

NORTH DAKOTA CLIMATE INITIATIVE – SECTOR STORY 5

Wind Energy Technician Programs are Soaring in North Dakota

North Dakota ranks ninth in the nation for its share of electricity generated from wind power with 4,249 Megawatts of installed capacity.

Wind power is generated naturally, making it [one of the cleanest](#) energy sources. Wind turbines work by converting the kinetic energy of wind into mechanical, and then into electrical energy. While the process may seem simple, wind turbine operations require specialized skills and knowledge. Rapid growth in the renewable energy industry has increased the demand for skilled and reliable wind energy technicians. The U.S. Bureau of Labor Statistics estimates that wind farm technician is the fastest-growing occupation in the country. It is expected to grow by about 60 percent between 2019 and 2029.

[Lake Region State College \(LRSC\)](#) in Devils Lake anticipated this growth. Together, with wind industry experts, the faculty at LRSC designed training courses that prepare students for careers in the wind energy industry. [The Wind Energy Technician program](#) at LRSC is the first of its kind in North Dakota, offering students the option of completing a one-year certificate program or continuing for a second year to earn an associate in applied science degree.

Throughout the program, students learn to be efficient, safe, and successful wind energy technicians. Some key competencies of the program are:

- Learning about mechanics, electronics, hydraulics, meteorology, composites, computer science, and power transmission
- Learning about safety in the wind industry and preparing to work at heights and in confined spaces
- Working in an actual wind turbine located on the LRSC campus to gain hands-on experience in wind turbine maintenance

In recognition of its high-quality course materials and outcomes focused on student skills, the Wind Energy Technician program at LRSC was awarded a [Seal of Approval](#) from the American Wind Energy Association, now the [American Clean Power Association](#).

As North Dakota looks to strengthen its future through a first-of-its-kind sustainability plan, it is tapping into a resource in ample supply—wind. North Dakota is ranked 10th

for states with the most wind. As the state continues to target renewable energy sources as part of energy generation, wind is becoming increasingly important.

Between 2015 and 2023, wind power generation more than doubled in North Dakota making it the second-largest electricity-generating source in the state (two-fifths of the state’s net electricity generation). North Dakota's wind energy industry has already helped to conserve five billion gallons of water, largely by generating electricity without the need for water-intensive cooling processes. It has also avoided 11.7 million metric tons of carbon dioxide emissions — the equivalent of 2,550,000 highway vehicles. As diversified energy sources continue to support climate resilience, the North Dakota wind industry is poised to grow well beyond its current workforce of [over 1,700 North Dakotans](#).

Initiatives like the Wind Energy Technician Program are ensuring that the wind energy workforce of tomorrow is equipped with the expertise to power a resilient future for North Dakota. For more information about the program or to speak with an academic advisor, contact Tucker Salander, Tucker.Salander@lrsc.edu or visit www.lrsc.edu.

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