



the new elite

Forget the old news money-and-power set. These 25 'newcomers' are putting B.C. on the map as a centre of creativity and innovation and boosting our reputation on the world stage as a city to reckon with

By Linda Bartz

Frank Donnelly CTO, RailPower Technologies

As with his personal hero, Thomas Edison, Frank Donnelly, 58, is a practical inventor focused on the commercialization of his ideas. As an electronics specialist and industrial designer who worked in the railway industry for 30 years before founding RailPower in the late 1990s, Donnelly has developed the technology for hybrid locomotives: the Green Goat (all heavy-duty switching locomotives are called 'goats') and its smaller relation, the Green Kid.

Hybrids use a small amount of diesel to fire up a fuel cell battery, which in turn provides 95 per cent of the locomotive's power. The 'green' comes in because the technology, when compared to conventional yard locomotives, reduces nitrous-oxide gases and particle emissions by 80 to 90 per cent and diesel fuel consumption by 50 to 80 per cent. This coincides neatly with state, provincial and federal legislation limiting the emission of greenhouse gases, as well as the railways' ongoing need to cut costs. Translation: substantial market opportunities.

The green locomotives have been tested with several railways including Union Pacific, Pacific Harbour Lines, Canadian Pacific and, most recently, CSX Corporation, the largest rail network in the eastern United States. Test results are very positive and while Donnelly and RailPower President Jim Maier won't reveal projected sales figures for 2004, they are confident enough to use the word 'significant'. With an eye on the future, Donnelly is now developing cost-efficient ways to marry turbine-gas locomotives with hydrogen fuel cells.