Clean Jobs North Carolina 2024[1]

NEARLY 110,000 CLEAN ENERGY JOBS AND POISED FOR CONTINUED GROWTH

KEY FINDINGS

9th
among all states for most clean energy jobs

1.7X
Clean energy jobs grew 1.7 times faster than North Carolina's economy overall

4,408
new clean energy jobs added last year

1st
among all states for growth rate of its storage and grid modernization workforce, with a growth rate of 10.1 percent year-over-year

SECTOR SUMMARY HIGHLIGHTS

CLEAN ENERGY OVERALL: North Carolina's clean energy workforce added 4,408 new workers in 2023, growing 4.2 percent and adding jobs at a much faster rate than the state's overall employment, which grew 2.5 percent. North Carolina had the 9th-largest clean energy workforce for 2023 among all 50 states, with 109,788 clean energy jobs in total. The bulk of the workforce were in construction and professional services industries. In 2023, clean energy accounted for over 11 times more jobs than fossil fuels in North Carolina. Two North Carolina counties made the top 30 list for most clean energy jobs by county in the nation: Mecklenburg County (19,586 jobs) and Wake County (17,122 jobs).

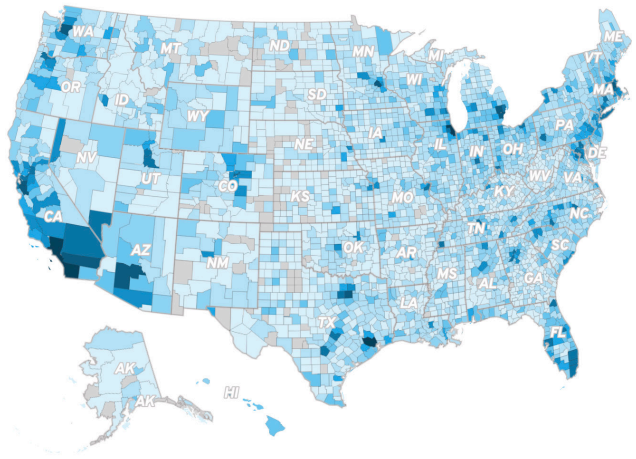
ENERGY EFFICIENCY: Energy efficiency is North Carolina's largest clean energy sector by jobs, with 80,817 workers. The sector grew 3.2 percent in 2023, tied for the 26th fastest-growing energy efficiency workforce in the nation.

RENEWABLE GENERATION: Renewable generation grew 7.7 percent in 2023, bringing North Carolina's renewable generation workforce to 13,579 individuals—the 8th largest in the country. Solar accounts for the majority of the sector's workforce, with 9,819 jobs.

STORAGE AND GRID MODERNIZATION: Jobs in battery, storage, and grid modernization grew 10.1 percent in 2023, making it the fastest-growing clean energy sector in the state. North Carolina's storage and grid modernization workforce totaled 4,246 in 2023—the 10th largest in the nation.

CLEAN VEHICLES: The clean vehicles sector was the third-fastest growing workforce in North Carolina's clean energy industry, growing 5.9 percent in 2023 to employ a total of 9,522 workers. The sector grew nearly 6 times faster than the gas/diesel vehicles sector in North Carolina, which grew only 1 percent in 2023.

CLEAN FUELS: North Carolina's clean fuels workforce makes up the smallest clean energy sector in the state, with 1,559 total jobs. Clean fuels jobs grew at a rate of 2.6 percent in North Carolina in 2023.



EXPLORE THE DATA FURTHER

Dive deeper into clean jobs data at www.cleanjobsamerica.e2.org to explore the latest state and county clean energy employment data across the entire U.S., including national and statewide rankings by total clean energy jobs, jobs per capita, and employment growth.

For information on methodology and this report's analysis—including what technologies and sectors are counted as clean energy, what jobs are not counted, definitions of clean energy sectors and subsectors, and more—visit www.cleanjobsamerica.e2.org.

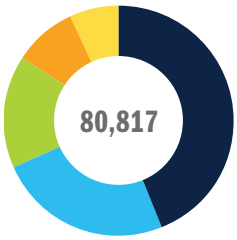
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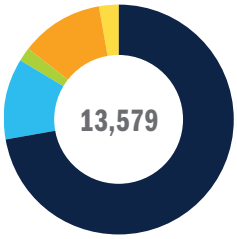
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NORTH CAROLINA CLEAN ENERGY ECONOMY—AT A GLANCE

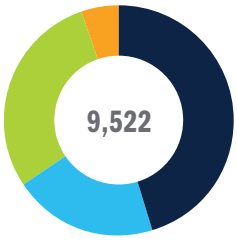
FIG 1 // NORTH CAROLINA CLEAN ENERGY EMPLOYMENT by sectors



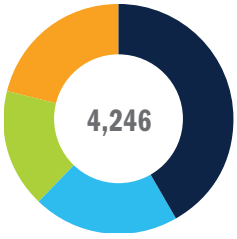
ENERGY EFFICIENCY:
- ENERGY STAR and Efficient Lighting: **35,471**
- Traditional HVAC: **19,959**
- High-Efficiency HVAC and Renewable Heating & Cooling: **12,630**
- Advanced Materials: **7,153**
- Other: **5,604**



RENEWABLE GENERATION:
- Solar: **9,819**
- Wind: **1,569**
- Geothermal: **247**
- Bioenergy/CHP: **1,574**
- Low-Impact Hydro: **369**

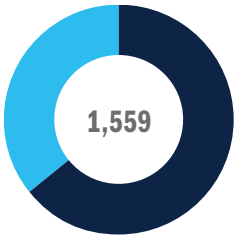


CLEAN VEHICLES:
- Hybrid Electric Vehicles: **4.313**
- Plug-In Hybrid Vehicles: **1,953**
- Electric Vehicles: **2,758**
- Hydrogen & Fuel Cell: **499**



GRID & STORAGE:
- Clean Storage:* **1,778**
- Smart Grid: **864**
- Micro-Grid: **709**
- Other Grid Modernization: **895**

* includes pumped hydro storage, battery storage, thermal storage, and mechanical storage detailed technologies



FUELS:
- Other Ethanol/Non-Woody Biomass: **1,004**
- Other Biofuels: **555**

FIG 2 // NORTH CAROLINA CLEAN ENERGY EMPLOYMENT by value chain

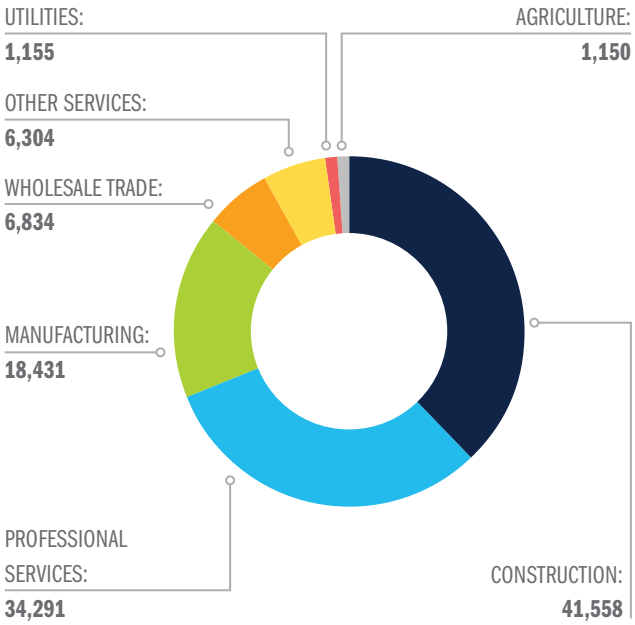
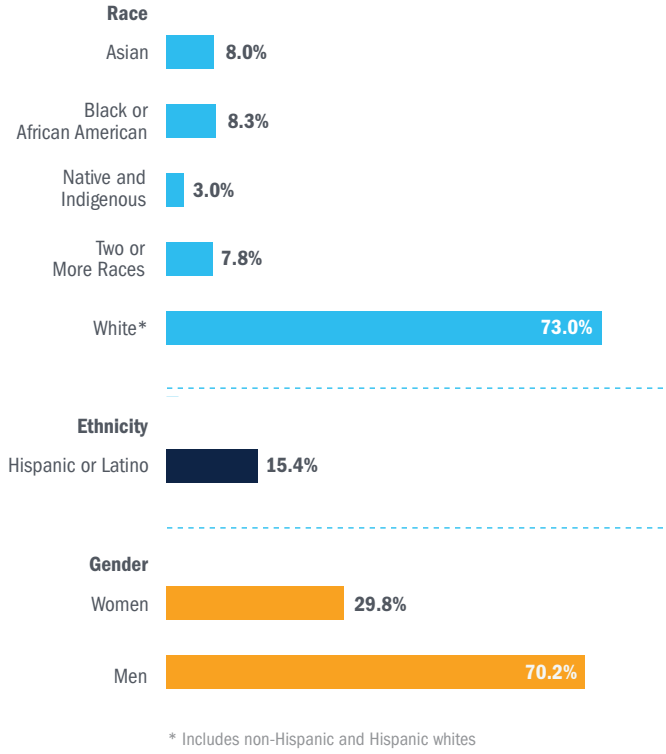
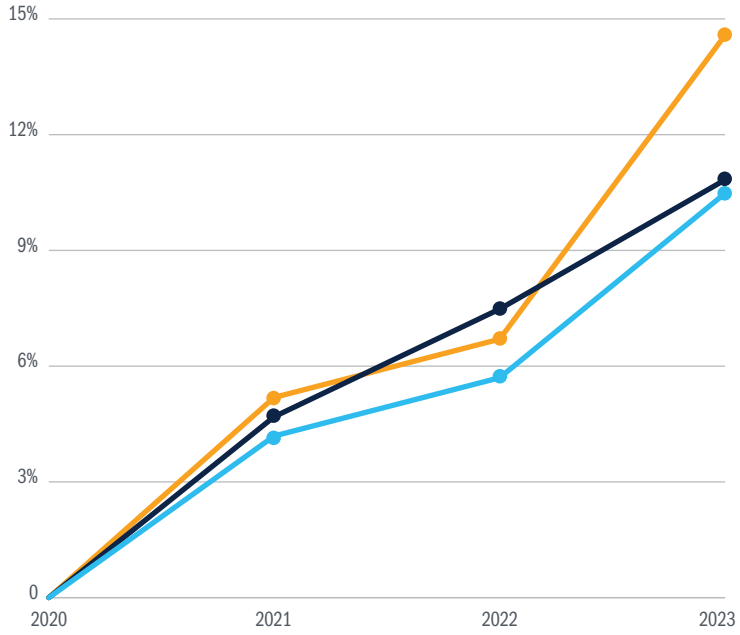


FIG 3 // NORTH CAROLINA CLEAN ENERGY EMPLOYMENT by demographics[2]



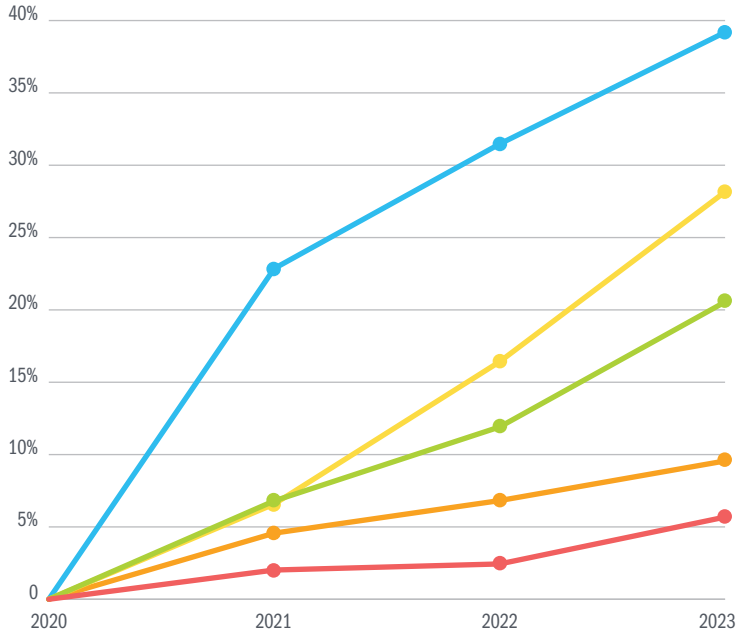
* Includes non-Hispanic and Hispanic whites

FIG 4 // NORTH CAROLINA ENERGY EMPLOYMENT by industry growth



2020	2021	2022	2023
North Carolina Clean Energy Employment			
99,314	103,472	105,315	109,723
Overall North Carolina Employment			
4,437,319	4,645,639	4,795,993	4,917,928
Overall North Carolina Energy Employment			
194,709	204,813	208,682	223,095

FIG 5 // NORTH CAROLINA ENERGY EMPLOYMENT by clean energy sector employment growth



	2021	2022	2023
Energy Efficiency			
76,473	78,018	78,338	80,817
Renewable Generation			
11,264	12,030	12,606	13,579
Storage/Grid			
3,313	3,531	3,857	4,246
Clean Fuels			
1,423	1,488	1,520	1,559
Clean Vehicles			
6,841	8,405	8,994	9,522

NORTH CAROLINA CLEAN ENERGY ECONOMY—APPENDIX

Table 1 // NORTH CAROLINA CLEAN ENERGY EMPLOYMENT by metro

Metro Area	Total Clean Energy	Renewable Gen.	Storage/Grid	Clean Fuels	Energy Efficiency	Clean Vehicles
Asheville, NC	**5,738**	1,224	44	31	3,960	480
Burlington, NC	**943**	47	<10	<10	726	160
Charlotte-Concord-Gastonia, NC-SC	**31,542**	5,109	599	160	22,682	2,991
Durham-Chapel Hill, NC	**7,406**	2,114	95	22	4,642	533
Fayetteville, NC	**2,577**	82	80	356	1,789	270
Goldsboro, NC	**874**	24	<10	15	708	119
Greensboro-High Point, NC	**7,909**	342	719	45	5,599	1,205
Greenville, NC	**1,359**	144	12	10	1,090	103
Hickory-Lenoir-Morganton, NC	**2,254**	117	155	13	1,472	498
Jacksonville, NC	**836**	56	<10	<10	682	85
Raleigh, NC	**18,750**	1,554	1,018	67	15,273	837
Rocky Mount, NC	**1,080**	51	12	37	925	56
Virginia Beach-Norfolk-Newport News, VA-NC	**159**	17	<10	<10	124	15
Wilmington, NC	**3,303**	386	56	12	2,630	218
Winston-Salem, NC	**5,220**	239	773	35	3,743	430

Note: An additional 19,722 clean energy jobs are found in rural or nonmetropolitan areas[3]

Table 2 // NORTH CAROLINA CLEAN ENERGY EMPLOYMENT by county

County Name	Total Clean Energy	Renewable Gen.	Storage/Grid	Clean Fuels	Energy Efficiency	Clean Vehicles	Workers Per 1K Jobs	Job Growth
Alamance County	943	47	<10	<10	726	160	14	2.50%
Alexander County	112	<10	<10	<10	90	17	13	1.80%
Alleghany County	58	<10	<10	<10	40	<10	17	-3.70%
Anson County	127	10	<10	<10	99	16	19	1.90%
Ashe County	260	<10	<10	<10	189	54	35	1.80%
Avery County	134	<10	<10	<10	110	14	18	3.30%
Beaufort County	408	33	<10	<10	329	34	26	2.70%
Bertie County	30	<10	<10	<10	20	<10	6	-5.30%
Bladen County	114	11	<10	<10	79	15	8	-2.30%
Brunswick County	1,315	154	<10	519	600	38	33	50.10%
Buncombe County	3,928	916	35	15	2,706	255	28	3.30%
Burke County	496	<10	109	<10	227	150	17	30.90%
Cabarrus County	1,736	239	11	<10	1,275	204	20	2.90%
Caldwell County	261	11	<10	<10	189	56	10	2.30%
Camden County	40	10	<10	<10	25	<10	31	-1.10%

County Name	Total Clean Energy	Renewable Gen.	Storage/Grid	Clean Fuels	Energy Efficiency	Clean Vehicles	Workers Per 1K Jobs	Job Growth
Carteret County	456	26	<10	<10	401	24	18	2.60%
Caswell County	31	<10	<10	<10	23	<10	11	0.20%
Catawba County	1,385	95	43	<10	966	274	15	4.10%
Chatham County	422	113	<10	<10	272	30	23	5.30%
Cherokee County	280	54	<10	<10	214	<10	35	7.70%
Chowan County	66	<10	<10	<10	51	<10	12	-0.60%
Clay County	52	<10	<10	<10	41	<10	24	2.00%
Cleveland County	1,067	113	28	<10	811	110	29	2.20%
Columbus County	185	14	<10	<10	143	19	12	0.40%
Craven County	889	63	<10	<10	762	50	21	4.00%
Cumberland County	2,136	76	69	<10	1,719	264	17	3.40%
Currituck County	141	10	<10	<10	116	13	20	1.90%
Dare County	415	23	<10	<10	374	13	22	2.40%
Davidson County	969	54	23	16	724	152	21	1.50%
Davie County	223	12	<10	<10	183	26	16	3.00%
Duplin County	220	21	<10	19	157	21	11	-3.40%
Durham County	5,224	1,453	52	10	3,350	359	22	4.90%
Edgecombe County	268	11	<10	<10	232	14	17	2.30%
Forsyth County	3,695	155	744	18	2,558	220	19	-2.50%
Franklin County	370	20	<10	<10	309	31	27	9.00%
Gaston County	2,847	263	14	<10	1,778	784	36	0.50%
Gates County	19	<10	<10	<10	<10	<10	13	23.70%
Graham County	109	10	<10	<10	96	<10	58	6.70%
Granville County	297	13	<10	<10	232	41	14	1.20%
Greene County	74	<10	<10	<10	57	<10	16	-2.20%
Guilford County	6,123	275	74	20	4,668	1,086	21	2.90%
Halifax County	161	11	<10	<10	121	23	11	0.20%
Harnett County	696	36	16	<10	561	75	24	1.60%
Haywood County	282	21	<10	<10	226	26	16	1.40%
Henderson County	1,214	34	<10	10	972	194	28	2.30%
Hertford County	168	<10	<10	<10	145	<10	20	0.10%
Hoke County	442	<10	11	348	70	<10	47	59.50%
Hyde County	32	<10	<10	<10	27	<10	19	-4.00%
Iredell County	3,178	1,167	31	<10	1,707	265	38	1.70%
Jackson County	228	35	<10	<10	183	<10	16	1.50%
Johnston County	1,258	71	39	14	1,032	101	21	4.40%
Jones County	40	<10	<10	<10	28	<10	24	-0.30%
Lee County	585	91	<10	<10	396	90	22	2.00%
Lenoir County	683	27	43	<10	564	40	23	0.30%
Lincoln County	709	26	11	<10	559	108	25	2.00%
Macon County	339	11	<10	<10	299	24	12	2.40%
Madison County	314	252	<10	<10	57	<10	27	0.10%
Martin County	106	36	<10	<10	61	<10	76	-0.70%
McDowell County	185	10	<10	<10	153	18	17	2.00%

County Name	Total Clean Energy	Renewable Gen.	Storage/Grid	Clean Fuels	Energy Efficiency	Clean Vehicles	Workers Per 1K Jobs	Job Growth
Mecklenburg County	19,586	3,038	498	113	14,883	1,053	25	3.40%
Mitchell County	119	<10	<10	<10	97	13	23	2.20%
Montgomery County	332	195	<10	<10	107	27	37	0.70%
Moore County	492	33	42	<10	373	41	12	0.50%
Nash County	812	40	10	28	693	42	20	0.60%
New Hanover County	2,917	367	35	<10	2,317	193	22	2.60%
Northampton County	65	<10	<10	<10	49	10	13	0.40%
Onslow County	836	56	<10	<10	682	85	15	2.30%
Orange County	1,444	529	24	<10	838	46	18	2.90%
Pamlico County	45	<10	<10	<10	35	<10	12	0.60%
Pasquotank County	219	14	<10	<10	175	22	14	1.10%
Pender County	386	19	21	<10	314	25	27	0.30%
Perquimans County	38	<10	<10	<10	29	<10	15	2.20%
Person County	316	19	13	<10	183	99	33	1.90%
Pitt County	1,359	144	12	10	1,090	103	17	1.90%
Polk County	122	20	<10	<10	96	<10	22	0.70%
Randolph County	1,328	33	639	22	540	93	31	90.80%
Richmond County	296	54	<10	<10	221	16	20	2.40%
Robeson County	459	32	11	<10	379	32	12	5.00%
Rockingham County	458	33	<10	<10	390	25	18	1.70%
Rowan County	1,320	74	<10	<10	805	425	26	3.60%
Rutherford County	339	23	<10	<10	277	32	19	1.90%
Sampson County	573	352	17	17	158	29	33	-1.10%
Scotland County	296	<10	<10	<10	159	126	25	5.70%
Stanly County	343	34	<10	<10	269	36	15	5.70%
Stokes County	143	<10	<10	<10	117	18	19	2.20%
Surry County	779	78	184	<10	471	45	27	7.30%
Swain County	68	<10	<10	<10	56	<10	6	-3.00%
Transylvania County	186	29	<10	<10	147	<10	19	2.10%
Tyrrell County	18	<10	<10	<10	13	<10	18	-4.00%
Union County	2,164	301	25	12	1,674	153	29	1.90%
Vance County	212	10	<10	<10	172	24	15	2.20%
Wake County	17,122	1,463	974	48	13,932	705	26	4.80%
Warren County	30	<10	<10	<10	25	<10	10	0.70%
Washington County	24	<10	<10	<10	13	<10	8	-6.20%
Watauga County	389	27	<10	<10	328	25	15	2.60%
Wayne County	874	24	<10	15	708	119	21	1.70%
Wilkes County	279	<10	<10	<10	233	28	15	2.10%
Wilson County	997	64	10	18	830	75	28	2.70%
Yadkin County	190	11	<10	<10	161	14	19	2.00%
Yancey County	130	19	<10	<10	104	<10	29	1.00%
Undefined	3,074	176	196	25	2,562	115	13	1.70%

1 Unless otherwise stated, all data is based on 2023 Q4 employment data and surveys collected and analyzed by the BW Research Partnership for the 2024 U.S. Energy and Employment Report (USEER), June 2024, Department of Energy (DOE). Employment data used in this analysis comes from the U.S. Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) and a nationwide employer survey of 34,200 business establishments administered in Q1 2024. See Pages 201-206 for methodology questions.

2 Information on the representation of people with disabilities, lesbian, gay, bisexual, transgender, intersex, and queer people, migrants, religious minorities, and different age demographics in clean energy is limited. Based on the available data from the Bureau of Labor Statistics (BLS) and the supplemental employer survey used by the USEER, this analysis was unable to produce any findings regarding those groups.

3 Rural clean energy jobs are calculated based on the Bureau of Labor Statistics' (BLS) nonmetropolitan area for every state, which is any area not designated as a metropolitan area by BLS. This is the most commonly used definition to analyze rural and small-town trends, and is available at https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural. New Jersey, Rhode Island, and the District of Columbia contain no nonmetropolitan statistical areas.

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