

Creating Crisp, Clean, and Free Solar Power at NLC

Northern Lakes College Electrical instructor, Martin Engler, has a fascination with alternative energy. He brings this passion to the classroom, inspiring students to look beyond the conventional. In the spring of 2019, students Kurtis Luntz and David Douillard built a portable, four-panel solar array capable of converting abundant Alberta sunlight into 1064 watts of electrical power. This power charges the batteries on a 2200-volt amp, battery-based solar system assembled by a previous Pre-Employment Electrical class. This system would be ideal for providing the electrical supply for a small cabin.

Kurtis Luntz is from Forestburg in east-central Alberta. He completed his academic-level courses in high school, receiving the Rutherford Scholarship upon graduation in June 2018. With all options open to him and a keen interest in electricity, he chose to pursue a career as an electrician, with the possibility of instrumentation in the future. He is currently enrolled in Pre-Employment Electrical and is thoroughly enjoying his Northern Lakes College experience. Kurtis found NLC because it is one of the few Alberta colleges offering Pre-Employment Electrical. Kurtis comments, "My instructors are excellent. They don't just tell you the answer; they explain. The small class sizes provide a lot of one-on-one time." Kurtis mentions that he also finds the low tuition appealing.

David Douillard graduated from Roland Michener Secondary School in June 2018. He is enrolled in First Period Electrical and employed by an Edmonton-based electrical company. David also completed his academic-level courses in high school, and decided to follow his father and uncle into the trades. David echoes Kurtis' comments in regards to the excellent instructors, and adds, "The Wi-Fi is good, too!"

Engler included the project in his class to provide the students with experience working with electrical materials commonly used in northern Alberta's industrial settings. "It involves a lot of precision cutting, and this provided practice using the tools required for such materials." Engler explains that the portable solar array feeds a two-sided panel, which includes both battery-based and grid-tie systems. Battery-based systems are standalone solar systems suitable for off-grid dwellings. The grid-tie option, including both string inverter and micro inverter systems, are suitable for residential use.