Compete.
Council on Competitiveness

NEW ENGLAND COMPETITIVENESS CONVERSATION

Growing New England's Next Generation Innovation Economy

The COUNCIL ON COMPETITIVENESS is a nonprofit, 501(c) (3) organization as recognized by the U.S. Internal Revenue Service. The Council's activities are funded by contributions from its members, foundations, and project contributions. To learn more about the Council on Competitiveness, visit Compete.org.

June 5-6, 2025
Medford, Massachusetts

New England's innovation ecosystem has distinctive strengths and areas for growth.

Strengths

ACADEMIC EXCELLENCE	43% of New England's population aged 25+ has a bachelor's degree or higher, by far the most educated region in the country.
INVENTION	Regionally, New England ranks 2nd in patents per capita. Massachusetts ranks 3rd in total patents across all states.
R&D INTENSITY	Massachusetts ranks 1st in the nation in R&D intensity, and 2nd for total R&D funding.
BLUE-GREEN ECONOMY	Over $3.3B was invested into clean energy technology in New England in 2024.

Areas for Growth

HIGH COST OF LIVING	In 12 of 13 regional metros, buying the median home requires at least $100k in annual income.
POPULATION GROWTH	New England relies on international migration to maintain its population.
WORKFORCE NEEDS	The region has workforce gaps, particularly across the blue and green economies.
ENERGY INFRASTRUCTURE	The region will need to more than triple its generation capacity to meet load growth.

NEW ENGLAND: REGIONAL ECONOMY

New England is one of the most economically productive regions of the country.

Bureau of Economic Analysis

- New England had the 3rd highest GDP per capita across the nation's 8 regions, cementing it as a hub for industry and innovation.
- From 2014-2024, New England's economy has grown at a slower pace (22%) than the national rate (27%). Rejuvenating growth will require renewed focus on the region's innovative industries.

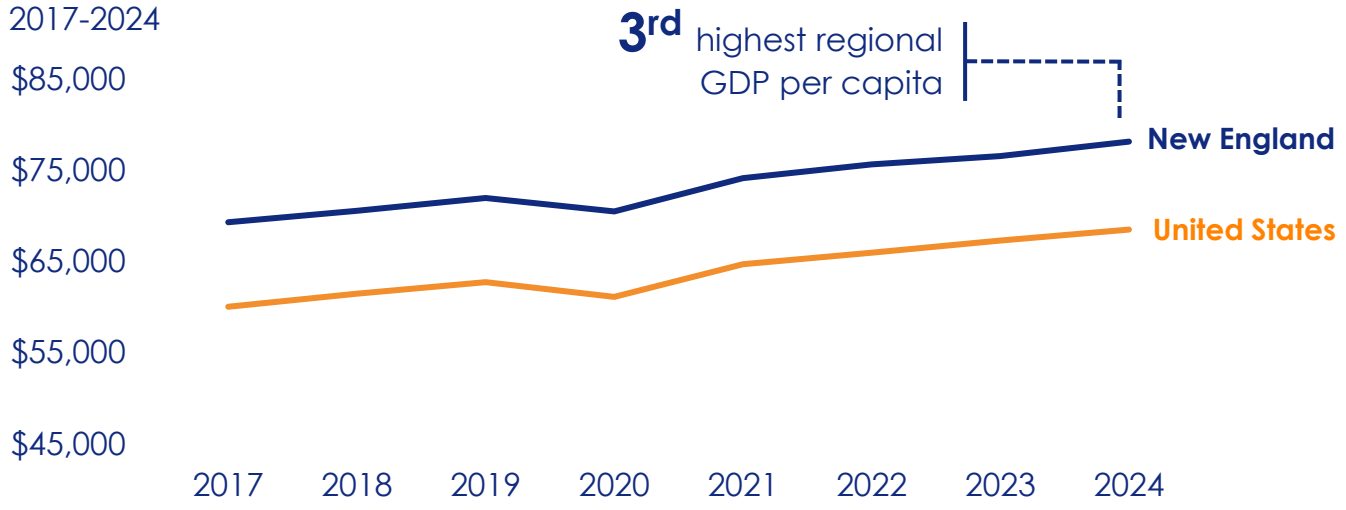
Massachusetts' robust business environment and innovation resources have positioned the state as a driver of national growth.

Massachusetts Technology Leadership Council; Mass Fintech Hub; MassBio; StartupBlink

- The technology industry accounts for 17% of MA's GDP, and technology workers account for 14% of the state's workforce, compared to only 10% nationally.
- MA is home to a booming financial technology sector, boasting $5.9B in funding, 350+ fintechs in the ecosystem, 400+ financial services organizations, and 105 leading academic institutions.
- MA's biopharmaceutical sector is booming, its workforce growing a nation-leading 15.2% year-over-year in 2021. The biopharmaceutical R&D workforce grew even faster at 17.2% year-over-year in 2021, second only to CA.
- The Boston area is home to > 3,000 startups, representing 5% of all startups in the United States. Boston ranks as the 4th best startup ecosystem in the United States.

GDP per Capita

2017-2024



Bureau of Economic Analysis

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NEW ENGLAND: REGIONAL ECONOMY

Maine's long coastline and forest coverage contributes to its leadership in aquaculture and forestry.

State of Maine Department of Economic and Community Development; NOAA

- ME's forestry and forest products industry is valued near $2.1B, accounting for 3% of ME's GDP.
- ME's marine economy values $3.6B, 5% of ME's GDP. This is largely due to its sizeable fisheries, as well as growing innovation in aquaculture and seaweed cultivation.

Vermont's green economy is represented by strong forestry and agriculture industries.

Federal Reserve Bank of St. Louis; Vermont Agency of Natural Resources; Think Vermont

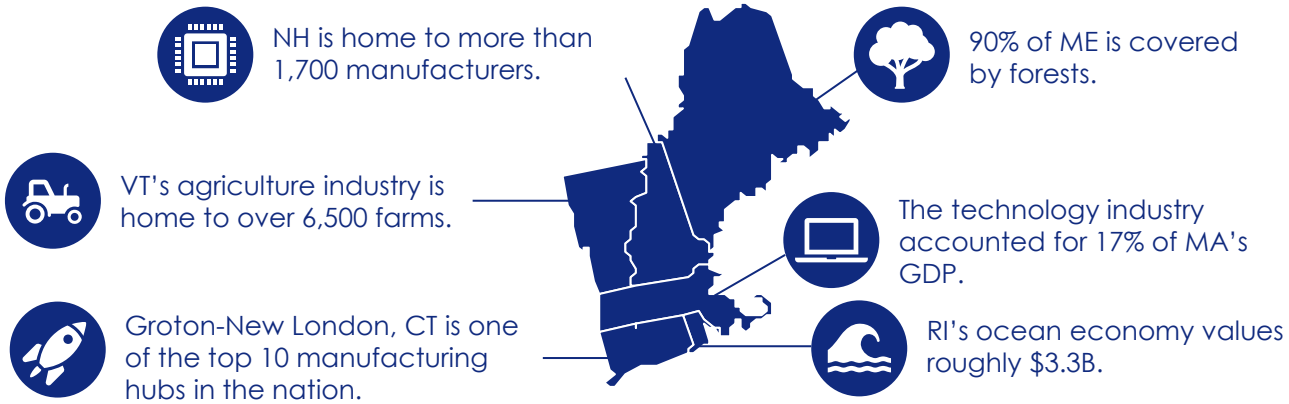
- VT's economy grew over 40% between 2017 and 2024, displaying strong post-pandemic growth.
- VT's forest products sector values over $1.4B and employs over 1,900 workers. In addition, VT's agriculture industry supports almost 54,000 direct jobs.

Rhode Island, Connecticut, and New Hampshire each bring unique strengths to the region.

Ocean Tech Hub; AdvanceCT; NH Department of Business and Economic Affairs

- RI's Ocean Tech Hub aims to increase regional GDP by $2.2B by 2030.
- CT is home to Groton-New London, one of the top 10 manufacturing hubs in the nation, and remains a key manufacturer of advanced military technology.
- More than 1,700 manufacturers call NH home and employ over 67,000 people with an output of $9.8B a year.

New England's Diverse Innovation Ecosystem



ME Department of Economic and Community Development; MA Technology Leadership Council; NOAA; NH Department of Business and Economic Affairs; AdvanceCT

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NEW ENGLAND: INDUSTRIES OF THE FUTURE

What is the Blue Economy?

- Aquatourism
- Shipping & Oceanic Trade
- Maritime Security
- Aquaculture
- Offshore Energy
- Fishing

New England's blue industries anchor the region's economy.

State of Maine Department of Economic and Community Development; NOAA

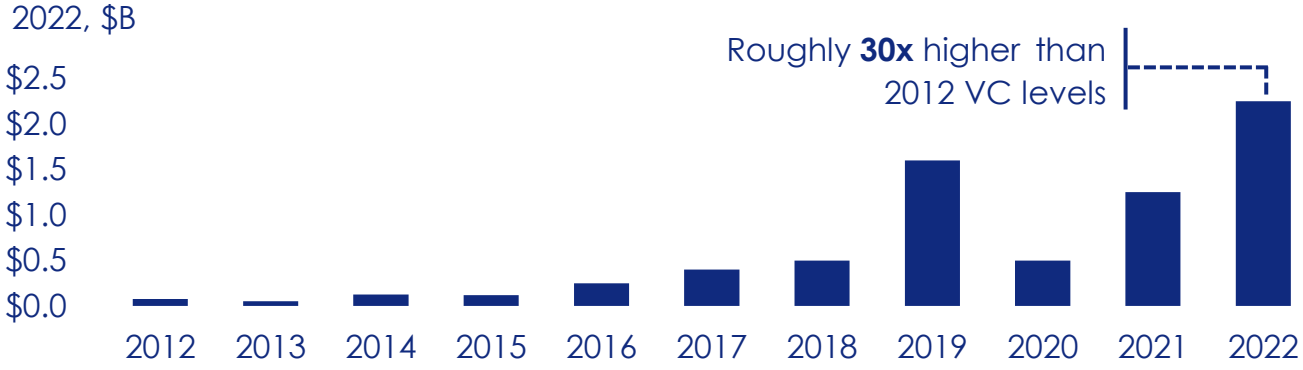
- The Northeast's marine economy is made up of roughly 16,000 businesses and 250,000 employees, and accounts for $23.7B in regional GDP.
- From 2011 to 2021, the blue economy grew its workforce by 13% and its GDP by 28%. In comparison, the region's highest-exporting industry, manufacturing, grew only 10% in GDP during that time — about a third of the marine economy's growth.
- In 2022, over $2B in venture capital was invested in the blue economy in New England — a 4x increase in just 10 years.

New England's shipbuilding ecosystem is a national leader, helping to secure U.S. maritime dominance.

General Dynamics Bath Iron Works; The Providence Journal

- Maine's General Dynamics Bath Iron Works, a key supplier of advanced warships, accounts for 6.7% of national shipbuilding employment. Through direct and indirect effects it supported an estimated $1.3B to state GDP and over $2.5B in total output.
- RI is home to the U.S. Navy's submarine research and development laboratory, the Naval Undersea Warfare Center, and General Dynamics Electric Boat, the primary builder of the nation's submarine force.

Venture Capital Investments into the Blue Economy in New England



Pitchbook, analysis by Netherlands Enterprise Agency

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NEW ENGLAND: INDUSTRIES OF THE FUTURE

What is the Green Economy?

- Agriculture
- Electric Grids
- Clean Energy
- Forestry
- Battery Storage

New England is a national leader in clean technology, energy, and investment.

Rhodium; CNN

- In 2024 alone, over $3.3B was invested in the development of clean energy and its industry in New England.
- Commonwealth Fusion Systems, a MA based fusion-start up, is currently developing a first-of-its-kind nuclear fusion plant prototype 30 miles outside of Boston.

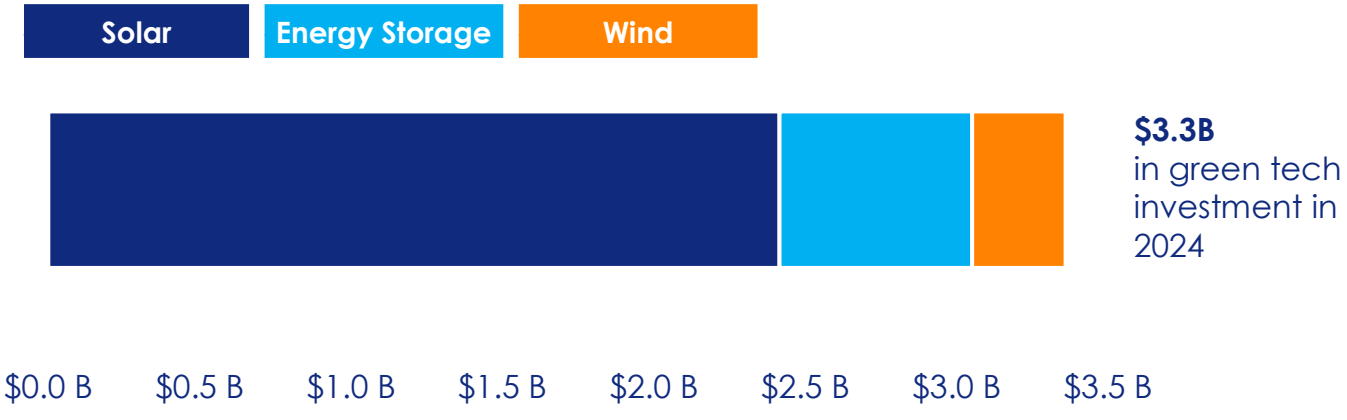
Advancements around battery storage will help solidify the region's energy security.

ISO New England; VT Department of Public Service; University of Vermont

- Batteries already make up 46% of New England's interconnection queue.
- VT ranks 3rd in the nation in small-scale storage capacity, with firms like Green Mountain Power Corporation leading in direct connected battery storage capacity.
- In 2023, University of Vermont and Vermont Electric Power Company began a five-year partnership to develop the Next-gen Energy Systems Simulation Technology Lab.

Innovative Tech Investment in New England

2024, by state and type



$3.3B in green tech investment in 2024

Clean Investment Monitor

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$ NEW ENGLAND: INVESTMENT

New England has strong R&D spending, with a majority concentrated in Massachusetts.

National Center for Science and Engineering Statistics

- Annual R&D spending in New England totals an estimated $84 billion, $63 billion of that in MA alone. MA ranks 2nd in the nation for R&D funding and 1st for R&D intensity.
- New England has the second most patents per capita of any region, behind only the Pacific region. Across the region, four of the states (MA, CT, NH, and VT) rank within the top 11 patent-producing states per capita.

Massachusetts is a national leader in venture capital, supporting its leading start-up ecosystem.

Pitchbook

- Massachusetts has the third highest amount of venture capital funding in the nation and ranks first for venture capital as a share of GDP.

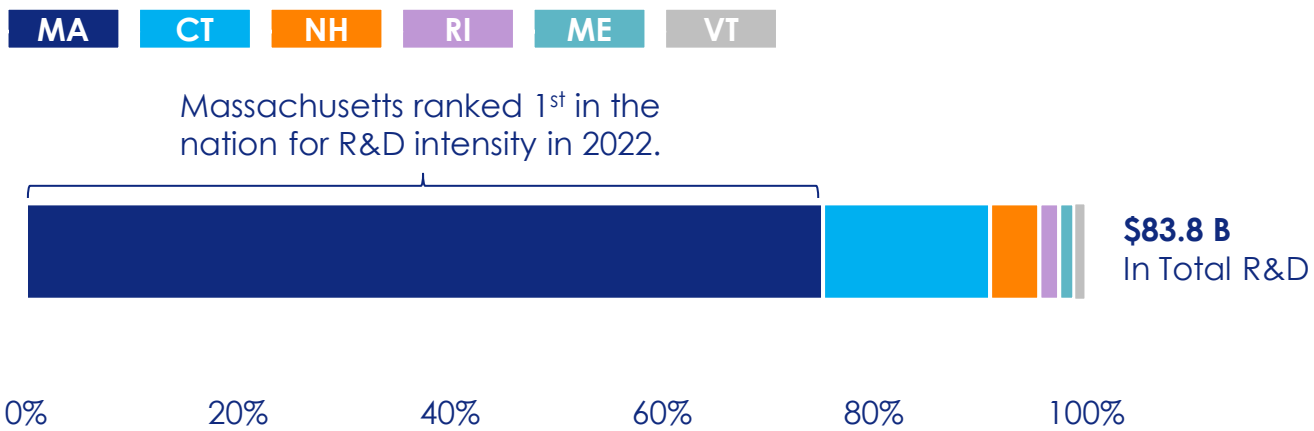
Major private investments are ongoing into advanced manufacturing and biomanufacturing.

FiercePharma; Burlington Free Press

- Continuus Pharmaceuticals recently announced a $125 investment into a new manufacturing facility in Woburn, MA. This stems from a $69.3 million federal contract Continuus secured with aims to reinvigorate the industry's domestic supply chain.
- GlobalFoundries was recently awarded $1.5B through the CHIPS and Science Act to expand domestic production of computer chips in Vermont.

Share of Research & Development Performance by State

2022



National Center for Science and Engineering Statistics

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NEW ENGLAND: PARTNERSHIPS

Public-private partnerships are driving collaboration, distributing resources, and accelerating innovation across the blue economy.

The Ocean Foundation; MITRE

- There are 4 blue tech clusters in New England (Boston, New Bedford, New London, and Portland). These innovation hubs connect academic institutions, industry, and government stakeholders across the region.
- MITRE's BlueNERVE Network connects maritime researchers across the country to enable connection between lab equipment, modeling software, tools, and data. The partnership currently connects Woods Hole Oceanographic Institution, UMass Boston, UMass Dartmouth, Northeastern University, Massachusetts Maritime Academy, Tufts University, Mass Challenge, University of Rhode Island, and Naval Undersea Warfare Division Newport.

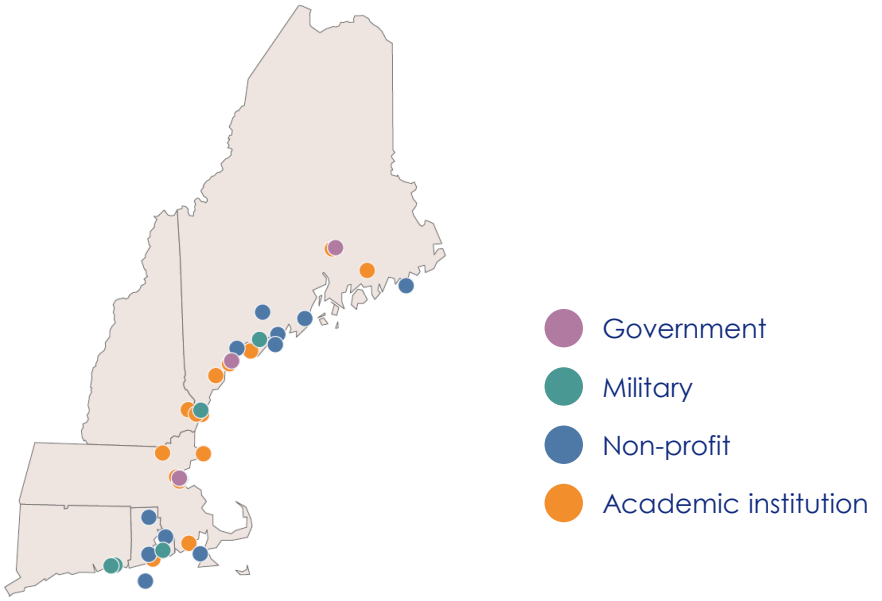
Academic initiatives are ongoing region-wide to accelerate innovation within green technology.

Western New England University; University of Vermont

- Western New England University's engineering program provides students with an emphasis on "green engineering," filling skills gaps and workforce needs.
- University of Vermont is home to Energyshed, an energy project that partners with the Department of Energy to explore place-based energy generation.

Blue Economy Resource Map

2024



SeaAhead

NEW ENGLAND: WORKFORCE

New England houses several world-leading higher education institutions that bolster its economy and workforce.

New England Council

- New England is home to 321 post-secondary educational institutions, including many of the world's leading research universities.
- Higher education in New England generates an estimated $26.5B in economic impact and over 560,000 jobs annually. In MA alone, higher education generated a $15.6B economic impact and over 300,000 jobs each year.

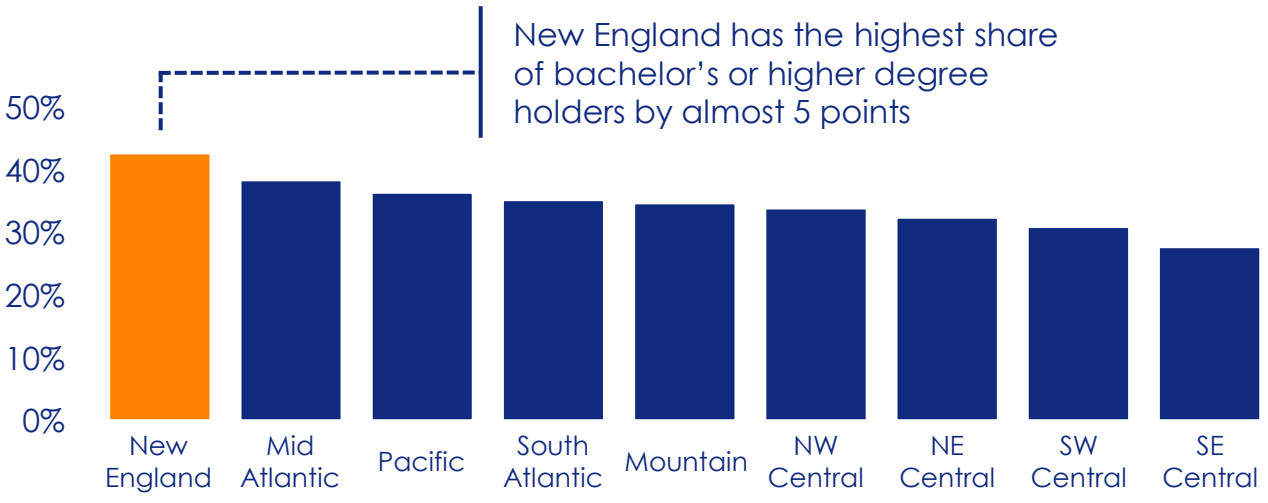
New England boasts the nation's most highly educated workforce, with concentrations of highly educated STEM workers.

US Census Bureau, National Science Board

- 43% of the population aged 25+ has a bachelor's degree or higher, almost 5 percentage points higher than the second-highest region (Middle Atlantic).
- Nearly 19% of the population aged 25+ has a graduate or professional degree, the highest share of any region and over 5 percentage points greater than the national rate.
- As of 2021, MA held the highest share of workers with a bachelor's degree or higher in STEM occupations, as a share of total workforce, with NH, VT, and CT also cracking the top 15. At the same time, MA ranked 48th in its share of workers in the Skilled Technical Workforce (STEM workers without bachelor's), with other New England states near the bottom, suggesting that highly educated STEM workers may replace rather than complement Skilled Technical Workers.

Share of 25+ Population with Bachelor's Degree or Higher by Region

2023



US Census Bureau, American Community Survey

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NEW ENGLAND: WORKFORCE

Net domestic emigration is contributing to slow population growth in region and threatening the future of the workforce.

US Census Bureau, University of Arizona, Boston University

- Since 2020, New England's population growth has slightly lagged the national rate (2.2% vs. 2.6%). In that time, New England has relied on international migration (+400k) to mitigate domestic migration loss (-100k).
- The trend is slightly better for people aged 25+ with at least a bachelor's degree, with the region as a whole gaining 3,000 workers in 2022. However. MA lost 20,000 of these workers in 2022, and despite strong international immigration, MA's total civilian labor force declined by almost 100,000 from 2018-2023.
- Three dominant drivers have encouraged MA residents to out-migrate: housing costs, income taxes, and healthcare costs. Young people, not retirees, are driving MA's out-migration trends.

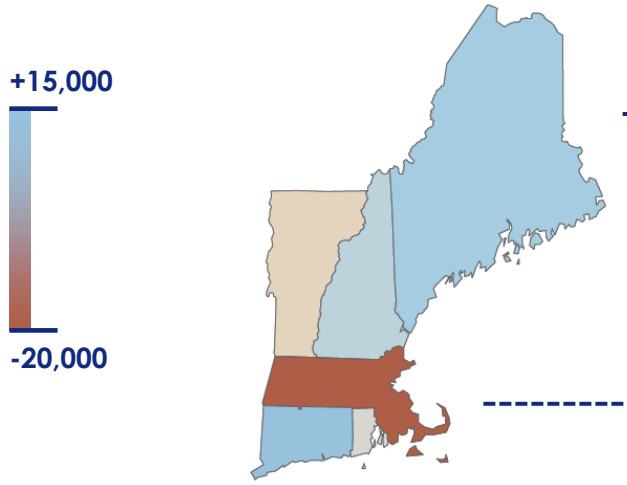
Despite these trends, the region must continue to expand its workforce, especially in emerging sectors like clean energy.

MA Clean Energy Center, VT Department of Public Service, NOAA

- In MA alone, an estimated 77,000 additional FTE workers will be required by 2050 to meet emissions reduction targets. Even in states like VT, which leads the nation in clean energy jobs per capita at 6%, workforce needs are growing rapidly.
- Programs like the Greater Boston Coastal Resilience Jobs Alliance, one of nine Climate-Ready Workforce Initiatives funded by NOAA, will be critical to filling gaps.

Net Domestic Migration, 25+ Population with Bachelor's Degree or Higher

2022



MA: -19,961

Rest of Region: +23,309

Net domestic migration of 25+ year olds with a bachelor's or higher

MA was the only state with significant population outflow, ranking 4th in the nation.

US Census Bureau, analysis by University of Arizona

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NEW ENGLAND: INFRASTRUCTURE

High costs of living are impacting innovation in the region.

Federal Reserve Bank of Boston; Joint Center for Housing Studies of Harvard University; Boston Globe

- From 2016 to 2024, the average value of a single-family home has spiked across New England, more than doubling in two states: CT (+69%), ME (+102%), MA (+74%), NH (+102%), RI (+89%), VT(+67%).
- Across almost all metro areas in the region, the annual income required to afford the median priced home exceeds $100,000.
- In a survey focused on business conditions, more than 50% of surveyed MA businesses pointed to an inability to have workers relocate to the state as their largest recruiting hurdle. Over 80% of businesses said the high cost of living affects their decisions about whether to grow their presence in the state.

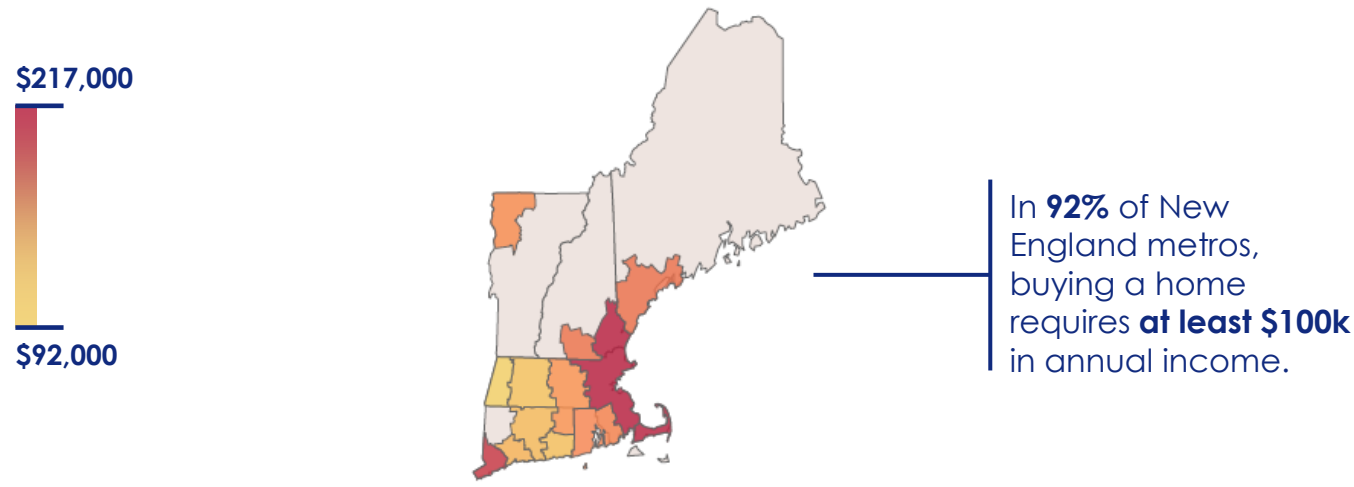
Demands on New England's transmission infrastructure and energy grid are growing.

Clean Air Task Force; ISO New England; Boston Globe

- To meet growing energy demands, the region will need to more than triple its regional electric generation capacity by adding over 100GW of clean energy resources.
- Projections estimate the region's electric grid could require up to $1 billion in annual transmission investments through 2050 to support a clean energy transition.
- An over $3 billion data center project is beginning construction in Westfield, MA, with experts anticipating more construction announcements as AI power needs grow.

Annual Income Required to Afford Median Priced Home

2024



Joint Center for Housing Studies of Harvard University

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