North Dakota

ENERGY AND EMPLOYMENT — 2019

Overview

North Dakota has a high concentration of energy employment, with 35,443 Traditional Energy workers statewide (representing 1.1 percent of all U.S. Traditional Energy jobs). Of these Traditional Energy workers, 3,470 are in Electric Power Generation, 22,023 are in Fuels, and 9,950 are in Transmission, Distribution, and Storage. The Traditional Energy sector in North Dakota is 8.3 percent of total state employment (compared to 2.3 percent of national employment). North Dakota has an additional 5,425 jobs in Energy Efficiency (0.2 percent of all U.S. Energy Efficiency jobs) and 7,865 jobs in Motor Vehicles (0.3 percent of all U.S. Motor Vehicle jobs).

Figure ND-1.
Employment by Major Energy Technology Application

Overall, Traditional Energy jobs grew by 5.6 percent since the 2018 report, increasing by 1,888 jobs over the period. Energy Efficiency jobs added 297 jobs (5.8 percent) and motor vehicles added 439 jobs (5.9 percent).
Breakdown by Technology Applications

Electric Power Generation

Electric Power Generation employs 3,470 workers in North Dakota, 0.4 percent of the national total and losing 66 jobs over the past year (-1.9 percent). Wind makes up the largest segment of employment related to Electric Power Generation, with 1,776 jobs (down 0.3 percent), followed by traditional fossil fuel generation at 1,221 jobs (down 5.1 percent).

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

Construction is the largest industry sector in Electric Power Generation, with 47.8 percent of jobs. Utilities are next with 36.1 percent.

Figure ND-3.
Fuels

Fuels employs 22,023 workers in North Dakota, 2.0 percent of the national total, up 8.3 percent over the past year. Petroleum and other fossil fuels makes up the largest segment of employment related to Fuels.

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

Mining and extraction jobs represent 87.8 percent of Fuels jobs in North Dakota.

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

Transmission, Distribution, and Storage employs 9,950 workers in North Dakota, 0.7 percent of the national total, up 2.8 percent or 270 jobs since the 2018 report.

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

Construction is responsible for the largest percentage of Transmission, Distribution, and Storage jobs in North Dakota, with 36.6 percent of such jobs statewide.

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

The 5,425 Energy Efficiency jobs in North Dakota represent 0.2 percent of all U.S. Energy Efficiency jobs, adding 297 jobs (5.8 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 ND-8.
Energy Efficiency Employment by Detailed Technology Application

Energy Efficiency employment is primarily found in the construction industry.

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

Motor Vehicle employment accounts for 7,865 jobs in North Dakota, up 439 jobs over the past year (5.9 percent). The industry sector that accounts for the largest fraction of Motor Vehicle jobs is repair and maintenance.

Figure ND-10.
Motor Vehicle Employment by Industry Sector

![Motor Vehicle Employment by Industry Sector](chart)

Workforce Characteristics

Employer Growth

Employers in North Dakota are less optimistic to their peers across the country in regards to their job growth over the next year in Traditional Energy (0.7 percent versus 4.1 percent nationally). Energy Efficiency employers expect to add 471 jobs in Energy Efficiency (8.7 percent) and Motor Vehicles employers expect to add 156 jobs (2.0 percent) over the next year.

Table ND-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>7.2</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>8.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Fuels</td>
<td>--</td>
<td>3.0</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>2.0</td>
<td>2.2</td>
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</tbody>
</table>
Hiring Difficulty

Over the last year, 63.3 percent of energy-related employers in North Dakota hired new employees. These employers reported the greatest overall difficulty in hiring workers for jobs in Energy Efficiency.

Table ND-2
Hiring Difficulty by Major Technology Application

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

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

1. Lack of experience, training, or technical skills
2. Competition/ small applicant pool
3. Cannot provide competitive wages

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

1. Electrician/construction laborers – $27.58 median hourly wage
2. Drivers/dispatchers – $19.42 median hourly wage
3. Technician or mechanical support – $24.04 median hourly wage