

MANUFACTURING LEADS NEW HAMPSHIRE'S

Driving economic growth, meeting challenges, Granite State manufacturers look to the future

With unemployment low, wages high and the state's economy maturing, New Hampshire's manufacturing sector remains healthy, competitive and the primary driver of economic growth. Thanks to its ability to evolve, innovate and face challenges specific to doing business in the northeastern United States, the manufacturing sector remains a vital part of the state's economy, making up 12 percent of its Gross State Product according to the U.S. Department of Commerce. It's the largest wealth

producing sector of our economy.

"Manufacturing is a powerful engine of economic growth in the state," says Provident Bank CEO Dave Mansfield. "Creation of manufacturing jobs as well as opportunities to develop and expand New Hampshire's workforce continues to have a measurable impact on New Hampshire's economy."

In its "Smart Manufacturing and High Technology" report, commissioned by the BIA, the New Hampshire Center for Public Policy

Studies says that the creation of manufacturing jobs, particularly "smart" manufacturing/high tech positions, are having a meaningful impact on the state's economy. According to the report, the creation of 100 new manufacturing jobs in New Hampshire creates as many as 138 additional jobs in the rest of the state's economy, generating \$11 million in earnings, \$18 million to Gross State Product and \$1.2 million in state and local tax revenue. This is second only to real estate rental and leasing, according to the NH Department of Employment Security.

The manufacturing sector is the most important contributor to the state's economy and provides the highest wages in the state. Manufacturing workers were paid \$21.50 an hour through October of last year – nearly a dollar more per-hour than the previous year, and three dollars more per-hour than in 2015, according to Federal Reserve figures. Manufacturing is the third largest employer in the state with a 2017 payroll of \$4.6 billion, second only to health care. And while the recession of 2008/2009 softened the sector, it has since rebounded. As of last year, manufacturing produced 69,358 jobs in the state – behind only retail trade and health care. The sector added 800 jobs from December of 2016 to February 2017, according to the New Hampshire Department of Employment Security – a positive sign for Granite State manufacturers.

The National Association of Manufacturers says for every \$1 spent in manufacturing, another \$1.89 is added to the economy. That is the highest multiplier effect of any economic sector. In addition, for every one worker in manufacturing, there are another four employees hired elsewhere.

New Hampshire Manufacturing by Subsector, Third Quarter 2017	Average Firms	Average Employment	Average Weekly Wage
Food Manufacturing	121	2,714	\$1,107.02
Beverage and Tobacco Product Manufacturing	55	1,072	\$989.11
Textile Mills	23	1,957	\$1,179.44
Textile Product Mills	39	237	\$737.45
Apparel Manufacturing	15	458	\$1,247.15
Leather and Allied Product Manufacturing	12	211	\$915.96
Wood Product Manufacturing	96	1,786	\$913.45
Paper Manufacturing	23	833	\$1,196.80
Printing and Related Support Activities	158	2,391	\$955.83
Petroleum and Coal Products Manufacturing	15	268	\$1,396.82
Chemical Manufacturing	59	2,113	\$1,360.05
Plastics and Rubber Products Manufacturing	95	5,537	\$1,029.06
Nonmetallic Mineral Product Manufacturing	98	2,071	\$1,140.75
Primary Metal Manufacturing	33	2,276	\$1,059.79
Fabricated Metal Product Manufacturing	383	11,659	\$1,062.90
Machinery Manufacturing	153	6,738	\$1,315.39
Computer and Electronic Product Manufacturing	262	15,299	\$1,788.42
Electrical Equipment/Appliances Manufacturing	59	4,220	\$1,156.95
Transportation Equipment Manufacturing	44	2,360	\$1,259.91
Furniture and Related Product Manufacturing	68	1,029	\$898.83
Miscellaneous Manufacturing	153	4,127	\$1,173.77
Total Manufacturing	1,964	69,358	\$1,271.52

ECONOMY

Meeting challenges

There are hurdles to continued growth, however. Energy expenses remain a major portion of overall business costs. New Hampshire residents and businesses continue to pay electric rates 50% to 60% higher than the national average, year-round, and as much as 77 percent higher for large energy users. The result: fewer capital investments for manufacturers, less disposable income for families, and higher prices for commercial businesses.

Recently, Lindt Chocolate USA, which has a manufacturing facility in Stratham, entered into a partnership with Eversource to reduce electricity usage by hundreds of thousands of dollars a year. The plan is the first multi-year agreement completed under the NHSaves program, which provides incentives and tips to help reduce energy usage and costs to residential, municipal and business customers. The plan will help Lindt save nearly 3.5 million kilowatt hours of electricity annually.

Eversource and Lindt conducted a comprehensive energy analysis of the entire facility to determine a plan that includes the installation of a new energy-efficient central chiller plant and rooftop cooling units, a waste water heat recovery system,

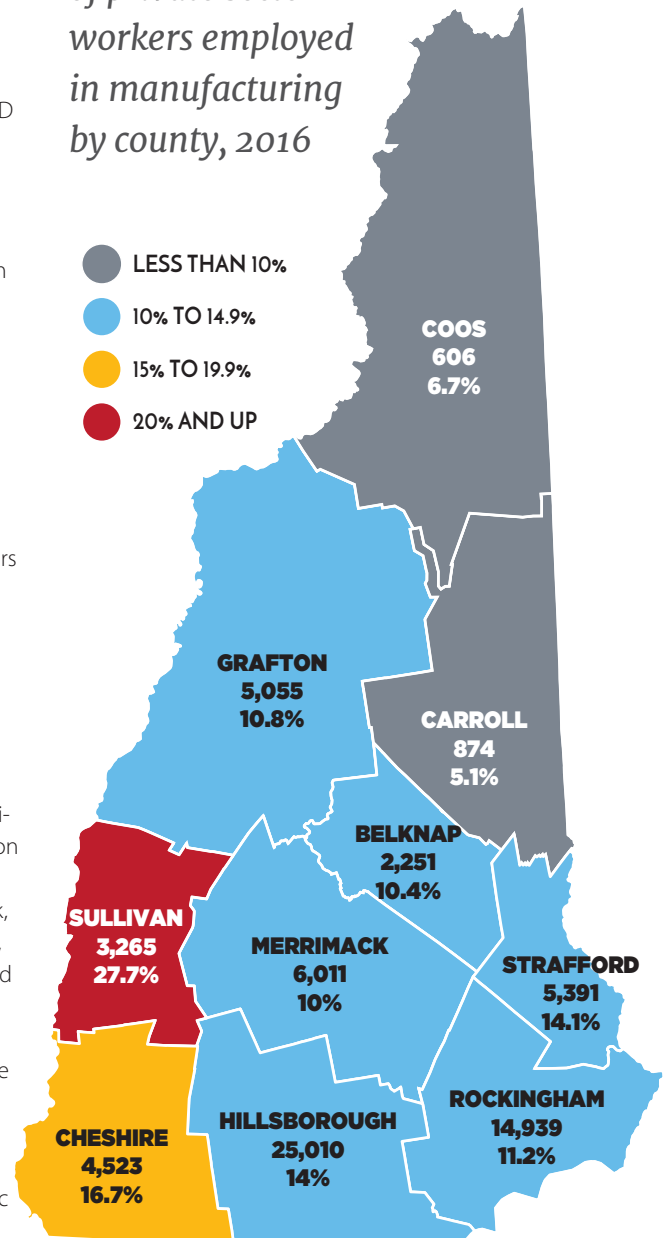
state-of-the-art ventilation, and LED lighting and controls throughout the plant.

The move comes after Lindt expressed concerns about energy costs during an energy symposium in Manchester in late 2016. Davide Nicò, vice president of operations at Lindt Chocolate USA, said in a statement that the savings at the Stratham production facility will be "significant and meaningful." He said the company will complete a number of additional renovations and projects over the next few years to increase efficiency of processes and complement the company's sustainability efforts.

One of the state's largest employers, and the state's largest manufacturer, is BAE Systems. The military contractor spends more than \$9.5 million a year on electricity. BAE recently invested \$1.9 million in conservation and sustainability initiatives. After three years of work, the company's usage dropped 2%, but the cost of the power increased a whopping 24%.

"The cost of electricity in New Hampshire for BAE Systems is twice that of some of our other locations," says Guy Montminy, senior vice president and deputy general manager of BAE Systems' Electronic Systems. "To put this impact into

Number and share of private sector workers employed in manufacturing by county, 2016



Economic impact of adding 100 manufacturing jobs in New Hampshire



	Employment	Earnings	GDP	State & Local Taxes
Direct	100	\$5,793,259	\$10,394,227	\$634,354
Indirect & Induced	138	\$5,640,610	\$7,654,723	\$617,639
Total	238	\$11,433,869	\$18,048,950	\$1,251,994

“He’s learning about design, he’s learning about working on machining, he’s going to be working on programming machinery and he’ll be learning about plant operations by being here.”

– Jaffrey-based Graphicast is one of several New Hampshire manufacturers focusing on workforce development by engaging young talent. Here, Graphicast President Val Zanchuk works with Anthony Clark, 18, of ConVal Regional High School.

perspective, a half-cent increase in the price of electricity equates to a half-million dollars in utility costs for BAE Systems in New Hampshire.”

BAE, which was awarded a \$180 million contract to produce laser-guided rockets at its Hudson facility last summer, also has facilities in Nashua, Merrimack and Manchester, and employs 5,400 people – roughly 400 more than it did a year ago. The high cost of energy, Montminy says, is a consideration for all current and prospective businesses in the state.

“It is increasingly difficult to be competitive due to the high cost of energy in New Hampshire compared with other regions of the country,” he says. “An unreliable energy supply and unpredictable prices put companies, especially manufacturers that use a considerable amount of energy, at a further competitive disadvantage.

“Whether a company employs five or 5,000 people, the current energy environment of volatility and high prices is concerning. BAE Systems believes that we must take action now to reduce electricity costs, and bring more reliable, affordable supplies of power onto the regional grid. This is necessary for New Hampshire’s economy to remain competitive.”

Developing workforce, enabling growth

Workforce development also continues to be a challenge for many New Hampshire businesses – including manufacturers.



For Val Zanchuk, president of Graphicast in Jaffrey, and past BIA chair – and for manufacturers around the state – it’s an ongoing problem.

“The shortage of a skilled workforce is holding back a lot of manufacturers right now,” he says. “It’s more than a lack of business opportunity; it’s a lack of business completion.”

The long-term solution requires a number of different approaches. Toward that end, Graphicast and other Monadnock-region manufacturers have teamed up with ConVal Regional High School to introduce students to the manufacturing sector through a career and technical education (CTE) program. Representatives from several Peterborough/Jaffrey-area manufacturers meet with stu-

dents, parents, administrators and teachers to discuss and demystify the industry.

“There’s a bit of a selling process – getting people past the skepticism about the future of manufacturing,” Zanchuk says. “We showed them that this is for real. The salaries are good, and we also pointed out that every manufacturer in the area has a tuition reimbursement program.”

Purchasing necessary machinery and equipment could place financial strain on the school system, and stall progress. So participating manufacturers have opened their shops and offered equipment to the program, allowing for a quick start.

“I have an intern from ConVal,” Zanchuk says. “He’s learning about design, he’s learning about working on machining, he’s going

to be working on programming machinery and he'll be learning about plant operations by being here."

Additional efforts are underway statewide to increase awareness. Among them:

In October, 51 manufacturers hosted 1,863 students from 50 schools during New Hampshire Manufacturing Month to help spark interest from younger residents. Following facility tours, 66 percent of participating students said they would be "more likely to consider a career in manufacturing," according to an exit survey conducted by the New Hampshire Manufacturing Extension Partnership.

At the post-secondary level, the Community College System of New Hampshire is a leading participant in the '65 by 25' initiative, whose goal is to ensure that 65 percent of adults 25 and older will have some form of post-secondary education – from certificates to advanced degrees – by 2025. The effort includes internships and training programs to help students prepare for a career in manufacturing.

Additionally, the University of New Hampshire recently launched a pilot program in

collaboration with the state's community college system, the Department of Business and Economic Affairs and advanced manufacturing partners, to address the state's workforce needs. Funded by a \$300,000, two-year grant from the National Science Foundation, the program will provide a number of opportunities for workers and manufacturers, including paid internships, mentorships, on-the-job training and job placement.

Workforce Accelerator 2025 is an initiative launched by BIA and the New Hampshire Charitable Foundation to help find sustainable solutions for growing a skilled workforce by focusing on 65x25 facilitation and encouraging school to career pathways for students.

Businesses participating in the school to career pathways program allow students to tour manufacturing facilities, participate in internships and receive training – showing them what a career in manufacturing and other sectors looks like.

"It's almost like a show-and-tell for businesses," Sara Colson, director of Workforce Accelerator 2025, says of the school to

career pathways initiative.

Colson points out that New Hampshire is second only to Vermont in the number of students who leave the state after graduation "There's a mass exodus of students," she says. Presenting career options to those students may help stem that tide.

"It will help us with the pipeline of students," Colson says. "It won't help immediately, but it will help over the long haul."

And while New Hampshire has done a good job marketing itself as a tourism destination, it hasn't done as well marketing itself as a good place to live, she says. The Workforce Accelerator 2025 program addresses that. The school to career pathways element creates opportunities for students who may not be college-bound and helps to attract graduates who have moved away.

"Even if it's later in life when someone is ready to settle down or look for a different job, we can show them that New Hampshire is creating opportunities to be successful and make a good living," Colson says. "Employers really need skilled workers, so it's a place they can come to if they're aware of these opportunities."



The manufacturing sector remains the most important part of the state's economy. (Photos by Kendal J. Bush Photography)

Leading the region while eyeing international markets

Addressing those needs may position the Granite State for even further success in the future, especially compared to its neighbors. The 2017 Manufacturing and Logistics Report Card for the United States, by the Center for Business and Economic Research at Ball State University, gave New Hampshire a “B-” for Manufacturing Industry Health in its latest report – down from a “B” in 2016. However, the ranking still puts New Hampshire at the top of the New England states: Massachusetts ranked a “C,” Maine a “C-,” Vermont was given a “C,” Rhode Island a “D+” and Connecticut a “C+.”

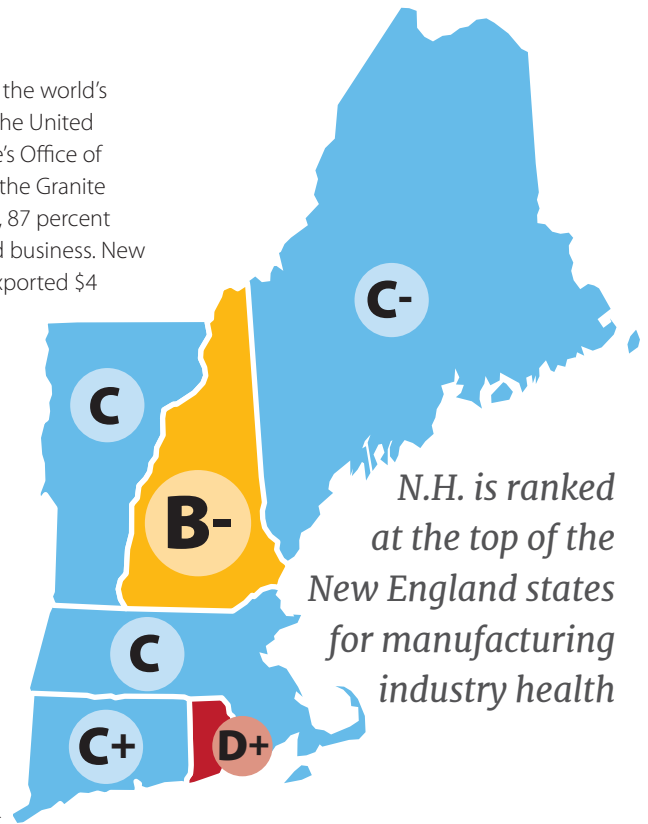
The report also showed slight improvements in New Hampshire’s tax climate, ranking it a “C,” up from a “C-” the previous year, and in its global reach, which rose to a “B-,” up from a “C.” It’s in those global markets that manufacturers may find additional opportunities. Small and medium-sized companies interested in growing their sales, improving profitability and growing the value of their business should take a hard look at exporting. Local lenders have dedicated efforts to help manufacturers reach international customers.

Recent data shows that 2,625 New Hampshire companies exported goods to

the more than 95 percent of the world’s consumers located outside the United States, according to the state’s Office of International Commerce. Of the Granite State companies who did so, 87 percent were small- or medium-sized business. New Hampshire manufacturers exported \$4 billion in goods to foreign markets in 2015, according to U.S. Global Leadership Coalition figures.

“Manufacturing and exporting are ideally suited to one another because U.S. equipment and manufactured products are respected worldwide for being technologically innovative and of high quality,” says Leanne Spees, senior vice president of International Finance at The Provident Bank. “U.S. companies are also known for high levels of customer service and sound business practices, all of which can help New Hampshire manufacturers make overseas sales.”

Financing tools are available for manufacturing exports, such as medium-term financing through the Export-Import Bank of

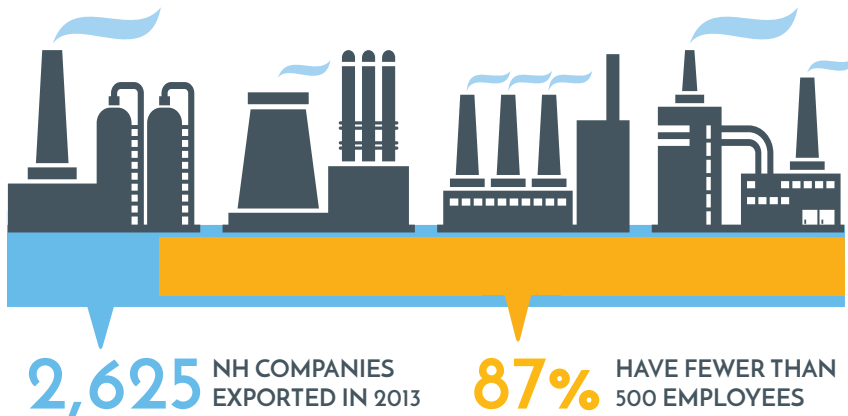


N.H. is ranked at the top of the New England states for manufacturing industry health

the United States, which can provide financing directly to an overseas buyer, helping the local exporter to be globally competitive and conclude the sale. Since the American market is quite large, many companies overlook international markets. Selling to purchasers overseas can present a compelling way for manufacturers to grow revenues and the bottom line while mitigating risks associated with fluctuations in the U.S. economy. Over 95 percent of the world’s consumers and over 80 percent of the world’s purchasing power resides outside the U.S. As the middle class around the world continues to expand, there are tremendous global growth opportunities for New Hampshire manufacturers.

A recent Global Competitiveness Index study by Deloitte Touche Tohmatsu and the Council on Competitiveness found that the U.S. is currently the second most competitive manufacturing market in the world behind China, but that the U.S. will likely surpass China by 2020. And according to the National Association of Manufacturers, the sector contributed \$2.25 trillion to the U.S. economy in 2016 – up from \$1.70 trillion six years earlier.

It’s a sign that despite challenges and market fluctuations, manufacturing is poised to remain an important economic sector throughout the country, and particularly in the Granite State. ■



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