



Transport trucks with hybrid fuel cell battery powertrain coming to market

01 March 2016 Perry Hoffman

Zero emission cars aren't new; the major automakers have a variety of passenger vehicles on the market. But now the zero emission label is coming to the transport truck sector with **Loop Energy** introducing an innovative hybrid fuel cell battery powertrain that appears poised to replace diesel trucks for short to medium haul routes.

Announced last month, the hybrid powertrain combined with Loop Energy's eFlow technology not only allows big trucks to emit zero emissions, but they are cost competitive with diesel-based fleets.

Ben Nyland, president of Vancouver-based **Loop Energy** (the company was formerly known as Powerdisc Development Corp.), told **Canadian Green Tech** in an interview last month that the combination of the hybrid powertrain with eFlow technology is what helps improve the performance and costs of the fuel cells while also delivering an overall lower price tag.

"What that means in layman terms is it costs less to acquire it and also it costs less to operate it. The reason that that's important for us, not just that it costs less, but it actually costs enough less that we can compete directly with the incumbent technology being diesel and natural gas," he said.

The company isn't yet ready to put some numbers to the cost competitiveness assertions, but Nyland said the business case for the first 100 trucks is compelling. The way the company is working to bring these trucks to market takes a lot of the costs out of the equation, he added, noting that by teaming up with truck OEMs and a powertrain provider, much of the costs for building these new types of trucks has already been factored in.

"Everything in the trucks that we're going to be bringing is already in volume manufacture and so that has a significant impact on the initial capital costs of the units themselves," he explained. "What that allows us to do on the

first 100 units is get reasonably close to what the competition would be from a capital cost perspective and then the net savings on the operating cost creates a very quick payback situation for the end customers.”

The new types of trucks will be ideally suited for the short to medium haul routes at international ports and in urban areas. Travel distance on a single tank of hydrogen will be about 320 kms. The long haul market, while still on Loop Energy’s radar, is not in the immediate future because the hydrogen storage requirements aren’t yet robust enough for longer travel.

“Our focus has really been short haul, urban markets with lots of stop and go, where you’re focused not just on greenhouse gases but also on emissions for health reasons and in an environment where diesel and natural gas are really not good solutions,” said Nyland. “So this allows us to put the right amount of fuel on board and provide a truck that competes directly. And as the storage technology improves in the future, absolutely long haul will become an option for us.”

With respect to emissions, these new hybrid transport trucks can contribute to significant reductions. According to analysis from Loop Energy, using 2014 emissions data from the Ports of Long Beach and Los Angeles in California, replacing the more than 1,400 yard trucks in operation at the two locations with the zero emission versions would avoid more than 127,000 tonnes of CO₂ emissions, or the entire emissions of all 1,400 trucks.