

T a l k

VOLUME 18

r a n s i t

Edmonton Councillors Take the Transit Test

Four Edmonton City Councillors spent the last week in November using public transit rather than private automobiles for their travels in response to a challenge by the University of Alberta based Transit Riders' Union of Edmonton (TRUE). Councillors Amarjeet Sohi, Dave Thiele, Ben Henderson and Don Iveson used transit not only to get to their offices in the morning, but also to their many meetings and appointments. All agreed that the system is in need of improvement, starting with more buses running more frequently. Sohi and Henderson both agreed that bus signals and reserved lanes that speed service would be an asset. "Buses should not be stuck in the same traffic as a personal vehicle," said Sohi after a two-hour trip from the Royal Alberta Museum to his home in Mill Woods. Iveson noted the circuitous routes that meander through neighborhoods and take forever to get to their destinations. [24 Hours/Mass Transit News Headlines, December 3, 2007]

Diesel Fuel Crunch hits Alberta Some ask – is it a harbinger of things to come?

A diesel fuel shortage in Alberta made news headlines across the province at the end of November. Shell spokesperson Denita Davis blamed increased demand for diesel fuel during the winter months coupled with a supply problem resulting from a fire at its Fort Saskatchewan upgrader facility.

More Crunch, see p. 2

Vancouver Technology Report shows Superiority of Trolleys

High capacity 60-foot articulated trolley buses began arriving in Vancouver on October 12th to provide much needed additional capacity on Vancouver's heaviest lines. Approval to supplement the original order of 40 articulated trolleys with 20 more such vehicles formed part of *Translink's* 2008 budget, following the release of their second report on vehicle technologies on November 28th. The report details the findings of phase two of the transit authority's test of new buses.

More Report, see p. 2



One of 60 new articulated trolleys for Vancouver [D. Lam]

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Ballard gives up on Automotive Fuel Cells

Oil Approaches \$100 a barrel – time to invest in alternatives

Philadelphia goes for Trolleys and Hybrids

Seattle Streetcar line opens

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News Bulletin of the Edmonton Trolley Coalition
Sustainable Transit for Liveable Communities
www.trolleycoalition.org

Edited by Robert R. Clark, retired supervisor of transit planning

Member of the Alberta Environmental Network and Electric Mobility Canada

Report Shows Trolleys' Superiority (con't from p. 1)



After testing two of its new trolley buses for 4 weeks on typical urban routes, the report concludes that the "superiority of trolley buses to internal combustion engine-powered buses is undeniable and maximum use of trolley buses will yield substantial reductions in energy use and cost." Trolley buses consumed an average of 2.14 kWh of electricity per km operated at an energy cost of 0.14, whereas diesel buses averaged about 0.49.

The report also lauds the zero emissions and low noise characteristics of trolley buses. While interior noise levels on most types of buses are comparable and often dependent on whether heater fans, compressors and other devices are operating or not, at street-level trolleys were by far the quietest vehicle. "A subjective evaluation confirms the superiority of trolleys in terms of quiet operation," it concludes.

The report cites trolley and hybrid technologies as the best choices for achieving Translink's objectives of reduced emissions, cost effectiveness, performance, safety and reliability (customer service).

Further extensions to Vancouver's trolley overhead wire system in specific areas are planned.

[www.translink.bc.ca]



Diesel Fuel Crunch (con't from p. 1)



While Shell officials grappled with ways to boost supply problems, such as importing diesel fuel from the U.S., Flying J, a large retailer of diesel fuel in the province, reported November 29th that six of its outlets had run out of diesel fuel altogether and several others reported their supplies as "critically low".

While there was no talk of rationing, Shell officials indicated they were uncertain when the shortage would be resolved. [CBC News, November 29, 2007]

Australia Urges Action on Peak Oil

A report tabled in the Australian State Parliament on October 11th highlighted the need to reduce dependence on oil and develop alternative energy sources, according to the *Energy Bulletin*.

The Honorable Andrew McNamara, Minister for Sustainability, Climate Change and Innovation, emphasized that peak oil is "both real and imminent". His report concludes that there is overwhelming evidence that world oil production will peak within the next ten years. A mix of strategies must be implemented in order to prepare and cope effectively, including reducing our consumption of fossil fuels, developing alternative fuel sources and technologies, and preparing for demographic and regional changes necessitated by rising fuel prices. [Energy Bulletin, October 11, 2007]

Oil approaches \$100 a barrel--could move towards \$150, say analysts Need to invest in oil alternatives more apparent than ever

Oil prices soared over \$90 a barrel late in 2007, and seem destined to stay there, if not climb higher. Fed by political unrest, a growing recognition of long-term supply limitations, and market speculation, Opec delegates warned at a Special Summit on November 15th that prices could soar toward \$150 a barrel.

"People believe that \$100/barrel oil is sustainable, and there is continued upward pressure," said Usameh Jamali, a Kuwait-based oil consultant.

Robert Mabro, director of the Oxford Institute for Energy Studies think tank, commented that market uncertainty had reached new heights and it was now impossible to predict where prices could go from here. Mabro, a long-time advisor to Opec, said he had spent six months researching ways to try to find a different pricing structure. With pricing uncertain, it was very difficult for firms to make a case for investments that would add production capacity, he added.

con't on p. 3

Oil Prices (con't from p. 2)

Yvo de Boer, Executive Secretary to the United Nations Framework Convention on Climate Change told the Summit that every nation needed to start making changes to cut carbon emissions and that the attitude of “business as usual” could not continue. [Guardian Unlimited, November 15, 2007]

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Ballard Dumps Automotive Fuel Cell Development

“Fuel cells a black hole for cash” – Jon Hykawy, Research Capital Analyst

Ballard Power Systems—the British Columbia company that poured millions of dollars into the development of fuel cell vehicles—is now out of the automotive fuel cell business. In announcing negotiations to divest itself of its automotive fuel cell operations on November 6th, Ballard officials admitted that the development of automotive fuel cells had consumed resources better spent on other projects.

Research Capital Analyst Jon Hykawy told the *Globe and Mail* that the fuel cell automotive sector is a “black hole for cash”. “If you had any hope that [fuel cell vehicles] were going to come to pass, you would hold onto it.” On November 7th, 34.3 million Ballard shares were sold to Daimler AG and Ford and promptly cancelled, signalling the end of Ballard’s long-held dream that fuel cells would become a viable replacement for the internal combustion engine and revolutionize how the world fuels its cars.

Company spokespeople indicated the company would now concentrate its efforts on projects that had greater potential profitability, such as fuel cell applications for stationary power generation and back-up power.

Major automobile companies had invested over a billion dollars in Ballard projects over the past decade, and the company received millions in research grants from the Federal government. When Ballard promised in 2000 that fuel cell cars would be on the market in just a couple of years, Ballard shares traded as high as \$210.00 per share. Seven years later such vehicles remain in the experimental stage, with little to show but a few demonstration fleets. Ballard shares had fallen to around the \$4 to 5 dollar mark by November and December.

Fuel cells have been known since about 1835 and have yet to be developed into an energy efficient and cost-effective means for on-board motive power. [Sources: *Globe and Mail Report on Business*, November 6, 2007; Ballard Power Systems News Release, November 7, 2007; Reuters Canada, November 8, 2007]

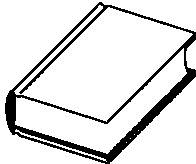
New Book Release

Transport Revolutions—Moving People and Freight Without Oil

by Richard Gilbert and Anthony Perl

www.transportrevolutions.info

“Essential reading for professionals in transport, energy, business, engineering, urban planning, and local and national governments”



Philadelphia renews transit fleet with trolleys and hybrids

In addition to the 38 new low floor trolley buses recently ordered for three of its most popular trolley bus routes, the Southeastern Pennsylvania Transit Authority (SEPTA) of Philadelphia has placed an order for 400 hybrid buses as replacements for aging diesel buses in its fleet. The move will give Philadelphia one of the largest hybrid bus fleets in the U.S.

New trolley buses are due for delivery in mid-2008, after testing of a prototype was completed earlier this year. The hybrids are due for delivery at the rate of 100 per year for each of the years 2008 through 2011.

SEPTA estimates the life of a diesel bus at twelve years, and so plans to introduce the hybrids gradually as its diesel fleet reaches retirement age. Total value of the hybrid bus contract is pegged at U. S. \$253.6 million. [Mass Transit Magazine, Oct. 17, 2007]



ETC Editorial: The Basics of Public Transit

or

How to attract people out of their cars

by Bob Clark, retired Supervisor of Transit Development

The points below summarize the essentials of an efficient transit system:

- It must cover the entire metropolitan area
- It must be easy to use
- It must be economical
- It must link each subdivision with the main traffic generators – principally – Downtown, University, main Shopping Centres, main Sports Facilities.
- It should link subdivision to subdivision via cross-town connections.
- It should provide intense service through established business areas such as Jasper Avenue, Whyte Avenue, 118 Avenue, 124 Street.
- Stopping places should be spaced at regular intervals
- Shelters should be provided at transfer points and where headways are more than 30 minutes.
- Vehicles should be scheduled to meet at transfer points with sufficient time overlap to allow passengers to cross streets if necessary.
- Each transit mode should be used in its appropriate context according to its capacity, performance characteristics, and infrastructure. In Edmonton L.R.T. for principal, high capacity main lines; trolley buses in busy corridors, to link main transit centres and as predecessors to future L.R.T.; prime mover buses (diesel, hybrid, L.N.G.) for feeder services and express to downtown in rush hours. Mini-buses may be used to establish services in developing subdivisions.
- Exclusive bus lanes should be provided on main lines and bus only access linking adjacent subdivisions where appropriate.
- Transit priority signals should be installed at intersections on main lines.
- Bus stops should be sited so as to allow for the most convenient transfers of passengers in the prevailing direction and might vary from nearside to farside depending on time of day.

The Return of Streetcars

Seattle Streetcar Line Opens

With the opening of the \$52 million, 1.3 mile long Lake Union streetcar line in Seattle on December 12th, Mayor Greg Nickels and city councillors are now talking of expanding the line as well as working on a streetcar network to supplement the city's trolley bus, bus and light rail systems. "We now want to talk about a network that connects neighborhoods to Downtown," said James Kelly, president of the Seattle Urban League and member of the City Streetcar Alliance, both of which view the streetcar as way to attract commuters who don't care for buses.



Seattle Streetcar on Opening Day | Photo: Zack Willhoite |

But there are issues to resolve. Streetcars are less expensive to build than light rail on private right-of-way, but more expensive to operate than buses (\$186.00 per hour for streetcars vs. \$120.00 per hour for buses). They may help development, but the rails take away parking spaces. And there is also a concern that adding streetcar hours will take funding away from bus service in other areas.

The City Council's Transportation Committee will discuss the idea of a possible streetcar "network map" at its January 8th meeting, including a possible extension to service the University of Washington. The extension would cost about \$89 million to construct, but has the potential to add around 2 million more riders to the transit system annually. A line linking the Waterfront to First Hill and Capital Hill has also been proposed, but engineering studies are needed to determine if the streetcars could cope with the hills in the area. [Sources: *Seattle Post-Intelligencer*, December 7th and December 12th, 2007]

DC Government Brings Back Streetcars

The hum of electric streetcars will return to Washington, DC this coming spring with a street-based light rail route in the Southeast that officials hope will contribute to revitalization. Transportation officials hope to complete a 1.1 mile long track by spring of 2008, at a cost of around \$10 million. The new line will link the Anacostia Metro Station to Bolling Air Force Base.

Officials hope the streetcar line will attract cornerstones of development such as shopping, restaurants, housing and office buildings in a similar manner to other cities. Portland, for instance, has attributed an estimated \$2.8 billion in development over the past 6½ years to a streetcar line in that city. Eight other U.S. cities have resurrected streetcar service in recent years.

"I suspect you'll see a lot of benefit to making things happen sooner, faster and better," said Jim Graebner, chair of the APTA Streetcar and Trolley Subcommittee. "Development along the streets that the streetcar uses will tend to happen quite fast, and can be an impetus for retail." Officials are planning to build streetcar lines in other areas of Washington in the future. [Mass Transit News/The Washington Post]

International News

New Trolley Buses officially Launched in Wellington, NZ

Wellington's new trolley buses were officially launched December 20th in a ceremony held at the Karori Wildlife Sanctuary officiated by New Zealand Transport Minister Annette King.

Wrapped in blue and green New Zealand Conservation designs and displaying signs that read "Wellington's Newest Trolley Bus", two of the striking three-axle Designline vehicles lowered their trolley poles at the entrance to Karori tunnel and were driven to the sanctuary—about a km away from the overhead wires—under their own auxiliary power.



New Wellington trolley bus in environmental paint scheme operates on battery power en route to launch ceremony. [G. Bennett]

Unlike all previous generations of trolleys, the new vehicles have powerful batteries that allow them to travel up to 5 km away from the overhead wires. This flexibility will allow the new fleet to detour around traffic obstructions, accidents and street parades; localized power interruptions will not significantly affect them.

The new trolleys cost NZ \$460,000 each, bring continued environmental benefits through the use of wind energy for their power, and are a significant step up in terms of passenger comfort and reliability. Wellington's fleet of 61 trolley buses carries about 8 million passengers a year. [International Trolleybus News/D. McLoughlin and Wellington Regional Council at www.gw.govt.nz]

Sankt Gallen votes for Trolley Buses

The results of an official referendum in Sankt Gallen, Switzerland to decide the future of that city's electric trolley bus system showed overwhelming support to continue investing in electric transit. The renewal of Sankt Gallen's trolley bus fleet was approved by voters by 20,269 votes to 2,380 on November 26th. [International Trolleybus News/R.C. DeArmond]

Solingen, Germany to get 15 articulated trolleys

Transit in the City of Solingen Germany will benefit from an order of 15 articulated trolley bus to supplement its existing fleet. The order, valued at 10.5 million Euros, was approved as part of the city's 2007-08 business plan early in 2007. By the fall, an order had been placed with Hess of Switzerland to supply vehicles with electrical equipment by Vossloh-Kiepe, the same company that has supplied the electrical equipment for Vancouver's trolley buses. [International Trolleybus News/R. C. DeArmond and Vossloh-Kiepe Corporation]

Usti nad Labem, Czechoslovakia opens Trolley Bus Extension

A newly built extension to the trolley bus system in Usti nad Labem in the Czech Republic commenced operation on Sunday, December 9th. The extension allows trolley buses on Route 60 to cross the Labe River and enter the district of Strekov. [International Trolleybus News/R.C. DeArmond]

Trolley Buses Return to Arkhangelsk, Russia

In August of 2006, the sale of the public transport undertaking in Arkhangelsk, Russia to a private firm had marked the end of trolley bus service there. Their removal, however, was short-lived, as trolley buses returned to the streets of this Russian city on December 1st of this year as a result of efforts by the municipality and a new private undertaking. Their return was marked as officials cut a red ribbon in front of TV cameras, and five trolley buses pulled out to make an inaugural trip around the system. The service will operate with a total of six trolley buses. The new private firm has set the fare at 14.5 Rubles, or about 60 cents. [International Trolleybus News/Yury Maller]

More Trolley Buses for Italy

Following the recent surge of new trolley bus systems in Italy, the city of Avellino has embarked on construction of an 11 km trolley bus line, with an opening date in 2009. The line will use 11 trolley buses, with vehicles currently on order from the European bus builder Van Hool. The vehicles will be outfitted with Kiepe electrical components. [Tramways and Urban Traction, October 2007]