Quebec firm to become world's largest producer of lithium for use in batteries

Ross Marowits-Associated Press

A Quebec-based company will use a $78-million cash infusion from its German parent company to build the world's largest plant to produce lithium iron phosphate, a material it hopes will power electric-car batteries.

"Our technology is not in a commercial car right now but it will be very soon," Michel Parent, director of sales and marketing for Phostech Lithium Inc., said in an interview.

The Canadian subsidiary of Sud-Chemie AG expects to create more than 50 jobs after it hires experienced technicians and others to eventually produce up to 2,500 tonnes of the black powder a year.

The company is building a new plant in Candiac, Que., near its other facility that employs 40 on Montreal's south shore that produces lithium iron phosphate — or LFP — using a different process. The German company also produces 300 tonnes of the material at a pilot facility in Europe.

Interest in the commercial possibilities of lithium has grown with the push to develop alternatives to gasoline-powered cars.

The new Phostech Lithium plant announced Monday is expected to make enough LFP for about 50,000 all-electric automobiles per year — or 500,000 hybrid-electric vehicles.

The company sees an approaching wave of demand for its patented material that will prompt battery makers to shift to its safer, faster-charging material.

"That's what we hope, that's what we think, but we have to prove ourselves in the market," said Denis Geoffroy, technical director and interim CEO.

The material is used for battery-charged power tools and could also be important for other applications, including solar and wind turbines.

But the huge potential for the automotive market is what has people taking notice.

"This is clearly a step in the right direction. This is good news for the industry and for the electrification of transportation," said Stacey Masson, spokeswoman for Hydro-Quebec, which has a given Phostech an exclusive license to produce and sell LFP for batteries.

The public utility has invested in research and development to improve battery

performance and reduce costs. It holds several patents, including the one on LFP that was invented in 1994 by John Goodenough and his team at the University of Texas at Austin.

Phostech said it hopes to have its product in cars starting next year, but wouldn't say which automobiles it was eyeing.

The production process was developed with the help of the University of Montreal, whose key scientists formed the company in 2001.

Dried and liquid raw materials shipped from suppliers around the world are combined to create a powdery substance used in batteries using a patented process.

"We have a chemical process which is what we are installing in the plant and we are taking the raw materials and making magic with it," Geoffroy added.

LFP is considered safer than other lithium products because it is more stable with no potential for overheating or fires. The raw materials are also more abundant in nature than lithium oxide batteries that use cobalt, manganese and nickel.

Sud-Chemie AG of Munich, which generated euro1.07 billion (C$1.4 billion) in revenue last year, says it's investing euro60 million in the new plant.

The German company employed 6,500 people worldwide at the end of 2009.

"With this investment, we are now significantly expanding our production capacity in this market of the future, which will allow us to meet the heavily increasing demand from our strategic customers in the automotive and battery industries," said Hans-Joachim Muller, a member of the managing board of Sud-Chemie AG

A news release in 2007 said Phostech received funding from Quebec Societe Generale de Financement (SGF).

Masson said Hydro-Quebec will earn royalties from Phostech, but declined to detail the potential windfall because the licensing agreement is confidential.

The Quebec government and Hydro-Quebec have helped to push the development of electric cars, in part, to reduce greenhouse gases from road transportation.

"I think it will be a very interesting project for Quebec," said Geoffroy.

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