Overview

Arizona has a low concentration of energy employment, with 46,597 Traditional Energy workers statewide (representing 1.4 percent of all U.S. Traditional Energy jobs). Of these Traditional Energy workers, 23,855 are in Electric Power Generation, 1,844 are in Fuels, and 20,898 are in Transmission, Distribution, and Storage. The Traditional Energy sector in Arizona is 1.7 percent of total state employment (compared to 2.3 percent of national employment). Arizona has an additional 43,418 jobs in Energy Efficiency (1.9 percent of all U.S. Energy Efficiency jobs) and 31,226 jobs in Motor Vehicles (1.2 percent of all U.S. Motor Vehicle jobs).

Figure AZ-1. Employment by Major Energy Technology Application

Overall, Traditional Energy jobs grew by 0.7 percent since the 2018 report, increasing by 329 jobs over the period. Energy Efficiency jobs added 1,532 jobs (3.7 percent) and motor vehicles added 1,595 jobs (5.4 percent).
Breakdown by Technology Applications

Electric Power Generation

Electric Power Generation employs 23,855 workers in Arizona, 2.7 percent of the national total and losing 531 jobs over the past year (-2.2 percent). Traditional fossil fuel generation makes up the largest segment of employment related to Electric Power Generation, with 9,883 jobs (down 5.0 percent), followed by solar at 9,262 jobs (down 3.0 percent).

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

Construction is the largest industry sector in Electric Power Generation, with 37.6 percent of jobs. Professional and business services are next with 25.3 percent.

Figure AZ-3.
Fuels

Fuels employs 1,844 workers in Arizona, 0.2 percent of the national total, up 33.2 percent over the past year. Petroleum and other fossil fuels makes up the largest segment of employment related to Fuels.

Figure AZ-4.
Fuels Employment by Detailed Technology Application

Professional and business services jobs represent 50.1 percent of Fuels jobs in Arizona.

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

Transmission, Distribution, and Storage employs 20,898 workers in Arizona, 1.5 percent of the national total, up 2.0 percent or 400 jobs since the 2018 report.

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

Utilities are responsible for the largest percentage of Transmission, Distribution, and Storage jobs in Arizona, with 49.1 percent of such jobs statewide.

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

The 43,418 Energy Efficiency jobs in Arizona represent 1.9 percent of all U.S. Energy Efficiency jobs, adding 1,532 jobs (3.7 percent) since last year. The largest number of these employees work in high efficiency HVAC and renewable heating and cooling firms, followed by traditional HVAC.

*Figure AZ-8.*
Energy Efficiency Employment by Detailed Technology Application

Energy Efficiency employment is primarily found in the construction industry.

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

Motor Vehicle employment accounts for 31,226 jobs in Arizona, up 1,595 jobs over the past year (5.4 percent). The industry sector that accounts for the largest fraction of Motor Vehicle jobs is repair and maintenance.

Figure AZ-10.
Motor Vehicle Employment by Industry Sector

Workforce Characteristics

Employer Growth

Employers in Arizona are more optimistic to their peers across the country in regards to their job growth over the next year in Traditional Energy (5.5 percent versus 4.1 percent nationally). Energy Efficiency employers expect to add 2,920 jobs in Energy Efficiency (6.7 percent) and Motor Vehicles employers expect to add 618 jobs (2.0 percent) over the next year.

Table AZ-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>7.7</td>
<td>7.1</td>
</tr>
<tr>
<td>Electric Power Transmission,</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Distribution and Storage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>6.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Fuels</td>
<td>2.2</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, 42.1 percent of energy-related employers in Arizona hired new employees. These employers reported the greatest overall difficulty in hiring workers for jobs in Electric Power Generation.

Table AZ-2
Hiring Difficulty by Major Technology Application

<table>
<thead>
<tr>
<th>Technology</th>
<th>Very Difficult (%)</th>
<th>Somewhat Difficult (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State</td>
<td>National</td>
</tr>
<tr>
<td>Electric Power Generation</td>
<td>28.0</td>
<td>20.7</td>
</tr>
<tr>
<td>Electric Power Transmission, Distribution and Storage</td>
<td>50.0</td>
<td>21.9</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>18.8</td>
<td>21.3</td>
</tr>
<tr>
<td>Fuels</td>
<td>66.7</td>
<td>37.9</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>25.0</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Employers in Arizona 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 – $22.40 median hourly wage
2. Sales, marketing, or customer service – $33.14 median hourly wage
3. Electrician/construction laborers – $25.35 median hourly wage