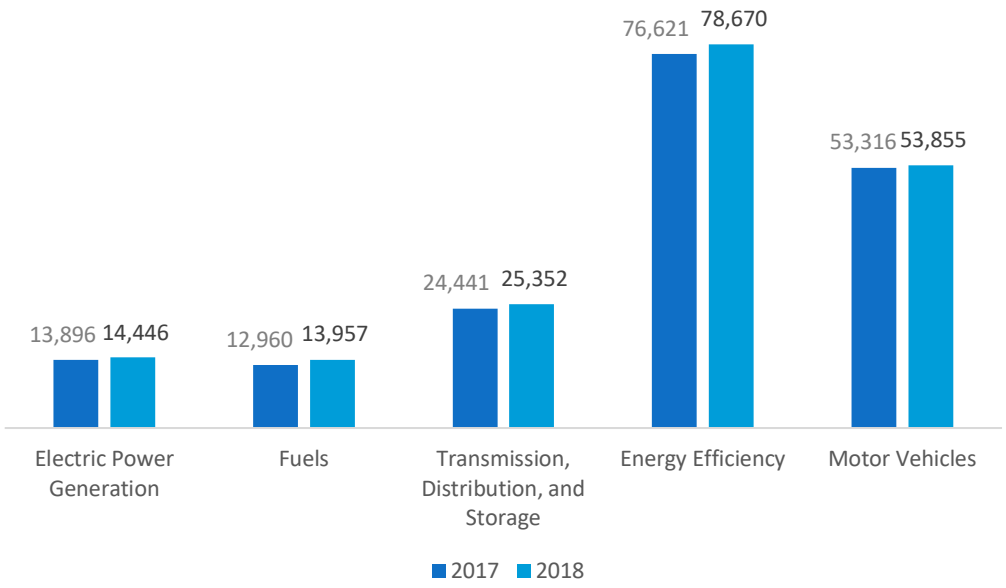
Virginia

ENERGY AND EMPLOYMENT — 2019

Overview

Virginia has a low concentration of energy employment, with 53,755 Traditional Energy workers statewide (representing 1.6 percent of all U.S. Traditional Energy jobs). Of these Traditional Energy workers, 14,446 are in Electric Power Generation, 13,957 are in Fuels, and 25,352 are in Transmission, Distribution, and Storage. The Traditional Energy sector in Virginia is 1.4 percent of total state employment (compared to 2.3 percent of national employment). Virginia has an additional 78,670 jobs in Energy Efficiency (3.4 percent of all U.S. Energy Efficiency jobs) and 53,855 jobs in Motor Vehicles (2.1 percent of all U.S. Motor Vehicle jobs).

Figure VA-1.
Employment by Major Energy Technology Application



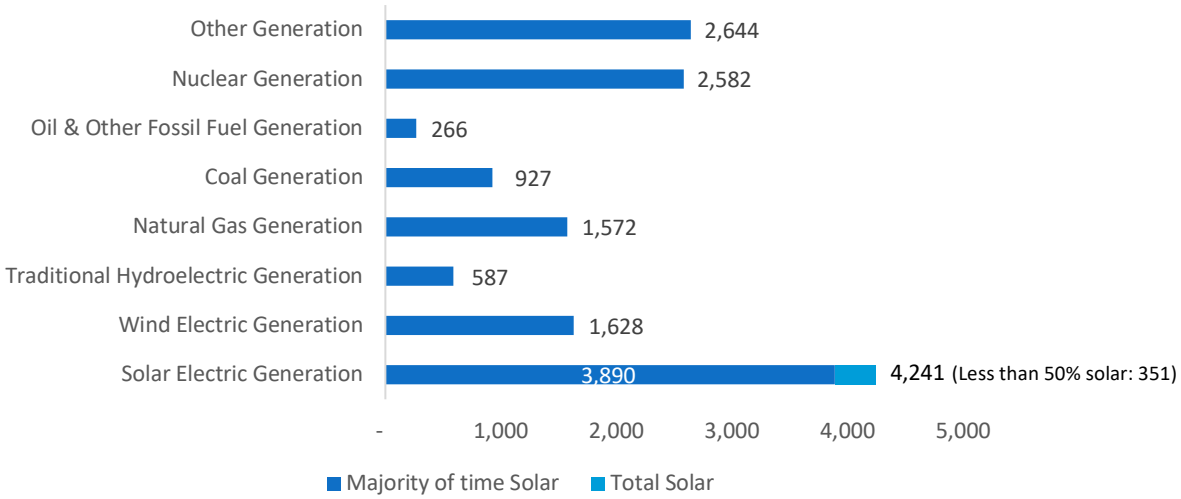
Overall, Traditional Energy jobs grew by 4.8 percent since the 2018 report, increasing by 2,458 jobs over the period. Energy Efficiency jobs added 2,049 jobs (2.7 percent) and motor vehicles added 539 jobs (1.0 percent).

Breakdown by Technology Applications

Electric Power Generation

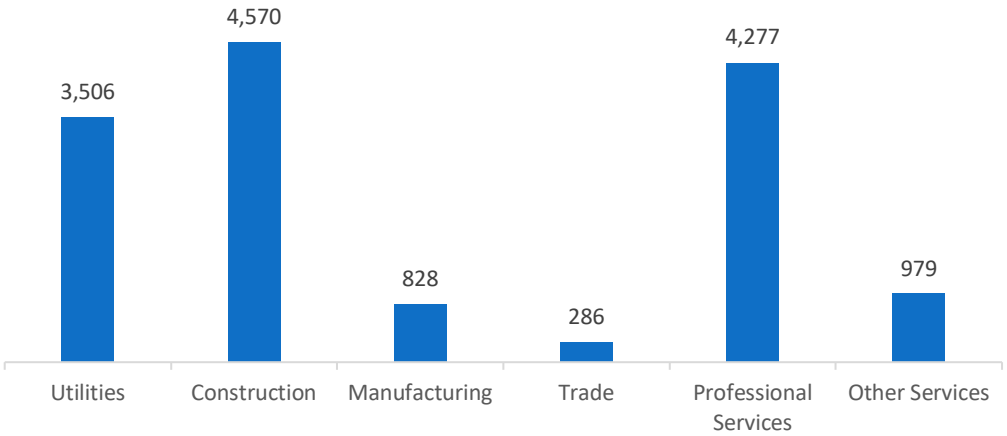
Electric Power Generation employs 14,446 workers in Virginia, 1.6 percent of the national total and adding 550 jobs over the past year (4.0 percent). Solar makes up the largest segment of employment related to Electric Power Generation, with 4,241 jobs (up 1.0 percent), followed by traditional fossil fuel generation at 2,765 jobs (up 3.7 percent).

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



Construction is the largest industry sector in Electric Power Generation, with 31.6 percent of jobs. Professional and business services are next with 29.6 percent.

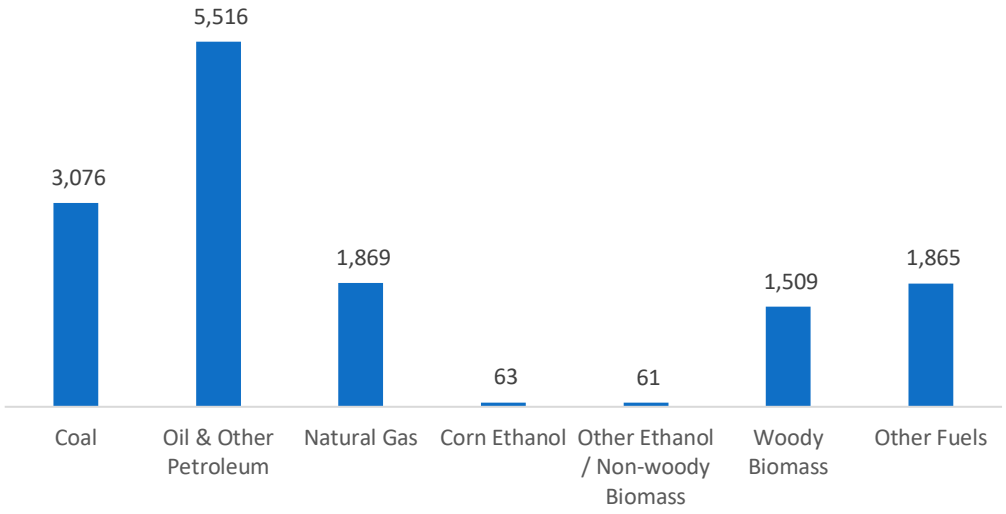
Figure VA-3.



Fuels

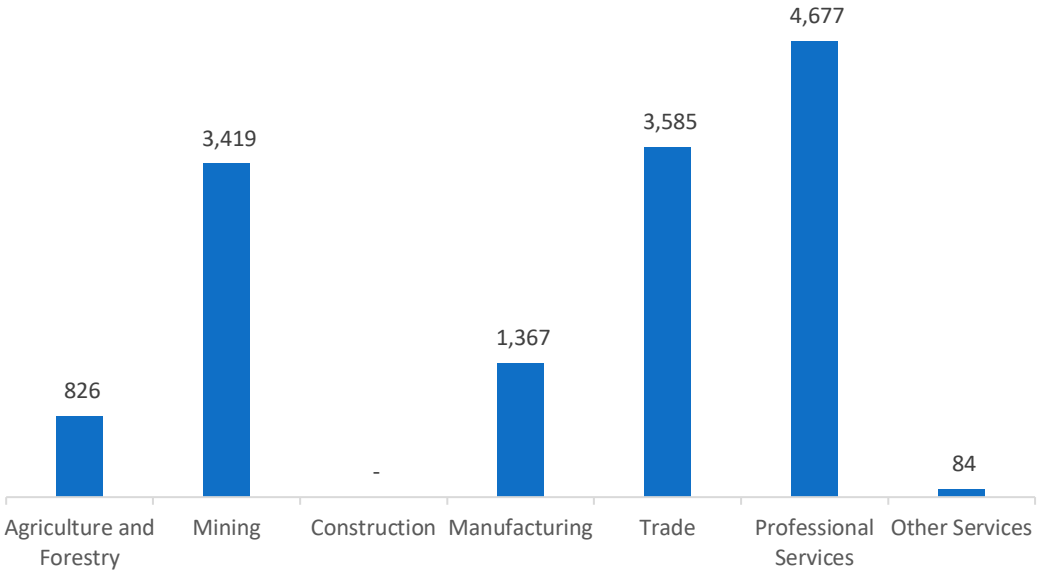
Fuels employs 13,957 workers in Virginia, 1.2 percent of the national total, up 7.7 percent over the past year. Petroleum and other fossil fuels makes up the largest segment of employment related to Fuels.

Figure VA-4.
Fuels Employment by Detailed Technology Application



Professional and business services jobs represent 33.5 percent of Fuels jobs in Virginia.

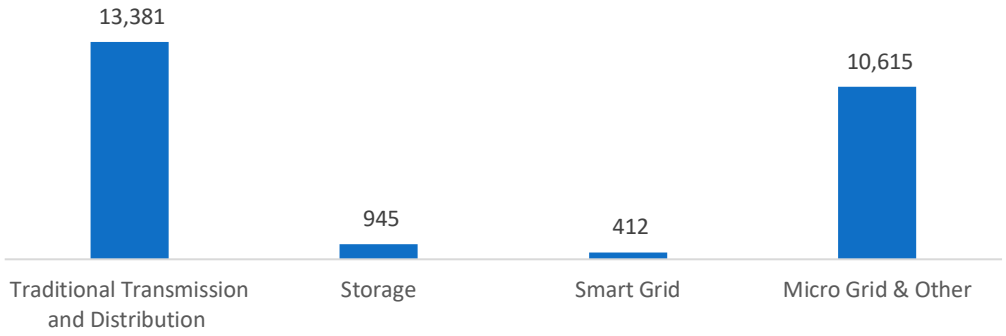
Figure VA-5.
Fuels Employment by Industry Sector



Transmission, Distribution and Storage

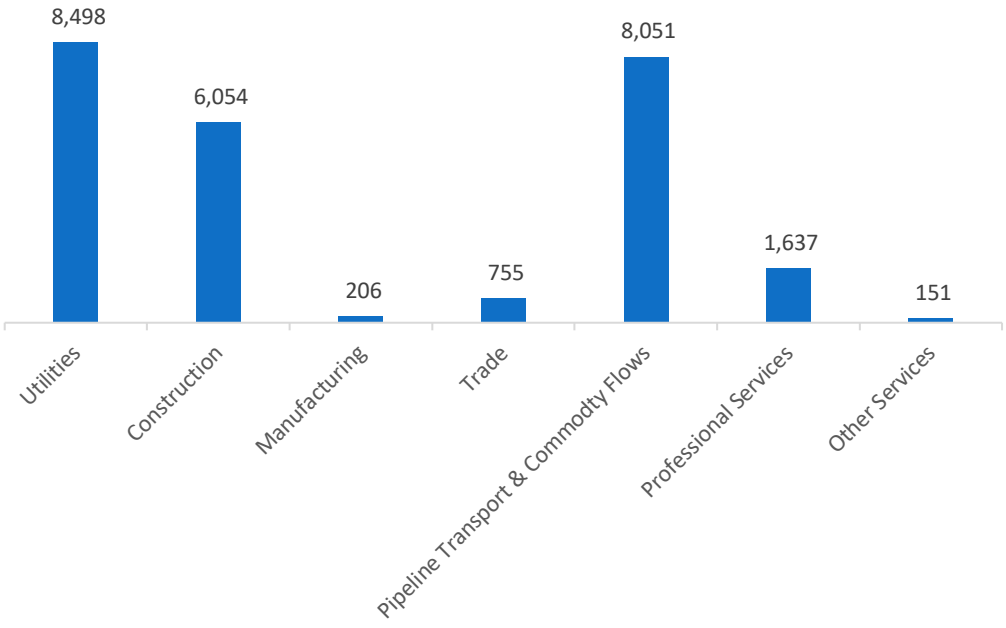
Transmission, Distribution, and Storage employs 25,352 workers in Virginia, 1.9 percent of the national total, up 3.7 percent or 911 jobs since the 2018 report.

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



Utilities are responsible for the largest percentage of Transmission, Distribution, and Storage jobs in Virginia, with 33.5 percent of such jobs statewide.

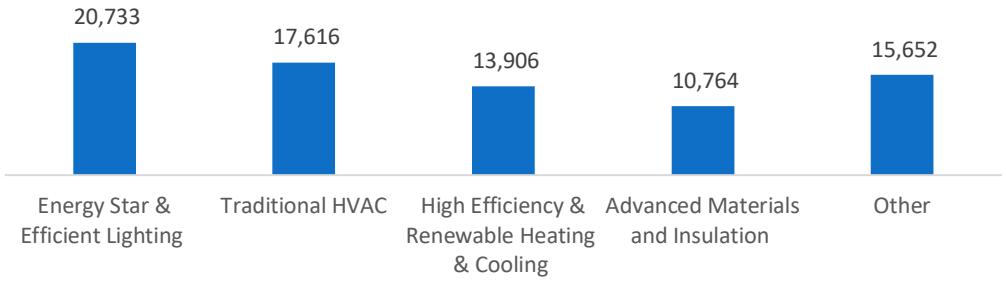
Figure VA-7.
Transmission, Distribution and Storage Employment by Industry Sector



Energy Efficiency

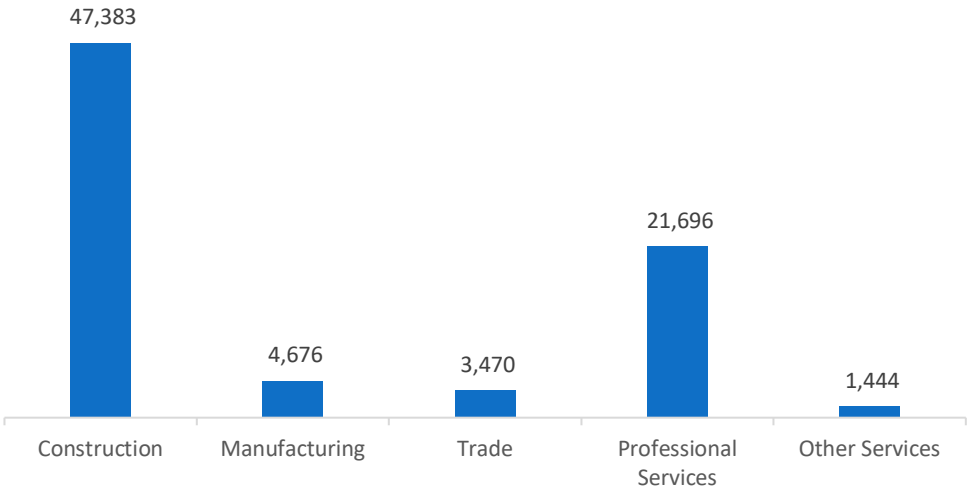
The 78,670 Energy Efficiency jobs in Virginia represent 3.4 percent of all U.S. Energy Efficiency jobs, adding 2,049 jobs (2.7 percent) since last year. The largest number of these employees work in ENERGY STAR and efficient lighting firms, followed by traditional HVAC.

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



Energy Efficiency employment is primarily found in the construction industry.

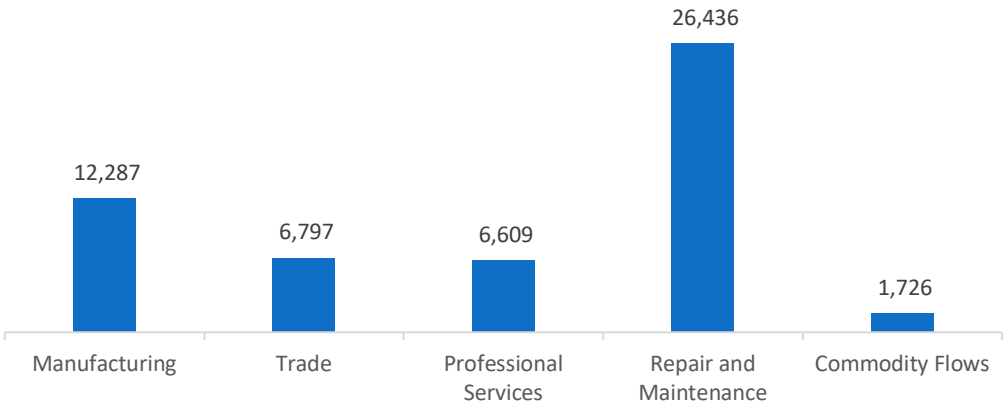
Figure VA-9.
Energy Efficiency Employment by Industry Sector



Motor Vehicles

Motor Vehicle employment accounts for 53,855 jobs in Virginia, up 539 jobs over the past year (1.0 percent). The industry sector that accounts for the largest fraction of Motor Vehicle jobs is repair and maintenance.

Figure VA-10.
Motor Vehicle Employment by Industry Sector



Workforce Characteristics

Employer Growth

Employers in Virginia are less optimistic to their peers across the country in regards to their job growth over the next year in Traditional Energy (3.6 percent versus 4.1 percent nationally). Energy Efficiency employers expect to add 6,927 jobs in Energy Efficiency (8.8 percent) and Motor Vehicles employers expect to add 6,452 jobs (12.0 percent) over the next year.

Table VA-1.
Projected Growth by Major Technology Application

Technology	State Projected Growth Next 12 Months (percent)	U.S. Projected Growth Next 12 Months (percent)
Electric Power Generation	6.4	7.1
Electric Power Transmission, Distribution and Storage	4.0	3.2
Energy Efficiency	8.8	7.8
Fuels	--	3.0
Motor Vehicles	12.0	2.2

Hiring Difficulty

Over the last year, 50.8 percent of energy-related employers in Virginia hired new employees. These employers reported the greatest overall difficulty in hiring workers for jobs in Motor Vehicles.

Table VA-2
Hiring Difficulty by Major Technology Application

Technology	Very Difficult (%)		Somewhat Difficult (%)	
	State	National	State	National
Electric Power Generation	5.6	20.7	66.7	54.8
Electric Power Transmission, Distribution and Storage	27.3	21.9	45.5	46.1
Energy Efficiency	36.4	21.3	45.5	48.1
Fuels	50.0	37.9	50.0	43.0
Motor Vehicles	57.1	30.0	42.9	46.4

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

1. Lack of experience, training, or technical skills
2. Difficulty finding industry-specific knowledge, skills, and interest
3. Insufficient qualifications (certifcations or education)

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

1. Technician or mechnical support – $16.89 median hourly wage
2. Management (directors, supervisors, vice presidents) – $38.57 median hourly wage
3. Installation workers – $17.18 median hourly wage