                             | 0.39                      |
| 1975                              | 0.92    | 1.28                     | 2.05                | —              | 1.97              | 1.98  | 0.28         | —                           | 3.89                             | 1.04                      |
| 1980                              | 1.56    | 2.74                     | 6.07                | —              | 4.10              | 4.24  | 0.49         | —                           | 6.94                             | 1.71                      |
| 1985                              | 1.88    | 4.43                     | 5.60                | —              | 4.64              | 5.15  | 0.80         | —                           | 9.34                             | 1.74                      |
| 1990                              | 1.60    | 2.11                     | 4.60                | —              | 2.89              | 3.26  | 0.79         | 0.46                        | 8.37                             | 1.45                      |
| 1995                              | 1.45    | 2.00                     | 3.90                | —              | 2.62              | 2.94  | 0.65         | 0.70                        | 6.21                             | 1.40                      |
| 2000                              | 1.30    | 3.90                     | 5.91                | 0.65           | 3.35              | 3.77  | 0.61         | 0.67                        | 16.78                            | 1.56                      |
| 2005                              | 1.55    | 5.51                     | 11.78               | 1.21           | 6.83              | 7.35  | 0.43         | 2.28                        | 16.53                            | 1.80                      |
| 2006                              | 1.64    | 5.95                     | 14.40               | 1.31           | 7.20              | 8.38  | 0.40         | 2.32                        | 17.32                            | 1.79                      |
| 2007                              | 1.69    | 6.53                     | 16.41               | 1.78           | 7.55              | 8.60  | 0.47         | 2.42                        | 18.25                            | 1.99                      |
| 2008                              | 1.93    | 8.62                     | 24.38               | 1.46           | 10.59             | 13.01 | 0.51         | 2.66                        | 18.28                            | 2.42                      |
| 2009                              | 2.03    | 4.48                     | 12.98               | 1.91           | 7.50              | 7.68  | 0.66         | 2.20                        | 12.10                            | 2.20                      |
| 2010                              | 2.09    | 4.90                     | 16.76               | 1.70           | 8.93              | 9.63  | 0.78         | 2.40                        | 13.31                            | 2.25                      |
| 2011                              | 2.66    | 4.69                     | 22.17               | 4.01           | 13.28             | 15.80 | 0.76         | 2.44                        | 11.53                            | 2.44                      |
| 2012                              | 2.78    | 3.16                     | 22.67               | 4.10           | 15.06             | 14.55 | 0.79         | 2.21                        | 9.51                             | 2.42                      |
| 2013                              | 2.66    | 4.49                     | 22.75               | 1.43           | 14.07             | 7.32  | 0.80         | 2.26                        | 11.49                            | 2.51                      |
| 2014                              | 2.60    | 6.57                     | 21.30               | 1.45           | 12.93             | 3.98  | 0.70         | 2.73                        | 13.31                            | 2.67                      |
| 2015                              | 2.39    | 3.12                     | 12.86               | 1.76           | 6.72              | 3.11  | 0.78         | 2.62                        | 10.54                            | 2.28                      |
| 2016                              | 2.25    | 2.71                     | 10.50               | 1.30           | 5.76              | 2.57  | 0.73         | 2.54                        | 8.74                             | 2.06                      |
| 2017                              | 2.17    | 3.18                     | 13.01               | 1.44           | 7.56              | 2.38  | 0.68         | 2.40                        | 9.18                             | 2.04                      |
| 2018                              | 2.12    | 3.25                     | 15.72               | 1.48           | 9.07              | 2.61  | 0.63         | 2.22                        | 10.74                            | 2.15                      |
| 2019                              | 2.09    | <sup>R</sup> 2.60        | 13.95               | 1.54           | 8.71              | 2.65  | 0.58         | 2.33                        | 9.20                             | 1.90                      |
| 2020                              | 2.03    | 2.06                     | 9.67                | 1.19           | 6.42              | 1.97  | 0.51         | 1.80                        | 8.38                             | 1.67                      |
| Expenditures in Million Dollars   |         |                          |                     |                |                   |       |              |                             |                                  |                           |
| 1970                              | 173.4   | 27.2                     | 3.6                 | —              | 17.9              | 21.5  | 1.5          | —                           | 6.7                              | 230.3                     |
| 1975                              | 456.8   | 60.7                     | 18.4                | —              | 174.9             | 193.2 | 22.2         | —                           | 24.9                             | 757.9                     |
| 1980                              | 832.3   | 53.2                     | 27.5                | —              | 248.2             | 275.7 | 85.1         | —                           | 138.9                            | 1,385.2                   |
| 1985                              | 1,138.3 | 20.6                     | 21.1                | —              | 15.2              | 36.3  | 115.0        | —                           | 15.5                             | 1,325.6                   |
| 1990                              | 1,061.0 | 145.6                    | 9.1                 | —              | 20.9              | 30.0  | 179.7        | 4.2                         | 1.1                              | 1,421.6                   |
| 1995                              | 972.6   | 209.6                    | 9.3                 | —              | 18.1              | 27.4  | 167.9        | 13.8                        | 122.9                            | 1,514.3                   |
| 2000                              | 905.7   | 491.2                    | 12.9                | (s)            | 35.4              | 48.3  | 119.6        | 17.1                        | 76.1                             | 1,658.1                   |
| 2005                              | 1,113.7 | 731.4                    | 25.5                | 1.2            | 47.2              | 73.9  | 146.7        | 53.0                        | 94.8                             | 2,213.4                   |
| 2006                              | 1,140.4 | 656.5                    | 25.2                | 1.6            | 10.5              | 37.3  | 122.2        | 53.8                        | 21.1                             | 2,031.2                   |
| 2007                              | 1,219.5 | 819.7                    | 28.0                | 2.6            | 25.1              | 55.6  | 154.0        | 53.5                        | 104.7                            | 2,407.0                   |
| 2008                              | 1,377.3 | 817.7                    | 40.5                | 2.0            | 14.3              | 56.7  | 166.9        | 60.5                        | 393.2                            | 2,872.4                   |
| 2009                              | 1,385.4 | 381.3                    | 19.3                | 2.6            | 6.0               | 27.8  | 150.3        | 48.5                        | 312.9                            | 2,306.2                   |
| 2010                              | 1,418.0 | 562.8                    | 24.7                | 2.1            | 6.6               | 33.4  | 242.0        | 52.6                        | 277.8                            | 2,586.7                   |
| 2011                              | 1,652.1 | 536.8                    | 41.0                | 3.8            | 3.7               | 48.5  | 260.4        | 56.0                        | 178.0                            | 2,731.9                   |
| 2012                              | 1,556.6 | 581.8                    | 29.1                | 4.2            | 4.8               | 38.1  | 231.8        | 49.4                        | 148.4                            | 2,606.0                   |
| 2013                              | 1,566.7 | 507.0                    | 29.2                | 5.1            | 2.5               | 36.8  | 243.2        | 52.5                        | 236.4                            | 2,642.6                   |
| 2014                              | 1,441.1 | 750.3                    | 32.0                | 15.4           | 1.3               | 48.7  | 227.6        | 67.6                        | 280.4                            | 2,815.7                   |
| 2015                              | 1,325.7 | 533.5                    | 14.4                | 14.8           | 0.9               | 30.1  | 240.5        | 55.6                        | 305.0                            | 2,490.5                   |
| 2016                              | 974.2   | 682.2                    | 12.9                | 10.6           | 1.0               | 24.5  | 241.2        | 55.3                        | 233.6                            | 2,211.0                   |
| 2017                              | 969.8   | 702.3                    | 13.4                | 18.8           | 1.7               | 33.9  | 231.7        | 54.5                        | 179.7                            | 2,172.1                   |
| 2018                              | 961.4   | 864.7                    | 19.1                | 21.7           | 1.0               | 41.7  | 201.6        | 49.9                        | 239.6                            | 2,359.0                   |
| 2019                              | 832.7   | <sup>R</sup> 759.2       | 13.1                | 15.4           | 0.8               | 29.3  | 200.0        | 51.2                        | 189.9                            | <sup>R</sup> 2,062.3      |
| 2020                              | 614.1   | 653.0                    | 9.6                 | 12.3           | 0.7               | 22.6  | 162.3        | 36.3                        | 165.6                            | 1,653.9                   |

<sup>a</sup> Includes supplemental gaseous fuels that are commingled with natural gas.

<sup>b</sup> Wood, wood-derived fuels, and biomass waste. Prior to 2001, includes non-biomass waste.

<sup>c</sup> Electricity imported from Canada and Mexico.

<sup>d</sup> There are no direct fuel costs for hydroelectric, geothermal, solar, or wind energy.

Where shown, R = Revised data, — = No consumption, and (s) = Value less than 0.05 million dollars.

Notes: Expenditure totals may not equal sum of components due to independent rounding. · The electric power

sector consists of electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. · Through 1988, data are for electric utilities only. Beginning in 1989, data include independent power producers.

Web Page: All data are available at <https://www.eia.gov/state/seds/seds-data-complete.php>.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.