

Red Deer Polytechnic team with Stettler connection nominated for prestigious award

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While solar power has many benefits, one of its biggest issues remains that large panels can lose up to 50 per cent of their efficiency over time if not kept clean of dust and debris.

Keeping the panels clean has been ongoing issue for users and designers alike, and until now has proven to be either costly, manpower intensive or both.

A now-graduated team from Red Deer Polytechnic appears to have created a cost-effective solution for the solar panel problem, and there is a Stettler connection.

The team, made up of former Red Deer Polytechnic students Carson West, Nathan Crombie and former Stettler resident Kyle Victor, have been nominated for the prestigious Capstone Project of the Year Award for their design of a pneumatic air-cleaner.

Having only four months to complete the project, the team, made up of two engineering technologist students and an electrical engineering technologist student, developed a solar panel cleaner that can be mounted directly to a panel and cleans it by directing a blast of air from the top towards the middle, then another from the middle towards the bottom.

The device, which can be powered by the solar panel it's attached to, can clean the panel in a matter of seconds.

“Our team had two goals for this project. The first was to create a design applicable to both residential and industrial solar panel systems. The second was to ensure that it was cheaper and more efficient than cleaning systems currently used,” said Victor, in a press release.

Current automated cleaning systems can run back and forth on tracks, resulting in a potentially long delay between the panel getting debris on it and it getting cleaned off. Otherwise, panels have to be manually cleaned, which is equally inefficient.

Eight projects are nominated for the Capstone Award every year, two from every engineering technologist program in the province.

According to Barry Cavanaugh, chief executive officer of the Association of Science and Engineering Technology Professionals of Alberta (ASET), all the projects nominated are high quality every year.

“They are all winners,” said Cavanaugh. “It’s hard to say one is more a winner than the other. They are all characterized by innovation ... I think Alberta should be very proud.”

ASET is the governing body for all types of engineering technologists in the province and is comprised of over 17,000 members with quite a few located in Stettler. ASET also manages the Capstone Award, which was introduced in 2017 as a way to recognize the quality of the engineering technology programs in the province.

Victor’s team was one of six projects being worked on at Red Deer Polytechnic by groups in the second-year of their engineering technology program and it was the school which determined the two of the projects to be nominated.

Since graduation in the spring of 2022, the team has split up and Victor has taken an Engineering Technologist position in Wetaskiwin.

According to Victor, Engineering Technologists are, education wise, a level below Engineers, and are responsible for the constructing of prototypes, designing 3-D models and otherwise bring an Engineer’s idea to life.