



OVERVIEW OF REGIONAL ENERGY WORKFORCE

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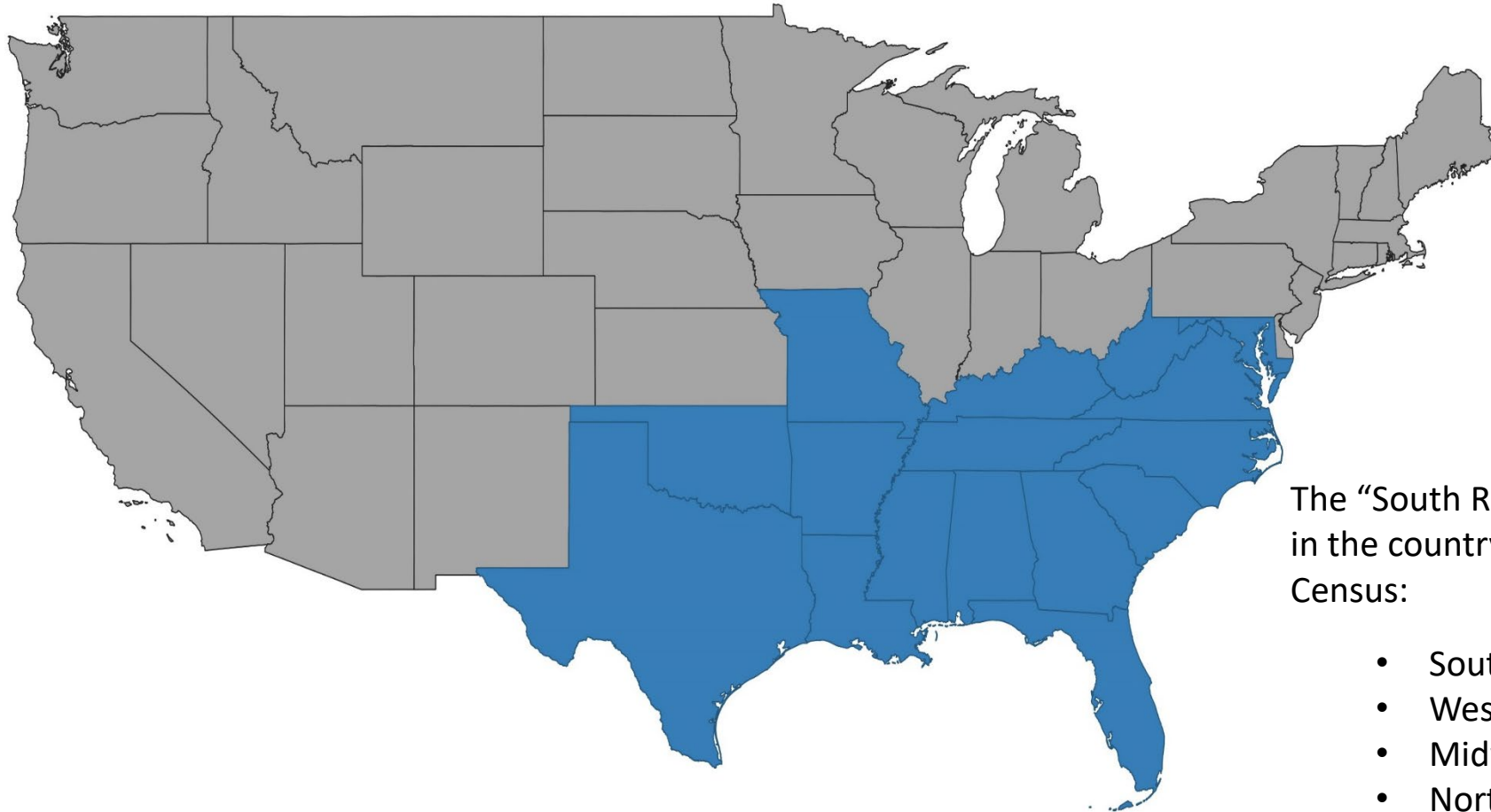
South Carolina Department of Employment and Workforce

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SOUTHERN STATES ENERGY BOARD: A GROWING REGION



The “South Region” was the fastest growing region in the country 2021 vs. 2020 according to the U.S. Census:

- South: +0.6%
- West: +0.0%
- Midwest: -0.1%
- Northeast: -0.6%

Source: https://www.census.gov/popclock/data_tables.php?component=growth

SOUTH REGION: A GROWING SHARE OF NATIONAL POPULATION

Region	1960	2000	2020	Change 1960-2020
South	31%	36%	38%	+7 percentage pts
Midwest	29%	23%	21%	-8 percentage pts
Northeast	25%	19%	17%	-8 percentage pts
West	16%	22%	24%	+8 percentage pts

- ▶ Regions are based on U.S. Census Bureau designations; figures are based on the Decennial Census.
- ▶ The relationship between population growth and energy consumption is complex, but there will surely need to be increased production to serve increased needs.

DEFINING THE INDUSTRY

- Mining, Quarrying, and Oil and Gas Extraction
 - 211 Oil and Gas Extraction
 - 2121 Coal Mining
- Utilities
 - 2211 Electric Power Generation, Transmission, and Distribution (EPGTD)
 - Hydroelectric
 - Fossil Fuel
 - Nuclear
 - Solar
 - Wind
 - Geothermal
 - Biomass
 - Other
 - 2212 Natural Gas Distribution

REGIONAL: PRIVATE EMPLOYMENT

	SSEB States				
	Oil and Gas Extraction	Coal Mining	EPGTD	Natural Gas Distribution	Total
2011 Annual	124,715	52,419	164,423	28,829	370,386
2019 Annual	102,987	24,850	163,112	26,690	317,639
2020 Annual	91,306	18,589	162,289	25,114	297,298
2021 Annual	81,051	17,534	161,724	25,021	285,330

Note: There are some limitations in data disclosure for certain states. Employment estimates are likely on the conservative side for the region.

- ▶ Employment in the SSEB states for this industry has declined over the past decade.
 - Overall: -23%
 - Coal mining: -67% – oil and gas extraction: -35% – natural gas distribution: -13% – EPGTD: -2%

Source: Quarterly Census of Employment and Wages. Note: 2021 data are preliminary.

STATE BY STATE: PRIVATE EMPLOYMENT

State	Oil and Gas Extraction	Coal Mining	EPGTD	Natural Gas Distribution	Total
Alabama	331	1,964	10,540	1,436	14,271
Arkansas	448	N/D	5,596	969	7,013
Florida	47	N/D	17,745	1,577	19,369
Georgia	N/D	N/D	15,967	2,093	18,060
Kentucky	435	3,714	5,474	740	10,363
Louisiana	5,457	N/D	5,826	1,066	12,349
Maryland	N/D	N/D	8,366	721	9,087
Mississippi	404	N/D	5,684	545	6,633
Missouri	17	N/D	7,568	N/D	7,585
North Carolina	N/D	N/D	11,660	1,991	13,651
Oklahoma	11,347	N/D	6,653	2,361	20,361
South Carolina	5	N/D	9,236	448	9,689
Tennessee	48	N/D	2,919	494	3,461
Texas	59,518	1,411	37,661	8,121	106,711
Virginia	188	N/D	7,967	1,844	9,999
West Virginia	2,000	11,099	3,649	843	17,591

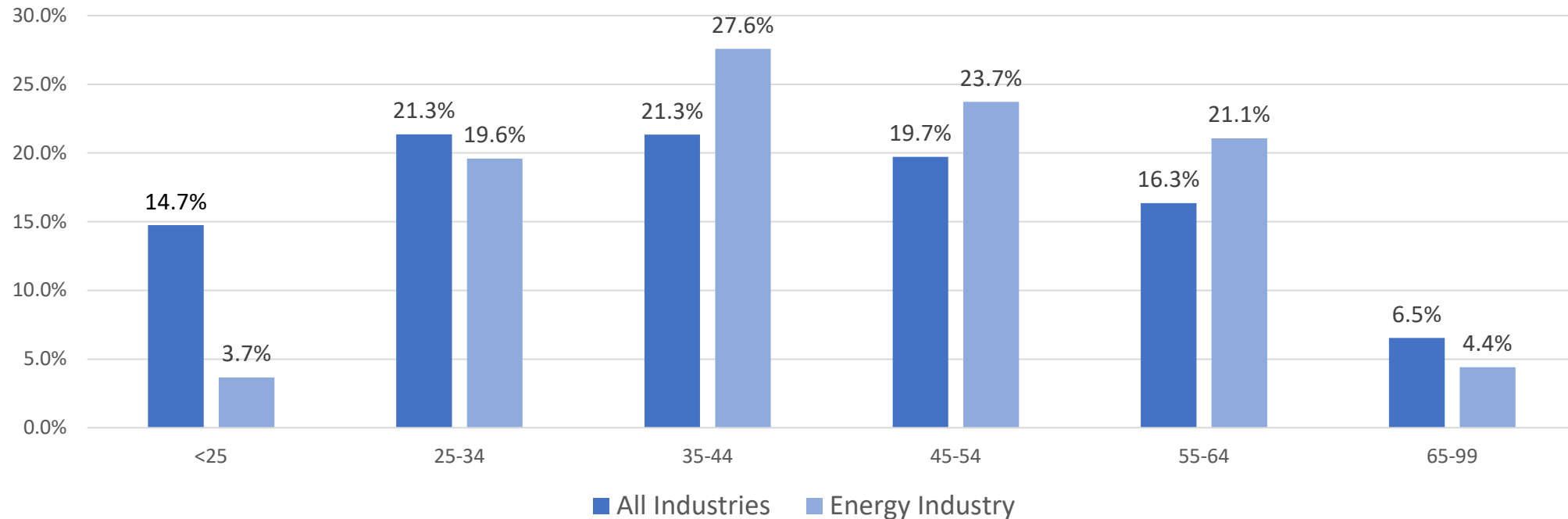
Source: Quarterly Census of Employment and Wages (2021 preliminary data). Note: N/D means not disclosed.

REGIONAL: COMPENSATION IS RELATIVELY HIGH

- Average annual wages in the energy industry tend to be higher than average:

• Oil and Gas Extraction.....	\$187,312
• Coal Mining.....	\$ 92,381
• Electrical Power Generation, Transmission, Distribution.....	\$115,780
• Natural Gas Distribution.....	\$109,755
• Total All Private Industries.....	\$ 60,961

REGIONAL: AGE PROFILE OF ENERGY INDUSTRY WORKFORCE



- Employees in the energy industry tend to be older than the average worker in the region.
 - 42.6% of all private industry employees are aged 45 or older.
 - 49.2% of energy industry employees fall in this age range.
- This will continue to be a challenge for the industry as older workers retire and younger generations are typically smaller in size than Baby Boomers.

Source: Longitudinal Employer-Household Dynamics, U.S. Census Bureau (2021 Q3).

Note: Arkansas and Mississippi do not participate in the LEHD program.

REGIONAL: GENDER PROFILE OF ENERGY INDUSTRY WORKFORCE

State	Male		State	Male
Alabama	76.8%		North Carolina	75.7%
Florida	73.0%		Oklahoma	71.1%
Georgia	73.7%		South Carolina	76.9%
Kentucky	85.4%		Tennessee	73.8%
Louisiana	82.5%		Texas	72.7%
Maryland	76.1%		Virginia	82.2%
Missouri	78.4%		West Virginia	92.7%

- Employees in the energy industry are predominately male.
 - Overall, nearly 76% of employees in 2021 Q3 were reported to be male.
 - The low was 71.1% in Oklahoma, and the high was 92.7% in West Virginia.
- These trends are in line with other goods-producing sectors (construction and manufacturing).

Source: Longitudinal Employer-Household Dynamics, U.S. Census Bureau (2021 Q3).

Note: Arkansas and Mississippi do not participate in the LEHD program.

NATIONAL: MOST COMMON OCCUPATIONS

SOC Code	Occupation	US Share of Energy Jobs	Typical Pay Range Among SSEB States	Typical Education Requirements
49-9051	Electrical Power-Line Installers and Repairers	10.0%	\$61,820-\$82,210	HS Diploma or Equivalent
43-4051	Customer Service Representatives	3.9%	\$31,440-\$40,480	HS Diploma or Equivalent
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	3.8%	\$64,200-\$73,430	HS Diploma or Equivalent
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	3.6%	\$47,620-\$74,080	HS Diploma or Equivalent
51-8013	Power Plant Operators	3.4%	\$68,490-\$87,690	HS Diploma or Equivalent
17-2071	Electrical Engineers	3.2%	\$88,050-\$117,950	Bachelor's Degree
11-1021	General and Operations Managers	2.7%	\$84,700-\$127,380	Bachelor's Degree
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	2.4%	\$59,210-\$98,840	Postsec. Non-degree Award
49-9041	Industrial Machinery Mechanics	2.2%	\$52,670-\$63,540	HS Diploma or Equivalent
53-7073	Wellhead Pumpers	2.0%	\$47,880-\$72,060	HS Diploma or Equivalent

Source: National Industry-Occupation Matrix, Bureau of Labor Statistics;
Occupational Employment & Wage Statistics (BLS/DEW)

REGIONAL DEMAND: ENERGY JOB POSTINGS, JULY 2021-JUNE 2022

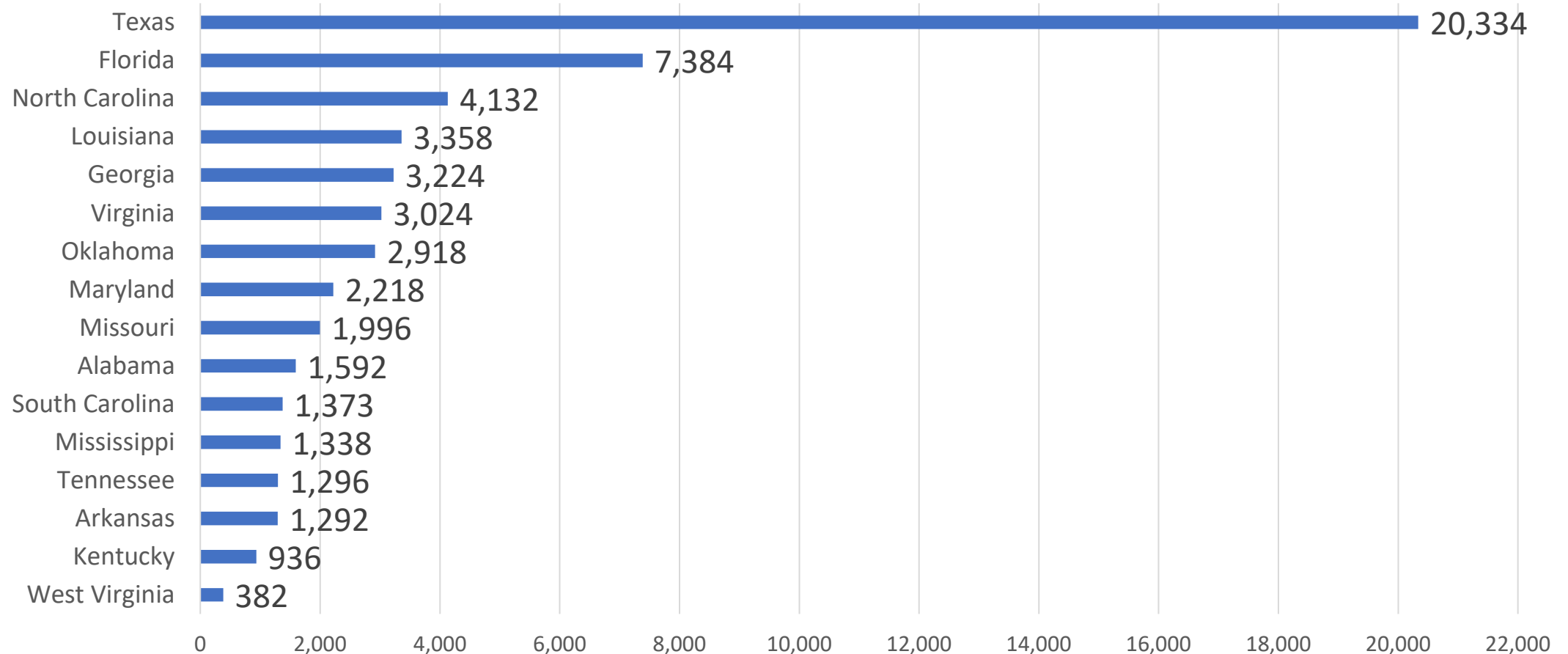
- **Total job postings in region:**
 - **Total** **56,797**
 - **Electric Power Generation** **27,427**
 - **Oil and Gas Extraction** **26,614**
 - **Natural Gas Distribution** **1,599**
 - **Coal Mining** **369**

- **Among job postings listing minimum educational requirements:**
 - **High School or Vocational Training** **44%**
 - **Associate's Degree** **4%**
 - **Bachelor's Degree** **49%**
 - **Master's Degree** **1%**
 - **Doctoral Degree** **1%**

- **Among job postings that required specific programs of study:**
 - **Engineering, General** **36%**
 - **Business Administration and Mgmt.** **32%**
 - **Computer Science** **17%**
 - **Accounting** **16%**
 - **Finance, General** **15%**
 - **Electrical and Electronics Engineering** **13%**
 - **Mechanical Engineering** **9%**

REGIONAL DEMAND: ENERGY JOB POSTINGS, JULY 2021- JUNE 2022

Job Postings by SSEB State



Source: Lightcast Labor Insight

REGIONAL: OCCUPATION PROJECTIONS

SOC Code	Occupation	Base Year Employment (2020)	Projected SSEB Job Growth, 2020-2030	Projected Average Annual Openings, 2020-2030
49-9051	Electrical Power-Line Installers and Repairers	52,880	+11%	5,400
43-4051	Customer Service Representatives	1,196,550	+8%	165,200
49-1011	Supervisors of Mechanics, Installers, and Repairers	209,580	+13%	22,430
49-9012	Control and Valve Installers and Repairers	23,280	+14%	2,310
51-8013	Power Plant Operators	10,700	-5%	920
17-2071	Electrical Engineers	62,740	+15%	5,240
11-1021	General and Operations Managers	937,050	+17%	98,770
49-2095	Electrical and Electronics Repairers	10,240	+6%	900
49-9041	Industrial Machinery Mechanics	164,910	+28%	20,620
53-7073	Wellhead Pumpers	7,160	+26%	1,070

Source: Long-Term Occupational Projections, Projections Central/
U.S. Department of Labor. Note: Data for Arkansas not available.

REGIONAL: SUPPLY GAP ANALYSIS

SOC Code	Occupation	Annual Openings (Demand)	Annual Credentials (Supply)	ANNUAL SUPPLY GAP (Demand minus Supply)
49-9051	Electrical Power-Line Installers and Repairers	5,400	325	5,075
43-4051	Customer Service Representatives	165,200	587	164,613
49-1011	Supervisors of Mechanics, Installers, and Repairers	22,430	2,159	20,271
49-9012	Control and Valve Installers and Repairers	2,310	594	1,716
51-8013	Power Plant Operators	920	0	920
17-2071	Electrical Engineers	5,240	2,457	2,783
11-1021	General and Operations Managers	98,770	39,501	59,269
49-2095	Electrical and Electronics Repairers	900	377	523
49-9041	Industrial Machinery Mechanics	20,620	3,460	17,160
53-7073	Wellhead Pumpers	1,070	0	1,070

Source: Long-Term Employment Projections, Projections Central/
U.S. Department of Labor; IPEDS, U.S. Department of Education

ENERGY INDUSTRY WORKFORCE TAKEAWAYS

- The U.S. population continues to migrate south and west resulting in population changes and increased demand for energy throughout the region. These trends are projected to continue in the coming years.
- Overall, employment in the industry, particularly oil and gas extraction, has tended to decline over the prior decade. Despite overall employment declines, average wages in the industry continue to be well above regional averages.
- The current energy industry workforce is aging and attracting replacement employees could be a challenge in a period of low labor force participation and declining population.
- About half of job postings in the industry require a Bachelor's degree or higher, with engineering and related disciplines in particularly high demand. While Texas has the highest number of job postings, as a percent of the labor force, Louisiana has the highest concentration of job postings for the industry.
- While overall employment in the industry is projected to decline by 2030, there are several common occupations within the industry that are expected to experience healthy growth over the next decade, especially industry machinery mechanics (+28%) and wellhead pumpers (+26%).

Thank You for your time!