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Brenda Watson, Chair

The 2024 Connecticut Clean Energy Industry Report (CTCEIR) highlights significant growth in the state's clean energy workforce, outpacing overall employment growth and reversing previous trends of slower regional progress.

### *Key findings include:*

- **Clean Energy Job Growth:** Connecticut's clean energy employment grew by 3.9 percent between 2022 and 2023, adding over 1,700 jobs and reaching nearly 46,000 total jobs. Over this period, clean energy job growth accounted for 7.5 percent of total statewide employment growth, nearly three percentage points higher than its share from 2021 to 2022, and this growth rate significantly outpaced the state's overall employment growth.
- **Significant Economic Contributions:** The sector's contribution to the Gross Regional Product (GRP) surged to \$7.01 billion in 2023, marking a 3.1 percent increase from the previous year and highlighting the sector's growing importance to Connecticut's overall economic health.
- **Sector Performance:** The fastest-growing sectors were Alternative Transportation (16.3 percent), Clean Grid and Storage (CGS) (7.6 percent), and Clean Energy Generation (7.1 percent), all surpassing national growth rates. The CGS sector's growth was propelled by 12 percent growth in the storage sub-technology. Energy Efficiency remains the largest technology sector, contributing the most to overall job growth.
- **Workforce Development Challenges:** While the sector has seen positive trends in employment growth, challenges remain in filling skilled labor positions. As clean energy advocates, we need to continue to support training programs to bridge the skill gap and sustain the sector demand for workers. Despite the steady progress recovering from COVID, the state continues to see a lower share of females and historically marginalized groups in the clean energy sector, which represents a priority area of potential growth.

Connecticut's clean energy sector's continued growth is a testament to the collective efforts of state leadership, industry stakeholders, and the broader community. Through these partnerships our state stands as a beacon of progress, demonstrating an unwavering dedication to fostering a sustainable future through economic and environmental innovation.



Fayerweather Island Lighthouse, Connecticut.

## About Energize CT and Joint Committee

### Energize Connecticut

Energize CT is an initiative of the Energy Efficiency Fund, the Connecticut Green Bank, the State and your local electric and gas utilities with funding from a charge on customer energy bills.

### Joint Committee

Pursuant to Section 16-245m(d)(2) of the Connecticut General Statutes, the Joint Committee shall examine opportunities to coordinate programs and activities contained in the plan developed under Section 16-245n(c) (i.e., Comprehensive Plan of the Green Bank) with the programs and activities contained in the plan developed under Section 16-245m(d)(1) (i.e., Conservation and Load Management Plan), and to provide financing to increase the benefits of programs funded by the plan developed under Section 16-245m(d)(1) so as to reduce the long-term cost, environmental impacts, and security risks of energy in the state.

To support the Joint Committee, the following is a principal statement to guide its activities: The Energy Efficiency Board and the Connecticut Green Bank have a shared goal to implement state energy policy throughout all sectors and populations of Connecticut with continuous innovation towards greater leveraging of ratepayer funds and a uniformly positive customer experience.

## About the Members

The Connecticut Green Bank is the nation's first green bank. Its mission is to confront climate change by increasing and accelerating investment into Connecticut's green economy to create more resilient, healthier, and equitable communities. Guiding this mission is a vision for "a planet protected by the love of humanity."



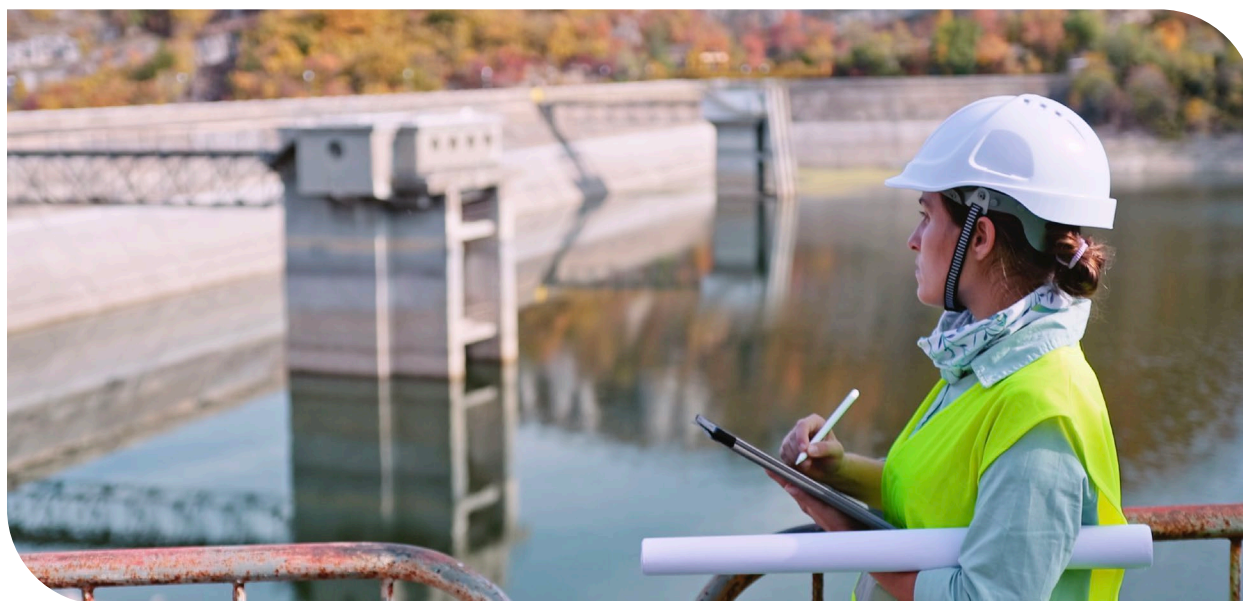
The Connecticut Department of Energy and Environmental Protection (DEEP) is charged with conserving, improving and protecting the natural resources and the environment of the state of Connecticut as well as making cheaper, cleaner and more reliable energy available for the people and businesses of the state. The agency is also committed to playing a positive role in rebuilding Connecticut's economy and creating jobs – and to fostering a sustainable and prosperous economic future for the state.



United Illuminating, Southern Connecticut Gas and Connecticut Natural Gas, subsidiaries of Avangrid Inc. is a leading, sustainable energy company with \$32 billion in assets and operations in 24 U.S. states. Avangrid has two primary lines of business: Avangrid Networks and Avangrid Power. Avangrid Networks owns eight electric and natural gas utilities, serving 3.2 million customers in New York and New England.



Eversource proudly serves 4.4 million customers in Massachusetts, Connecticut and New Hampshire. With over 10,000 people committed to providing safe, reliable and sustainable electric, gas and water service to its neighborhoods and communities.



## Connecticut continues to be a leader in the nation's efforts to support clean energy, demonstrating steady job growth across multiple clean energy sectors.

The state's clean energy workforce expanded significantly between 2022 and 2023, outpacing statewide total employment growth and reversing previous trends of slower regional progress, while employment in traditional energy sectors has declined. This report provides insights into Connecticut's clean energy and traditional energy workforces. As Connecticut continues to invest in a sustainable energy future, these findings highlight the state's role in driving workforce growth while advancing clean energy.

### 2024 Highlights:

**Clean energy job growth** in Connecticut since last year's Clean Energy Industry Report was the strongest it has been since 2015.



#### Employment in Connecticut's Alternative

**Transportation, Clean Grid and Storage, and Clean Energy Generation sectors outpaced national growth rates.**

#### While clean energy employment in Connecticut grew

between 2019 and 2023, traditional energy jobs have declined.



**Energy Efficiency continues to be the largest** technology sector within Connecticut's clean energy industry, as most clean energy jobs and business establishments in Connecticut are part of this sector.

The clean energy sector's continued growth is a testament to the collective efforts of state leadership, industry stakeholders, and the broader community.

**Connecticut's clean energy sector stands as a beacon of progress,** demonstrating the state's unwavering dedication to fostering a sustainable future through economic and environmental innovation.



### Key Findings:

**Clean energy job growth in Connecticut since last year's Clean Energy Industry Report was the strongest it has been since 2015.** Between 2022 and 2023, clean energy employment in Connecticut grew by 3.9 percent (over 1,700 jobs), reaching close to 46,000 total jobs in 2023, significantly outpacing the state's overall employment growth of 1.4 percent. Over this period, clean energy job growth accounted for 7.5 percent of total statewide employment growth, nearly three percentage points higher than its share from 2021 to 2022.

**Connecticut's clean energy employment growth outpaced that of other Northeastern states between 2022 and 2023.** While Connecticut's clean energy economy still lags behind national and New York growth trends, its growth was consistent with that of Massachusetts and faster than other states in the region – Maine, Rhode Island, and Vermont – over the last year, after progressing slower than Massachusetts and Maine from 2021 to 2022.<sup>1</sup>

**Connecticut's clean energy industry expanded across all technology sectors from 2022 to 2023, and the fastest-growing sectors – Alternative Transportation (16.3 percent), Clean Grid and Storage (7.6 percent), and Clean Energy Generation (7.1 percent) – outpaced national growth rates.** Key sub-technologies driving this growth included Hybrid-Electric Vehicles (+263 jobs) within Alternative Transportation, Energy Storage (+37 jobs) within Clean Grid and Storage, and Solar (+272 jobs) within Clean Energy Generation.

**Energy Efficiency continues to be the largest technology sector within Connecticut's clean energy industry, as most clean energy jobs and business establishments in Connecticut are part of this sector.** This sector added around 770 jobs and almost 80 establishments from 2022 to 2023, making Energy Efficiency the primary driver of overall job growth in the state's clean energy industry. However, despite this year-over-year growth, Energy Efficiency remains 2.1 percent below its 2019 pre-pandemic level.

Within the Energy Efficiency sector, High-Efficiency HVAC & Renewable Heating and Cooling remained the largest sub-technology, accounting for 28.8 percent of all Energy Efficiency jobs. While it has been growing over the last few years, employment in this sub-technology is still 4.4 percent below its 2019 level, a key reason the Energy Efficiency sector has yet to fully recover from pandemic-induced job losses.

<sup>1</sup> National and state clean energy employment comparisons are all based on Connecticut's definition of clean energy. For further detail on Connecticut's clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

**Between 2022 and 2023, clean energy employment grew across all value chain segments in Connecticut, with the largest job gains in Construction, Other Services, and Professional and Business Services.** The Construction value chain, which accounts for the largest share (44.3 percent) of all clean energy jobs, continues to be heavily concentrated in the Energy Efficiency sector and represents over half (52.2 percent) of total Energy Efficiency employment. While Construction added the great number of jobs (over 500) from 2022 to 2023, Connecticut's clean energy Utilities sector grew the fastest (14.5 percent).

**Hartford, Fairfield, and New Haven Counties collectively employed four-in-five (79.7 percent) clean energy workers in Connecticut in 2023, with Hartford employing the largest share and adding over 900 jobs from 2022 to 2023.** In contrast, New London County saw the steepest decline of 22.6 percent, losing over 750 clean energy jobs.

**There is strong representation among veterans, youth, and racial minorities in Connecticut's clean energy workforce.** When compared to its overall workforce, the state's clean energy industry has a greater share of veterans (9.0 percent) and workers below the age of 55 (13 percent). Its representation of racial minorities and mixed-race workers is similar to that of the state's total labor force. However, gender diversity in the clean energy industry can be enhanced in Connecticut and across the country.

**While clean energy employment in Connecticut grew between 2019 and 2023, traditional energy jobs have declined.** Since 2019, employment in the clean energy industry has increased by 8.8 percent. At the same time, traditional energy employment has declined by 9.1 percent, largely driven by the Motor Vehicles sector. However, traditional energy employment remained relatively stable from 2022 to 2023, with a loss of only 24 jobs, representing a decline of less than 1.0 percent.<sup>2</sup>

**Electric Power Generation is the smallest technology sector within Connecticut's traditional energy industry, and the only sector that has grown since 2019.** The state's traditional energy industry has four major technology sectors – Electric Power Generation; Fuels; Transmission, Distribution, and Storage; and Motor Vehicles – and from 2019 to 2023, employment in all sectors except Electric Power Generation has declined. Traditional Electric Power Generation has grown by 34.0 percent over this time and within this sector, Natural Gas Electricity employs the largest share (61.0 percent) of workers and added almost 200 workers between 2019 and 2023.

<sup>2</sup> For further detail on Connecticut's traditional energy industry definition, please refer to Appendix C: Traditional Energy Technology List and Definitions.

<sup>3</sup> For further detail on Connecticut's clean energy industry definition and what constitutes a clean energy job, please refer to Appendix B: Clean Energy Technology List and Definitions.

<sup>4</sup> <https://www.energy.gov/policy/us-energy-employment-jobs-report-useer>.

## This report provides a summary of the initial findings of the 2024 Connecticut Clean Energy Industry Report (CTCEIR), covering clean energy and traditional energy employment trends.

It is the fifth annual report tracking clean energy employment in Connecticut, highlighting the initial impacts of the wave of significant federal funding put forward in the 2021 Infrastructure Investment and Jobs Act and the 2022 Inflation Reduction Act. The Joint Committee commissioned BW Research Partnership to produce the 2024 report, with financial support from the Connecticut Green Bank, Eversource, and United Illuminating.

The 2024 CTCEIR analyzes historical clean energy employment trends from 2017 to 2023, using Connecticut's unique clean energy definition.<sup>3</sup> It provides a breakdown of clean energy employment by technology sector, sub-technology, and industry value chain segment. These annual reports also include county-level employment figures, clean energy firms' contributions to Gross Regional Product (GRP) in Connecticut, workforce demographics, and notable clean energy policies and programs introduced. In addition to this standard clean energy employment analysis found in previous years' CTCEIRs, an analysis of the state's traditional energy employment is included in this 2024 CTCEIR, and an analysis of Connecticut's clean energy innovation metrics is to follow.

All employment data in this report is sourced from the 2024 U.S. Energy and Employment Report (USEER).<sup>4</sup>



Aerial view of the Capitol Building in Hartford, Connecticut.

## Connecticut remained committed to its clean energy agenda throughout 2024 with the continuation and introduction of numerous policies and initiatives.

Compared to previous years, these efforts reflect a more integrated approach, prioritizing energy storage, home and commercial efficiency, solar and hydropower expansion, and grid reliability.

In 2024, Connecticut broadened its energy procurement strategies to include a more diverse array of renewable and zero-emission resources and continue its efforts to reach the state's greenhouse gas emission reduction goals. Notably, the Department of Energy and Environmental Protection (DEEP) is now authorized to solicit proposals from various energy providers, including hydropower sources, and to coordinate zero-carbon procurements for nuclear facilities in collaboration with other states.<sup>5</sup> By the end of the year, DEEP selected new clean energy projects totaling 518 megawatts (MW) of solar generation and 200 MW of energy storage to be developed in Connecticut. These initiatives are expected to enhance grid reliability and save ratepayers approximately \$424 million in energy supply costs over their first 20 years of operation.<sup>6</sup>

To further expand solar energy deployment and building efficiency, the state increased capacity for the Nonresidential Energy Solutions and Shared Clean Energy Facility programs, which support the adoption of solar and other clean energy projects for residential and nonresidential customers. Lawmakers also modified eligibility criteria for the Green Bank's Commercial Property Assessed Clean Energy (C-PACE), making solar and other clean energy investments more accessible to commercial property owners.<sup>7</sup>

The state also enhanced the Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR) program in 2024 to further reduce emissions from the transportation sector, Connecticut's most significant greenhouse gas emitting sector.<sup>8</sup> With this enhancement, the value of rebates and vouchers for environmental justice (EJ) community residents increased to more than double the standard amount offered to non-EJ community residents.<sup>9</sup> This expansion promotes equitable access to clean transportation options and showcases the state's commitment to a comprehensive clean energy strategy that involves those in every part of the economy and state. These policies, along with ones passed in 2023, have led to a 74.5 percent increase in electric vehicle registrations in the state since the beginning of 2023.<sup>10</sup>



Barkhamsted Reservoir and Saville Dam.

In addition to new state level policies in 2024, Connecticut also received support from neighboring states and the federal government through the Inflation Reduction Act (IRA), the Bipartisan Infrastructure Law (BIL), and New England Heat Pump Accelerator Grant funding. Two programs, the Home Electrification and Appliances Rebate (HEAR) program and the Solar for All program, were awarded funding from the IRA in 2024 totaling roughly \$64.9 million.<sup>11</sup> To support heat pump expansion and energy efficiency in the state, Connecticut received funding through the state-led New England Heat Pump Accelerator Grant initiative.

While some impact from the current uncertainties of federal government funding may be observed in the coming year, Connecticut's commitment to clean energy and a renewable future is clear and will be important for driving a growing workforce within the state.

<sup>5</sup> Connecticut General Assembly, S.B. No. 385, [https://cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Public+Act&which\\_year=2024&bill\\_num=38](https://cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Public+Act&which_year=2024&bill_num=38)

<sup>6</sup> Department of Energy and environmental Protection, Connecticut Announces Clean Energy Selections, December 2024, <https://portal.ct.gov/deep/news-releases/news-releases---2024/connecticut-announces-clean-energy-selections>.

<sup>7</sup> Connecticut General Assembly, H.B. No. 5232, [https://cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which\\_year=2024&bill\\_num=5232](https://cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&which_year=2024&bill_num=5232).

<sup>8</sup> Department of Energy and environmental Protection, Transportation, Accessed April 2025, <https://portal.ct.gov/deep/climate-change/transportation>

<sup>9</sup> Connecticut General Assembly, H.B. No. 5523, <https://www.cga.ct.gov/2024/act/pa/pdf/2024PA-00081-R00HB-05523-PA.pdf>

<sup>10</sup> Connecticut's Official State Website, Expanded EV Registration Fact Sheet, <https://portal.ct.gov/-/media/DEEP/air/mobile/CHEAPR/EV-Reg-Fact-Sheet.pdf>.

<sup>11</sup> Connecticut's Official Government Website, Federal Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) Funding Updates, Accessed February 2025, <https://portal.ct.gov/deep/business-and-financial-assistance/federal-funding/bil-and-ira-updates>.

## Jobs in Connecticut's clean energy industry include permanent roles concerning Energy Efficiency, Clean Energy Generation, Alternative Transportation, Clean Grid and Storage, and Clean Fuel technologies.

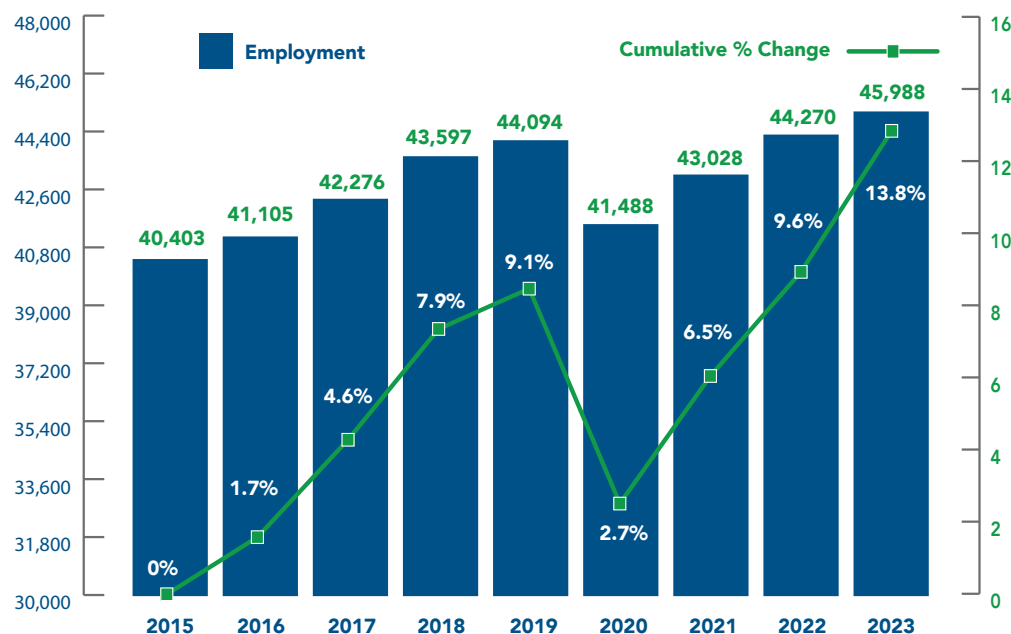
These roles may be directly involved in the research, development, production, manufacturing, distribution, sales, implementation, installation, or repair of components, goods, or services related to the clean energy technologies previously listed.

Professional or business services jobs in consulting, finance, tax, and legal services related to energy are also included. Permanent workers who spend part or all of their time engaged with specific clean energy technologies are classified as clean energy workers.

In 2023, the number of clean energy workers in Connecticut reached nearly 46,000. Between 2022 and 2023, the state's clean energy employment grew by 3.9 percent, or more than 1,700 jobs. In fact, this year-over-year increase is the largest Connecticut's clean energy industry has experienced since 2015 (Figure 1). This growth was more than twice as fast as the statewide total employment growth rate of 1.4 percent. Overall, the 1,700 jobs added to the clean energy industry accounted for 7.5 percent of total statewide employment growth.<sup>12</sup>

### Clean Energy Employment In Connecticut 2015-2023

Figure 1

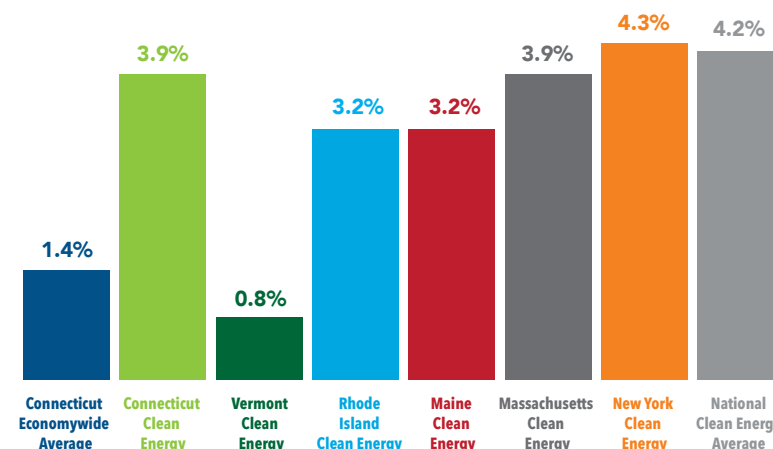


In comparison, clean energy employment in Connecticut from 2022 to 2023 grew at the same rate as Massachusetts (3.9 percent), but more than four times faster than Vermont (0.8 percent). The growth was slightly faster than in Rhode Island (3.2 percent) and Maine (3.2 percent). Yet, Connecticut's clean energy industry experienced slower growth than both New York's (4.3 percent) and the national (4.2 percent) clean energy industries (Figure 2).

Connecticut's clean energy employment of nearly 46,000 workers in 2023 accounted for 2.7% of total workers in the state. This share is larger than that of the U.S., in which 2.3% of all workers in the country are clean energy workers, as well as Maine (2.3%) and New York (1.9%). However, the proportion of clean energy workers to the total state labor force is smaller in Connecticut than Massachusetts (3.5%), Rhode Island (3.1%), and Vermont (5.6%).<sup>13</sup>

### Clean Energy Employment Change 2022-2023, Regional Comparison<sup>14</sup>

Figure 2



<sup>12</sup> Total economy workforce data sourced from U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW), All industries, All employees in total covered. December 2023. Data accessed March 2025.

<sup>13</sup> Total economy workforce data sourced from U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW), All industries, All employees in total covered. December 2023. Data accessed March 2025.

<sup>14</sup> National and state clean energy employment comparisons are all based on Connecticut's definition of clean energy. For further detail on Connecticut's clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

The clean energy economy accounted for 2.4 percent, or \$7.01 billion, of Connecticut's Gross Regional Product (GRP) in 2023. This is a 3.1 percent increase from 2022, which is a similar increase to the prior year (3.2 percent) (Figure 3 and Table 1).<sup>15</sup>

Also similar to previous years, Professional and Business Services accounted for the largest portion of total clean energy GRP contributions (40.2 percent) in Connecticut, followed by Manufacturing (25.7 percent) and Utilities (19.1 percent) (Table 1).

Aside from Construction and Other Services,<sup>16</sup> GRP contributions from all clean energy value chain components have increased from 2022 to 2023. The largest rise was from the Manufacturing value chain (8.8 percent), followed by Agriculture and Forestry (3.2 percent). Other Services experienced the largest decline of 5.8 percent (Table 1).

### Clean Energy Contribution To Gross Regional Product (GRP) In Billions, 2019-2023, Connecticut<sup>17</sup>

Figure 3

2023	\$7,012,434,627
2022	\$6,803,084,742
2021	\$7,026,464,684
2020	\$6,856,083,742
2019	\$6,774,811,365

### Clean Energy Contribution To Gross Regional Product (GRP) In Billions, By Value Chain, 2022-2023, Connecticut<sup>18</sup>

Table 1

	2022 Clean Energy GRP	2023 Clean Energy GRP	% Change	Proportion
Professional and Business Services	\$2,774,843,095	\$2,817,643,574	1.5%	40.2%
Manufacturing	\$1,654,759,486	\$1,800,718,471	8.8%	25.7%
Utilities	\$1,311,546,000	\$1,339,875,394	2.2%	19.1%
Construction	\$484,043,242	\$472,996,398	-2.3%	6.7%
Wholesale Trade	\$541,641,412	\$546,787,879	1.0%	7.8%
Other Services	\$33,300,395	\$31,368,036	-5.8%	0.4%
Agriculture and Forestry	\$2,951,112	\$3,044,875	3.2%	0.0%
TOTAL	\$6,803,084,742	\$7,012,434,627	3.1%	

<sup>15</sup> Total Connecticut Gross Regional Product (GRP) from Bureau of Economic Analysis (BEA), 2023, real GRP in millions of chained 2017 dollars. Prior year data, 2019-2023, has been revised by BEA.

<sup>16</sup> The other services value chain is largely comprised of automotive repair and maintenance activities but also includes other non-automotive repair and maintenance activities in addition to organizational and non-profit work such as environment and conservation organizations, business associations, or advocacy organizations.

<sup>17</sup> Real Gross Domestic Product (GDP) by state was revised by the Bureau of Economic Analysis (BEA) for the years 2019-2023. Figure 3 and Table 1 reflect the revised values and therefore may have different values than what was reported in prior years of the Connecticut Clean Energy Industry Reports.

<sup>18</sup> U.S. Bureau of Economic Analysis, "SAGDP9N Real GDP by state".

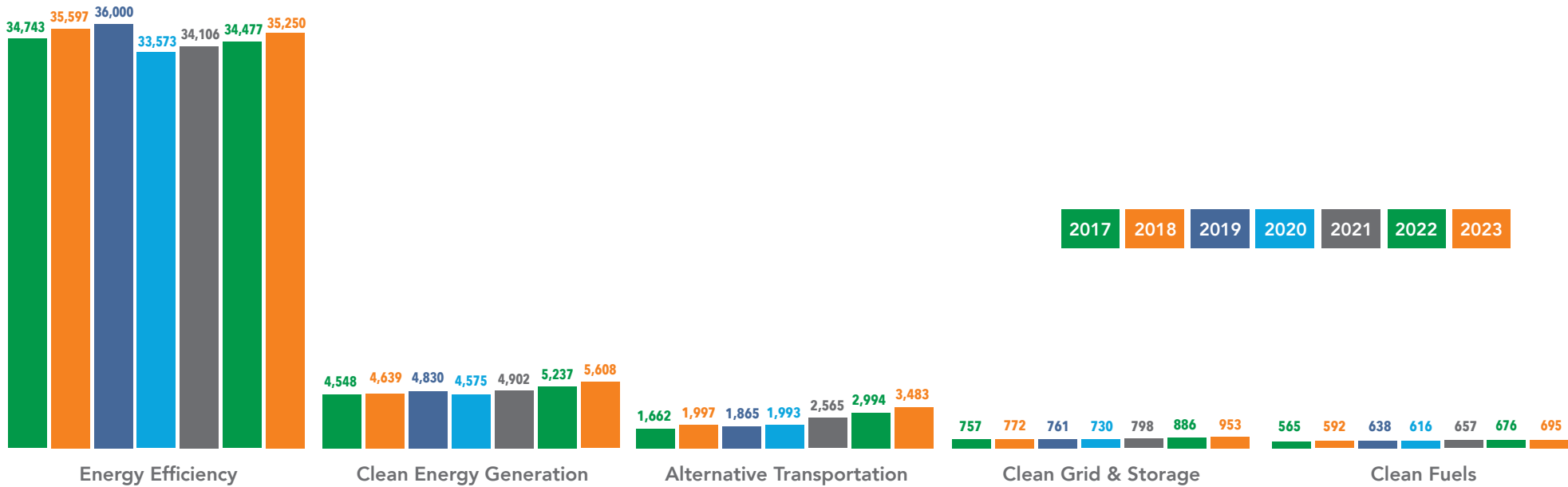
Overall, each of the five major clean energy technology sectors experienced employment growth between 2022 and 2023.

Like prior years, the highest employment growth rates were among Alternative Transportation jobs (16.3 percent), followed by Clean Grid and Storage jobs (7.6 percent) and Clean Energy Generation jobs (7.1 percent). The greatest number of jobs (almost 800) was added to the Energy Efficiency technology sector, representing a growth rate of 2.2 percent (Figure 4).



Clean Energy Employment By Technology Sector, 2017-2023

Figure 4



As of 2023, more than 4,500 clean energy establishments exist within Connecticut.

The largest concentration of these establishments are Energy Efficiency firms (87.7 percent), which is expected given the technology sector’s concentration of clean energy jobs in the state. Energy Efficiency also had the largest increase in new establishments between 2022 and 2023, adding 76 new establishments to Connecticut’s clean energy economy (Table 2).



Clean Energy Establishments By Sector, 2017-2023

Table 2

SECTORS	2017	2018	2019	2020	2021	2022	2023
Energy Efficiency	3,677	3,728	3,833	3,771	3,860	3,909	3,985
Clean Energy Generation	223	241	258	247	261	273	278
Alternative Transportation	172	194	177	187	187	191	194
Clean Fuels	58	59	52	50	51	50	51
Clean Grid & Storage	28	31	27	29	32	33	34
TOTALS	4,159	4,253	4,347	4,284	4,392	4,455	4,543






Note: For this report, a clean energy business establishment is any business location in Connecticut with employees that are directly involved with researching, developing, producing, manufacturing, distributing, selling, implementing, installing, or repairing components, goods, or services related to one or multiple clean energy technologies, as defined in Appendix B. This also includes supporting services such as consulting, finance, tax, and legal services related to energy, fuels, energy efficiency, or motor vehicles.

This section provides an overview of clean energy employment in Connecticut by major technology sector and sub-technology, or detailed technology.

Each major technology sector – Energy Efficiency, Clean Energy Generation, Alternative Transportation, Clean Grid and Storage, and Clean Fuels – includes multiple detailed technologies, as seen in (Table 3).

Clean Energy Industry Definition<sup>19</sup>

Table 3

				
Energy Efficiency	Clean Energy Generation	Alternative Transportation	Clean Grid & Storage	Clean Fuels
High Efficiency HVAC & Renewable Heating and Cooling (including geothermal, biomass, and heat pumps)	Solar	Hybrid Electric Vehicles	Storage	Other Biofuels
Traditional HVAC <sup>20</sup>	Nuclear	Electric Vehicles	Microgrid	Nuclear Fuels
ENERGY STAR & Efficient Lighting (including LED, CFL, and other efficient lighting)	Bioenergy & Combined Heat and Power	Plug-In Hybrid Vehicles	Other Grid Modernization	Woody Biomass
Other <sup>21</sup>	Wind	Natural Gas Vehicles	Smart Grid	Other Ethanol & Non-Woody Biomass
Advanced Materials (including weatherization)	Traditional Hydropower	Hydrogen and Fuel Cell Vehicles		
	Low-impact Hydropower			
	Geothermal			

<sup>19</sup> For detailed definitions of detailed technologies, please see Appendix B.

<sup>20</sup> "Traditional HVAC" workers are those that spend a portion of their time on energy efficient products and services; it is not inclusive of all HVAC workers, only those that are reported to spend less than 50 percent of their labor hours on efficient products and services. "ENERGY STAR/High AFUE HVAC" workers spend the majority of their labor hours (more than 50 percent) working with energy efficient HVAC technologies. The employment data makes this distinction in order to capture all HVAC workers that spend any portion of their labor hours on efficient HVAC technologies but separates the two job categories in order to appropriately track how much high efficiency HVAC activity is occurring.

<sup>21</sup> This includes ENERGY STAR certified electronics and data center equipment, recycled building materials, reduced water consumption products and appliances, and any energy efficiency that is not captured in the categories listed previously or a category that is used when unable to split employment into a single energy efficiency category.

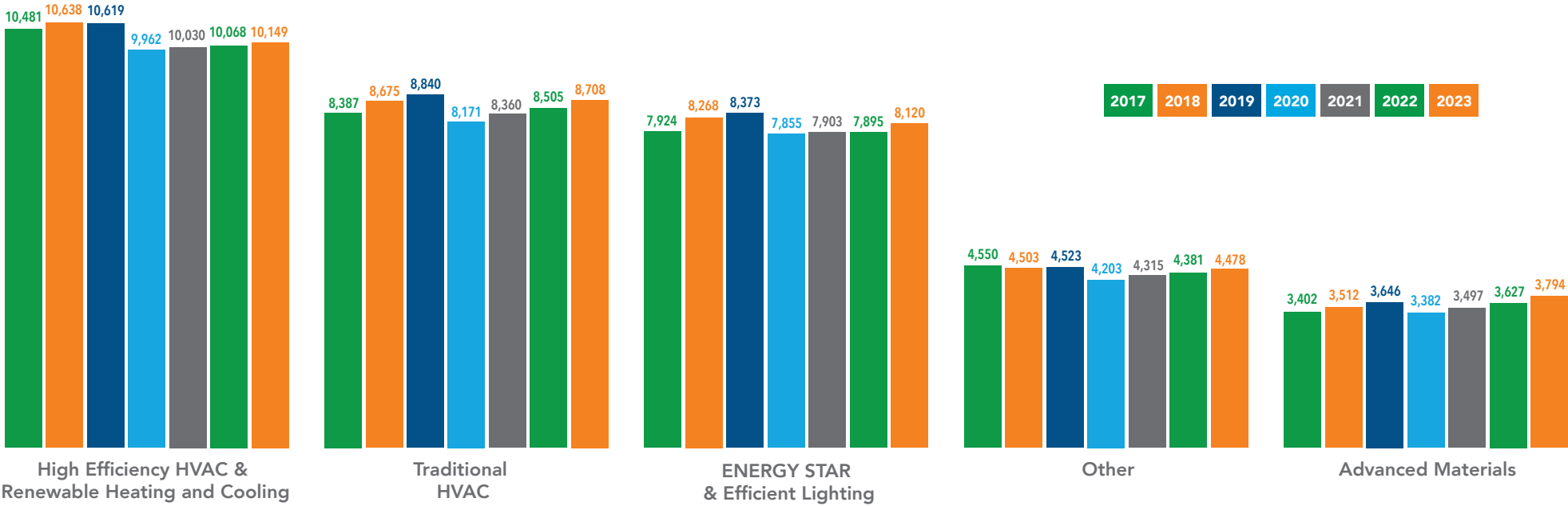
Within the Energy Efficiency technology sector, the High Efficiency HVAC & Renewable Heating and Cooling sub-technology continues to be the largest employer in the sector, representing 28.8 percent of total Energy Efficiency employment in 2023.

Despite the large concentration of High Efficiency HVAC & Renewable Heating and Cooling workers in Energy Efficiency, employment in this sub-sector remains below its 2019 pre-pandemic employment level, while the remaining sub-technologies have either surpassed 2019 employment or are closer to recovering than High Efficiency HVAC & Renewable Heating and Cooling (Figure 5).

From 2022 to 2023, Energy Efficiency employment in Connecticut grew by 2.2 percent, while nationally, this technology sector grew by 3.4 percent.<sup>22</sup> The ENERGY STAR® & Efficient Lighting and Traditional HVAC sub-technology sectors added the greatest number of jobs in 2023, each adding over 200 jobs. Between 2022 and 2023, the Advanced Materials sub-technology had the fastest growth rate at 4.6 percent and almost 170 added jobs (Figure 5).



Energy Efficiency Employment By Sub-Technology, 2017-2023<sup>23</sup> Figure 5



<sup>22</sup> National clean energy employment comparisons are all based on Connecticut's definition of clean energy. For further detail on Connecticut's clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

<sup>23</sup> For detailed definitions of sub-technologies, please see Appendix B: Clean Energy Technology List and Definitions.

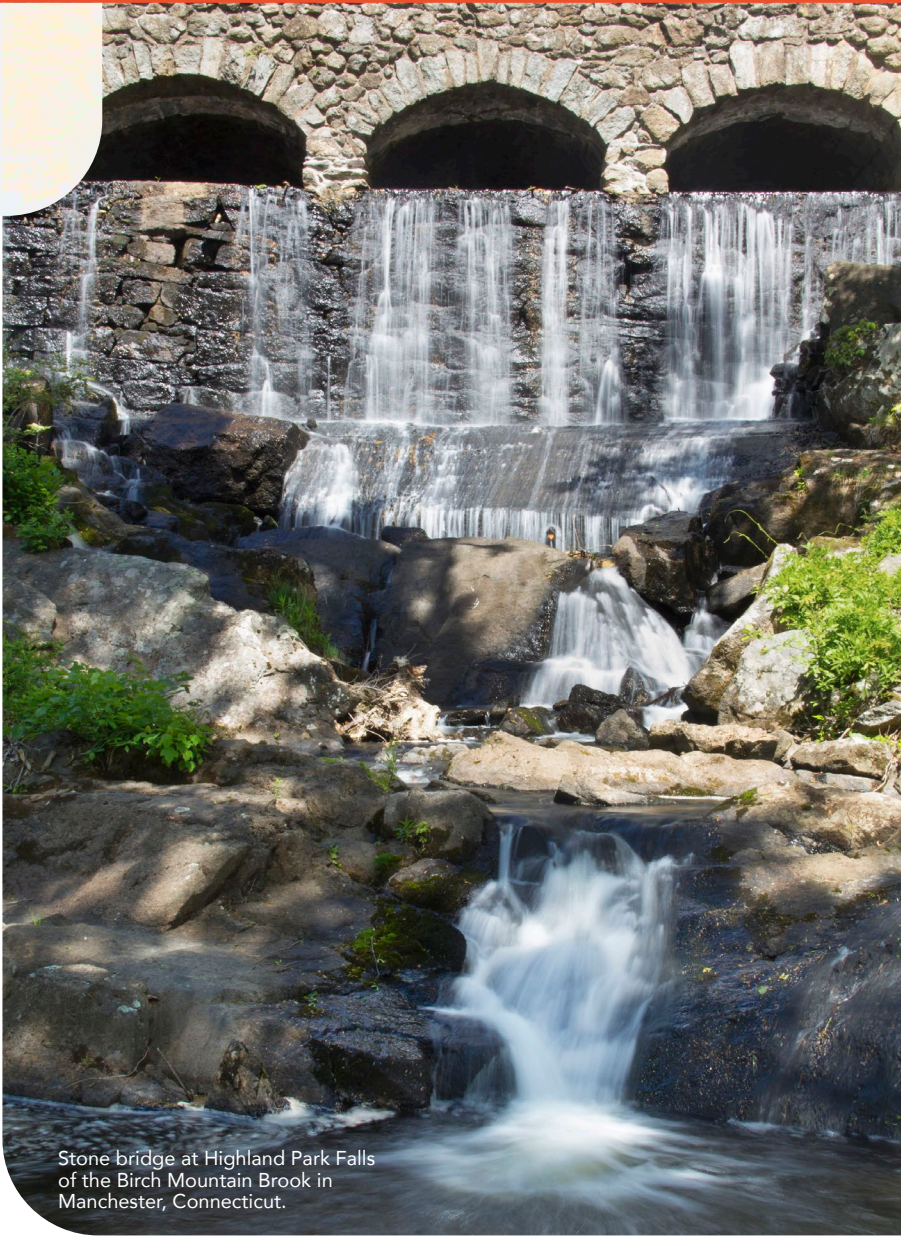
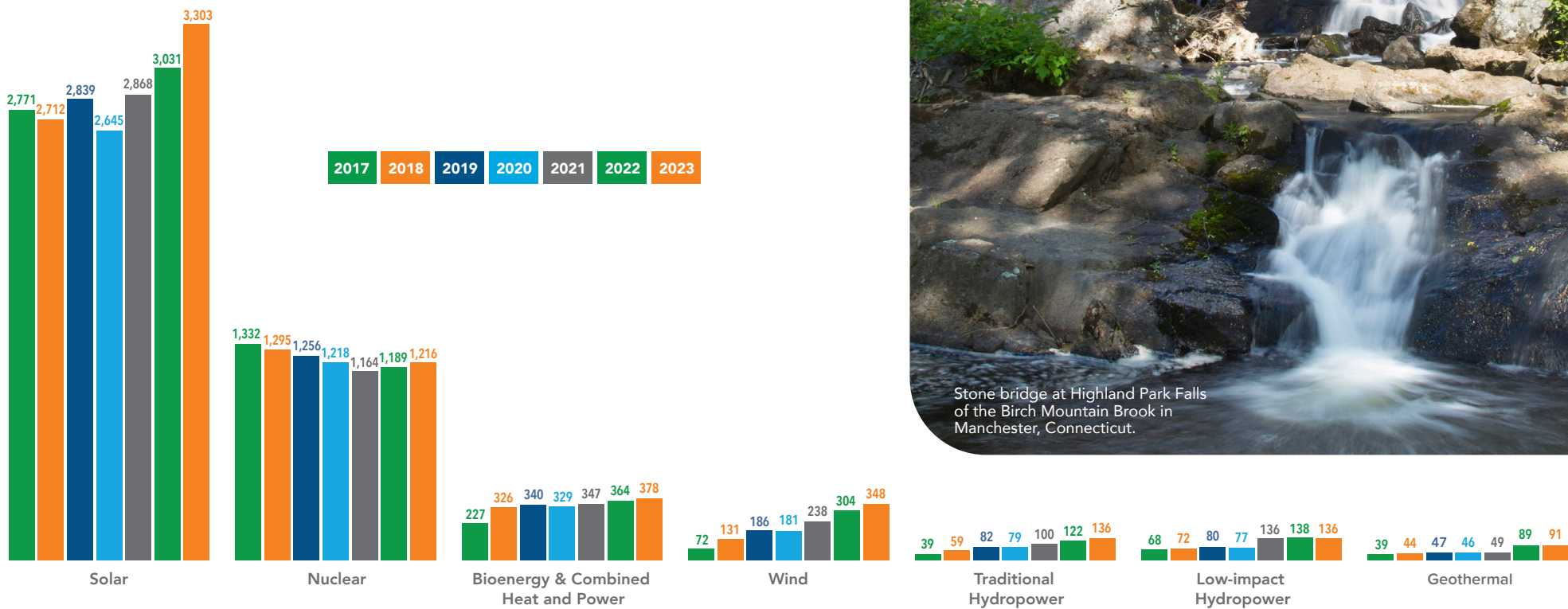
Clean Energy Generation (CEG) employment in Connecticut grew by 7.1 percent from 2022 to 2023, outpacing national CEG growth (4.5 percent).<sup>24</sup>

The Solar sub-technology added the largest number of jobs (272 jobs), growing 9.0 percent, and remains the largest employer within the CEG technology sector (Figure 6).

The Wind and Traditional Hydropower sub-technologies experienced the largest percentage increases in employment between 2022 and 2023, growing by 14.6 and 11.5 percent, respectively. Both of these growth rates outpaced Connecticut's overall CEG employment growth. The remaining sub-technologies largely remained unchanged between 2022 and 2023 (Figure 6).

Clean Energy Generation Employment By Sub-Technology, 2017-2023<sup>25</sup>

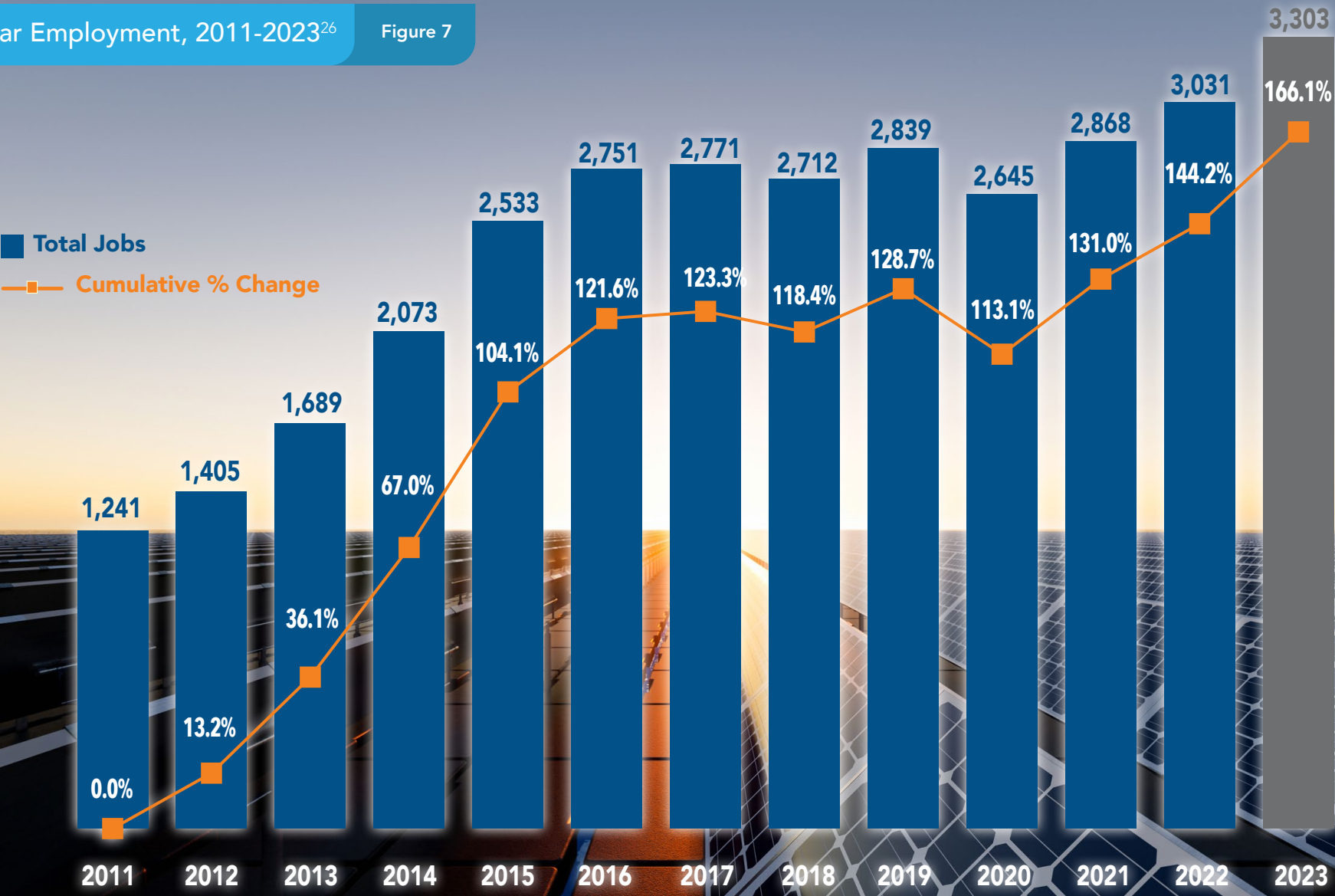
Figure 6



<sup>24</sup> National clean energy employment comparisons are all based on Connecticut's definition of clean energy. For further detail on Connecticut's clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

<sup>25</sup> For detailed definitions of sub-technologies, please see Appendix B: Clean Energy Technology List and Definitions.

Solar Employment, 2011-2023<sup>26</sup> Figure 7

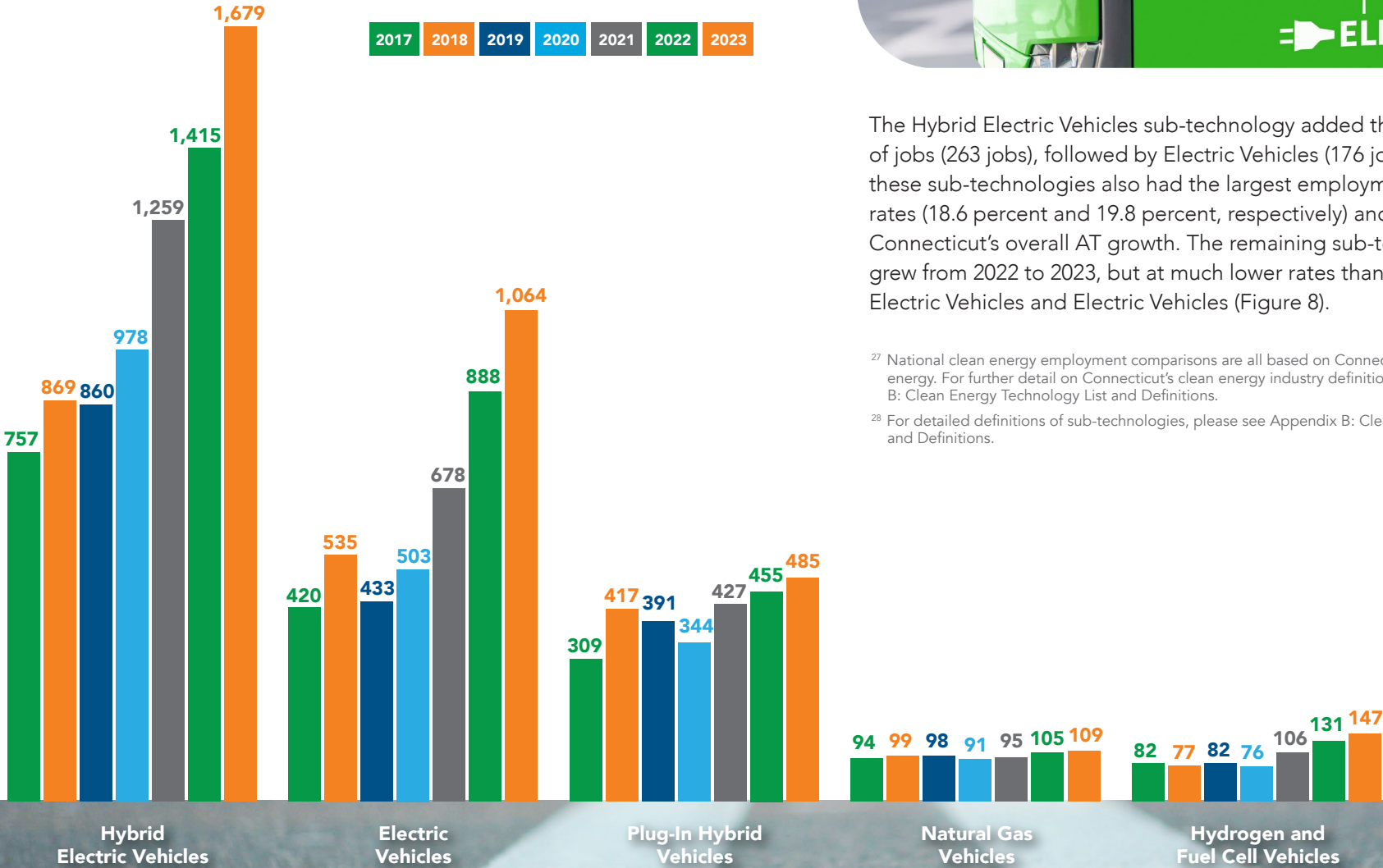


<sup>26</sup> National Solar Jobs Census, 2011-2015, Interstate Renewable Energy Council & USEER, 2016-2024, U.S. Department of Energy.

Connecticut's Alternative Transportation (AT) technology sector grew by 16.3 percent between 2022 and 2023, outpacing the national growth of 9.6 percent.<sup>27</sup>

Alternative Transportation Employment  
By Sub-Technology, 2017-2023<sup>28</sup>

Figure 8



The Hybrid Electric Vehicles sub-technology added the largest number of jobs (263 jobs), followed by Electric Vehicles (176 jobs). Both of these sub-technologies also had the largest employment growth rates (18.6 percent and 19.8 percent, respectively) and outpaced Connecticut's overall AT growth. The remaining sub-technologies grew from 2022 to 2023, but at much lower rates than Hybrid Electric Vehicles and Electric Vehicles (Figure 8).

<sup>27</sup> National clean energy employment comparisons are all based on Connecticut's definition of clean energy. For further detail on Connecticut's clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

<sup>28</sup> For detailed definitions of sub-technologies, please see Appendix B: Clean Energy Technology List and Definitions.



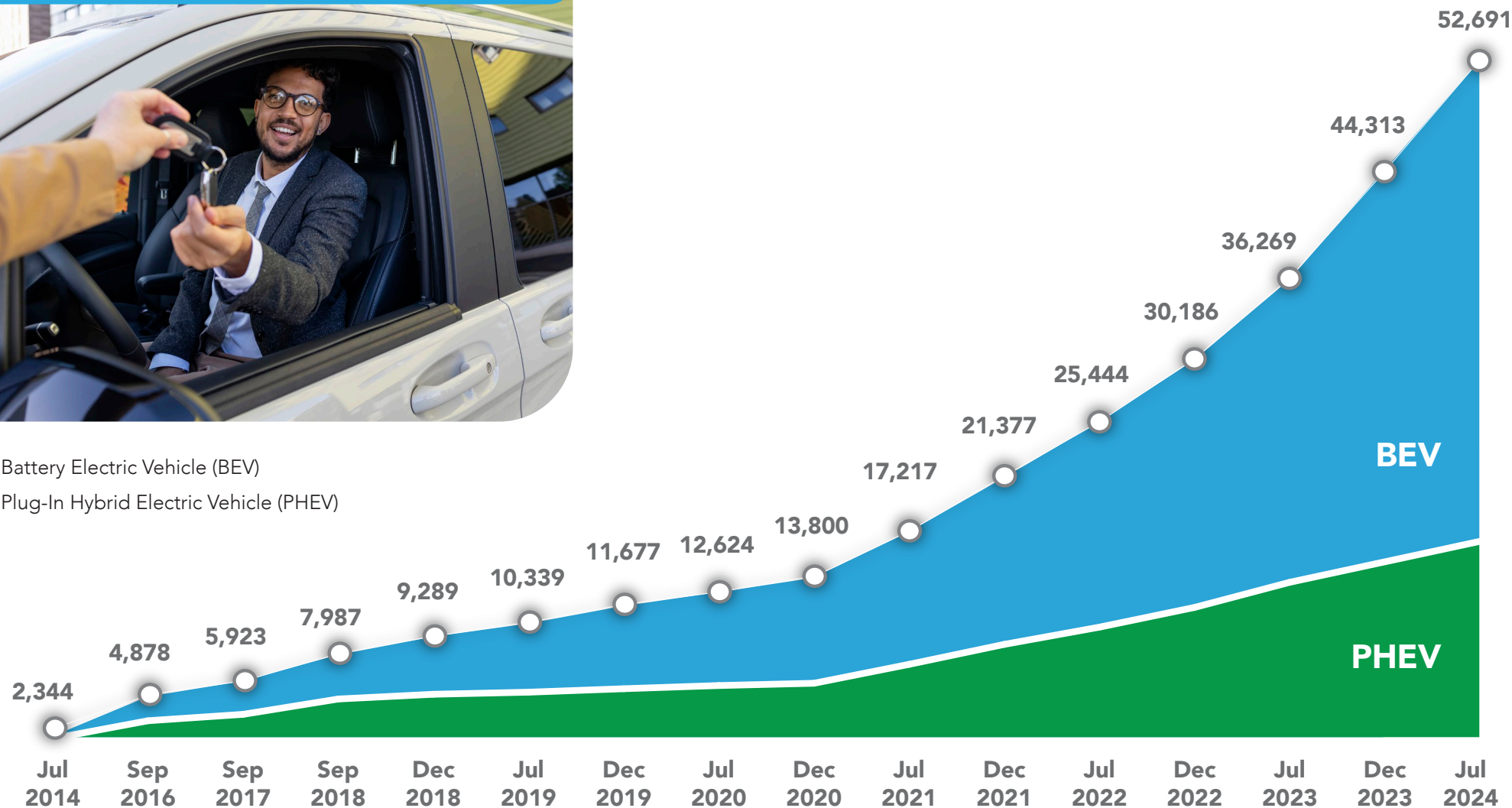
Total active EV registrations in Connecticut grew by 46.8 percent from 2022 to 2023, reaching over 44,300 registrations by the end of 2023. This outpaced the increase of 41.2 percent seen the year prior, from 2021 to 2022 (Figure 9).

Total Active EV Registrations In Connecticut<sup>29</sup>  
(as of July 1, 2024)

Figure 9



Battery Electric Vehicle (BEV)  
Plug-In Hybrid Electric Vehicle (PHEV)



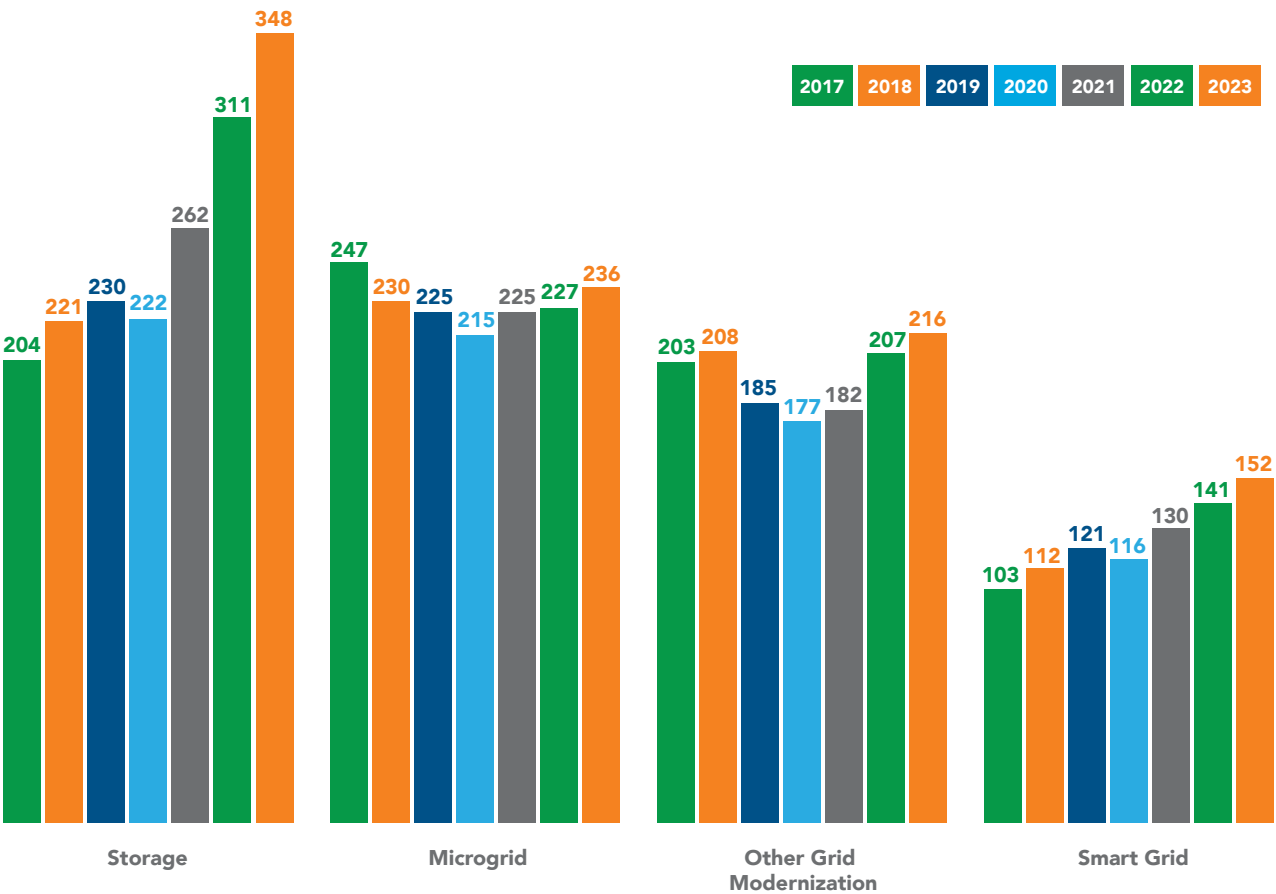
<sup>29</sup> Connecticut's Official State Website, Expanded EV Registration Fact Sheet, Accessed March 2025, <https://portal.ct.gov/-/media/DEEP/air/mobile/CHEAPR/EV-Reg-Fact-Sheet.pdf>.

Employment in Connecticut’s Clean Grid and Storage (CGS) technology sector grew by 7.6 percent from 2022 to 2023, six percentage points higher than the national growth rate of this sector.<sup>30</sup>

Connecticut’s CGS technology sector operates within the state’s broader Transmission, Distribution, and Storage (TDS) sector and includes workers who spend part or all of their time engaged with clean grid and storage technologies. As shown in the traditional energy Transmission, Distribution, and Storage section below, the overall TDS sector, which encompasses both clean and traditional energy jobs, is significantly larger than the CGS sector. However, some TDS workers classified as traditional energy workers may spend a small portion of their time on clean grid and storage technologies, such as smart grid technology.

Each sub-technology within CGS experienced moderate employment increases, with the largest in the Storage sub-technology, adding 37 jobs and growing by 12.0 percent. Storage also remains the largest sub-technology in the sector (Figure 10).

Clean Grid And Storage Employment By Sub-technology, 2017-2023<sup>31</sup> Figure 10



<sup>30</sup> National clean energy employment comparisons are all based on Connecticut’s definition of clean energy. For further detail on Connecticut’s clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

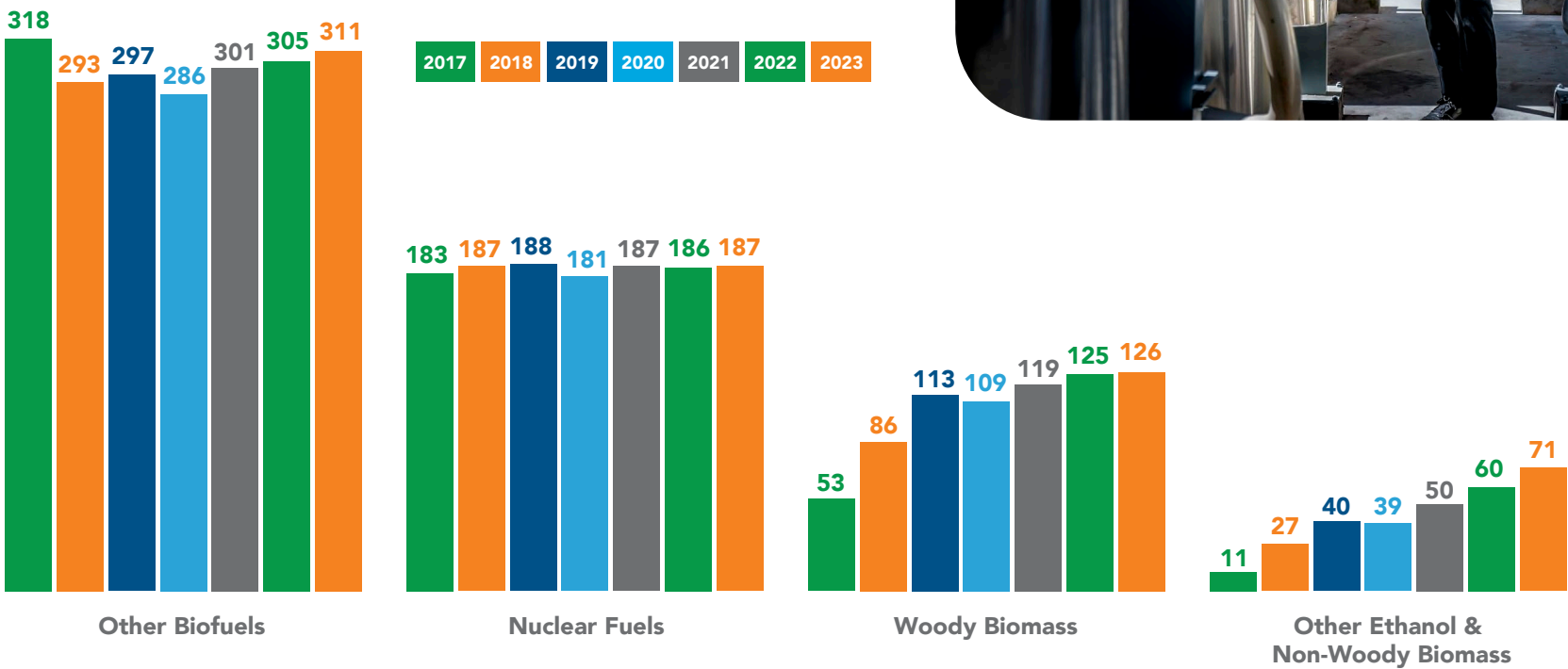
<sup>31</sup> For detailed definitions of sub-technologies, please see Appendix B: Clean Energy Technology List and Definitions.

Connecticut’s Clean Fuels (CF) technology sector experienced a modest employment increase of 2.9 percent since the 2023 CT CEIR, representing almost 20 added jobs.

This growth in Connecticut was outpaced by the national CF technology sector which grew by 3.4 percent.<sup>32</sup> The largest employment increase was in the Other Ethanol and Non-Woody Biomass sub-technology, which added around 10 jobs. Other Biofuels remains the largest CF sub-technology, representing 44.8 percent of employment in 2023 (Figure 11).

Clean Fuels Employment By Sub-Technology, 2017-2023<sup>33</sup>

Figure 11



<sup>32</sup> National clean energy employment comparisons are all based on Connecticut’s definition of clean energy. For further detail on Connecticut’s clean energy industry definition, please refer to Appendix B: Clean Energy Technology List and Definitions.

<sup>33</sup> For detailed definitions of sub-technologies, please see Appendix B: Clean Energy Technology List and Definitions

Connecticut’s clean energy workforce has a greater share of veterans and a similar share of workers who identify as racial minorities or mixed race, compared to its overall workforce.

It also has a smaller proportion of workers aged 55 years and over, which is a positive indicator that the state’s clean energy industry is growing, with fewer retirements expected over the next decade and a stronger interest in the industry among the state’s residents. Yet, women continue to be underrepresented in the clean energy sector, both in Connecticut and across the U.S.

Since 2019, ethnic and racial diversity in Connecticut’s clean energy industry has improved. The share of Hispanic or Latinx clean energy workers has increased by three percentage points from 2019 to 2023.



Clean Energy Workforce Demographics, 2023<sup>34</sup>Table 4

Workforce Demographic	Connecticut Clean Energy, 2019	Connecticut Clean Energy, 2022	Connecticut Clean Energy, 2023	Connecticut Overall Work-force, 2023	U.S. Clean Energy, 2023	U.S. Overall Work-force, 2023
Male	72%	73%	73%	51%	72%	53%
Female	28%	27%	27%	49%	28%	47%
Hispanic or Latino	10%	13%	13%	18%	17%	19%
Not Hispanic or Latino	90%	87%	87%	82%	83%	82%
American Indian or Alaska Native	1%	<1%	<1%	<1%	1%	<1%
Asian	6%	7%	7%	6%	8%	7%
Black or African American	6%	7%	7%	14%	8%	13%
Native Hawaiian or other Pacific Islander	1%	<1%	<1%	<1%	1%	<1%
White	82%	79%	79%	78%	73%	76%
Two or more races	5%	6%	6%	2%	8%	3%
Veterans	11%	9%	9%	3%	10%	5%
55 Years and Over	15%	13%	13%	28%	14%	23%

Over the same period, the share of racial minorities or mixed-race workers within the clean energy workforce also increased by three percentage points, driven by increases in Black or African American workers, Asian workers, and workers of two or more races. From 2022 to 2023, Connecticut’s clean energy workforce saw little demographic change (Table 4).

<sup>34</sup> Demographic data retrieved from the United States Energy and Employment Report 2024 (USEER 2024); the Bureau of Labor Statistics: Current Population Survey, and Veterans News Release; as well as JobsEQ Population Demographics.

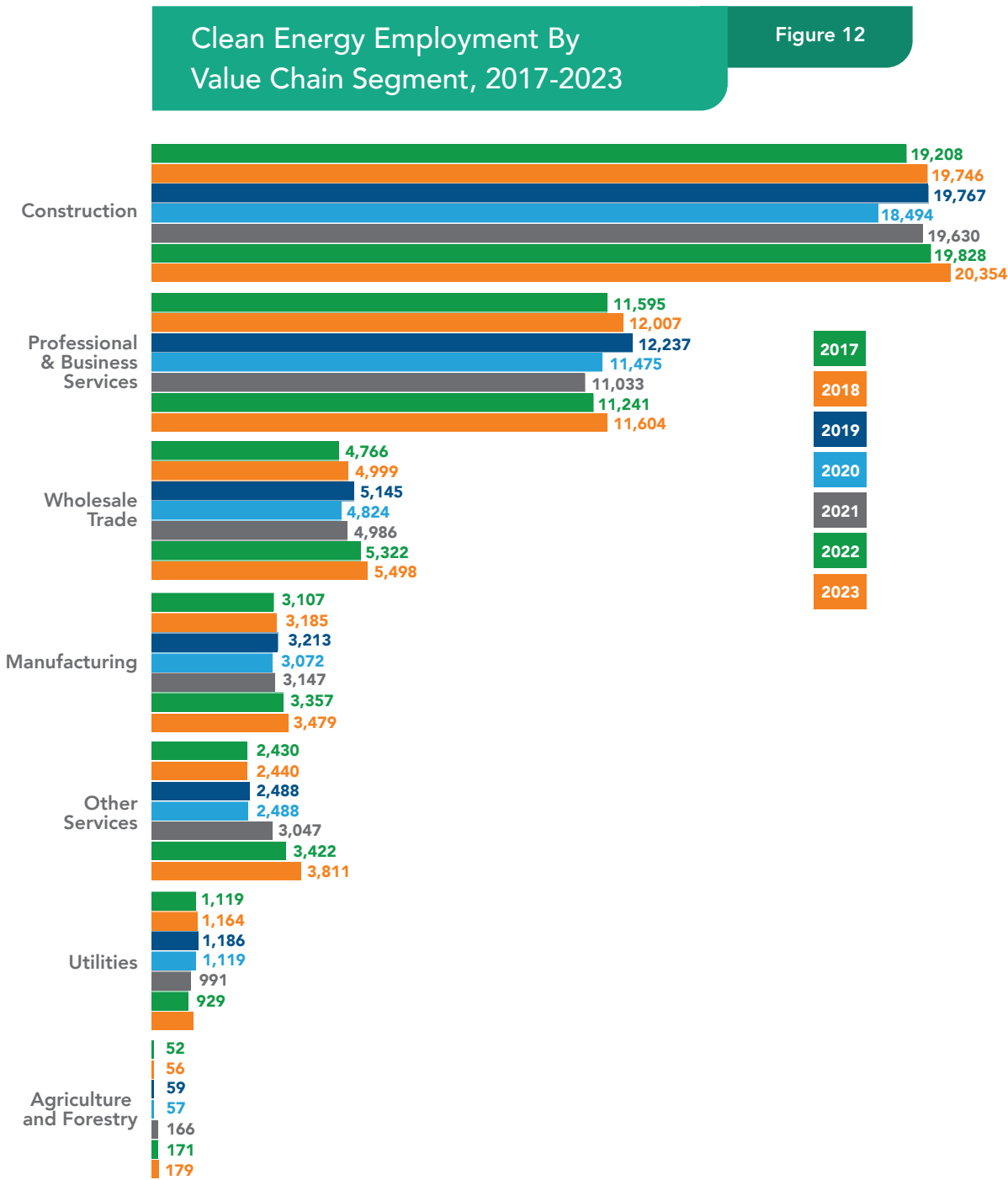
Clean energy employment by value chain presents the industries in which clean energy activities are concentrated in Connecticut, providing insight into the types of policies and workforce development strategies needed to support employers statewide.

Key value chain segments include Construction, Manufacturing, Wholesale Trade, Professional and Business Services, Other Services, Agriculture and Forestry, and Utilities.

Overall Clean Energy Value Chain Jobs

Between 2022 and 2023, employment grew across all clean energy value chain segments. Construction, the largest value chain segment, added the greatest number of jobs (526) over the last year, followed by Other Services (389) and Professional and Business Services (364). The remaining value chains experienced modest employment growth during the same time.

By 2023, nearly all value chain segments had recovered from pandemic-related job losses, with the exception of Utilities and Professional and Business Services. Employment in these two segments remains 5.2 and 10.3 percent below the respective 2019 pre-pandemic employment levels (Figure 12).



The Construction value chain represents approximately 44.3 percent of all clean energy jobs in Connecticut, with a strong concentration in the Energy Efficiency sector.

In 2023, almost all (90.4 percent) of these Construction value chain jobs were part of the Energy Efficiency technology sector. Construction jobs also make up a significant portion (62.5 percent) of Clean Grid & Storage employment. Clean energy Construction job growth from 2022 to 2023 was largely driven by Energy Efficiency, which added almost 400 Construction jobs over the last year.

Professional and Business Services accounts for one-quarter (25.2 percent) of Connecticut’s clean energy workforce and also has a significant presence in the Energy Efficiency sector. More specifically, 29.0 percent of Energy Efficiency jobs are in Professional and Business Services. Among the 360 Professional and Business Services jobs added to Connecticut’s clean energy industry between 2022 and 2023, almost two-thirds (63.1 percent) were jobs involved in Energy Efficiency technologies (Table 5 and Table 6).

Value Chain Employment By Clean Energy Technology Sector, 2023

Table 5

Clean Energy Sector	Clean Energy Generation	Clean Grid & Storage	Energy Efficiency	Clean Fuels	Alternative Transportation	TOTAL
Agriculture and Forestry	–	–	–	179	–	179
Utilities <sup>35</sup>	1,063	–	–	–	–	1,063
Construction	1,358	596	18,400	–	-	20,354
Manufacturing	433	80	2,165	146	654	3,479
Wholesale Trade	535	49	3,831	313	771	5,498
Professional & Business Services	1,037	182	10,212	54	119	11,604
Other Services	1,182	46	642	2	1,939	3,811
TOTAL	5,608	953	35,250	695	3,483	45,988

<sup>35</sup> Many energy utilities and third parties in the U.S. sponsor or manage Energy Efficiency programs for residential, commercial, and industrial properties. However, the USEER Energy Efficiency employment numbers do not include direct employees of the utilities that administer these programs. These employees are included in the numbers for “utilities” employees in the CEG section of this report. Though the Energy Efficiency section does not capture these employees, the programs include many different incentives and tools that reduce energy consumption and improve Energy Efficiency in meaningful ways.

Value Chain Proportional Employment By Clean Energy Technology Sector, 2023

Table 6

Clean Energy Sector	Connecticut Clean Energy Average	Clean Energy Generation	Clean Grid & Storage	Energy Efficiency	Clean Fuels	Alternative Transportation
Agriculture and Forestry	0.4%	0.0%	0.0%	0.0%	25.8%	0.0%
Utilities <sup>36</sup>	2.3%	19.0%	0.0%	0.0%	0.0%	0.0%
Construction	44.3%	24.2%	62.5%	52.2%	0.0%	0.0%
Manufacturing	7.6%	7.7%	8.4%	6.1%	21.0%	18.8%
Trade	12.0%	9.5%	5.1%	10.9%	45.1%	22.1%
Professional & Business Services	25.2%	18.5%	19.1%	29.0%	7.7%	3.4%
Other Services	8.3%	21.1%	4.9%	1.8%	0.4%	55.7%

<sup>36</sup> Many energy utilities and third parties in the U.S. sponsor or manage Energy Efficiency programs for residential, commercial, and industrial properties. However, the USEER Energy Efficiency employment numbers do not include direct employees of the utilities that administer these programs. These employees are included in the numbers for “utilities” employees in the CEG section of this report. Though the Energy Efficiency section does not capture these employees, the programs include many different incentives and tools that reduce energy consumption and improve Energy Efficiency in meaningful ways.

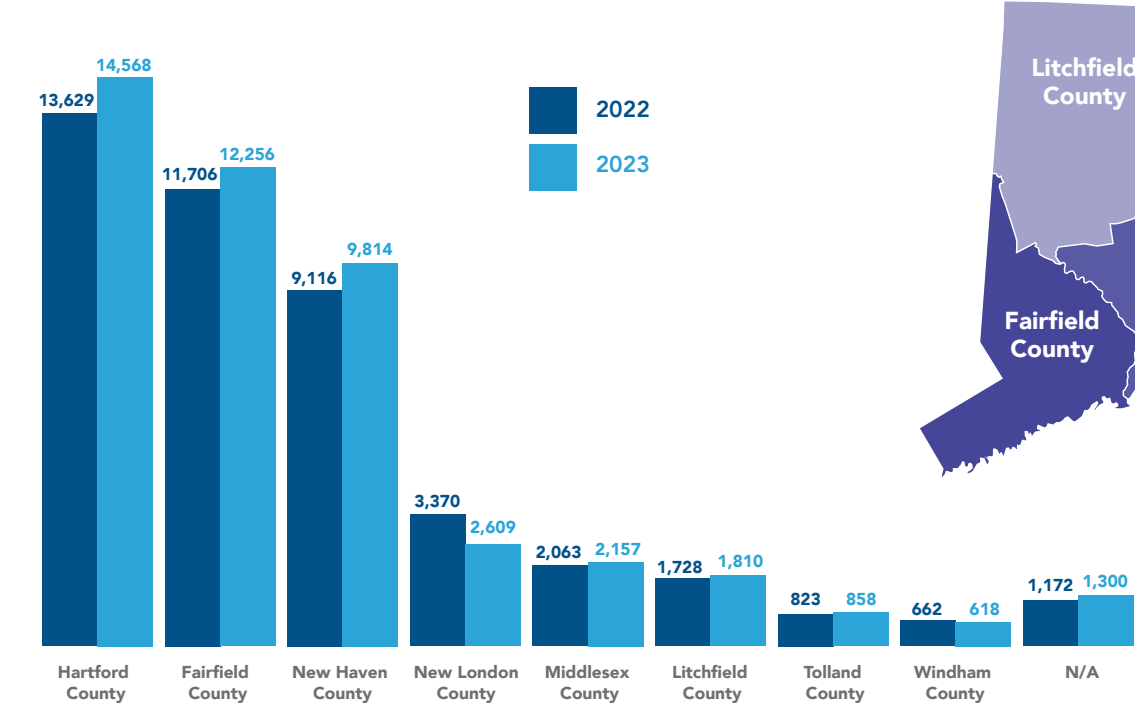
The geographic distribution of clean energy employment in Connecticut remained largely unchanged from 2022 to 2023, with Hartford, Fairfield, and New Haven Counties continuing to hold the largest shares of clean energy jobs in the state.

Hartford County experienced the strongest growth, adding over 900 jobs, a 6.9 percent increase. New Haven and Fairfield Counties also saw significant gains, adding 698 and 550 clean energy jobs, respectively.

In contrast, New London County saw a sharp decline, losing more than 700 clean energy jobs, representing a 22.6% decrease in clean energy employment from 2022 to 2023 (Figure 13 and Figure 14).

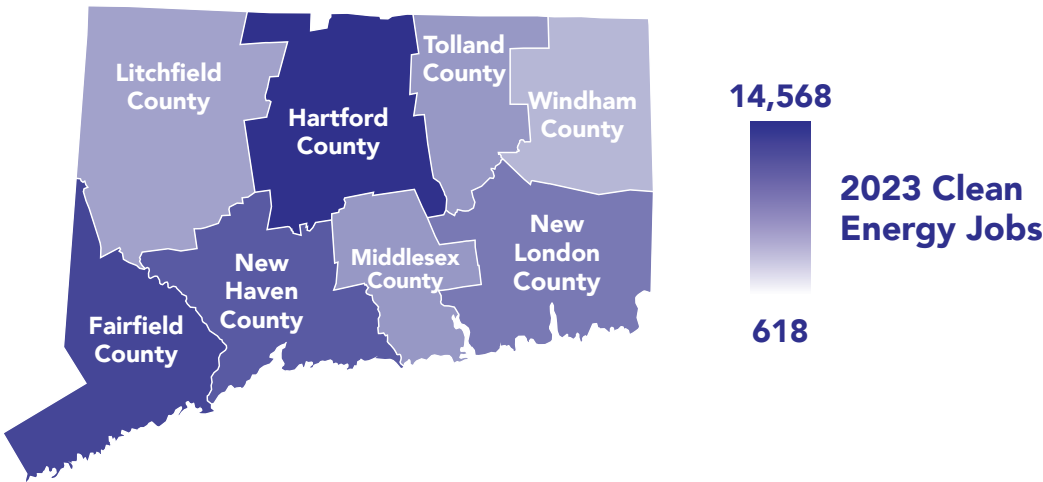
Clean Energy Employment By County, 2022-2023<sup>37</sup>

Figure 13



Map Of Clean Energy Employment By County, 2023

Figure 14



<sup>37</sup> Employment categorized as "n/a" could not be assigned to a single location.

Connecticut’s traditional energy industry includes permanent workers directly involved in Electric Power Generation; Fuels; Transmission, Distribution, and Storage; and Motor Vehicles technologies.

Roles engaging in the research, development, production, manufacturing, distribution, sales, implementation, installation, or repair of components, goods, or services related to these types of technologies are considered traditional energy roles. Similar to the clean energy industry, professional or business services jobs in consulting, finance, tax, and legal services related to energy are also included. Permanent workers who spend part or all of their time engaged with specific traditional energy technologies are classified as traditional energy workers in this report.<sup>38</sup>

*Solar and storage powers Hanwha Aerospace USA*

In May 2024, Qcells – a global leader in complete clean energy solutions – completed two solar and storage systems on Hanwha Aerospace USA’s (HAU) Cheshire and Newington sites. The systems will help power HAU’s operations. Under a 20-year Power Purchase Agreement (PPA), Qcells will provide HAU, a leading aviation and aerospace component manufacturer, with nearly 20% of its energy needs.

The battery system will help HAU power critical safety equipment in the event of an outage and help manage their electric demand. The battery installation is among the first to benefit from the Energy Storage Solutions program, launched in 2022 by Public Utilities Regulatory Authority (PURA) and managed by the Connecticut Green Bank, Eversource, and UI, to benefit Connecticut’s grid and electric customers.



Hanwha Aerospace USA's (HAU) Cheshire site. Photos by Red Skies Photography.

<sup>38</sup> Please see Appendix C: Traditional Energy Technology List and Definitions for the list of detailed technologies included in each traditional energy technology sector.

In 2023, over 28,600 workers were employed in Connecticut’s traditional energy industry, approximately 17,300 less than the state’s clean energy industry.

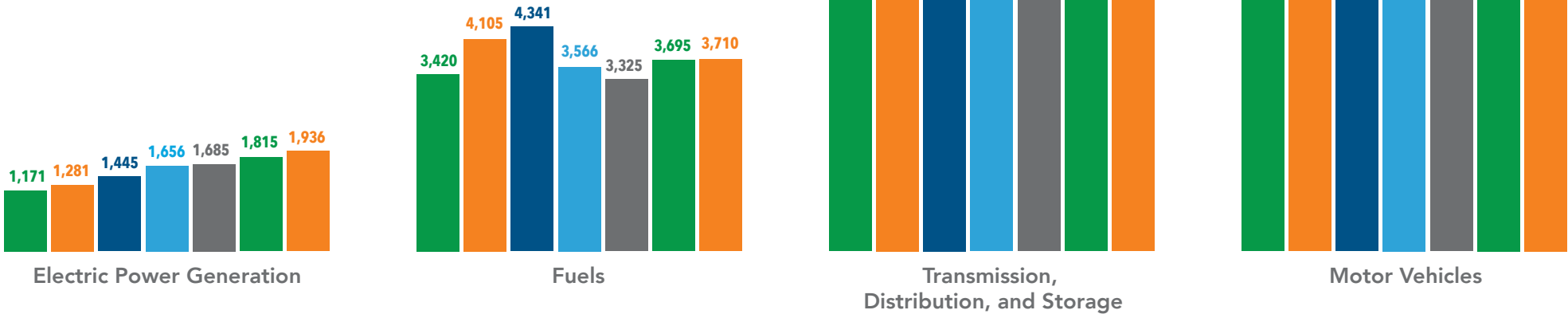
The largest concentration of traditional energy jobs is within the Motor Vehicles technology sector, which represents 48.9 percent of traditional energy employment.

Since 2019, traditional energy employment in Connecticut has declined 9.1 percent, while clean energy employment grew 8.8 percent. While Motor Vehicles employs the greatest number of traditional energy workers in the state, it was also the primary driver behind the industry’s overall job losses from 2019 to 2023. Between 2022 and 2023, traditional energy employment remained relatively flat, losing only 24 jobs, or declining by less than 1.0 percent (Figure 15).

Connecticut’s smallest traditional energy sectors are Electric Power Generation and Traditional Fuels, primarily because the state does not produce traditional fossil fuels such as coal, oil, and natural gas.<sup>39</sup> Instead, workers in these sectors generate and distribute electricity using imported fuels and manage the storage of the generated electricity.

Traditional Energy Employment  
By Sector, 2017-2023

Figure 15



<sup>39</sup> U.S. Energy Information Administration, Connecticut State Profile and Energy Estimates, December 2024, <https://www.eia.gov/state/analysis.php?sid=CT>.

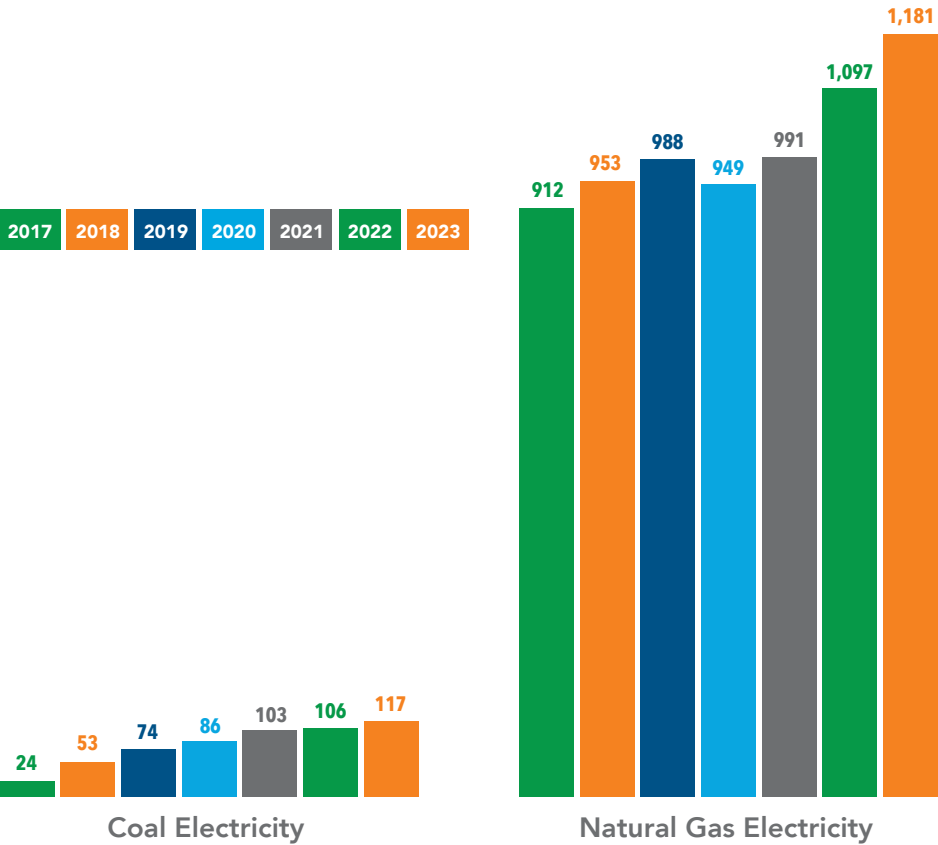
### Electric Power Generation

Electric Power Generation (EPG) is the smallest sector within Connecticut’s traditional energy industry and accounted for approximately 1,900 jobs, or 6.8 percent of employment in 2023. Since 2019, EPG has grown by close to 500 jobs, or 34.0 percent. In fact, around 120 of these jobs were added over the past year, representing a 6.6 percent growth from 2022 to 2023.

Connecticut’s traditional energy EPG workers are involved in the generation of electricity using imported fuels since the state does not have its own natural gas, crude oil, or coal reserves.<sup>40</sup> Within EPG, the Natural Gas Electricity sub-technology accounts for the largest share of employment (61.0 percent). From 2019 to 2023, this sub-technology added almost 200 jobs, growing by 19.6 percent. While Oil and Other Fossil Fuel Electricity employment remained stagnant during this period, Coal Electricity grew by 57.3 percent and Other Electricity more than doubled (Figure 16).

Electric Power Generation Employment  
By Sub-Technology, 2017-2023

Figure 16



<sup>40</sup> U.S. Energy Information Administration, Connecticut State Profile and Energy Estimates, December 2024, <https://www.eia.gov/state/analysis.php?sid=CT>.

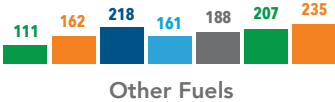
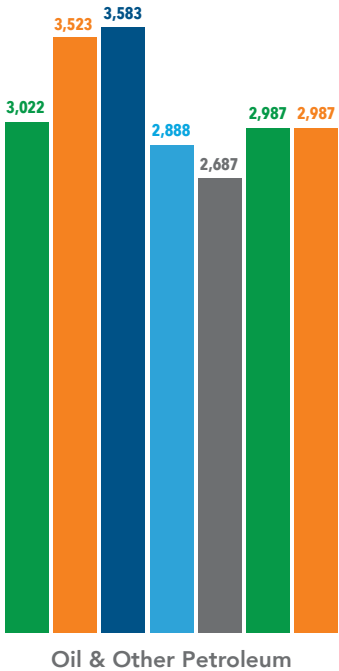
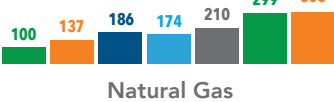
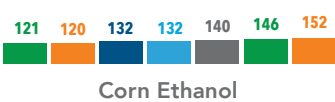
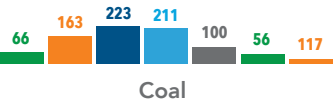
Traditional Fuels

Although Connecticut is not a fossil fuel producer, the state’s traditional fuel workers engage in the import, storage, and distribution of fossil fuels. Connecticut’s Traditional Fuels (TF) sector represents 13.0 percent of the state’s 2023 traditional energy employment. Between 2019 and 2023, the TF sector saw a decline of around 630 jobs, or 14.5 percent. Within the last year, from 2022 to 2023, there was virtually no change in employment.

Within Connecticut’s TF sector, the largest sub-technology is Oil and Other Petroleum fuels, accounting for 8.5 percent of the sector’s jobs in 2023. Since 2019, this sub-technology lost almost 600 jobs, representing 16.6 percent decline. Coal fuel employment also declined from 2019 to 2023, by close to 200 jobs (Figure 17).



Traditional Fuels Employment By Sub-Technology, 2017-2023 Figure 17



Transmission, Distribution, And Storage

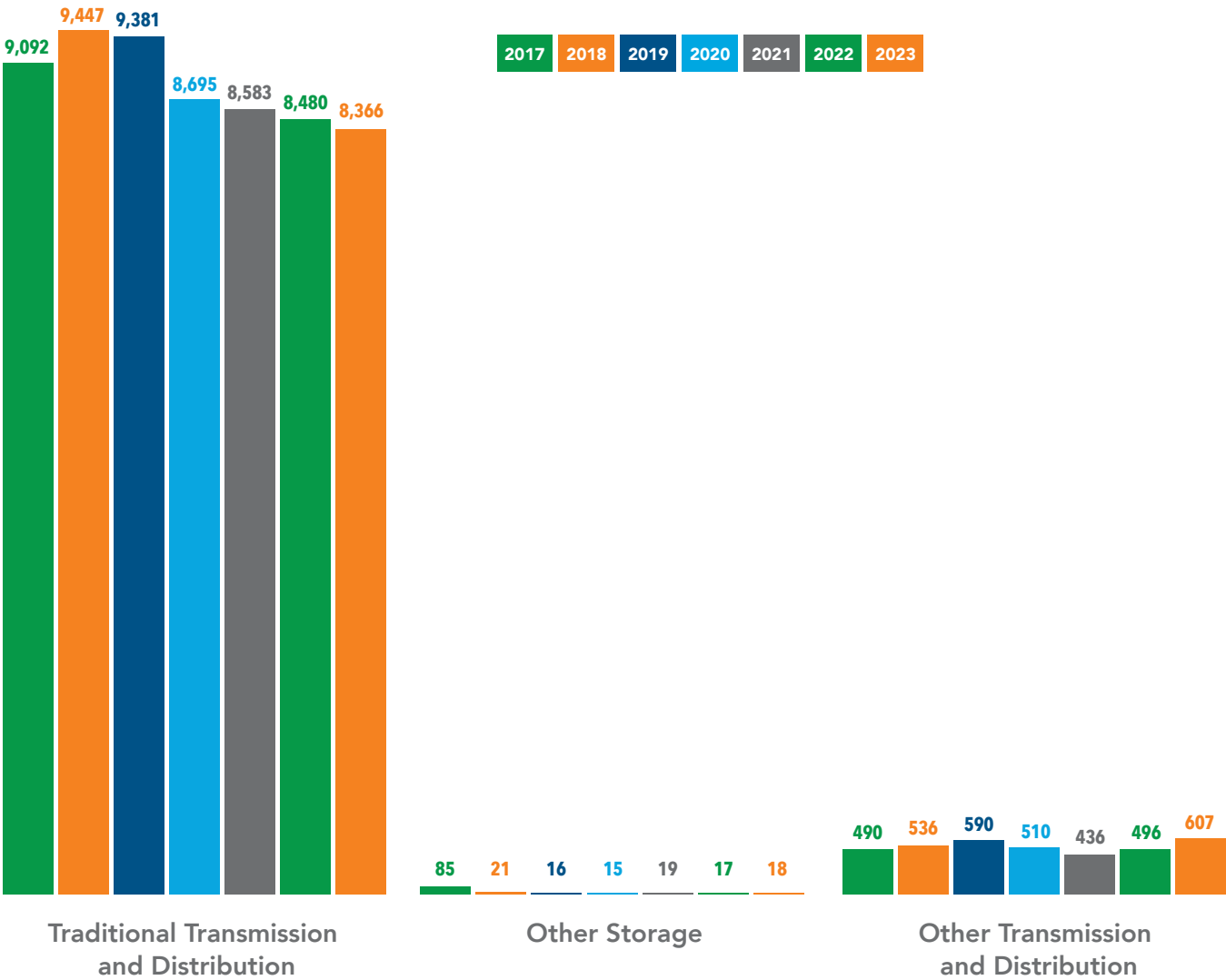
Transmission, Distribution, and Storage (TDS) is the second largest sector in Connecticut’s traditional energy industry, representing 31.4 percent of employment in 2023, or nearly 9,000 jobs. Since 2019, employment in the TDS technology sector has declined by 10.0 percent, losing almost 1,000 jobs, but remained relatively flat over the last year.

Within Connecticut’s TDS sector, Traditional Transmission and Distribution is the largest sub-technology, accounting for 93.1 percent of the sector’s total 2023 employment. The sub-technology lost over 1,000 jobs between 2019 and 2023, while jobs in the other TDS sub-technologies grew over the same time period (Figure 18).



Transmission, Distribution, And Storage Employment By Sub-Technology, 2017-2023

Figure 18



Motor Vehicles

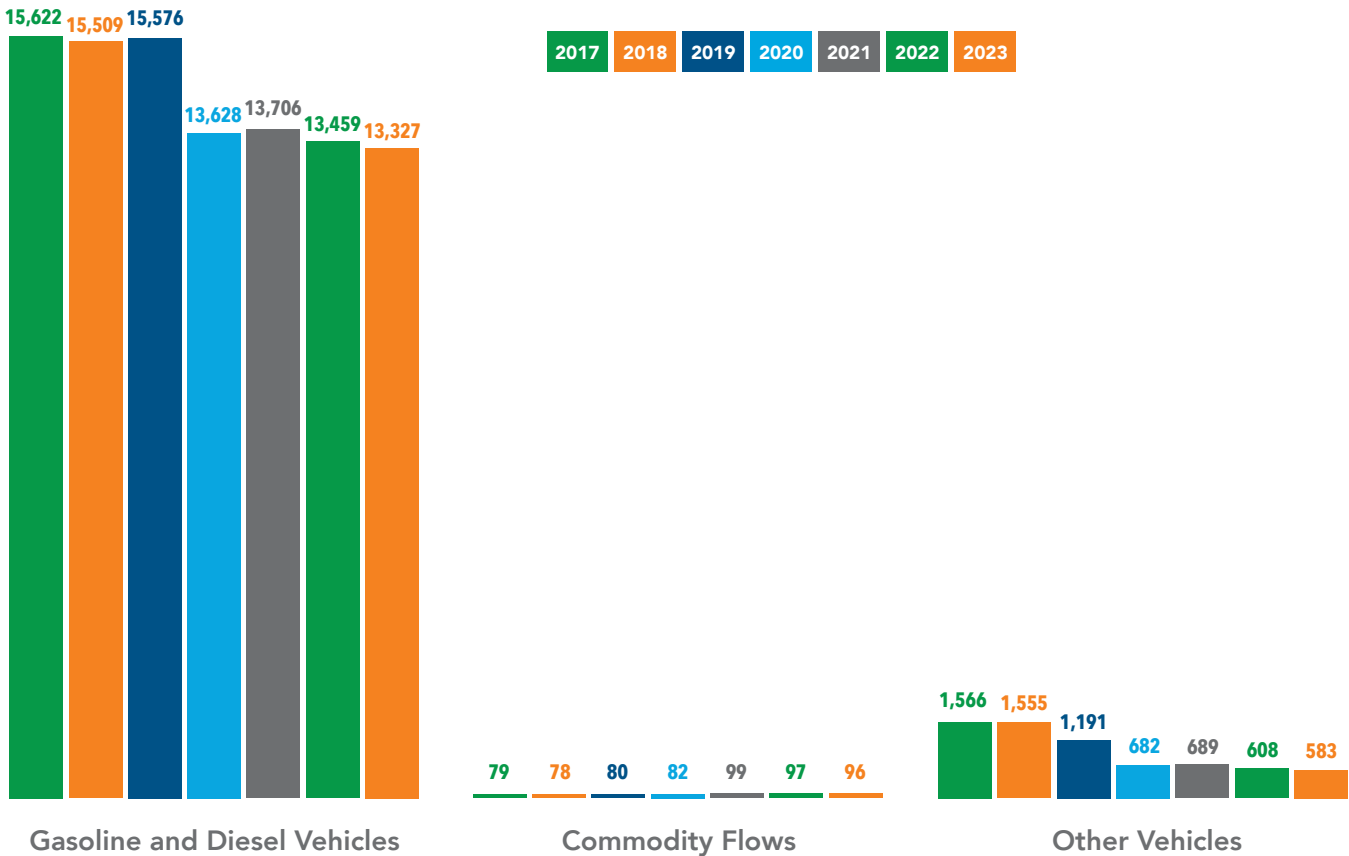
The largest traditional energy sector in Connecticut is Motor Vehicles (MV). This sector accounts for almost half (48.9 percent) of total 2023 traditional energy employment in the state. Workers in this sector are primarily involved in the manufacture and trade of internal combustion engine vehicle components as well as the maintenance and repair of internal combustion engine vehicles.

From 2019 to 2023, Connecticut’s traditional MV sector has experienced an employment decline of 16.9 percent, representing almost two-thirds (63.6 percent) of all traditional energy industry job losses in Connecticut during this time. Within the MV sector, the Gasoline and Diesel Vehicles and Other Vehicles sub-technologies drive this loss (Figure 19).



Motor Vehicles Employment By Sub-Technology, 2017-2023

Figure 19



Data for the 2024 Connecticut Clean Energy Industry Report comes from the 2024 U.S. Energy and Employment Report (USEER). The survey was conducted via phone and web, with phone interviews handled by ReconMR and the web survey programmed internally. To ensure data integrity, each respondent used a unique ID to prevent duplication.

A total of 593 business establishments in Connecticut participated, providing data to calculate industry incidence rates and distribute employment across industry categories—insights not available from state and federal labor market information agencies. The margin of error for incidence rates in Connecticut is  $\pm 3.99\%$  at a 95% confidence level.

The full research methodology for USEER is available at: [https://www.energy.gov/sites/default/files/2024-10/USEER%202024%20Appendices\\_1002\\_0.pdf](https://www.energy.gov/sites/default/files/2024-10/USEER%202024%20Appendices_1002_0.pdf)

Appendix B: Clean Energy Technology List and Definitions

The Connecticut Green Bank, Department of Energy and Environmental Protection, Eversource, and United Illuminating, operating through the Joint Committee, partnered with BW Research Partnership to define clean energy technologies in alignment with the state's clean energy policies.

Clean Energy employment in this report is categorized into five major clean energy sectors:

- 1. Energy Efficiency
- 2. Clean Energy Generation
- 3. Alternative Transportation
- 4. Clean Grid & Storage
- 5. Clean Fuels

A clean energy job includes any role directly involved in the research, development, production, manufacturing, distribution, sales, implementation, installation, or repair of components, goods, or services related to these sectors. It also includes supporting services such as consulting, finance, tax, and legal services related to clean energy.

Connecticut's clean energy sub-technologies, listed below, were selected based on their alignment with state-specific clean energy policies.<sup>41</sup>

Energy Efficiency:

- ENERGY STAR Certified Appliances, excluding HVAC
- ENERGY STAR Certified Heating Ventilation and Air Conditioning (HVAC), including boilers and furnaces with an AFUE rating of 90 or greater and air and central air conditioning units of 15 SEER or greater
- Traditional HVAC goods, control systems, and services<sup>42</sup>
- ENERGY STAR Certified Electronics (TVs, Telephones, Audio/Video, etc.)
- ENERGY STAR Certified Windows and Doors
- ENERGY STAR Certified Roofing
- ENERGY STAR Certified Seal and Insulation
- ENERGY STAR Certified Commercial Food Service Equipment

- ENERGY STAR Certified Data Center Equipment
- ENERGY STAR Certified LED Lighting
- Other LED, CFL, and Efficient Lighting
- Solar Thermal Water Heating and Cooling
- Other Renewable Heating and Cooling (geothermal, biomass, heat pumps, etc.)
- Advanced Building Materials/Insulation
- Recycled Building Materials
- Reduced Water Consumption Products and Appliances
- Other Energy Efficiency<sup>43</sup>

Clean Energy Generation

- Solar Photovoltaic Electric Generation
- Concentrated Solar Electric Generation
- Wind Generation
- Geothermal Generation
- Bioenergy/Biomass Generation
- Low-Impact Hydroelectric Generation, including Wave/Kinetic Generation
- Traditional Hydroelectric Generation
- Nuclear Generation
- Combined Heat and Power

Alternative Transportation

- Hybrid Electric Vehicles
- Plug-In Hybrid Vehicles
- Electric Vehicles
- Natural Gas Vehicles
- Hydrogen Vehicles
- Fuel Cell Vehicles

Clean Grid & Storage

*Electric Power Transmission and Distribution*

- Smart Grid
- Microgrids
- Other Grid Modernization<sup>44</sup>

*Storage*

- Pumped Hydropower Storage
- Battery Storage, including battery storage for solar generation
  - Lithium Batteries
  - Lead-Based Batteries
  - Other Solid-Electrode Batteries
  - Vanadium Redox Flow Batteries
  - Other Flow Batteries
- Mechanical Storage, including flywheels, compressed air energy storage, etc.
- Thermal Storage
- Biofuels, including ethanol and biodiesel
- Nuclear Fuel

Clean Fuels

- Woody Biomass/Cellulosic Biofuel
- Nuclear Fuel
- Other Ethanol/Non-Woody Biomass, including biodiesel
- Other Biofuels<sup>45</sup>

<sup>41</sup> Detailed major technology sector and sub-technology definitions are available at: [https://www.energy.gov/sites/default/files/2024-10/USEER%202024%20Appendices\\_1002\\_0.pdf](https://www.energy.gov/sites/default/files/2024-10/USEER%202024%20Appendices_1002_0.pdf)

<sup>42</sup> Traditional HVAC" workers are those that spend a portion of their time on energy efficient products and services; it is not inclusive of all HVAC workers, only those that are reported to spend less than 50 percent of their labor hours on efficient products and services. "ENERGY STAR/High AFUE HVAC" workers spend the majority of their labor hours (more than 50 percent) working with energy efficient HVAC technologies. The employment data makes this distinction in order to capture all HVAC workers that spend any portion of their labor hours on efficient HVAC technologies but separates the two job categories in order to appropriately track how much high efficiency HVAC activity is occurring.

<sup>43</sup> Other Energy Efficiency includes any energy efficiency that is not captured in the categories listed previously or a category that is used when unable to split employment into a single energy efficiency category.

<sup>44</sup> Other Grid Modernization includes other modernization of Connecticut's electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth.

<sup>45</sup> Other Biofuels includes other fuel derived directly from living matter.

**Electric Power Generation**

- Natural Gas Electricity
- Coal Electricity
- Oil and Other Fossil Fuel Electricity
- Other Electricity<sup>46</sup>

**Transmission Distribution and Storage**

- Traditional Transmission and Distribution
- Other Transmission and Distribution<sup>47</sup>
- Other Storage<sup>48</sup>

**Fuels**

- Oil and Other Petroleum
- Natural Gas
- Corn Ethanol
- Coal
- Other Fuels<sup>49</sup>

**Motor Vehicles**

- Gasoline and Diesel Vehicles
- Other Vehicles<sup>50</sup>



<sup>46</sup> Any generation that is not captured in the categories previously listed or a category that is used when unable to split employment into a single category.

<sup>47</sup> Any transmission, distribution, and storage that is not captured in the categories listed previously or a category that is used when unable to split employment into a single transmission, distribution, and storage category.

<sup>48</sup> Any transmission, distribution, and storage that is not captured in the categories listed previously or a category that is used when unable to split employment into a single transmission, distribution, and storage category.

<sup>49</sup> Any fuel that is not captured in the categories listed previously or a category that is used when unable to split employment into a single fuel category.

<sup>50</sup> Other Vehicles includes any motor vehicle technology that is not captured in the categories listed previously or a category that is used when unable to split employment into a single motor vehicle category.



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