



MAINE DEPARTMENT OF  
**Energy Resources**

# **Maine Clean Energy Industry Report**

Prepared for Maine Department of Energy Resources

March 2026



# Executive Summary

Commissioned by the Maine Department of Energy Resources (DOER), this annual Maine Clean Energy Industry Report updates and builds upon [last year's analysis](#) and examines recent trends of the energy workforce in Maine. The employment analysis presented in this report is based on data collected through the annual United States Energy and Employment Report (USEER) published by the [U.S. Department of Energy](#). Data analyzed in this report was gathered from 2020 through 2024. Effects of the state's clean energy policies and incentives implemented or announced in late 2024 and beyond are not captured in this publication. The report also includes analyses of clean energy contributions to Gross State Product (GSP) and clean energy patent data obtained from the U.S. Patent and Trademark Office. Together, these data provide a comprehensive view of the industry's scale and trajectory.

**Maine's clean energy industry has become a key contributor to the state's economy**, and its growth has consistently outpaced that of the broader state economy over the past several years.



Maine's clean energy economy employed **16,171 workers in 2024**, representing nearly 3 percent of the state's total workforce.



**614 jobs were added** to Maine's clean energy sector from 2023 to 2024, growing at a rate of nearly 4 percent and outpacing overall job growth in Maine.



Maine had New England's **fastest-growing** clean energy workforce from 2020 to 2024.



More than **100 new business establishments** were added to Maine's clean energy sector from 2023 to 2024.



**316 jobs were added** to Maine's traditional energy industry from 2023 to 2024 representing 2.9 percent growth.

Despite uncertainty about federal support for clean energy initiatives, Maine remains committed to its goals to advance affordable and reliable energy, reach 100 percent clean electricity by 2040 by adding a diverse mix of new energy resources, install 275,000 heat pumps by 2027, and weatherize 35,000 homes and businesses by 2030.

**Maine has added more than two gigawatts of local clean energy across thousands of projects in recent years, with more scheduled to come online in the coming years. Maine has also been a leader in heat pump installation and energy efficiency implementation over the past several years.** In 2023, the state exceeded its original goal of installing 100,000 heat pumps by 2025 and has set a new goal of installing 275,000 heat pumps by 2027. Maine has also invested in clean energy and energy efficiency business accelerators, the state's first cleantech business incubator, and a variety of workforce training programs. These investments and goals have driven growth in the clean energy economy and attracted significant investment to the state.

## **Key findings from this report include:**

### **1 Clean energy is contributing substantially to Maine's economy and fueling broader economic strength.**

Maine's clean energy economy contributed \$3 billion to the state's economy in 2024, or approximately 3 percent of the state's GSP. Employment in the clean energy industry grew by more than three times the rate of job growth in the state's overall economy (3.9 percent and 1.2 percent, respectively) from 2023 to 2024. Clean energy establishments accounted for more than 4 percent of all establishments in Maine, with 100 new establishments gained during this period.

### **2 Maine is leading New England in clean energy job growth.**

Since 2020, Maine has experienced the fastest growth in clean energy employment among all New England states, adding more than 2,300 jobs for a 17 percent increase. From 2023 to 2024, the state's clean energy job growth also outpaced that of the national clean energy workforce which rose by 2.8 percent.

### **3 The energy efficiency and construction sectors are the biggest drivers of clean energy employment in Maine.**

Energy efficiency has employed the greatest number of clean energy workers in Maine since 2016. This sector employed 9,500 workers in 2024, accounting for 59 percent of the state's total clean energy workforce. This sector also added the greatest number of jobs (nearly 1,500) from 2020 to 2024, more than any other sector. At the same time, almost half (48 percent) of the state's clean energy workforce is employed in the construction value chain. The number of construction workers in Maine's clean energy economy rose by more than 1,000 between 2020 and 2024, reaching over 7,700 workers in 2024.

## **4** Of Maine's counties, Waldo had the greatest concentration of clean energy workers in 2024.

In 2024, clean energy workers represented nearly 5 percent of Waldo County's total workforce. Also in 2024, Lincoln County had the highest concentration of energy efficiency workers, and Cumberland County employed the largest total number of clean energy workers.

## **5** Of Maine's total energy workforce, more than half are working in clean energy.

Maine's traditional energy industry employed approximately 11,400 workers at the end of 2024. The traditional energy workforce in Maine was largely comprised of transportation workers (58 percent), who primarily worked with gasoline- and diesel-powered vehicles. The remaining traditional energy sectors include grid and storage (20 percent), fuels (16 percent), and electric power generation (6.4 percent). Since 2020, Maine's traditional energy industry has added approximately 1,550 workers, a growth rate of about 16 percent.

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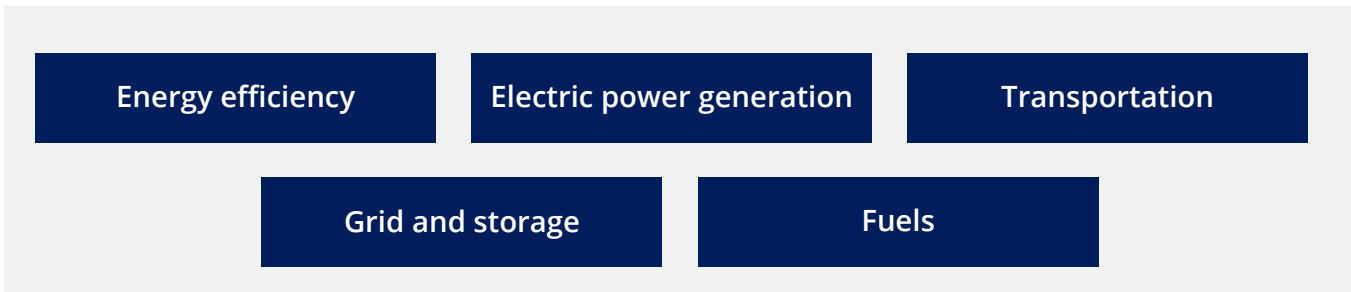
# Introduction

The 2025 Maine Clean Energy Industry Report, commissioned by the Maine Department of Energy Resources (DOER), marks the first time a detailed analysis of clean energy employment is accompanied by an overview of traditional energy employment in Maine. The state’s energy industry has five major technology sectors: energy efficiency, electric power generation, grid and storage, fuels, and transportation (Figure 1). Excluding energy efficiency, which is considered exclusively clean energy, the sectors include both clean energy and traditional energy jobs.

In 2024, there were approximately 27,500 workers in Maine’s energy industry, including approximately 16,200 clean energy workers and 11,400 traditional energy workers. This report highlights the sustained growth of Maine’s clean energy sector and recent trends among traditional energy workers in the state. The energy jobs data in this report are sourced from the U.S. Department of Energy’s annual United States Energy and Employment Report (USEER), a national energy jobs study, which considers only direct employment in the energy sector.

Jobs in each type of energy industry are defined by whether the workers spend part or all of their time engaged in specific clean or traditional energy technologies.<sup>1</sup> In Maine, the energy technologies defined as clean, and for which clean energy employment is discussed in this report, are laid out in Appendix B: Maine Clean Energy Technology List. This definition of clean energy is unique to the state of Maine. Similarly, Maine’s unique traditional energy definition can be found in Appendix C: Maine Traditional Energy Technology List.

Figure 1. Maine Energy Technology Sectors



<sup>1</sup> More information about USEER methodology and how jobs are counted as energy jobs in the report can be found in Appendix B of the 2025 USEER published by the United States Department of Energy.  
<https://www.energy.gov/sites/default/files/2025-08/USEER%20Appendices%200828%202.0.pdf>

## Clean and Traditional Energy Jobs

This report begins with a discussion of the clean energy industry’s five major technology sectors, followed by employment within the sub-technologies of each sector, which are also discussed throughout the report. Additionally, clean energy jobs are analyzed by value chain segment, or “industry”: installation, manufacturing, professional service, sales, and utility industries. As in previous years, the report presents a detailed overview of Maine’s clean energy industry, including Gross State Product, employment, and patent activity.

This report also discusses the employment trends of the four major traditional energy technology sectors: electric power generation, grid and storage, fuels, and transportation. Table 1 below displays the various clean and traditional energy technology sectors found within Maine’s overall energy industry.

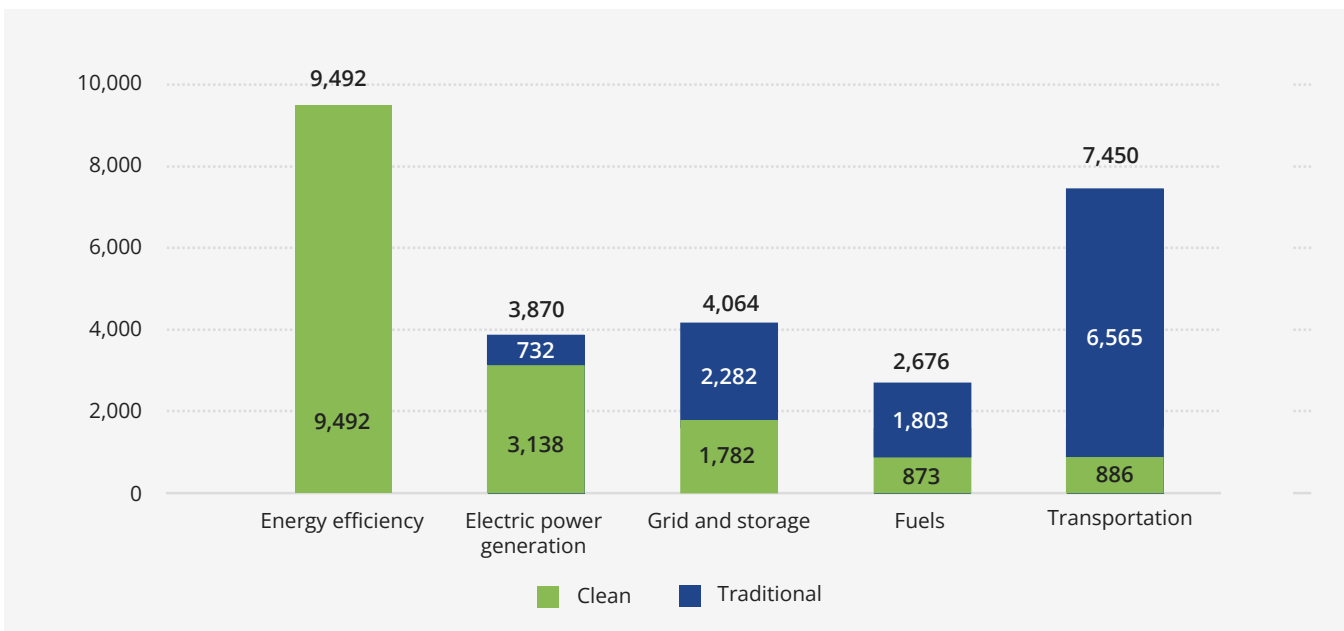
*Table 1. Maine Energy Technology Sectors, Clean Energy Sub-Technology Sectors, and Traditional Energy Sub-Technology Sectors<sup>2</sup>*

| Overall Energy Industry          | Clean Energy Industry  | Traditional Energy Industry  |
|----------------------------------|--|--|
| <b>Energy efficiency</b>         | Traditional and high efficiency HVAC, renewable heating and cooling, energy-efficient appliances and lighting, advanced building materials and insulation, and other energy-efficient technologies | N/A  |
| <b>Electric power generation</b> | Renewable electric power generation, including solar, wind, geothermal, bioenergy and biomass, low impact and traditional hydropower   | Non-renewable electric power generation, including natural gas, coal, oil, and other non-renewable electric power generation   |
| <b>Grid and storage</b>          | Electric power transmission, control and distribution, smart grid, microgrid, pumped hydropower storage, battery energy storage, mechanical energy storage, thermal energy storage                 | Traditional power transmission, control and distribution, and fuel storage including liquified natural gas, compressed natural gas, crude oil, refined petroleum fuels, coal, biofuels, and nuclear fuel |
| <b>Fuels</b>                     | Renewable fuels, including woody biomass, ethanol, and biodiesel   | Coal, oil, natural gas, nuclear fuel, and other fuels  |
| <b>Transportation</b>            | Plug-in hybrid vehicles, electric vehicles, hybrid-electric vehicles, and hydrogen and fuel cell vehicles  | Gasoline and diesel vehicles, natural gas vehicles, and other  |

<sup>2</sup> Please refer to Appendix B: Maine Clean Energy Technology List and Appendix C: Maine Traditional Energy Technology List for the comprehensive list of energy technologies included in each energy industry.

Energy efficiency has been the largest technology sector in Maine’s energy industry for the last several years, employing nearly 9,500 workers in 2024. All workers in this sector are considered clean energy workers because of the technologies they work with. In electric power generation, clean energy jobs have significantly outweighed traditional energy jobs between 2020 and 2024, accounting for 81 percent of the sector’s jobs in 2024. Clean and traditional jobs are more evenly distributed in the grid and storage sector, with clean energy jobs accounting for 44 percent and traditional energy jobs comprising the remaining 56 percent of the 2024 employment.<sup>3</sup> In the fuels and transportation sectors, traditional energy workers are much more prominent, accounting for 67 percent and 88 percent of the energy employment, respectively (Figure 2).

Figure 2. Clean and Traditional Energy Employment in Maine by Technology Sector, 2024<sup>4</sup>



\*Please note that all figures presented in this report are rounded to the nearest hundred. As a result, totals may not match the sum of individual components due to rounding. For more information, please refer to Appendix C: Methodology in the 2025 USEER.

<sup>3</sup> Workers involved in grid are classified as clean or traditional energy workers based on the grid technology in which they are involved. Smart grid workers, for example, are clean energy workers. Power transmission and distribution (T&D) workers found in both clean and traditional energy industries because of how workers in the utility value chain are allocated. Electric T&D workers at a utility company, such as electrical line workers at Central Maine Power, are considered clean energy workers belonging to the utility value chain and the T&D sub-technology sector of grid modernization & energy storage. Natural gas distribution workers at a utility company are considered traditional energy workers belonging to the utility value chain and the T&D sub-technology sector of grid and storage. Outside of the utilities value chain, all T&D workers, such as those manufacturing electric transmission lines or cables, are considered traditional energy workers, due to BLS reporting limitations.

<sup>4</sup> The clean energy sectors in this chart are equivalent to the energy efficiency, electric power generation, grid modernization and energy storage, renewable fuels, and alternative transportation sectors displayed in Figure 6 and outlined below.





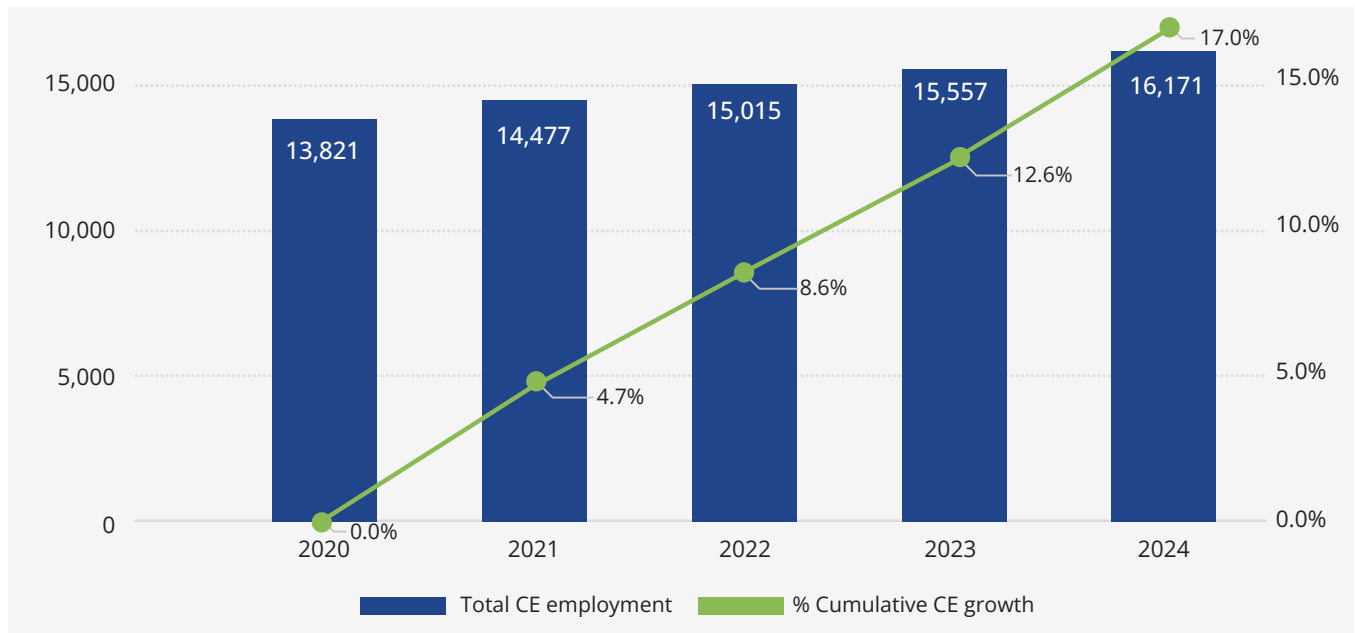
# Clean Energy Industry Overview

This section analyzes the clean energy sectors and industries in Maine, highlighting key strengths along with areas for growth.

## Total Clean Energy Employment

The state's clean energy workforce grew by more than three times the rate of the total economy of Maine in 2024 and outpaced that of the national clean energy labor force. Maine had nearly 16,200 clean energy workers in 2024, a 3.9 percent increase from the previous year (Figure 3). At the same time, Maine's total economy grew at a rate of 1.2 percent in 2024, or 0.5 percentage points slower than its 2023 growth.<sup>5</sup> National clean energy employment rose by 2.8 percent in 2024.<sup>6</sup>

Figure 3. Clean Energy Employment in Maine, 2020-2024

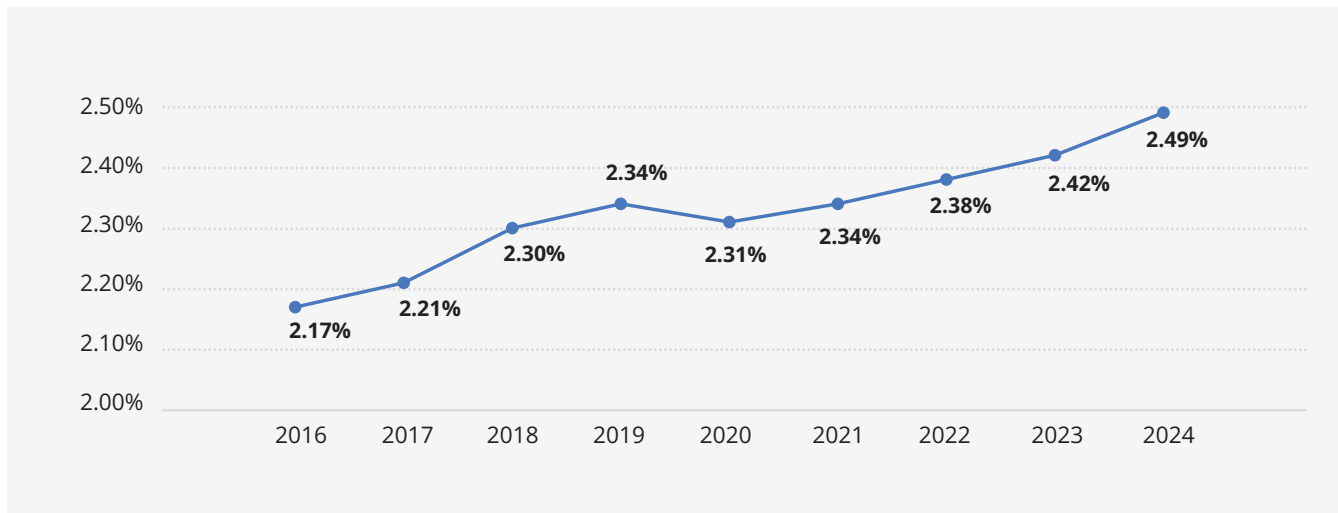


<sup>5</sup> Quarterly and Annual Industry Employment and Wages. Center for Workforce Research and Information. Maine Department of Labor. <https://www.maine.gov/labor/cwri/dashboards/quarterly-and-annual-employment-and-wages>

<sup>6</sup> National data found in U.S. Energy and Employment Report (USEER) 2024 ([https://www.energy.gov/sites/default/files/2024-10/USEER%202024\\_COMPLETE\\_1002.pdf](https://www.energy.gov/sites/default/files/2024-10/USEER%202024_COMPLETE_1002.pdf)) and USEER 2025 ([https://www.energy.gov/sites/default/files/2025-08/National%20USEER\\_08282025.pdf](https://www.energy.gov/sites/default/files/2025-08/National%20USEER_08282025.pdf)) reports.

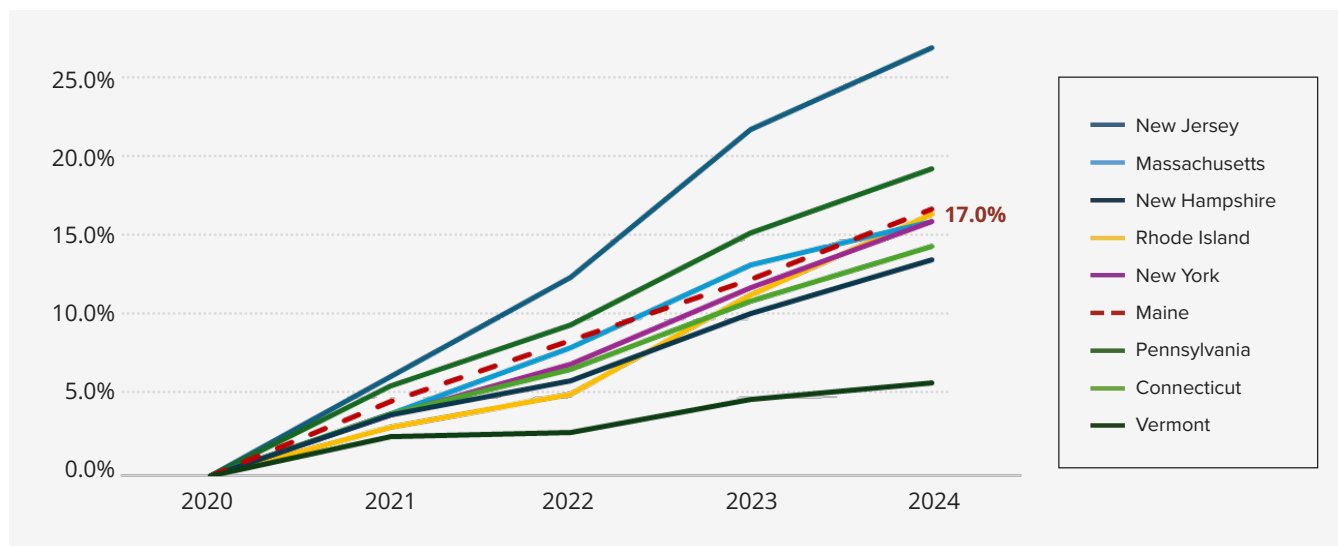
Besides 2020 when Maine’s overall employment fell, the state’s clean energy workforce continues to make up a greater share of the state’s total labor force year after year. In 2016, the clean energy workforce accounted for 2.2 percent of Maine’s entire workforce, and its share grew to 2.5 percent in 2024, which is like the state’s Supermarkets and Other Grocery Retailers industry (Figure 4).<sup>7</sup>

Figure 4. Share of Clean Energy Employment Among Total State Employment, 2016-2024



Since 2020, Maine has had the highest clean energy job growth among all New England states, increasing by more than 2,300 jobs (17.0 percent), just above Rhode Island (16.7 percent) and Massachusetts (16.2 percent). In the Northeast more broadly, Maine’s clean energy industry grew faster than New York’s (16.2 percent), but fell behind those of New Jersey and Pennsylvania (Figure 5).<sup>8</sup>

Figure 5. Cumulative Employment Change of Clean Energy Workers Across Northeast United States, 2020-2024



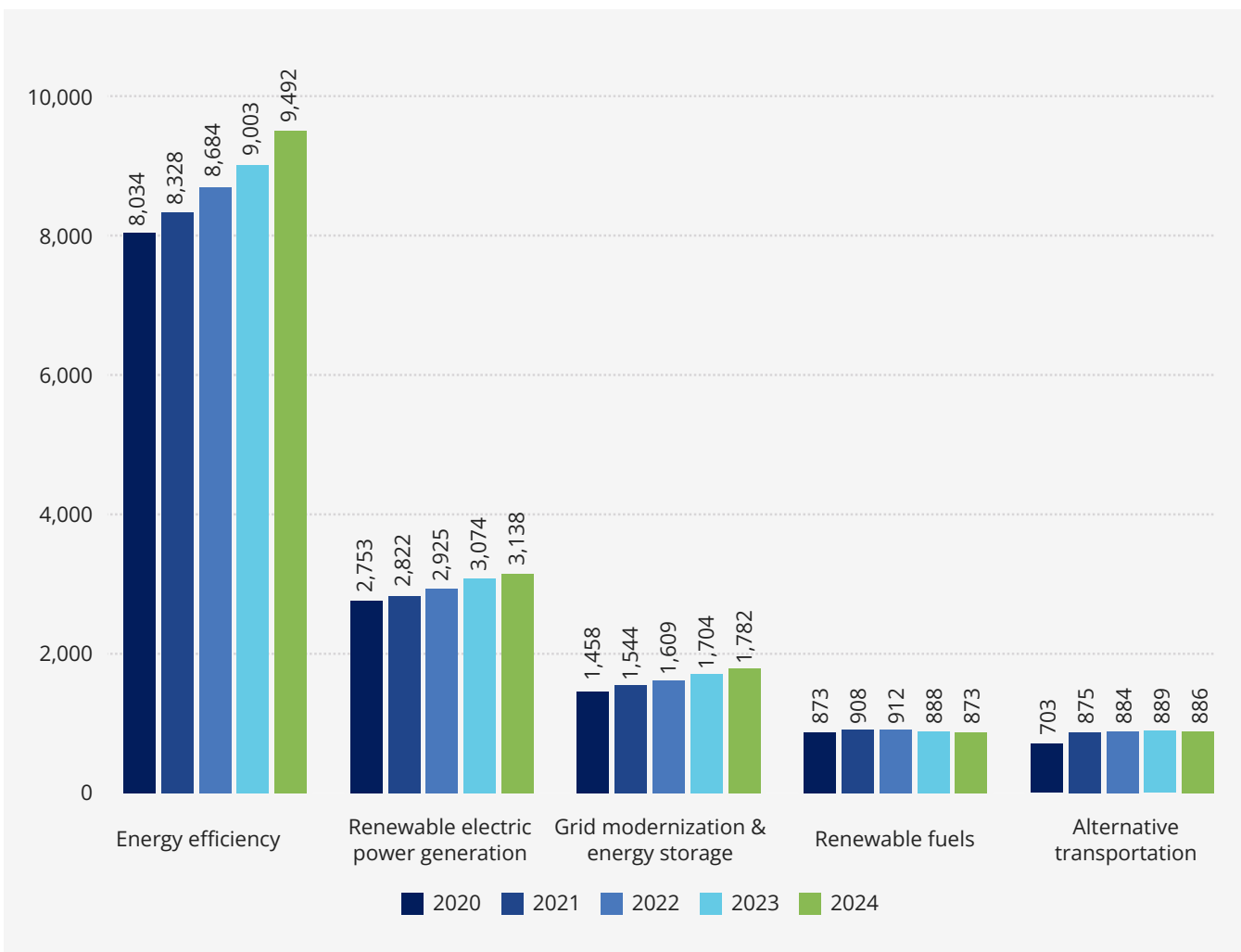
<sup>7</sup> Supermarkets and Other Grocery Retailers (except Convenience Retailers) (NAICS Code 445110) employed 16,122 workers in 2024Q4. Quarterly and Annual Industry Employment and Wages. Center for Workforce Research and Information. Maine Department of Labor. <https://www.maine.gov/labor/cwri/dashboards/quarterly-and-annual-employment-and-wages>

<sup>8</sup> National and state comparisons in this section are with respect to Maine’s clean energy definition, which includes employment in Electric Power Distribution (NAICS 22112) and excludes natural gas vehicle jobs. Details on Maine’s clean energy definition can be found in Appendix B: Maine Clean Energy Technology List.

From 2023 to 2024, Maine had the third-highest growth rate in clean energy employment (3.9 percent) in the Northeast, behind Rhode Island (4.6 percent) and New Jersey (4.3 percent), but outpacing New York's 3.8 percent growth. Despite a drop in employment in 2020 due to the COVID-19 pandemic, Maine recovered quickly and surpassed pre-pandemic employment by 2022. In 2022 alone, Maine's energy efficiency workforce increased by over 350 workers, and renewable electric power generation gained around 100 workers.<sup>9</sup>

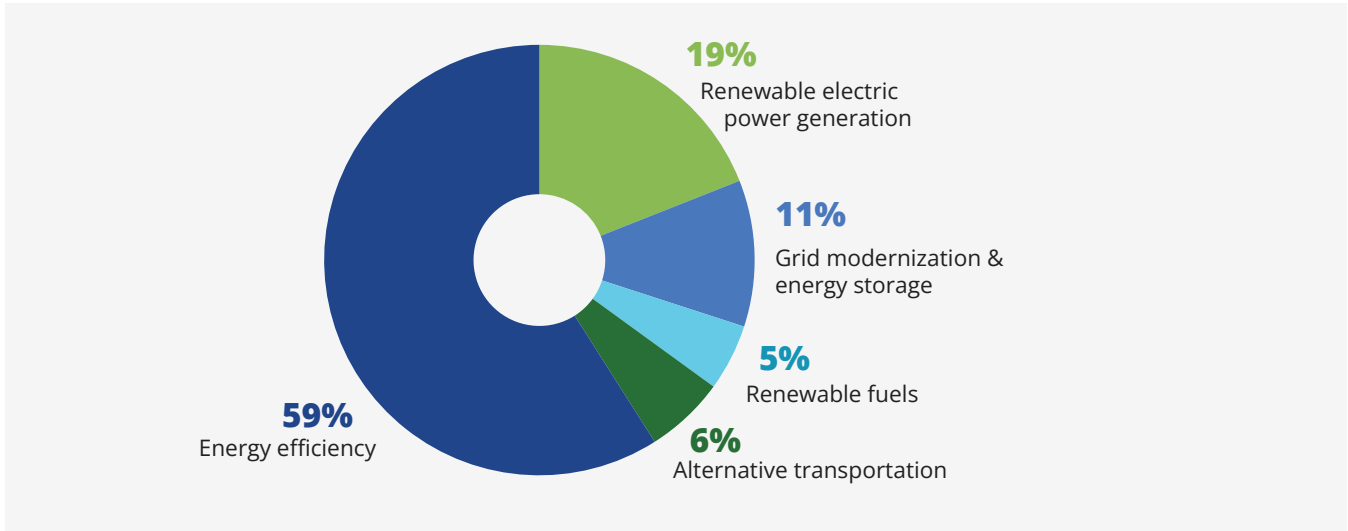
Each major technology sector in Maine's clean energy industry, aside from renewable fuels, saw notable job growth between 2020 and 2024. The state's alternative transportation workforce grew by 26 percent, the highest rate of any sector. Yet the energy efficiency sector added the greatest number of jobs since 2020, increasing by almost 1,500. In just one year, from 2023 to 2024, this sector grew by 5.4 percent, adding nearly 500 jobs to the clean energy industry (Figure 6). The energy efficiency technology sector employed 59 percent of all clean energy workers in Maine at the end of 2024 and remained the highest employing clean energy sector in the state since 2016 (Figure 7).

Figure 6. Clean Energy Employment in Maine by Technology Sector, 2020-2024<sup>4</sup>



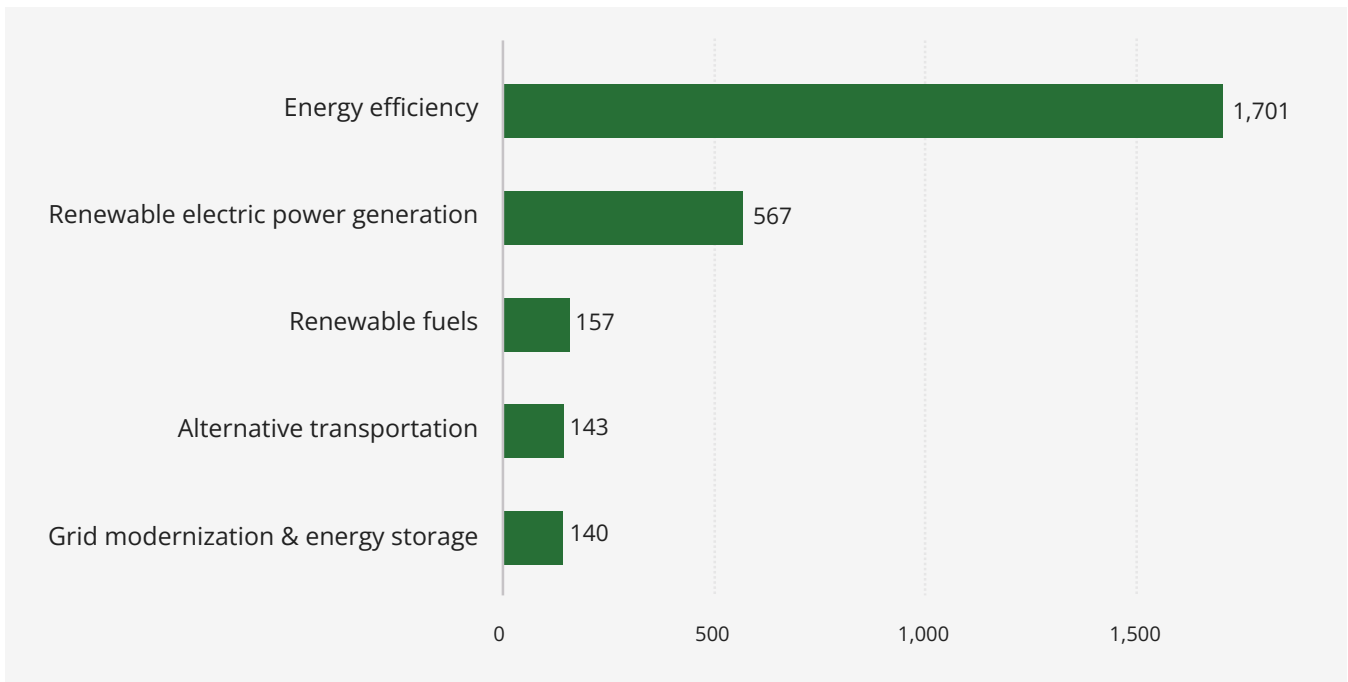
<sup>9</sup> 2023 Maine Clean Energy Industry Report.

Figure 7. Clean Energy Jobs by Technology Sector, 2024



By the end of 2024, 4.1 percent of all establishments in Maine were involved in clean energy-related activities.<sup>10</sup> The highest share (63 percent) of the 2,700 total clean energy establishments were involved with energy efficiency work, representing around 1,700 establishments. Overall, 105 clean energy establishments were added to Maine’s economy between the end of 2023 and the end of 2024. The largest gain was in the energy efficiency sector, which grew by 78 establishments, followed by the renewable electric power generation sector, which added 17 establishments (Figure 8).

Figure 8. Clean Energy Establishments in Maine by Technology Sector, 2024



<sup>10</sup>Total establishments in Maine, Q42023, are sourced from: Quarterly and Annual Industry Employment and Wages. Center for Workforce Research and Information. Maine Department of Labor. <https://www.maine.gov/labor/cwri/dashboards/quarterly-and-annual-employment-and-wages>.



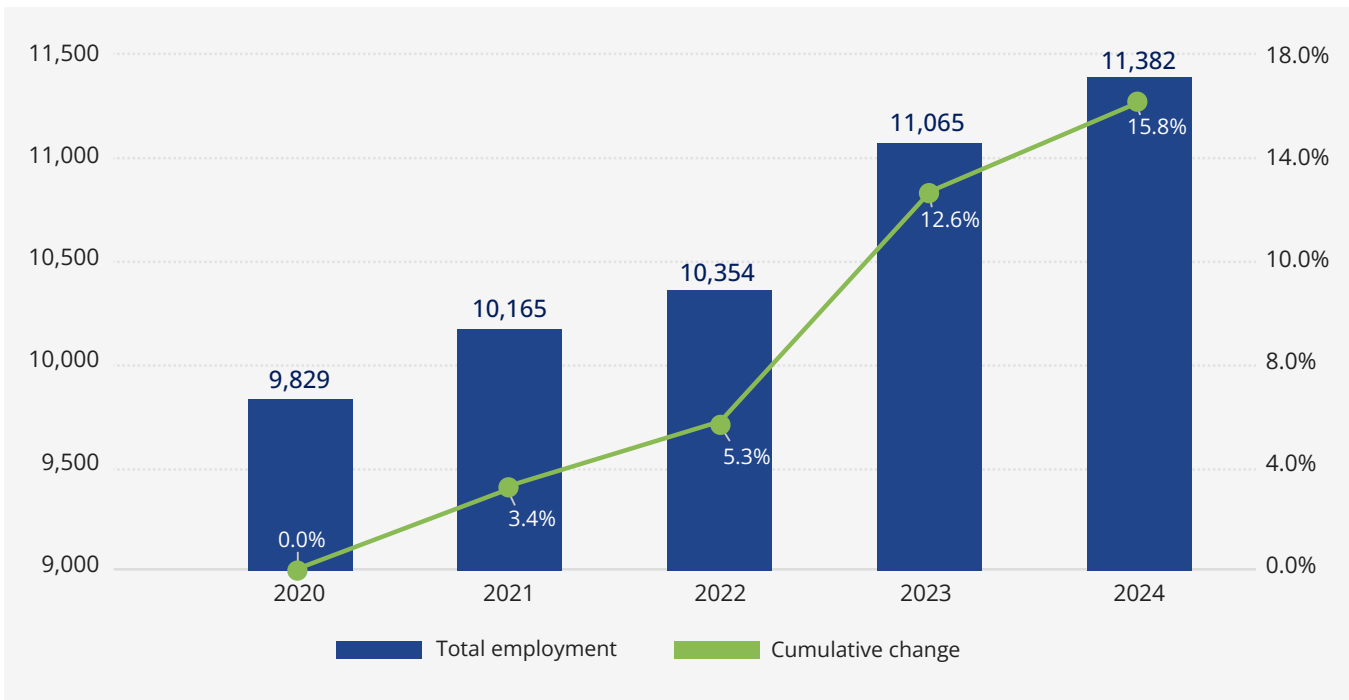
# Traditional Energy Industry Overview

This section presents an overview of traditional energy employment in Maine, highlighting key employment trends in traditional energy technology sectors between 2020 and 2024.

## Total Traditional Energy Employment

Since 2020, both the clean and traditional energy industries have been growing, with the clean energy industry expanding faster (17.0 percent compared to 15.8 percent). In 2024, Maine's traditional energy industry employed almost 11,400 workers, representing 1.8 percent of total jobs in Maine,<sup>11</sup> behind the clean energy industry's 16,200 workers. From 2023 to 2024, traditional energy employment rose by 2.9 percent, following the strongest year of growth from 2022 to 2023, when jobs expanded by 6.9 percent, driven primarily by growth in traditional transmission and distribution jobs, within the grid and storage technology sector (Figure 9 and Figure 10).

Figure 9. Maine Traditional Energy Employment, 2020-2024



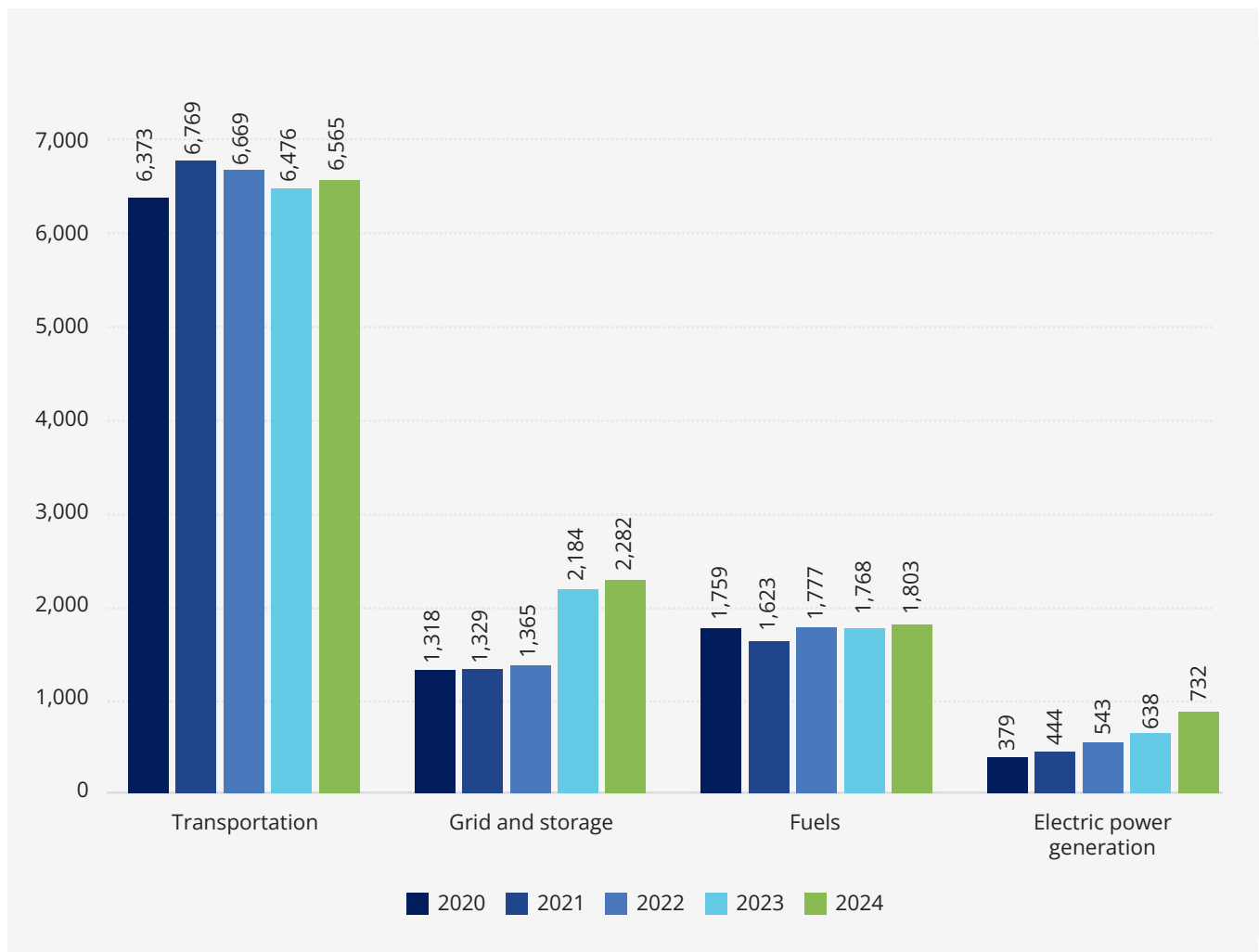
<sup>11</sup> Quarterly and Annual Industry Employment and Wages. Center for Workforce Research and Information. Maine Department of Labor. <https://www.maine.gov/labor/cwri/dashboards/quarterly-and-annual-employment-and-wages>

The transportation technology sector of Maine’s traditional energy industry is the largest employer, with workers primarily involved with gasoline and diesel-powered vehicles. Jobs in the transportation sector have remained relatively stagnant since 2020 (Figure 10).

In comparison, Maine’s traditional grid and storage sector has experienced substantial growth since 2020, driven by the transmission and distribution sub-technology sector. The most significant growth occurred between 2022 and 2023, when this sector’s workforce grew by 60 percent (Figure 10).

Although it remains the smallest traditional energy sector, electric power generation has also grown, albeit at a steadier pace. This expansion is largely fueled by the natural gas generation workforce, which increased by 147 percent, or more than 300 workers, from 2020 to 2024 (Figure 10).

Figure 10. Maine Traditional Energy Employment, by Technology Sector, 2020-2024





# Detailed Clean Energy Industry Employment

A detailed examination of employment trends across key value chain segments and major clean energy technology sectors highlights how workforce demand has shifted over time. This analysis provides critical insight into sectoral transformation, workforce pipeline requirements, and the policy levers necessary to support sustained industry growth.

## Clean Energy Value Chain Employment

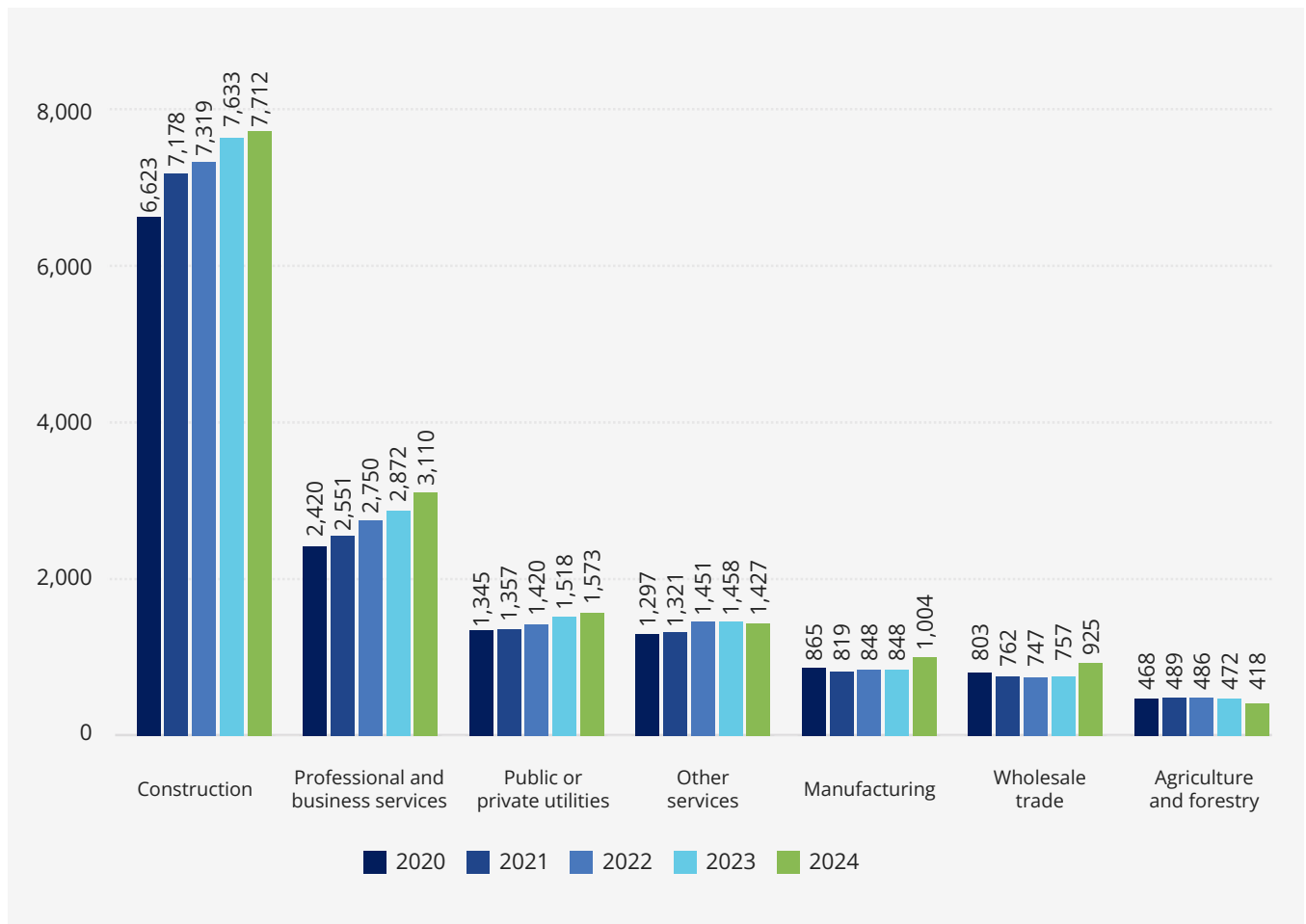
Understanding the value chain segments in which clean energy workers are involved can guide policymakers and investors in making the most informed decisions and identifying growth and opportunity. The major value chain segments of clean energy workers in Maine include the following:

- **Construction:** comprised of all workers engaged in residential, commercial, and industrial building construction, contracting and electrical work, insulation and weatherization, or plumbing and heating, air conditioning, and ventilation work.
- **Manufacturing:** encompasses ethyl alcohol or other basic organic chemical manufacturing as well as heating and air conditioning equipment manufacturing, engine and compressor manufacturing, semiconductor manufacturing, and energy-efficient product, appliance, or lighting manufacturing, as well as motor vehicle and parts manufacturing.
- **Wholesale trade:** includes fuel dealers, motor vehicle and parts wholesalers, electrical equipment and household appliance wholesalers, and other wholesale related to clean energy products and technologies.
- **Professional and business services:** includes all finance, legal, consulting, engineering, research, design, or architectural support.
- **Other services:** largely comprised of repair and maintenance workers, but also includes organizational and non-profit workers, such as those at environmental and conservation organizations, business associations, or advocacy organizations.
- **Agriculture and forestry:** includes establishments primarily engaged in growing crops and harvesting timber on farms or in natural habitats.
- **Utilities:** includes those engaged in specific activities associated with electric power utility services, including renewable generation and electric transmission and distribution.

In 2024, about half (48 percent) of Maine’s clean energy workforce was in the construction value chain segment. The number of construction workers in the state’s clean energy industry rose by over 1,000 from 2020 to 2024 and totaled around 7,700 workers in 2024. Maine’s commitment to heat pump installation and energy efficiency initiatives has most likely sustained employment in clean energy-related construction. The fastest-growing clean energy value chain segment, professional and business services, had just over 3,000 jobs in 2024, representing a 30 percent growth over the five years (Figure 11).

Between 2023 and 2024, the wholesale trade value chain segment grew the fastest among Maine’s clean energy sectors. This sector grew by 22 percent, or over 150 jobs. In terms of absolute job numbers, professional and business services gained the most jobs since 2023, adding more than 200 clean energy workers. While clean energy employment across all value chain segments saw a net growth of 3.9 percent from 2023 to 2024, the agriculture and forestry sectors declined by 11 percent, or over 50 jobs (Figure 11).

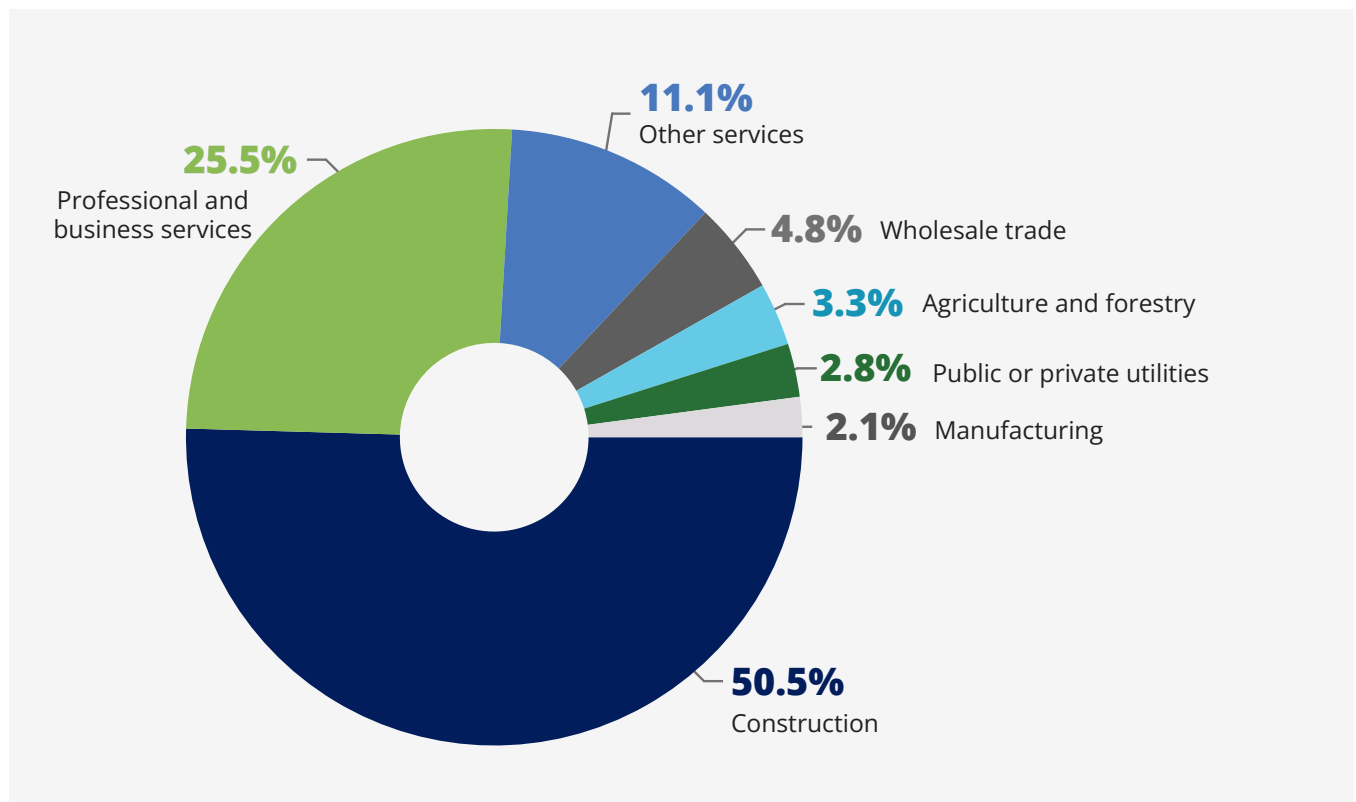
Figure 11. Clean Energy Employment in Maine by Value Chain Segment, 2020-2024





Similar to the trends in last year’s report, over half (51 percent) of Maine’s clean energy-related establishments are in the construction value chain segment, totaling over 1,300 establishments (Figure 12).

Figure 12. Clean Energy Establishments in Maine by Value Chain Segment, 2024





## Clean Energy Sector Employment

This section discusses clean energy employment within each major technology from 2020 through 2024. Overall, the energy efficiency sector employed the most workers in 2024 (approximately 9,500) and experienced the most growth since 2023, adding just under 500 jobs to the state's clean energy industry.

The sub-technology that experienced the most relative growth between 2023 and 2024 was the advanced materials field, within the energy efficiency sector, which increased by 22 percent. Since 2020, certified (formerly ENERGY STAR®) and efficient lighting employment grew by 75 percent, the highest relative growth of any sub-technology.

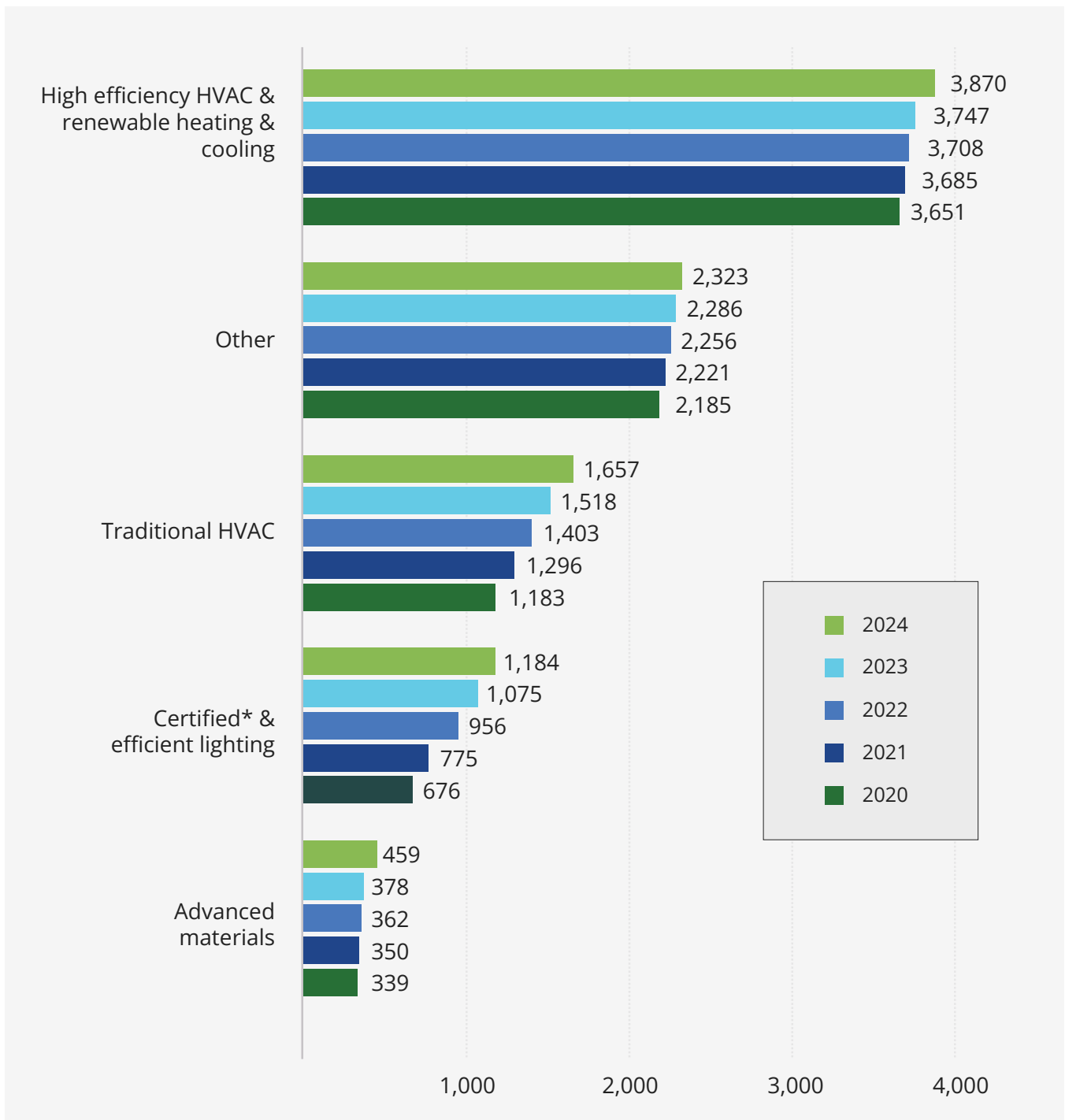
### Energy Efficiency

The energy efficiency sector encompasses all workers involved in the research, manufacture, sales, installation, repair, or professional service support of technologies and services designed to improve the efficiency of commercial, residential, and industrial buildings. The following sub-technologies are included in this sector: high-efficiency HVAC and renewable heating and cooling; certified and efficient lighting; advanced materials; traditional HVAC; and other energy-efficient technologies and processes.

All energy efficiency sub-technologies experienced job growth between 2020 and 2024. The certified and efficient lighting sub-technology experienced the largest growth, over 75 percent, and added about 500 jobs, aligning with Maine's increased investment in energy efficiency over the past few years. Between 2023 and 2024, the advanced materials sub-technology had the highest growth rate of 22 percent (about 80 jobs) (Figure 13).

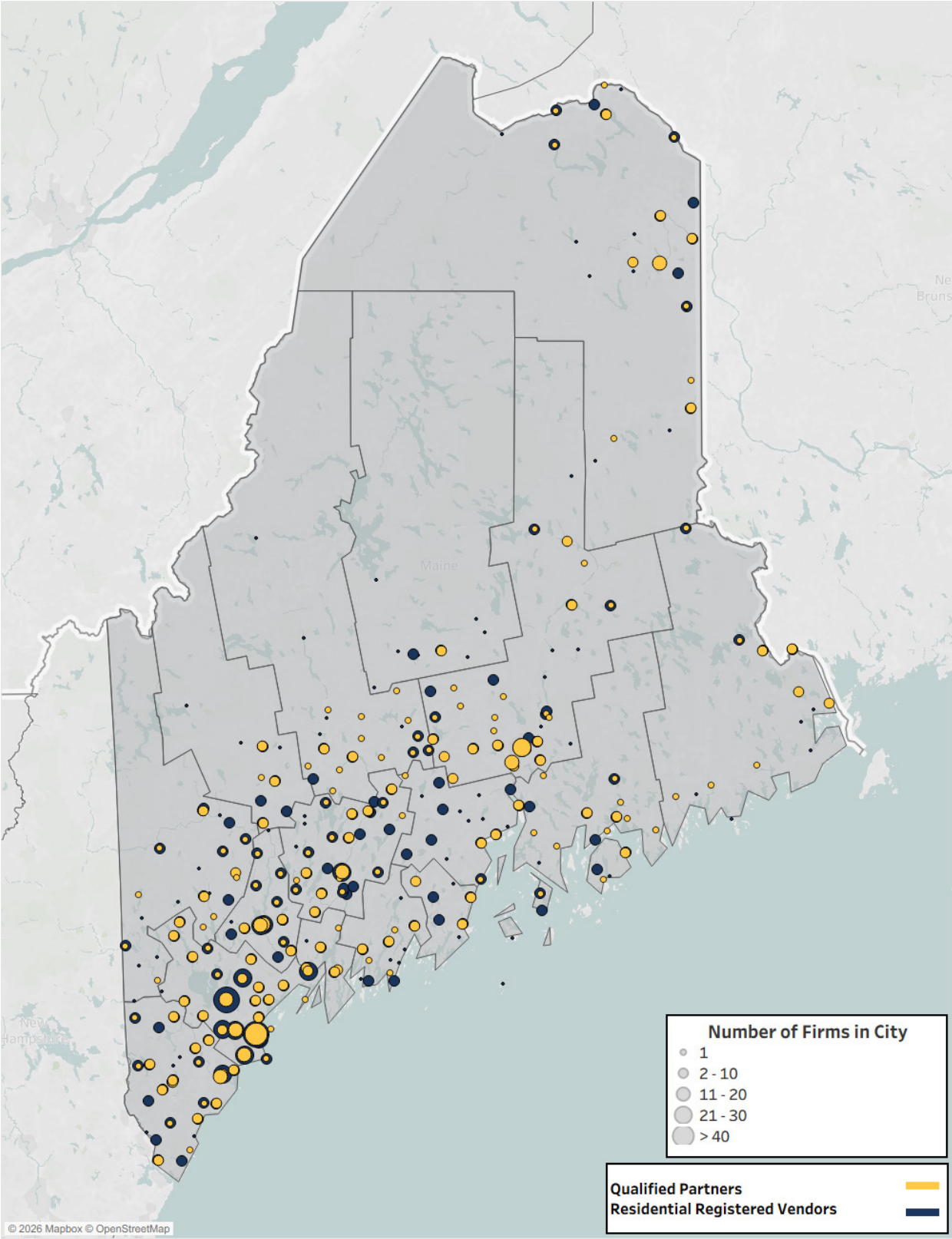
The highest employing energy efficiency sub-technology in 2024 was high-efficiency HVAC and renewable heating and cooling, which employed over 3,800 workers in 2024. This sector accounted for 41 percent of the energy efficiency jobs in Maine (Figure 13).

Figure 13. Energy Efficiency Employment by Sub-Technology, 2020-2024<sup>12</sup>



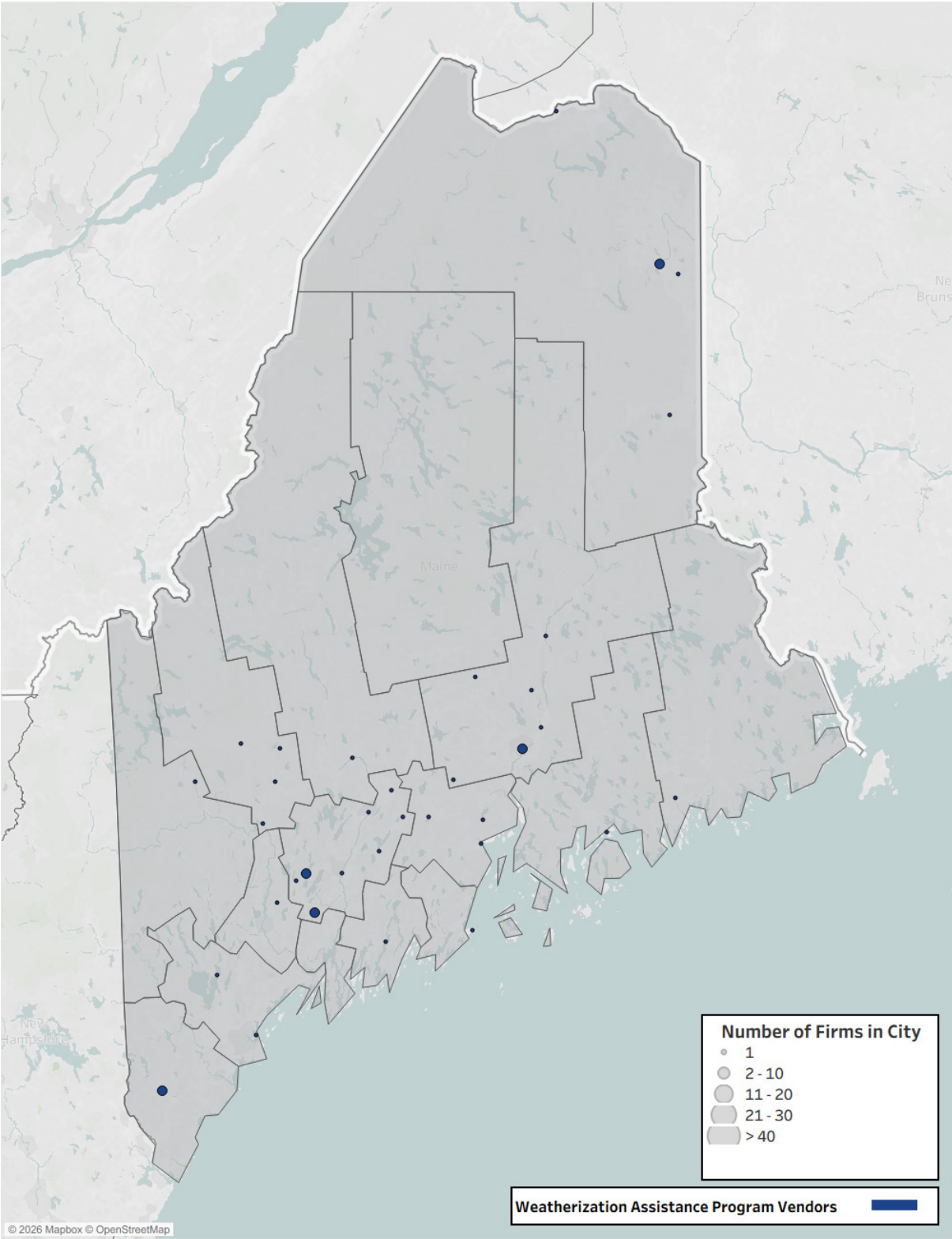
<sup>12</sup> Other energy efficiency technologies include variable speed motors, other design services not specific to a sub-technology, software not specific to a sub-technology, energy auditing, rating, monitoring, metering, and leak detection, energy efficiency policy not specific to a sub-technology, LEED certification, consulting not specific to a sub-technology, and phase-change materials.

Figure 14. Locations of Efficiency Maine Trust (EMT) Qualified Partners and Residential Registered Vendors, Maine, February 2026<sup>13</sup>



<sup>13</sup> Efficiency Maine Trust. <https://www.energymaine.com/at-home/vendor-locator/>

Figure 15. Locations of MaineHousing Weatherization Assistance Program Vendors, Maine, December 2025



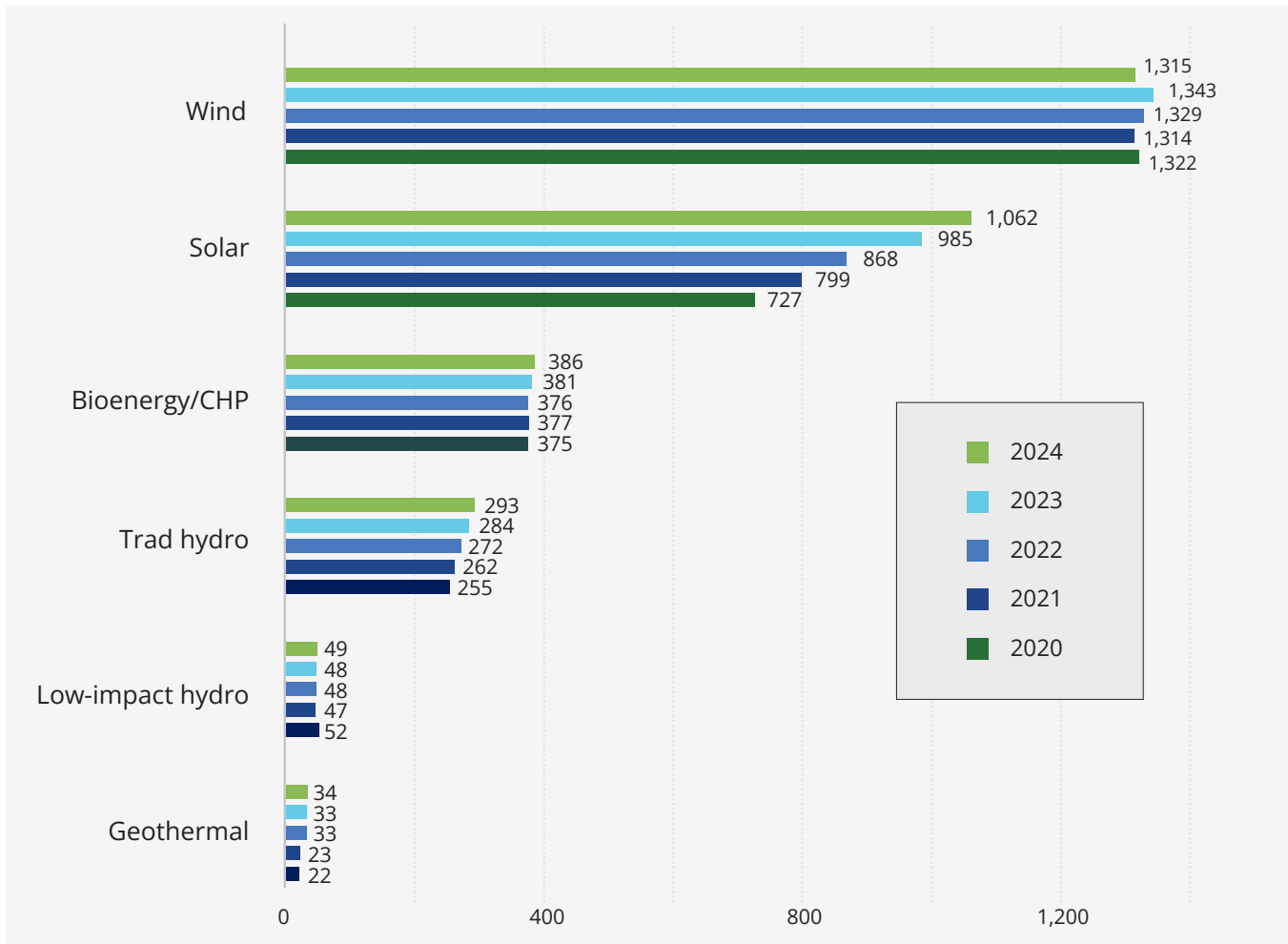
## Renewable Electric Power Generation

Clean power generation jobs encompass all workers engaged in the research, development, production, manufacture, sales, installation, maintenance, repair, or professional service support of renewable electricity-generating technologies, including solar, wind, geothermal, bioenergy, and hydropower.

In 2024, Maine’s wind power generation accounted for 42 percent of employment in the renewable electric power generation sector (over 1,300 jobs) and did not undergo any significant change between 2023 and 2024. The sector that had the highest growth rate from 2023 to 2024 was solar power generation, which grew by 7.8 percent, adding over 75 jobs to the industry (Figure 16).

Solar power generation also accounted for the most absolute new renewable electric power generation jobs added from 2020 to 2024, by over 300 jobs (Figure 16). The installed capacity of solar power in Maine has also expanded during this time, from just under 100 MW in 2020 to over 1,545 MW in 2024.<sup>14</sup>

Figure 16. Renewable Electric Power Generation Employment by Sub-Technology, 2020-2024<sup>15</sup>



<sup>14</sup> Solar, Maine Department of Energy Resources. <https://www.maine.gov/energy/initiatives/renewable-energy/solar-distributed-generation>. Accessed February 2026.

<sup>15</sup> The wind energy employment estimate represents both land-based and offshore wind energy; CHP is Combined Heat and Power.

## Grid Modernization and Energy Storage

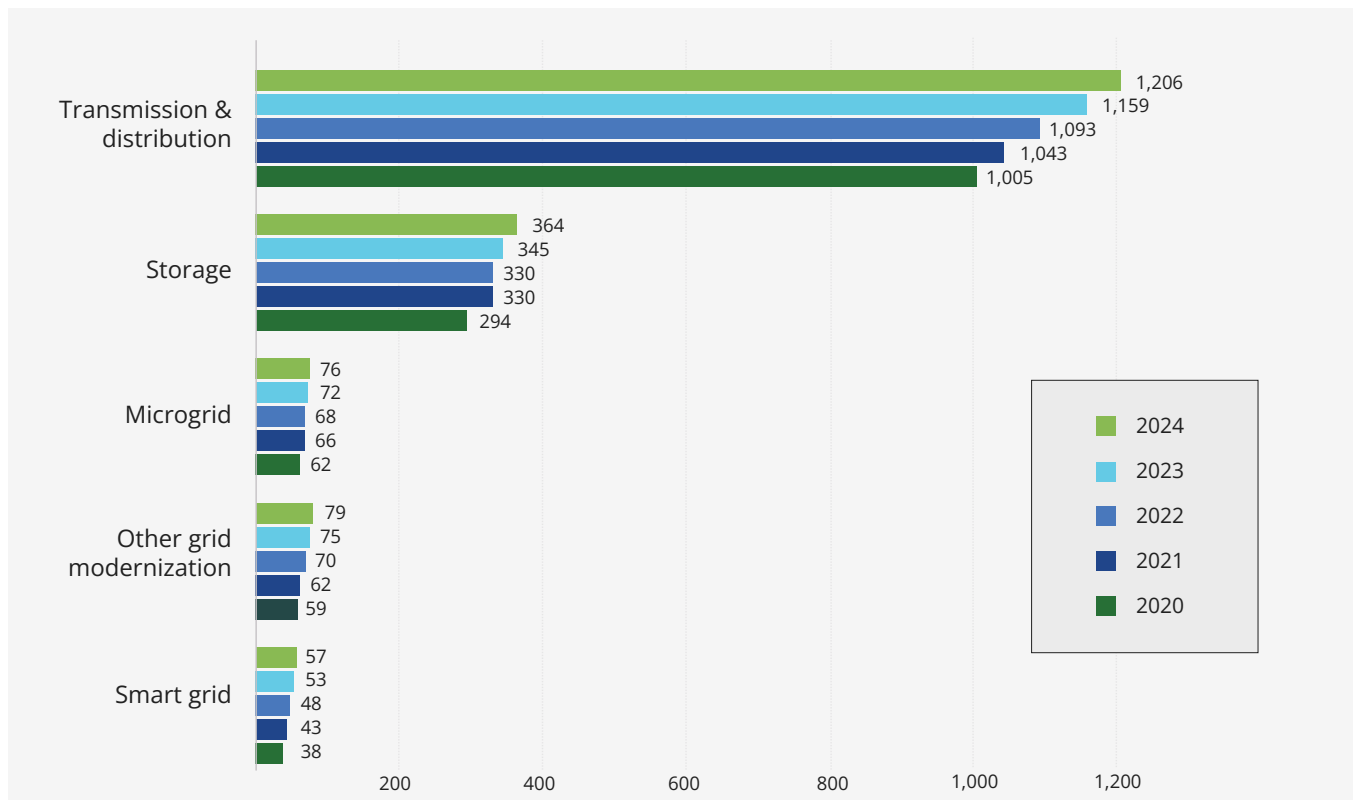
For the purposes of this report, grid modernization and storage workers include any individual who supports the deployment (construction), manufacture, wholesale trade, or legal, financial, and engineering services of smart grid and energy storage technologies. This also includes electrical transmission and distribution (T&D)<sup>16</sup> utility workers, as the maintenance and expansion of electrical T&D infrastructure are critical for managing the energy flow and demand from renewable energy sources and for facilitating a new, low-carbon energy system.

The clean storage sub-technology includes pumped hydropower storage,<sup>17</sup> battery storage,<sup>18</sup> mechanical storage,<sup>19</sup> thermal storage,<sup>20</sup> and biofuel storage (including ethanol and biodiesel).

In 2024, a majority of the nearly 1,800 grid and storage workers in Maine worked in the T&D sub-technology (68 percent, over 1,200 workers). Since 2020, T&D has added 200 jobs to the industry, including nearly 50 jobs between 2023 and 2024 (Figure 17).

Employment in the smallest sub-technology, smart grid, added nearly 20 jobs between 2020 and 2024. In addition, for the first time since the COVID-19 pandemic, the number of microgrid jobs surpassed 2019 levels (Figure 17).

Figure 17. Grid Modernization and Energy Storage Employment by Sub-Technology, 2019-2024



<sup>16</sup> This consists of Electric Power Transmission, Control, and Distribution (NAICS 22112) workers.

<sup>17</sup> Hydroelectric energy storage used by electric power systems for load balancing. This method stores the gravitational potential energy of water pumped from a lower elevation reservoir to a higher elevation.

<sup>18</sup> This includes battery storage for solar generation and lithium batteries, lead-based batteries, other solid-electrode batteries, vanadium redox flow batteries, and other flow batteries.

<sup>19</sup> This includes flywheels and compressed air energy storage.

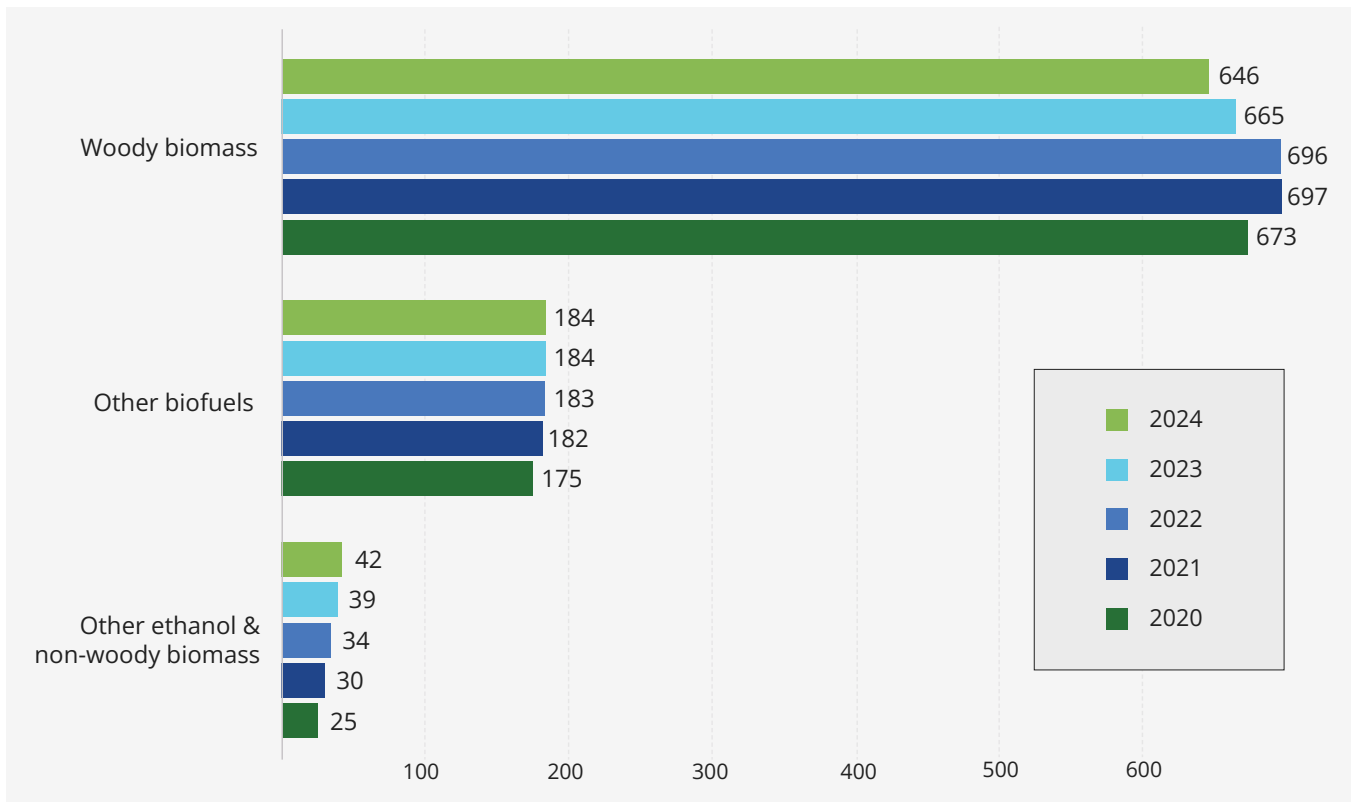
<sup>20</sup> Temporary storage of energy for later use when heating or cooling is needed.

## Renewable Fuels

The renewable fuels sector includes all workers involved in the production, distribution, and sales or professional and business service support for clean fuels and clean fuel technologies that use woody (including trees and woody plant parts) and non-woody (including fuel made from straw, manure, vegetable oil, and animal fats) biomass.

The woody biomass sub-technology employed nearly three-quarters of the workers in the renewable fuels sector by the end of 2024 (over 600), similar to its composition the previous year. The other ethanol and non-woody biomass sub-technology had the highest growth rate of all renewable fuel sub-technologies between 2023 and 2024, increasing by 8.9 percent (Figure 18).

Figure 18. Renewable Fuels Employment by Sub-Technology, 2019-2024



## Alternative Transportation

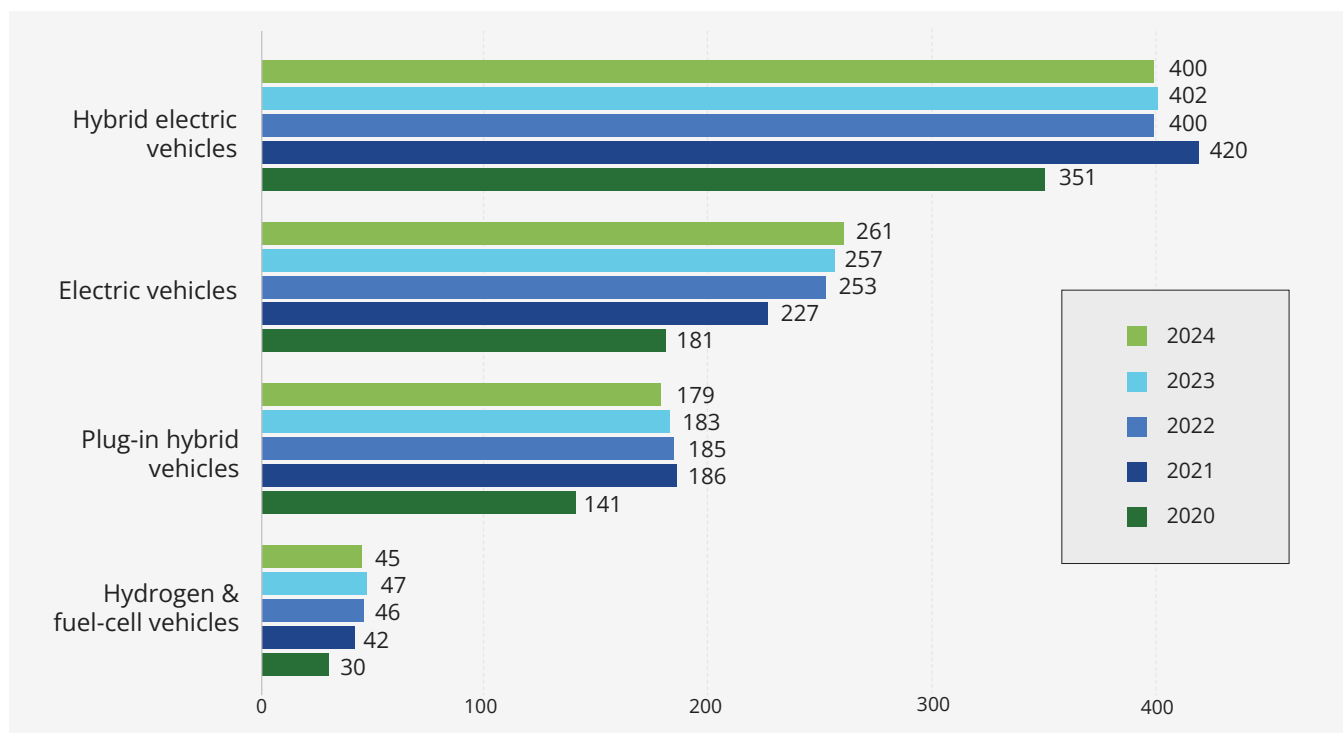
The alternative transportation technology sector is comprised of workers who support the manufacture, sales, repair, and maintenance, as well as professional business support—such as legal, financial, engineering, or consulting services—of alternative vehicle technologies. Alternative transportation includes technologies such as plug-in hybrid (PHEV), hybrid electric (HEV), electric (EV or BEV), hydrogen, and fuel cell vehicles.

This technology sector did not experience a significant change from 2023 to 2024. The HEV sub-technology remained the largest, with 400 jobs by the end of 2024, accounting for almost half (45 percent) of the workers in the alternative transportation sector (Figure 19). However, both nationally and across the Northeast, HEV and PHEV employment contracted from 2023 to 2024. Jobs in these sectors experienced nationwide declines of 3.6 percent and 5.0 percent, respectively. Regionally, HEV jobs declined by 2.5 percent, and PHEV jobs shrank by 4.4 percent, all while Maine remained stable. Moreover, EV jobs in the Northeast and Maine remained steady while national EV employment declined by 1.0 percent, resulting in a loss of more than 1,400 jobs.

The trend of PHEV and BEV job growth in Maine outpaces that of vehicle registrations, which grew by 36 percent and 45 percent, respectively. There were almost 6,400 PHEV registrations in October 2023, reaching almost 8,700 by October 2024. BEV registrations grew from over 5,900 to over 8,600 between October 2023 and October 2024.<sup>21</sup>

Since 2020, the EV sub-technology sector added 80 jobs, the most absolute jobs of any alternative transportation sub-technology (Figure 19).

Figure 19. Alternative Transportation Employment by Sub-Technology, 2020-2024



<sup>21</sup> Registration Snapshots Dashboard. Recharge Maine. Atlas Public Policy. <https://atlaspolicy.com/rechargemaine/>

# Regional Clean Energy Employment

Maine’s most populous county, Cumberland County, employed the most clean energy and energy efficiency workers of any county in Maine, with over 5,000 clean energy workers, including over 3,300 energy efficiency workers. Cumberland County’s clean energy workforce made up 32 percent of the state’s overall clean energy workforce. The county with the highest concentration of clean energy workers to total workers was Waldo County, where 4.7 percent of its overall workforce was employed in clean energy at the end of 2024. Lincoln County had the highest concentration of energy efficiency workers at 3.7 percent of its overall workforce (Table 2).

Clean energy employment across all counties has increased from 2020 to 2024. During this time, Piscataquis County has had the highest relative growth rate in clean energy jobs in Maine (51 percent).<sup>22</sup>

Table 2. Clean Energy, Energy Efficiency, and Total Employment by County, Maine, 2024

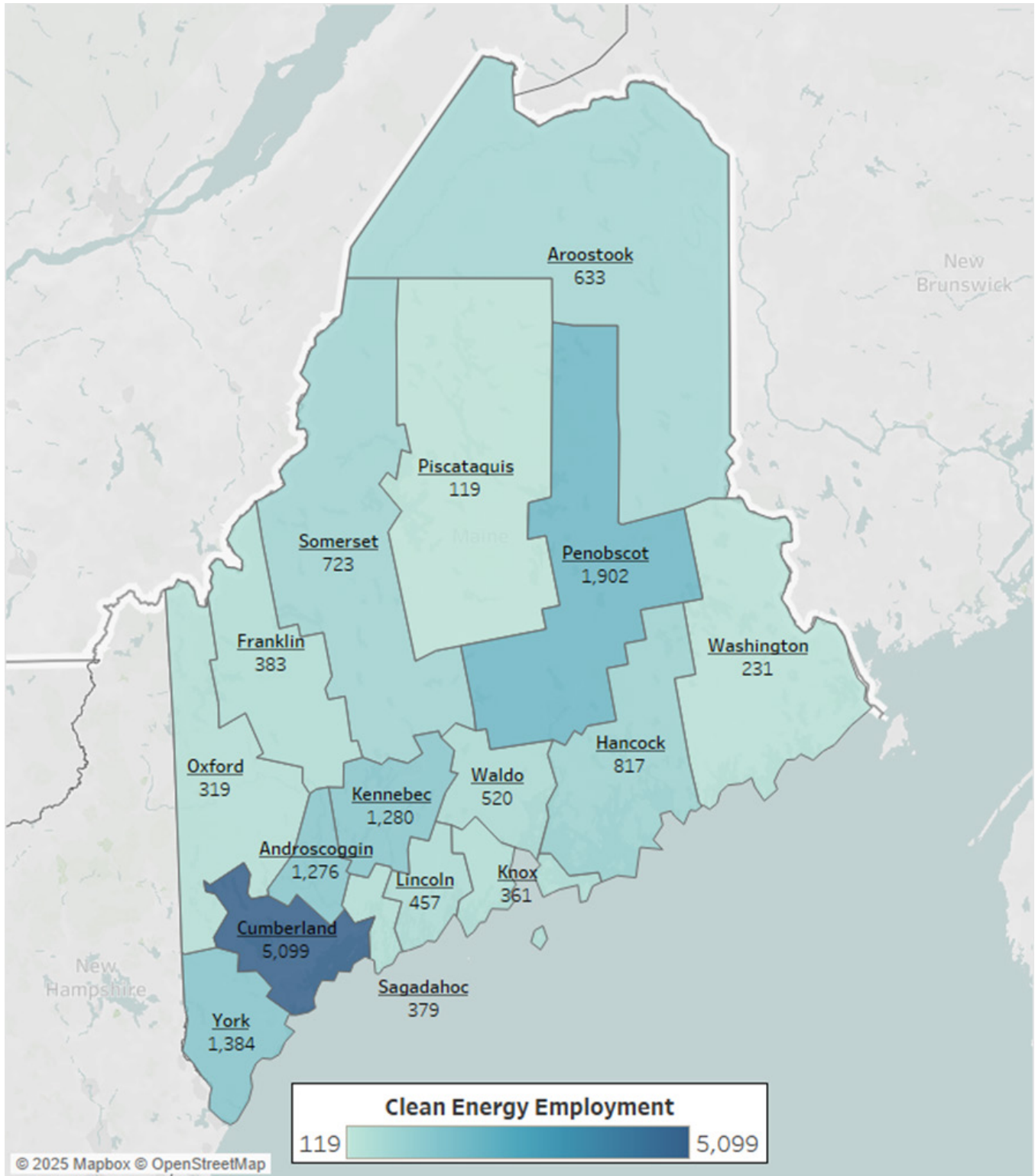
| County Name             | Clean Energy Jobs | Jobs in Energy Efficiency | Total Jobs in Overall Workforce <sup>23</sup> | Percent of Total Clean Energy Workforce |
|-------------------------|-------------------|---------------------------|---|---|
| <b>Androscoggin</b>     | 1,276             | 798                       | 48,526  | 7.9%                                    |
| <b>Aroostook</b>        | 633               | 209                       | 25,874  | 3.9%                                    |
| <b>Cumberland</b>       | 5,099             | 3,343                     | 193,260                                       | 31.5%                                   |
| <b>Franklin</b>         | 383               | 103                       | 10,791  | 2.4%                                    |
| <b>Hancock</b>          | 817               | 558                       | 21,480  | 5.1%                                    |
| <b>Kennebec</b>         | 1,280             | 730                       | 62,387  | 7.9%                                    |
| <b>Knox</b>             | 361               | 252                       | 16,516  | 2.2%                                    |
| <b>Lincoln</b>          | 457               | 400                       | 10,737  | 2.8%                                    |
| <b>Oxford</b>           | 319               | 174                       | 17,085  | 2.0%                                    |
| <b>Penobscot</b>        | 1,902             | 938                       | 72,336  | 11.8%                                   |
| <b>Piscataquis</b>      | 119               | 44                        | 5,161   | 0.7%                                    |
| <b>Sagadahoc</b>        | 379               | 261                       | 17,191  | 2.3%                                    |
| <b>Somerset</b>         | 723               | 356                       | 15,850  | 4.5%                                    |
| <b>Waldo</b>            | 520               | 163                       | 11,113  | 3.2%                                    |
| <b>Washington</b>       | 231               | 80                        | 10,417  | 1.4%                                    |
| <b>York</b>             | 1,384             | 918                       | 77,061  | 8.6%                                    |
| <b>N/A<sup>24</sup></b> | 286               | 165                       | 29,392  | 1.8%                                    |

<sup>22</sup> Q42020 clean energy employment by county is sourced from the 2021 Maine Clean Energy Industry Report.

<sup>23</sup> County Employment and Wages in Maine. U.S. Bureau of Labor Statistics. [https://www.bls.gov/regions/northeast/news-release/countyemploymentandwages\\_maine.htm](https://www.bls.gov/regions/northeast/news-release/countyemploymentandwages_maine.htm).

<sup>24</sup> This category includes all clean energy jobs that could not be attributed to a single county. Total jobs data in Maine’s overall workforce in this category are sourced from the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages database.

Figure 20. Clean Energy Employment by County, Maine, 2024





## Clean Energy Demographics

Maine’s clean energy workforce in 2024 remained more racially and ethnically diverse than the state’s overall economy. The state’s clean energy workforce is identified as 3.9 percent Hispanic or Latino and 3.5 percent Black or African American. Comparatively, Maine’s overall economy is 2.5 percent Hispanic or Latino and 3.0 percent Black or African American. When compared with other industries in Maine, the clean energy workforce in 2024 had a higher concentration of Hispanic or Latino and Black or African American workers than both the construction and manufacturing industries (Table 3).

Broadly, 9.8 percent of workers identified as a race other than White across the state’s clean energy workforce, indicating a higher concentration of racial diversity in the industry when compared to Maine’s overall workforce, which was 7.1 percent non-White in 2024. The clean energy workforce in 2024 also had more non-White workers than the construction and manufacturing industries, representing 3.7 percent and 6.8 percent of workers in these industries, respectively (Table 3).

While the clean energy industry in Maine led in racial and ethnic diversity, it continued to lack gender and age diversity in 2024. Female representation in the clean energy industry remained consistent from 2023 to 2024, at 27 percent in 2024; however, it increased by 1.1 percentage points between 2020 and 2024. While there is more gender diversity in Maine’s clean energy industry than in the construction industry (15 percent female) and aligns with the manufacturing industry (26 percent female), as well as the national clean energy industry (28 percent female), it lags behind the gender diversity of Maine’s overall economy (51 percent female) (Table 3).<sup>25</sup>

About one-fifth (21 percent) of the clean energy workforce was aged 55 or older in 2024, down 0.5 percentage points from 2023. This share reached 28 percent in 2024 in the state’s overall economy. In comparison, older workers represent 29 percent and 27 percent of Maine’s manufacturing and construction industries’ workforces, respectively (Table 3).

<sup>25</sup> National clean energy data is sourced from the E2 report, “Clean Jobs America 2025.”  
[https://cleanjobsamerica.e2.org/wp-content/uploads/2025/09/E2-2025-Clean-Jobs-America-2025\\_final.pdf](https://cleanjobsamerica.e2.org/wp-content/uploads/2025/09/E2-2025-Clean-Jobs-America-2025_final.pdf)

Table 3. Clean Energy Workforce Demographics, 2024<sup>26</sup>

|  | Maine Clean Energy Industry <sup>27</sup> | Maine Overall Economy | Maine Construction Industry | Maine Manufacturing Industry |
|--|---|-----------------------|-----------------------------|------------------------------|
| <b>Female</b>                                    | 26.6%                                     | 51.4%                 | 15.3%                       | 26.2%                        |
| <b>Male</b>                                      | 73.4%                                     | 48.6%                 | 84.7%                       | 73.8%                        |
| <b>White</b>                                     | 90.2%                                     | 92.9%                 | 96.3%                       | 93.2%                        |
| <b>Hispanic or Latino</b>                        | 3.9%                                      | 2.5%                  | 2.5%                        | 2.3%                         |
| <b>Black or African American</b>                 | 3.5%                                      | 3.0%                  | 1.3%                        | 2.6%                         |
| <b>Asian</b>                                     | 2.7%                                      | 1.7%                  | 0.5%                        | 2.1%                         |
| <b>American Indian or Alaska Native</b>          | 0.7%                                      | 0.6%                  | 0.6%                        | 0.5%                         |
| <b>Native Hawaiian or Other Pacific Islander</b> | 0.3%                                      | 0.1%                  | 0.1%                        | 0.1%                         |
| <b>Two or more races</b>                         | 2.6%                                      | 1.6%                  | 1.2%                        | 1.5%                         |
| <b>Veterans</b>                                  | 7.6%                                      | 7.3%                  | Insufficient data           |                              |
| <b>55 and over</b>                               | 20.6%                                     | 27.6%                 | 26.5%                       | 28.7%                        |

<sup>26</sup> Demographic data for Maine's overall economy, construction industry (NAICS 23), and manufacturing industry (NAICS 31) are compiled from JobsEQ.

<sup>27</sup> The demographic estimation for clean energy technology sectors cannot be provided due to low sample sizes.



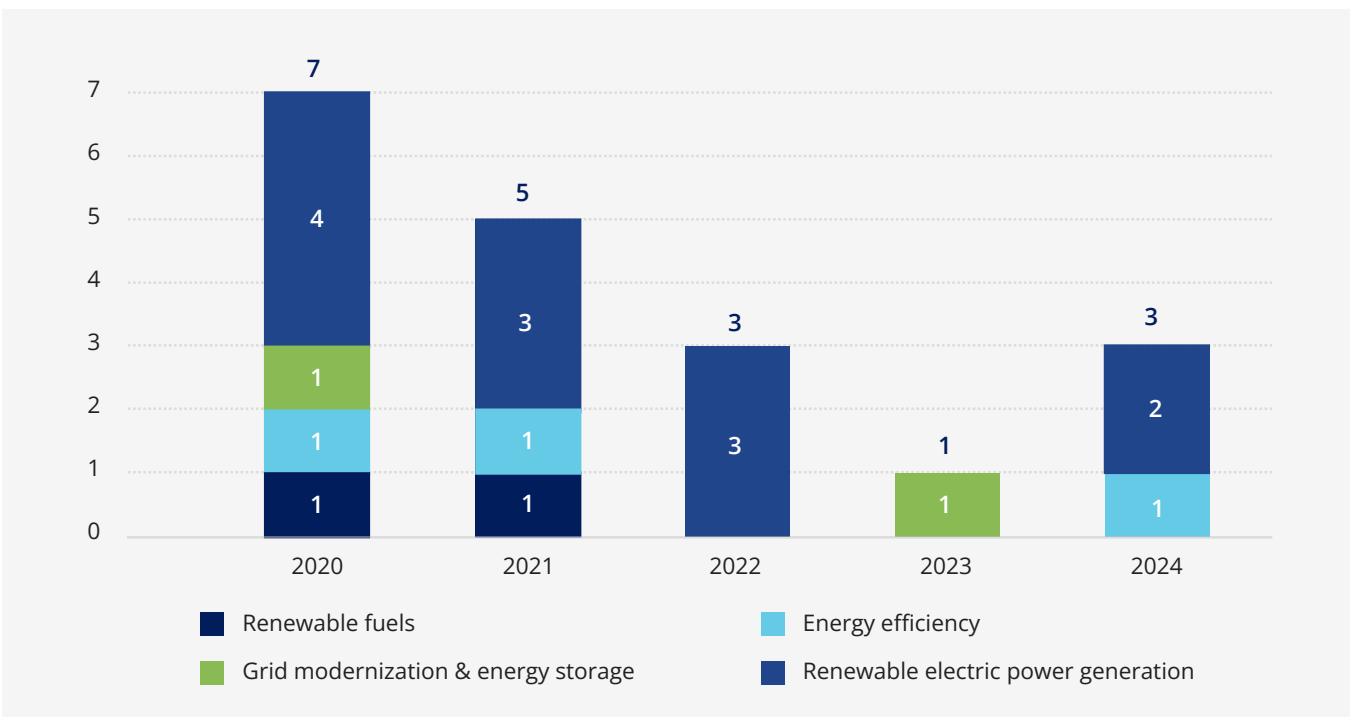
# Clean Energy Patents

Patent trends can provide valuable insight into a region’s innovation environment and economic advancement. This section analyzes Maine’s clean energy-related patent trends over the last several years, from 2020 through 2024, to look at how the clean energy industry is innovating and advancing in the state. The clean energy patents granted to projects or people (or groups of people) included in this analysis have been classified based on the state’s definition of clean energy, laid out in Appendix B: Maine Clean Energy Technology List.

Entities in Maine received 19 clean energy technology patents from 2020 to 2024.<sup>28</sup> In 2024, two patents were granted in the renewable electric power generation technology sector and one in the energy efficiency sector. This is the first year since 2020 to show growth in the number of clean energy technology patents granted compared to the previous year (Figure 21).

Since 2020, 63 percent of clean energy patents have been related to renewable electric power generation, and 16 percent to energy efficiency (Figure 21). The University of Maine System Board of Trustees has been assigned 6 of these patents, the most compared to any other assignee organization.

Figure 21. Clean Energy Patents by Technology Sector and Year in Maine, 2020-2024



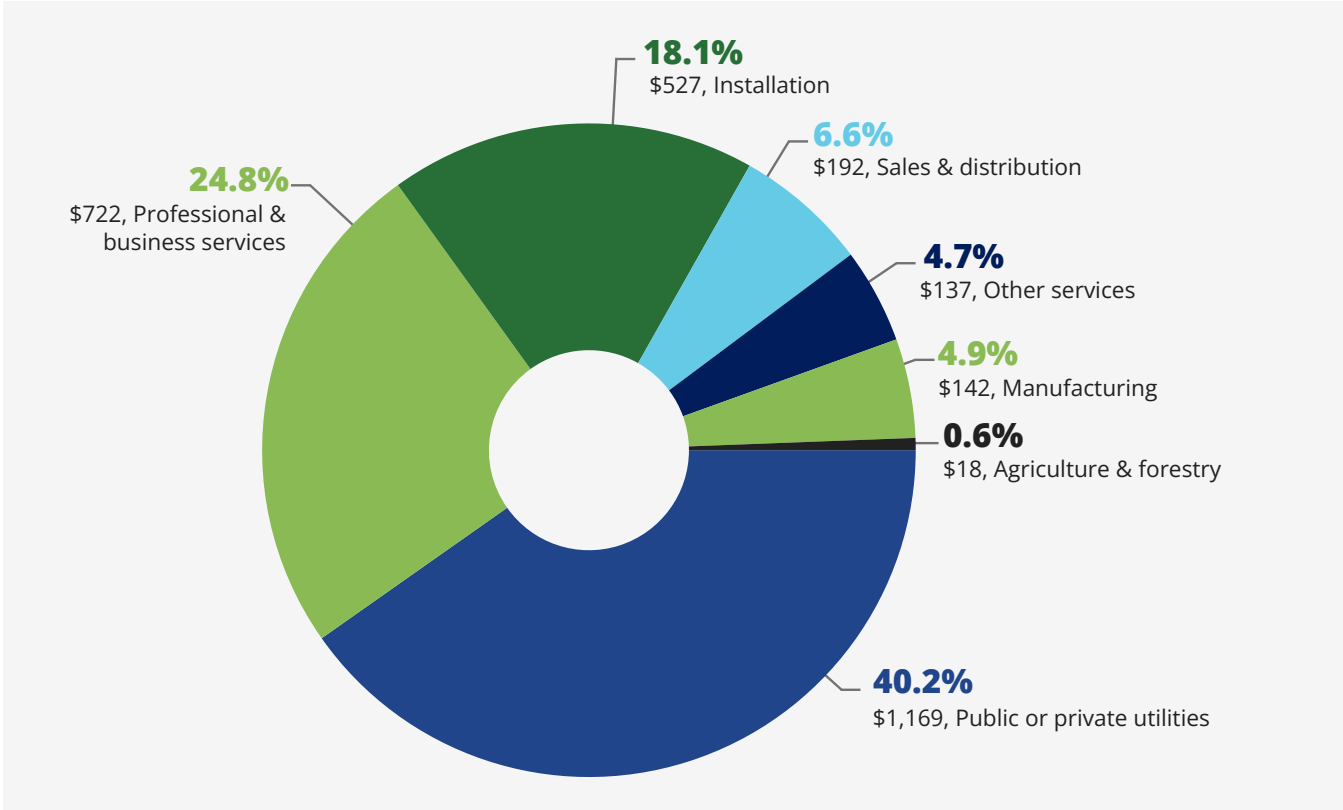
<sup>28</sup> Counts in this year’s report are different than in prior reports due to a change in methodology. This analysis includes only patents granted (not all applications filed). Please see Appendix D: Research Methodology for more detail.



# Gross State Product Analysis

The clean energy industry contributed just over \$2.9<sup>29</sup> billion to Maine's Gross State Product (GSP) in 2024, representing 2.9 percent of the state's overall GSP. A significant portion (almost \$1.2 billion) of this comes from the utilities sector (Figure 22). More specifically, clean energy work in utilities makes up 40 percent of clean energy GSP and 1.2 percent of Maine's overall GSP (Figure 23).

Figure 22. Maine Clean Energy Gross Product in Millions, by Sector, 2024

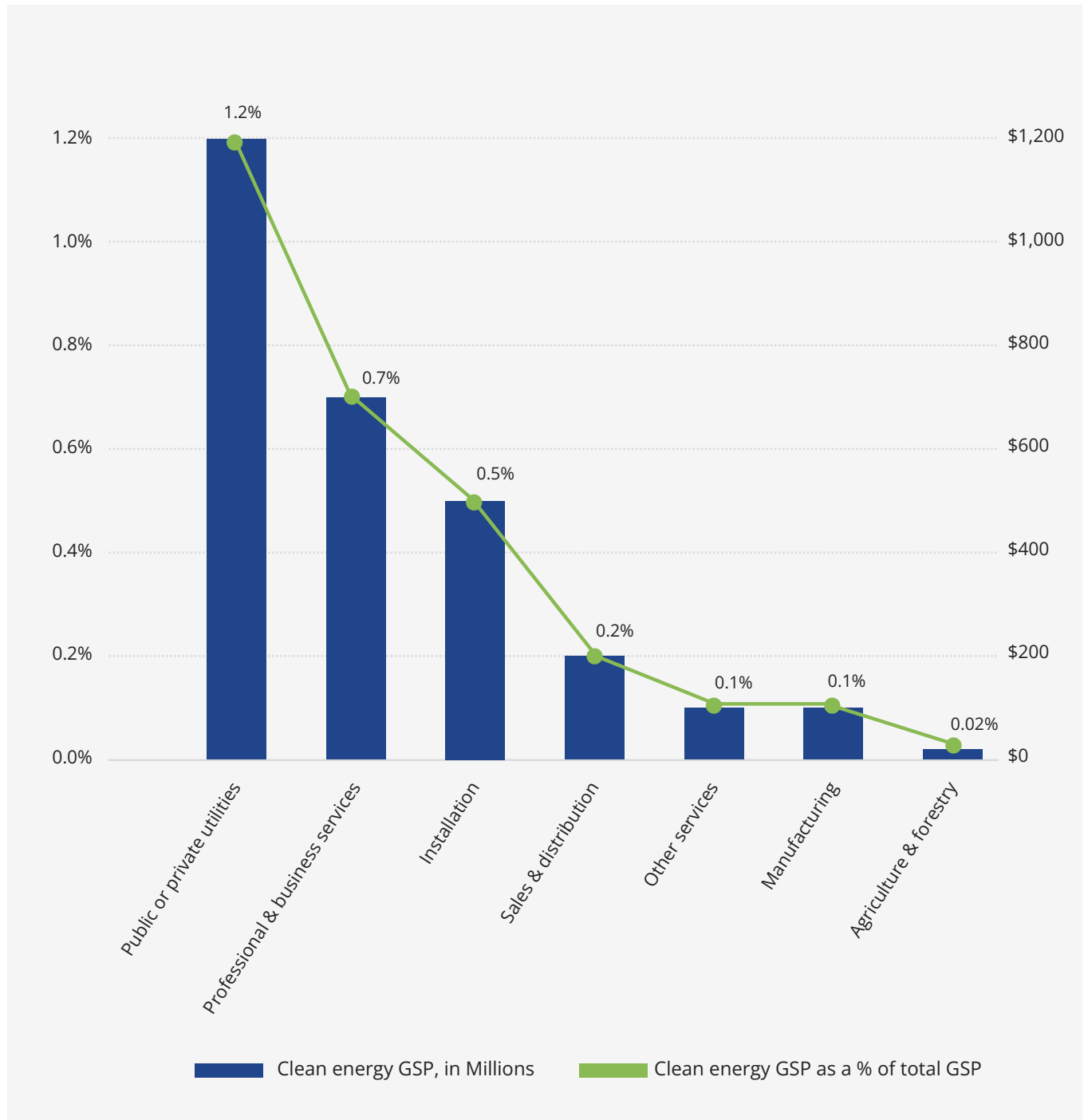


Similar to the workforce, Maine's clean energy GSP contribution rose at a faster rate than the total economy's GSP from 2023 to 2024.<sup>30</sup> Clean energy GSP increased by 10 percent, or \$261 million, since 2023, while the state's overall GSP increased by 5.7 percent, or \$5.3 billion.

<sup>29</sup> \$2,907,468,311

<sup>30</sup> The 2023 GSP data reported in the 2024 Maine Clean Energy Industry Report has revised for this analysis since as U.S. Bureau of Economic Analysis revises GDP estimates quarterly, annually, and every 5 years as the agency collects more information.

Figure 23. Maine's Clean Energy Contributions to Gross State Product in Millions, 2024, by Sector



# Appendix A:

## Clean Energy Occupational Analysis

This analysis is an update to that in the 2022 Maine Clean Energy Workforce Analysis Report, produced for the State of Maine, Department of Energy Resources.<sup>31</sup> It examines the current size, historical growth rates, regional concentration,<sup>32</sup> and wages of these clean energy-related occupations within Maine's labor market.

There are seven categories of clean energy-related jobs in Maine, covering 154 occupations:

1. Construction
2. Installation, Maintenance, & Repair
3. Production
4. Professional Services
5. Sales & Administrative Support
6. Transportation & Material Moving
7. Agriculture

Clean energy-related occupations are often conventional occupations, such as electricians, HVAC mechanics, and welders, whose workers may engage in clean energy activities. Some occupations work only in clean energy, including solar photovoltaic (PV) installers and wind turbine technicians, but, for the most part, clean energy-related occupations are common roles needed to support clean energy growth. This analysis captures all workers employed in these roles, whether or not they work with the clean energy technologies in Appendix B: Maine Clean Energy Technology List, whereas the clean energy industry analysis above focuses only on workers engaged with the technologies in Appendix B.

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<sup>31</sup> "2022 Maine Clean Energy Workforce Analysis Report," Maine Department of Energy Resources. <https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/2022%20Maine%20Clean%20Energy%20Workforce%20Report.pdf>

<sup>32</sup> Location quotients are a ratio that measures an area's concentration for an industry or occupational group relative to a larger geographic area. Location quotients are useful in identifying if a region specializes in a certain industry or occupational cluster compared to the national or regional average.

## Key findings

- 1. In total, there were close to 152,600 workers employed across the 154 clean energy-related occupations in the second quarter of 2025.**<sup>33</sup> The professional services occupations accounted for the largest share, 40 percent, followed by the construction and installation, maintenance, and repair occupations, which together accounted for over one-third (35 percent) of these clean energy-related occupations. Since 2020, workers employed in these jobs overall grew by 7.2 percent.
- 2. Professional services and construction occupations experienced the largest increases in median hourly wages between 2021 and 2025, rising by \$11 and \$8 per hour, respectively,** and highlighting the clean energy industry's role in supporting high-quality jobs. Across most other occupational groups, median hourly wages for clean energy-related roles increased by approximately \$6 per hour over the same period.
- 3. Occupations supported by the clean energy industry also offer strong career pathways, as evidenced by clear wage progression from entry- to experienced-level roles.** From entry- to mid-level, median wages in clean energy-related occupations increased by 20-65 percent, with agriculture occupations increasing in the lower range of 20 percent and professional services occupations increasing in the upper range of 65 percent. At the experienced level, wages in professional services and sales and administrative occupations are more than double entry-level pay, while other occupational groups see increases ranging from 60 percent in the transportation occupations to 86 percent in the installation occupations.
- 4. Solar PV installers and wind turbine service technicians are among the fastest-growing clean energy-supported occupations in Maine.** Since 2020, employment in construction and installation, maintenance, and repair occupations increased by 8.8 percent and 11 percent, respectively, reflecting strong overall growth in these sectors. Within this expansion, solar PV installers—a construction occupation—and wind turbine service technicians—an installation and maintenance occupation—experienced particularly rapid growth. Despite their relatively small workforce sizes, employment among solar PV installers increased by 81 percent to more than 100 jobs by 2025, while wind turbine service technicians grew by 58 percent to more than 50 workers over the same period.

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<sup>33</sup> Due to an update of the U.S. Bureau of Labor Statistics Standard Occupational Classification, this analysis capture 154 clean energy-related occupations, compared to 153 occupations in the 2022 report.

## Construction Occupations

There are 34 clean energy-related construction occupations in Maine, employing nearly 35,800 workers in 2025. The five largest occupations – carpenters; construction laborers; first-line supervisors of construction trade and extraction workers; electricians; and painters, construction and maintenance – make up 64 percent of all clean energy construction employment.

From 2020 to 2025, clean energy construction jobs grew by 8.8 percent. Solar PV installers saw the biggest increase, growing by 81 percent, followed by 27 percent growth among electricians. Clean energy-related construction jobs are also 1.23 times more concentrated in Maine than in the rest of the country and 1.32 times more concentrated than in the New England region. Most notably, mechanical insulation workers are about three times as prevalent in Maine as in the US and New England.

All clean energy-related construction occupations pay more than Maine's 2025 minimum wage of \$14.65 per hour<sup>34</sup> at the 10th, 50th, and 90th percentiles. First-line supervisors of construction trades and extraction workers earn the highest median wage, at \$36 an hour. The median hourly wage for these occupations overall increased from \$21 in 2021 to \$29 in 2025, representing a rise of \$8 per hour since the 2022 Maine Clean Energy Workforce Analysis Report.

## Installation, Maintenance, and Repair Occupations

As of the second quarter of 2025, Maine had nearly 17,000 jobs across the 18 clean energy-related installation, maintenance, and repair occupations. The largest workforces in this sector include maintenance and repair workers, general; first-line supervisors of mechanics, installers, and repairers; heating, air conditioning, and refrigeration mechanics and installers; industrial machinery mechanics; and installation, maintenance, and repair workers, all other. Together, these represent 82 percent of all clean energy-related jobs within this sector, while the first three account for 66 percent.

While being small workforces, wind turbine service technicians grew the fastest (58 percent) since 2020, followed by commercial divers (45 percent). Overall, installation, maintenance, and repair jobs related to clean energy grew by 11 percent between 2020 and 2025. In Maine, these jobs have a similar concentration to the country as a whole and are only slightly more concentrated in the state than in New England and the Northeast.

At all levels, installation, maintenance, and repair occupations earn above Maine's 2025 minimum wage of \$14.65 per hour. Experienced-level wages are almost double entry-level wages for these occupations overall. Since the 2022 Maine Clean Energy Workforce Analysis Report, the median hourly wage has risen by \$6, reaching \$31 in 2025. Electrical power-line installers and repairers, in particular, earn the highest median wage at \$46 per hour.

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<sup>34</sup> Maine's 2025 minimum wage data sourced from Maine Department of Labor.  
[https://www.maine.gov/labor/docs/2025/posters/English\\_minimum\\_wage\\_2025.pdf](https://www.maine.gov/labor/docs/2025/posters/English_minimum_wage_2025.pdf)

## Production Occupations

Over 17,000 workers are employed across Maine's 31 clean energy-related production occupations, as of the second quarter of 2025. Just over two-thirds (68 percent) of these workers are found within five roles: team assemblers; first-line supervisors of production and operating workers; welders, cutters, solderers, and brazers; machinists; and coating, painting, and spraying machine setters, operators, and tenders.

Between 2020 and 2025, employment in clean energy-related production occupations declined slightly, falling by 0.4 percent. The largest changes were among drilling and boring machine tool setters, operators, and tenders, metal and plastic (-58 percent, or almost 70 jobs), and machinists (approximately 200 jobs). In contrast, multiple machine tool setters, operators, and tenders, metal and plastic, recorded the strongest growth, increasing by 15 percent.

Clean energy-related production occupations are less concentrated in Maine than in the U.S., with a concentration of 0.93 times the national average. Layout workers, metal and plastic, have the highest concentration, with employment 7.23 times the U.S. average, while pourers and casters, metal, have the lowest concentration, at 0.24 times the U.S. average.

Between 2021 and 2025, the sector's median hourly wage rose by \$6, increasing from \$22 to \$28. Power distributors and dispatchers and power plant operators recorded the highest median wages, at \$56 and \$39 per hour, respectively. Like the clean energy-related construction and installation, maintenance, and repair occupations, these roles all earn above the state's 2025 minimum wage of \$14.65 per hour, even at entry level.

## Other Energy-Related Occupations

### Professional Services

There are 57 clean energy-related professional services occupations, totaling 61,953 jobs as of Q2 2025. The largest employing occupations are general and operations managers; accountants and auditors; farmers, ranchers, and other agricultural managers; financial managers; and construction managers, which together represent almost half (47 percent) of all professional services jobs.

Over the past five years, professional services occupations grew by 14 percent. The fastest-growing roles are administrative services managers (36 percent) and information security analysts (35 percent). At the same time, several occupations experienced significant declines, including agricultural engineers (-50 percent) and computer programmers (-46 percent). These occupations are less concentrated in Maine than nationally, with a location quotient of 0.93 relative to the U.S. average, and even lower than in New England (0.83 LQ).

Wages at all levels in professional services exceed Maine's minimum wage in 2025, with computer and information systems managers earning the highest entry wage of \$46 an hour and computer hardware engineers earning the highest median hourly wage at \$74. Professional services also have the highest overall median wage among the other occupational groups at \$49 per hour, up from \$38 in 2021.

## Sales and Administrative Support

This occupational group includes four clean energy–related sales and administrative support occupations. As of Q2 2025, the group employs almost 13,900 people, with the largest employer being bookkeeping, accounting, and auditing clerks (8,200 jobs), representing 60 percent of all employment in this group.

This group is the only occupational group to experience a decline in employment over the past five years, down 4.1 percent. All four occupations in this group experienced job losses during this time, with sales representatives of technical and scientific products experiencing the largest decline at 9.1 percent.

All jobs in this group pay above Maine’s minimum wage in 2025. However, the increase in median hourly wages since 2021 has been minimal, rising only \$2, from \$27 to \$29. Sales representatives of technical and scientific products earn the highest median wage of \$39 per hour.

## Agriculture Occupations

The agriculture occupational group is the smallest of the four other occupational groups, employing over 3,300 workers. It includes three occupations, largely consisting of farmworkers and laborers, crop, nursery, and greenhouse workers, accounting for 78 percent of the jobs in this group, or 2,600 jobs.

Despite its small size, this group experienced the highest overall growth over the past five years, increasing by 31 percent. Farmworkers and laborers, crop, nursery, and greenhouse, is also the fastest-growing occupation, having grown by 35 percent since 2020. These occupations are the most concentrated among the other occupational groups and the only group with a concentration above the national average. They are also over twice as concentrated in Maine as the rest of New England.

First-line supervisors of farming, fishing, and forestry workers have the highest median hourly wage in this group, earning \$32 per hour. Overall, these occupations saw a \$6 increase in median hourly wage since 2021, bringing the overall median to \$24 per hour in 2025.

## Transportation and Material Moving Occupations

There are seven clean energy–related transportation and material moving occupations, totaling around 4,100 jobs as of Q2 2025. The largest employing occupation is industrial truck and tractor operators, accounting for two-thirds (67 percent) of the group.

Transportation and material moving occupations experienced modest overall growth, increasing by 3.0 percent over the past five years. The fastest-growing occupation is captains, mates, and pilots of water vessels, which grew 16 percent. Some occupations faced slight declines, including dredge operators (–3.9 percent) and hoist and winch operators (–3.6 percent). The concentration of these jobs in Maine is close to the national and Northeast averages, but higher than the New England average at 1.69 times.

All seven occupations have entry-level hourly wages above Maine’s 2025 minimum wage. The highest-paying occupation is captains, mates, and pilots of water vessels, earning \$23 per hour at entry and a median wage of \$32 per hour. However, overall wages in this group have remained unchanged since 2021, with an average median of \$25 per hour.

# Data Tables

Table 4. Clean Energy-Related Construction Occupations in Maine, 2025Q2<sup>35</sup>

| SOC                                   | Occupation  | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---------------------------------------|---|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| <b>Total Construction Occupations</b> |   | 35,776           | 8.8%                          | 1.23                        | 1.32                               | 1.48                             | \$22                           | \$29               | \$38                                 |
| 47-2031                               | <b>Carpenters</b>   | 6,062            | -0.5%                         | 1.55                        | 1.42                               | 1.62                             | \$23                           | \$29               | \$37                                 |
| 47-2061                               | <b>Construction Laborers</b>  | 5,992            | 15.0%                         | 0.98                        | 1.22                               | 1.23                             | \$18                           | \$23               | \$29                                 |
| 47-1011                               | <b>First-Line Supervisors of Construction Trades and Extraction Workers</b> | 4,174            | 18.3%                         | 1.08                        | 1.19                               | 1.36                             | \$26                           | \$36               | \$53                                 |
| 47-2111                               | <b>Electricians</b>   | 3,810            | 27.4%                         | 1.11                        | 1.15                               | 1.30                             | \$27                           | \$34               | \$46                                 |
| 47-2141                               | <b>Painters, Construction and Maintenance</b>                               | 2,818            | 5.8%                          | 1.99                        | 1.74                               | 2.16                             | \$22                           | \$25               | \$32                                 |
| 47-2152                               | <b>Plumbers, Pipefitters, and Steamfitters</b>                              | 2,731            | 9.5%                          | 1.30                        | 1.15                               | 1.42                             | \$24                           | \$32               | \$41                                 |
| 47-2073                               | <b>Operating Engineers and Other Construction Equipment Operators</b>       | 2,326            | 12.1%                         | 1.14                        | 1.36                               | 1.53                             | \$22                           | \$28               | \$36                                 |
| 47-3013                               | <b>Helpers - Electricians</b>   | 852              | 10.9%                         | 3.11                        | 3.04                               | 3.41                             | \$20                           | \$23               | \$33                                 |
| 47-2211                               | <b>Sheet Metal Workers</b>  | 798              | -3.0%                         | 1.50                        | 1.52                               | 1.90                             | \$21                           | \$29               | \$34                                 |
| 47-2181                               | <b>Roofers</b>  | 705              | 6.0%                          | 1.01                        | 1.40                               | 1.64                             | \$22                           | \$25               | \$33                                 |
| 47-2051                               | <b>Cement Masons and Concrete Finishers</b>                                 | 645              | 2.1%                          | 0.75                        | 1.30                               | 1.18                             | \$18                           | \$27               | \$43                                 |

<sup>35</sup>JobsEQ & Bureau of Labor Statistics, Occupational Employment and Wage Statistics:

[https://www.bls.gov/oes/current/oes\\_me.htm](https://www.bls.gov/oes/current/oes_me.htm).

2021 Q3 Wage sourced from 2022 Maine Clean Energy Workforce Analysis Report,

<https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/2022%20Maine%20Clean%20Energy%20Workforce%20Report.pdf>

Table 4 (continued)

| SOC     | Occupation  | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---------|---|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| 47-4011 | Construction and Building Inspectors                        | 631              | 25.2%                         | 1.08                        | 1.13                               | 0.98                             | \$22                           | \$34               | \$43                                 |
| 47-2221 | Structural Iron and Steel Workers                           | 620              | 5.9%                          | 2.28                        | 2.18                               | 2.86                             | \$23                           | \$33               | \$38                                 |
| 47-2081 | Drywall and Ceiling Tile Installers                         | 466              | -3.3%                         | 1.06                        | 1.19                               | 1.48                             | \$23                           | \$29               | \$33                                 |
| 47-2071 | Paving, Surfacing, and Tamping Equipment Operators          | 371              | 1.2%                          | 1.84                        | 1.77                               | 2.13                             | \$21                           | \$28               | \$41                                 |
| 47-2132 | Insulation Workers, Mechanical                              | 355              | -11.9%                        | 3.13                        | 2.80                               | 3.70                             | \$24                           | \$29               | \$33                                 |
| 47-2021 | Brickmasons and Blockmasons                                 | 317              | -12.8%                        | 1.06                        | 1.16                               | 1.17                             | \$19                           | \$32               | \$37                                 |
| 47-2131 | Insulation Workers, Floor, Ceiling, and Wall                | 288              | 11.7%                         | 1.75                        | 1.66                               | 2.09                             | \$20                           | \$26               | \$35                                 |
| 47-3015 | Helpers-Pipelayers, Plumbers, Pipefitters, and Steamfitters | 273              | -11.2%                        | 1.40                        | 1.41                               | 1.64                             | \$20                           | \$23               | \$26                                 |
| 47-4041 | Hazardous Materials Removal Workers                         | 239              | 14.7%                         | 1.12                        | 0.78                               | 0.98                             | \$19                           | \$23               | \$30                                 |
| 47-3012 | Helpers-Carpenters  | 203              | -31.7%                        | 1.96                        | 2.05                               | 2.17                             | \$18                           | \$22               | \$27                                 |
| 47-2022 | Stonemasons   | 157              | -16.3%                        | 3.01                        | 2.12                               | 3.16                             | \$20                           | \$29               | \$35                                 |
| 47-2121 | Glaziers  | 148              | 8.7%                          | 0.60                        | 0.68                               | 0.78                             | \$19                           | \$25               | \$31                                 |

Table 4 (continued)

| SOC     | Occupation   | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---------|--|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| 47-2161 | Plasterers and Stucco Masons   | 128              | -11.1%                        | 1.18                        | 1.48                               | 1.76                             | \$19                           | \$28               | \$44                                 |
| 47-3019 | Helpers, Construction Trades, All Other                                    | 125              | 6.8%                          | 1.12                        | 1.57                               | 1.60                             | \$15                           | \$20               | \$28                                 |
| 47-2151 | Pipelayers   | 114              | -5.3%                         | 0.76                        | 1.53                               | 1.92                             | \$23                           | \$29               | \$43                                 |
| 47-2231 | Solar Photovoltaic Installers  | 105              | 80.7%                         | 0.80                        | 1.04                               | 1.01                             | \$19                           | \$26               | \$38                                 |
| 47-2171 | Reinforcing Iron and Rebar Workers   | 75               | 7.9%                          | 0.90                        | 1.16                               | 1.28                             | \$19                           | \$29               | \$45                                 |
| 47-2082 | Tapers   | 71               | -20.5%                        | 1.03                        | 1.00                               | 1.51                             | \$23                           | \$26               | \$29                                 |
| 47-3011 | Helpers-Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters | 65               | -32.6%                        | 0.96                        | 0.97                               | 1.12                             | \$22                           | \$25               | \$31                                 |
| 47-2011 | Boilermakers   | 40               | -22.1%                        | 0.83                        | 1.24                               | 1.40                             | \$24                           | \$36               | \$52                                 |
| 47-3014 | Helpers-Painters, Paperhangers, Plasterers, and Stucco Masons              | 34               | -20.2%                        | 1.05                        | 1.18                               | 1.35                             | \$15                           | \$19               | \$25                                 |
| 47-2072 | Pile Driver Operators  | 20               | -2.2%                         | 1.21                        | 1.04                               | 1.81                             | \$23                           | \$35               | \$59                                 |
| 47-3016 | Helpers-Roofers  | 19               | -48.3%                        | 0.81                        | 1.31                               | 1.62                             | \$15                           | \$19               | \$26                                 |

Table 5. Clean Energy-Related Installation, Maintenance, and Repair Occupations in Maine, 2025Q2<sup>36</sup>

| SOC  | Occupation  | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|--|---|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| <b>Total Installation, Maintenance, and Repair Occupations</b> |   | 16,992           | 10.7%                         | 1.06                        | 1.24                               | 1.17                             | \$22                           | \$31               | \$41                                 |
| 49-9071  | Maintenance and Repair Workers, General                                   | 6,245            | 9.4%                          | 0.94                        | 1.09                               | 0.91                             | \$18                           | \$25               | \$35                                 |
| 49-1011  | First-Line Supervisors of Mechanics, Installers, and Repairers            | 2,704            | 14.1%                         | 1.06                        | 1.17                               | 1.21                             | \$24                           | \$38               | \$55                                 |
| 49-9021  | Heating, Air Conditioning, and Refrigeration Mechanics and Installers     | 2,203            | 16.9%                         | 1.25                        | 1.20                               | 1.29                             | \$24                           | \$31               | \$40                                 |
| 49-9041  | Industrial Machinery Mechanics  | 1,574            | 9.1%                          | 0.87                        | 1.18                               | 1.17                             | \$24                           | \$33               | \$42                                 |
| 49-9099  | Installation, Maintenance, and Repair Workers, All Other                  | 1,122            | 15.7%                         | 1.26                        | 1.64                               | 1.74                             | \$17                           | \$27               | \$38                                 |
| 49-9051  | Electrical Power-Line Installers and Repairers                            | 725              | 34.2%                         | 1.33                        | 1.62                               | 1.78                             | \$28                           | \$46               | \$55                                 |
| 49-2094  | Electrical and Electronics Repairers, Commercial and Industrial Equipment | 416              | -7.5%                         | 1.67                        | 2.01                               | 2.20                             | \$29                           | \$39               | \$46                                 |
| 49-9043  | Maintenance Workers, Machinery  | 333              | -3.4%                         | 1.39                        | 2.10                               | 2.31                             | \$21                           | \$28               | \$36                                 |
| 49-9096  | Riggers   | 324              | 14.8%                         | 3.27                        | 2.87                               | 4.54                             | \$27                           | \$33               | \$39                                 |
| 49-9044  | Millwrights   | 281              | -6.4%                         | 1.66                        | 2.41                               | 2.78                             | \$24                           | \$33               | \$43                                 |
| 49-9098  | Helpers-Installation, Maintenance, and Repair Workers                     | 249              | -8.2%                         | 0.62                        | 0.71                               | 0.71                             | \$18                           | \$22               | \$25                                 |

<sup>36</sup> JobsEQ & Bureau of Labor Statistics, Occupational Employment and Wage Statistics:

[https://www.bls.gov/oes/current/oes\\_me.htm](https://www.bls.gov/oes/current/oes_me.htm).

2021 Q3 Wage sourced from 2022 Maine Clean Energy Workforce Analysis Report,

<https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/2022%20Maine%20Clean%20Energy%20Workforce%20Report.pdf>

Table 5 (continued)

| SOC     | Occupation  | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---------|---|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| 49-9031 | Home Appliance Repairers  | 202              | -5.3%                         | 1.31                        | 1.36                               | 1.40                             | \$17                           | \$23               | \$31                                 |
| 49-2095 | Electrical and Electronics Repairers, Powerhouse, Substation, and Relay       | 164              | 19.7%                         | 1.62                        | 1.71                               | 1.22                             | \$37                           | \$45               | \$51                                 |
| 49-3041 | Farm Equipment Mechanics and Service Technicians                              | 140              | 7.6%                          | 0.85                        | 1.98                               | 2.01                             | \$16                           | \$25               | \$31                                 |
| 49-2093 | Electrical and Electronics Installers and Repairers, Transportation Equipment | 101              | -28.3%                        | 3.46                        | 3.17                               | 3.87                             | \$20                           | \$30               | \$37                                 |
| 49-9092 | Commercial Divers   | 85               | 45.4%                         | 4.37                        | 3.58                               | 4.52                             | \$19                           | \$36               | \$40                                 |
| 49-2092 | Electric Motor, Power Tool, and Related Repairers                             | 67               | -10.0%                        | 0.94                        | 1.08                               | 1.26                             | \$18                           | \$27               | \$39                                 |
| 49-9081 | Wind Turbine Service Technicians  | 55               | 58.3%                         | 0.86                        | 1.44                               | 2.00                             | \$28                           | \$31               | \$38                                 |

Table 6. Clean Energy-Related Production Occupations in Maine, 2025Q2<sup>37</sup>

| SOC                                 | SOC Title  | Maine Total Jobs, 2025 Q2 | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|-------------------------------------|--|---------------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| <b>Total Production Occupations</b> |  | 17,063                    | -0.4%                         | 0.93                        | 1.03                               | 1.22                             | \$21                           | \$28               | \$37                                 |
| 51-2092                             | Team Assemblers  | 3,900                     | 3.6%                          | 0.77                        | 1.03                               | 1.13                             | \$18                           | \$22               | \$26                                 |
| 51-1011                             | First-Line Supervisors of Production and Operating Workers   | 3,085                     | 1.4%                          | 1.06                        | 1.11                               | 1.29                             | \$23                           | \$37               | \$51                                 |
| 51-4121                             | Welders, Cutters, Solderers, and Brazers   | 2,233                     | 5.1%                          | 1.18                        | 2.03                               | 2.09                             | \$22                           | \$30               | \$38                                 |
| 51-4041                             | Machinists   | 1,454                     | -12.0%                        | 1.17                        | 0.96                               | 1.36                             | \$21                           | \$29               | \$39                                 |
| 51-9124                             | Coating, Painting, and Spraying Machine Setters, Operators, and Tenders  | 897                       | 2.8%                          | 1.31                        | 1.56                               | 1.89                             | \$20                           | \$29               | \$61                                 |
| 51-2099                             | Assemblers and Fabricators, All Other  | 790                       | -3.1%                         | 0.80                        | 1.00                               | 1.05                             | \$18                           | \$22               | \$26                                 |
| 51-9161                             | Computer Numerically Controlled Tool Operators   | 682                       | 2.8%                          | 0.93                        | 0.79                               | 1.06                             | \$22                           | \$28               | \$31                                 |
| 51-2028                             | Electrical, Electronic, and Electromechanical Equipment Assemblers, Except Coil Winders, Tapers, and Finishers | 600                       | -1.4%                         | 0.56                        | 0.38                               | 0.53                             | \$18                           | \$22               | \$28                                 |
| 51-2051                             | Fiberglass Laminators and Fabricators  | 454                       | 13.3%                         | 5.89                        | 5.01                               | 8.09                             | \$20                           | \$24               | \$29                                 |
| 51-4072                             | Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic                    | 434                       | -3.5%                         | 0.69                        | 0.73                               | 0.86                             | \$21                           | \$28               | \$38                                 |
| 51-4081                             | Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic                                       | 366                       | 14.5%                         | 0.68                        | 0.76                               | 0.80                             | \$19                           | \$22               | \$29                                 |

<sup>37</sup> JobsEQ & Bureau of Labor Statistics, Occupational Employment and Wage Statistics:

[https://www.bls.gov/oes/current/oes\\_me.htm](https://www.bls.gov/oes/current/oes_me.htm).

2021 Q3 Wage sourced from 2022 Maine Clean Energy Workforce Analysis Report,

<https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/2022%20Maine%20Clean%20Energy%20Workforce%20Report.pdf>

Table 6 (continued)

| SOC     | Occupation  | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---------|---|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| 51-4031 | Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic | 316              | -6.9%                         | 0.44                        | 0.56                               | 0.64                             | \$21                           | \$25               | \$31                                 |
| 51-2041 | Structural Metal Fabricators and Fitters  | 312              | -18.3%                        | 1.42                        | 1.64                               | 1.83                             | \$23                           | \$27               | \$32                                 |
| 51-8021 | Stationary Engineers and Boiler Operators   | 282              | -7.1%                         | 2.10                        | 2.22                               | 1.43                             | \$24                           | \$31               | \$39                                 |
| 51-9141 | Semiconductor Processing Technicians  | 210              | 1.7%                          | 1.48                        | 1.11                               | 1.86                             | \$21                           | \$23               | \$30                                 |
| 51-4192 | Layout Workers, Metal and Plastic   | 186              | -10.3%                        | 7.23                        | 3.20                               | 8.37                             | \$22                           | \$34               | \$49                                 |
| 51-8013 | Power Plant Operators   | 154              | 8.6%                          | 1.16                        | 1.00                               | 1.21                             | \$29                           | \$39               | \$51                                 |
| 51-4122 | Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders                 | 102              | -9.6%                         | 0.65                        | 0.70                               | 0.98                             | \$22                           | \$24               | \$29                                 |
| 51-2031 | Engine and Other Machine Assemblers   | 83               | -2.2%                         | 0.53                        | 1.29                               | 1.41                             | \$20                           | \$28               | \$39                                 |
| 51-9162 | Computer Numerically Controlled Tool Programmers  | 83               | 6.1%                          | 0.72                        | 0.58                               | 0.82                             | \$27                           | \$33               | \$42                                 |
| 51-4021 | Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic        | 78               | -12.4%                        | 0.29                        | 0.25                               | 0.31                             | \$17                           | \$23               | \$48                                 |
| 51-8012 | Power Distributors and Dispatchers  | 68               | 13.5%                         | 1.70                        | 1.38                               | 1.92                             | \$36                           | \$56               | \$67                                 |
| 51-4035 | Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic          | 62               | -17.4%                        | 1.10                        | 1.20                               | 1.43                             | \$26                           | \$33               | \$40                                 |

Table 6 (continued)

| SOC     | Occupation  | Maine Total Jobs | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---------|---|------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| 51-6091 | Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers | 60               | -11.2%                        | 0.89                        | 1.04                               | 1.58                             | \$18                           | \$24               | \$33                                 |
| 51-4032 | Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic       | 49               | -57.7%                        | 2.12                        | 1.84                               | 3.41                             | \$20                           | \$23               | \$25                                 |
| 51-4023 | Rolling Machine Setters, Operators, and Tenders, Metal and Plastic                        | 36               | -4.8%                         | 0.39                        | 0.62                               | 0.59                             | \$19                           | \$26               | \$35                                 |
| 51-2021 | Coil Winders, Tapers, and Finishers   | 30               | -32.7%                        | 0.58                        | 0.73                               | 0.67                             | \$18                           | \$25               | \$33                                 |
| 51-4022 | Forging Machine Setters, Operators, and Tenders, Metal and Plastic                        | 24               | -33.8%                        | 0.62                        | 0.55                               | 0.78                             | \$20                           | \$21               | \$22                                 |
| 51-4051 | Metal-Refining Furnace Operators and Tenders  | 24               | 8.8%                          | 0.28                        | 0.63                               | 0.30                             | \$20                           | \$29               | \$40                                 |
| 51-4052 | Pourers and Casters, Metal  | 6                | -23.1%                        | 0.24                        | 0.33                               | 0.27                             | \$19                           | \$26               | \$35                                 |
| 51-4062 | Patternmakers, Metal and Plastic  | 3                | -46.3%                        | 0.43                        | 0.60                               | 0.51                             | \$21                           | \$29               | \$41                                 |

Table 7. All Other Clean Energy-Related Occupations in Maine, 2025Q2<sup>38</sup>

| SOC Title   | Maine Total Jobs, 2025 Q2 | Percent Change (2020 to 2025) | U.S. Location Quotient (LQ) | New England Location Quotient (LQ) | Northeast Location Quotient (LQ) | Entry Hourly (10th percentile) | Median Hourly 2025 | Experienced Hourly (90th percentile) |
|---|---------------------------|-------------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------|--------------------------------------|
| <b>Professional Services</b>                          | 61,953                    | 13.5%                         | 0.93                        | 0.83                               | 0.92                             | \$30                           | \$49               | \$81                                 |
| <b>Sales and Administrative Support</b>               | 13,854                    | -4.1%                         | 0.99                        | 1.02                               | 1.03                             | \$20                           | \$29               | \$44                                 |
| <b>Agriculture Occupations</b>                        | 3,319                     | 30.9%                         | 1.20                        | 2.31                               | 2.65                             | \$20                           | \$24               | \$33                                 |
| <b>Transportation and Material Moving Occupations</b> | 4,107                     | 3.0%                          | 0.94                        | 1.69                               | 1.21                             | \$20                           | \$25               | \$32                                 |

<sup>38</sup> JobsEQ & Bureau of Labor Statistics, Occupational Employment and Wage Statistics:

[https://www.bls.gov/oes/current/oes\\_me.htm](https://www.bls.gov/oes/current/oes_me.htm).

2021 Q3 Wage sourced from 2022 Maine Clean Energy Workforce Analysis Report,

<https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/2022%20Maine%20Clean%20Energy%20Workforce%20Report.pdf>

# Appendix B:

## Maine Clean Energy Technology List

A clean energy job is defined as any worker directly involved with the research, development, production, manufacture, distribution, sales, implementation, installation, or repair of components, goods, or services related to the following technology sectors of clean energy generation, clean grid and storage, energy efficiency, clean fuels, or alternative transportation. These jobs also include supporting services such as consulting, finance, tax, and legal services related to energy.

### Renewable Electric Power Generation

- Solar photovoltaic electric generation
- Wind generation
- Geothermal generation
- Bioenergy/biomass generation, including combined heat and power
- Low-impact hydroelectric generation, including wave/kinetic generation
- Traditional hydropower generation

### Grid Modernization & Energy Storage

#### Electric Power Transmission and Distribution

- Electric power transmission, control, distribution
- Smart grid
- Microgrid
- Other grid modernization

#### 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

## Energy Efficiency

- Traditional HVAC goods, control systems, and services (HVAC firms/employees who work with traditional HVAC goods, systems, and services most of the time but conduct some clean energy HVAC work such as installing high efficiency HVAC systems and components as well)
- High efficiency HVAC and renewable heating and cooling
  - Certified (formerly ENERGY STAR®) 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
  - Solar thermal water heating and cooling
  - Other renewable heating and cooling (geothermal, biomass, heat pumps, etc.)
- Certified (formerly ENERGY STAR®) and efficient Lighting
  - Certified appliances, excluding HVAC
  - Certified electronics (TVs, telephones, audio/video, etc.)
  - Certified windows and doors
  - Certified roofing
  - Certified seal and insulation
  - Certified commercial food service equipment
  - Certified data center equipment
  - Certified LED lighting
  - Other LED, CFL, and efficient lighting
- Advanced building materials/insulation
- Other energy efficiency
  - Recycled building materials
  - Reduced water consumption products and appliances

## Renewable Fuels

- Woody biomass
- Other ethanol and non-woody biomass, including biodiesel
- Other biofuels

## Alternative Transportation

- Plug-in hybrid vehicles
- Electric vehicles
- Hybrid electric vehicles
- Hydrogen and fuel cell vehicles

# Appendix C:

## Maine Traditional Energy Technology List

A traditional energy job is defined as any worker directly involved with the research, development, production, manufacture, distribution, sales, implementation, installation, or repair of components, goods, or services related to the following technology sectors. These jobs also include supporting services such as consulting, finance, tax, and legal services related to energy.

### Electric Power Generation

- Natural gas generation
- Coal generation
- Oil and other fossil fuel generation
- Other generation<sup>39</sup>

### Grid

- Traditional power transmission, control, distribution
- Other grid<sup>40</sup>

### Storage

- Liquefied natural gas storage
- Compressed natural gas storage
- Crude oil storage
- Refined petroleum fuels (liquid) storage
- Coal storage (piles, domes, etc.)
- Biofuels storage
- Nuclear fuel storage
- Other grid and storage<sup>41</sup>

### Fuels

- Coal
- Oil (petroleum and other fossil fuels)
- Natural gas
- Corn ethanol
- Nuclear fuel
- Other fuels<sup>42</sup>

### Storage

- Natural gas vehicles
- Gasoline and diesel vehicles
- Other vehicles<sup>43</sup>

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<sup>39</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>40</sup> Any transmission and distribution 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>41</sup> Any 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>42</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>43</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.

# Appendix D: Research Methodology

## Employment Data

Data for the 2025 Maine Clean Energy Industry Report is taken from data collected for the 2025 US Energy and Employment Report (USEER). The survey was administered by phone and web. The phone survey was conducted by ReconMR, and the web instrument was programmed internally. Each respondent was required to use a unique ID in order to prevent duplication.

The 2025 USEER survey in Maine resulted in 5,236 calls and 733 emails to potential respondents. 338 business establishments participated in the survey. The responses were used to develop incidence rates among industries as well as to apportion employment across various industry categories in ways currently not provided by state and federal labor market information agencies. The margin of error for the 2025 USEER survey in Maine is +/-5.29% at a 95% confidence level.

For the full 2025 USEER methodology, see:

<https://www.energy.gov/sites/default/files/2025-08/USEER%20Appendices%200828%202.0.pdf>

## Patent Data

Data for patents this year was taken from the U.S. Patent and Trademark Office's PatentSearch API.<sup>44</sup> Patent analysis includes only patents granted, not all applications filed. Due to data lags, a more complete picture of 2024 activity will be available in next year's report. Reports prior to 2024 utilized the PatentsView Query Builder tool, which was unavailable for the 2024 report. The 2024 report instead utilized PatentsView bulk download database tables. This 2025 report switches to the PatentSearch API, as categorization by CPC code is more detailed than the bulk download database tables. As such, there may be slight discrepancies in the patents reported in prior reports due to the methodological change.

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<sup>44</sup> United States Patent and Trademark Office, PatentsView.  
[https://search.patentsview.org/docs/docs/Search%20API/SearchAPIReference/?\\_gl=1\\*1h7tkg3\\*\\_ga\\*NDU30TYxODA2LjE3NjM0OTMxMTE.\\*\\_ga\\_K4PTTLH074\\*czE3NjQwMTAxMjMkbzlkZzEkdDE3NjQwMTEyNDkkajM1JGwwJGgw](https://search.patentsview.org/docs/docs/Search%20API/SearchAPIReference/?_gl=1*1h7tkg3*_ga*NDU30TYxODA2LjE3NjM0OTMxMTE.*_ga_K4PTTLH074*czE3NjQwMTAxMjMkbzlkZzEkdDE3NjQwMTEyNDkkajM1JGwwJGgw)