Tennessee

ENERGY AND EMPLOYMENT — 2019

Overview

Tennessee has a low concentration of energy employment, with 55,248 Traditional Energy workers statewide (representing 1.6 percent of all U.S. Traditional Energy jobs). Of these Traditional Energy workers, 11,901 are in Electric Power Generation, 7,702 are in Fuels, and 35,644 are in Transmission, Distribution, and Storage. The Traditional Energy sector in Tennessee is 1.8 percent of total state employment (compared to 2.3 percent of national employment). Tennessee has an additional 53,006 jobs in Energy Efficiency (2.3 percent of all U.S. Energy Efficiency jobs) and 104,591 jobs in Motor Vehicles (4.1 percent of all U.S. Motor Vehicle jobs).

Figure TN-1.
Employment by Major Energy Technology Application

Overall, Traditional Energy jobs grew by 2.4 percent since the 2018 report, increasing by 1,319 jobs over the period. Energy Efficiency jobs added 1,378 jobs (2.7 percent) and motor vehicles added 272 jobs (0.3 percent).
Breakdown by Technology Applications

Electric Power Generation

Electric Power Generation employs 11,901 workers in Tennessee, 1.4 percent of the national total and adding 357 jobs over the past year (3.1 percent). Traditional hydroelectric generation makes up the largest segment of employment related to Electric Power Generation, with 5,190 jobs (down 0.4 percent), followed by solar at 5,047 jobs (up 0.9 percent).

Figure TN-2.
Electric Power Generation Employment by Detailed Technology Application

Utilities are the largest industry sector in Electric Power Generation, with 53.9 percent of jobs. Professional and business services are next with 17.8 percent.

Figure TN-3.
Fuels

Fuels employs 7,702 workers in Tennessee, 0.7 percent of the national total, up 14.8 percent over the past year. Petroleum and other fossil fuels makes up the largest segment of employment related to Fuels.

**Figure TN-4.**
Fuels Employment by Detailed Technology Application

Professional and business services jobs represent 34.8 percent of Fuels jobs in Tennessee.

**Figure TN-5.**
Fuels Employment by Industry Sector
Transmission, Distribution and Storage

Transmission, Distribution, and Storage employs 35,644 workers in Tennessee, 2.6 percent of the national total, down 0.1 percent or 31 jobs since the 2018 report.

**Figure TN-6.**
Transmission, Distribution and Storage Employment by Detailed Technology

Construction is responsible for the largest percentage of Transmission, Distribution, and Storage jobs in Tennessee, with 47.5 percent of such jobs statewide.

**Figure TN-7.**
Transmission, Distribution and Storage Employment by Industry Sector
Energy Efficiency

The 53,006 Energy Efficiency jobs in Tennessee represent 2.3 percent of all U.S. Energy Efficiency jobs, adding 1,378 jobs (2.7 percent) since last year. The largest number of these employees work in high efficiency HVAC and renewable heating and cooling firms, followed by ENERGY STAR and efficient lighting.

Figure TN-8.
Energy Efficiency Employment by Detailed Technology Application

Energy Efficiency employment is primarily found in the construction industry.

Figure TN-9.
Energy Efficiency Employment by Industry Sector
Motor Vehicles

Motor Vehicle employment accounts for 104,591 jobs in Tennessee, up 272 jobs over the past year (0.3 percent). The industry sector that accounts for the largest fraction of Motor Vehicle jobs is manufacturing.

Figure TN-10.
Motor Vehicle Employment by Industry Sector

Workforce Characteristics

Employer Growth

Employers in Tennessee are less optimistic to their peers across the country in regards to their job growth over the next year in Traditional Energy (-0.0 percent versus 4.1 percent nationally). Energy Efficiency employers expect to add 3,310 jobs in Energy Efficiency (6.2 percent) and Motor Vehicles employers expect to add 2,071 jobs (2.0 percent) over the next year.

Table TN-1.
Projected Growth by Major Technology Application

<table>
<thead>
<tr>
<th>Technology</th>
<th>State Projected Growth Next 12 Months (percent)</th>
<th>U.S. Projected Growth Next 12 Months (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Power Generation</td>
<td>0.7</td>
<td>7.1</td>
</tr>
<tr>
<td>Electric Power Transmission,</td>
<td>--</td>
<td>3.2</td>
</tr>
<tr>
<td>Distribution and Storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>6.2</td>
<td>7.8</td>
</tr>
<tr>
<td>Fuels</td>
<td>(1.3)</td>
<td>3.0</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>2.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>
**Hiring Difficulty**

Over the last year, 60.6 percent of energy-related employers in Tennessee hired new employees. These employers reported the greatest overall difficulty in hiring workers for jobs in Motor Vehicles.

**Table TN-2**

<table>
<thead>
<tr>
<th>Technology</th>
<th>Very Difficult (%)</th>
<th>State</th>
<th>National</th>
<th>Somewhat Difficult (%)</th>
<th>State</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Power Generation</td>
<td>28.6</td>
<td>20.7</td>
<td>57.1</td>
<td>54.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric Power Transmission, Distribution and Storage</td>
<td>14.3</td>
<td>21.9</td>
<td>42.9</td>
<td>46.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>50.0</td>
<td>21.3</td>
<td>30.0</td>
<td>48.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuels</td>
<td>--</td>
<td>37.9</td>
<td>66.7</td>
<td>43.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>71.4</td>
<td>30.0</td>
<td>28.6</td>
<td>46.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Employers in Tennessee gave the following as the top three reasons for their reported difficulty:

1. Lack of experience, training, or technical skills
2. Insufficient non-technical skills (work ethic, dependability, critical thinking)
3. Insufficient qualifications (certifications or education)

Employers reported the following as the three most difficult occupations to hire for:

1. Technician or mechanical support – $20.65 median hourly wage
2. Electrician/construction laborers – $19.23 median hourly wage
3. Sales, marketing, or customer service – $30.10 median hourly wage