Onion power

The British Columbia Government will fund independent testing of a unique wind turbine designed to withstand high wind speeds.

Heinz Lange, a secondary school teacher from Merrit, B.C., 200 miles east of Vancouver, claims that his Wind Onion, as it is called, can stand up to 100 mph winds.

Heinz Lange shows his turbine to a group of interested onlookers.

"Current wind turbines can't stand up very well to storm winds," said B.C. Hydro spokesman Nick Vanderkwaak. "Even the 50 KW Darrieuses are shut down when wind speeds reach 50 mph because it is not known how they would hold up."

Lange's unit is extremely sturdy and rugged. It is built of the high tensile strength aluminum used in airplane wings. Seven blades act as scoops to catch the wind, and are twisted in such a way as to divert the wind upward within the Wind Onion, creating a whirlpool. This upward pressure takes the weight of the turbine off the bottom bearing and reduces friction.

The unit is completely self-contained and needs no guy wires or special set-up. That means a helicopter could simply set it down on a mountain top or other remote location, the unit would be bolted down or set in a concrete slab, and it would be ready to operate in wind speeds as low as 5 to 6 mph. Like the Darrieus, the Wind Onion is omni-directional, but because of its many blades, it is unlikely to be thrown out of balance because of icing.

Runs in high winds

At high wind speeds the Onion spreads out. This lowers its efficiency and prevents it from running wild. Lange has tested his turbine in 100 mph winds. In a 50 mph wind the turbine will run at 180 revolutions a minute.

Lange claims the manufacturing costs for the unit will be up to a third less than a comparable conventional wind turbine.

Harley Kelsey of the Ministry of Economic Development has been studying the unit and is enthusiastic: "This turbine has several unique properties, and if it is developed properly, I think it's going to have a lot of potential."

"An important feature is that the machine is capable of keeping an almost constant torque because the diameter of the Onion changes. Constant torque creates a steadier output current, which can be an important advantage," said Kelsey.

(Article by Joe Szostak in Renewable Energy News, *April 1980.)*

University builds coal centre

A new laboratory centre for coal and mineral processing – the only such facility in Canada – will be built this year at the University of British Columbia.

The three-storey, 20,000-square-foot structure is expected to be completed by the end of this year.

The new laboratory will meet the needs of teaching and research in coal preparation and mineral processing, and will also be available for co-operative research with the Canadian mineral industry.

Professor George Poling, head of the Department of Mining and Mineral Processing Engineering at UBC, said coal is becoming an increasingly important source of energy and hydrocarbon chemicals, and that traditional uses of western Canadian coal for making coke are also expanding rapidly.

"Preparation plants are necessary since coal cannot be utilized directly as it comes out of a mine," Dr. Poling said. "Impurities such as mineral matter and water must be removed to utilize our coal resources efficiently and with a minimal environmental impact."

"Establishment of this new centre will give our students a third option, that of coal preparation engineering," he said, "to go with mining engineering and mineral process engineering, and it will provide better facilities for students in mineral processing."

Dr. Poling said candidates for a Bachelor of Applied Science degree in mining and mineral processing spend three years in the department, after a year of science and a year of general engineering.

Hansard marks centenary

Hansard, the daily written record of parliamentary debate, celebrated 100 years of publication on May 5.

Speaker Jeanne Sauvé unveiled a plaque on May 7 commemorating the centenary of Commons *Hansard* service and read a message of congratulations from the Queen in the House of Commons.

"I express my confidence in the continuing impartiality and accuracy of the institution," the Queen's message said.

There now are 63 Hansard employees including 41 on the English side and 22 on the French to handle the reporting, editing, transcribing and printing of the Commons debates.

Hansard reporters in the House of Commons still use shorthand to take down words of the debate, just as their predecessors did a century ago.

Editor Douglas Baker said a recent check disclosed only four errors among 252,000 words recorded by Hansard reporters in a single week.

Erratic hours

The hours of work for a Hansard reporter are erratic. When the House is in session reporters typically work ten hours a day. They spend ten minutes in the House scribbling furiously, then an hour dictating what they have just written to a typist. Then they repeat the process over and over again until adjournment.

The title *Hansard,* used to describe official parliamentary reports throughout the English-speaking world commemorates T.C. Hansard, who acquired publication rights for the reporting of debates at Westminster in 1811.

In 1909, the Parliament at Westminster adopted the Canadian system of recording debates after describing it as "the best in the world".