

# Seattle Study finds New Trolleybuses Are Best Option for Fleet Renewal

On March 29<sup>th</sup>, 2011, King County Metro in Seattle released the results of a study into options for the renewal of the agency's 159 member electric trolleybus fleet. The current vehicles are due for replacement by 2014; Metro plans to order replacement vehicles before the end of 2012.

The findings of Metro's evaluation indicate that when all factors are considered - including available funding - new electric trolleybuses would be the most cost-effective option with the least environmental impacts, according to King County Executive Dow Constantine. "The initial findings of this study appear to confirm my own belief that electric trolleybuses are the best vehicles for moving riders in dense urban environments," said Executive Constantine. "As the study shows, they are clean, quiet, and the modern trolleys can be very cost-effective to operate over their lifetime."

Before replacing these buses, the Metropolitan King County Council directed Metro to conduct a comprehensive evaluation of replacement options that would work best on current trolley routes. Last summer, Metro narrowed the possibilities to two types of vehicles- either new electric trolleybuses or diesel-electric hybrid buses. Any new trolley would come with the ability to go off the overhead wire for short distances to travel around traffic blockages.

A consultant assessed the two options in several areas including purchase price, operating cost, network and system considerations, environmental impacts, funding opportunities, and legal issues. "The study evaluated all the cost factors beyond just the sticker price of the new vehicles," said the Executive. "While the base price cost of hybrid diesel buses is lower - the study points out other factors,

including clean and less expensive energy and quiet operations."

The results of the study were good news for Councilman Larry Phillips, who stated that the review confirmed his view that trolleybuses provide the most cost effective way to serve compact urban neighbourhoods. Citizen feedback on the study results is expected at an Open House at the end of April. [Source: King County News Release, March 29, 2011]



Current Seattle Trolleybus [ETC]

## Surging Oil Prices Pose Threat to Diesel Dependent Transit Fleets

Unrest in the Middle East is pushing oil prices to all-time highs. With the price exceeding \$112.00 a barrel in early April, the Tokyo based bank Nomura was projecting prices could soar as high as \$220 a barrel if Libya and Algeria halt production altogether.

With gas prices already well over the \$4.00 per gallon mark in some U.S. states, and ranging between \$1.20 and \$1.40 per litre in many Canadian cities,

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car commuters are flocking to public transit in large numbers. Transit agencies across North America are reporting larger rider volumes. California, with its gas prices of \$4.14 a gallon and higher, reports especially high ridership. Ridership on Capitol Corridor trains from Sacramento to San Jose is up nearly 14 percent. VTA light rail is up 7.4 percent, Caltrain 5.1 percent and BART 4.7 percent. The American Public Transportation Association reported that the current high gas prices could result in 10.8 billion more transit trips a year in the U.S. In Ottawa, the public transit system is already close to capacity. While more light rail will increase capacity, construction is still a long way off. Concerns about the impact that oil prices will have on construction costs are now becoming evident, and citizens are wondering how OC Transpo will respond.

Construction costs and the cost of service expansion aren't the only issues that public transit will soon be facing, however. If oil prices continue to rise, so will transit operating costs, particularly in systems that heavily depend on diesel fuel. This translates either into fare hikes, tax hikes, or service cuts if the money to cover these costs is not in the current year's budget. The additional riders gained from additional commuters has rarely proven to draw sufficient revenue to keep up with rising diesel prices. During the last oil price spike in 2008, transit agencies across North America struggled to make ends meet. A May 2008 APTA (American Public Transportation Association) report found that transit systems with larger electric fleets tended to fare better. But since 2008, relatively few cities have moved towards the implementation or expansion of electric services.

How high oil prices will go in the months ahead is anyone's guess. But it is fairly certain that transit agencies aren't much better prepared than they were three years ago.

[ETC Article. Information sources: Blogging Stocks, Feb. 24, 2011;Mercury News, March 14, 2011; Public Transit in Ottawa, March 16, 2011; Impact of Rising Fuel Costs on Transit Service, APTA, May 2008]

## **Dayton Study concludes Purchase of New Trolleys most Cost-Effective**

Dayton, a city in the Ohio heartland, operates an active fleet of about 35 electric trolleybuses. The current vehicles are due for renewal in 2016. In order to study different options for the replacement of this fleet, Greater Dayton's Regional Transit Authority undertook a study recently, the results of which will be presented to its Board later this year. In examining the authority's current trolley fleet, the study found that although maintenance costs had been higher than diesels for these particular trolley models, the trolley's energy costs were much lower. Overall, the trolleybuses came out ahead in the study, and the authority will put forward a recommendation that the current system be retained.

It is noteworthy that the United States Federal Government actively supports electric transit modes that require fixed infrastructure with special operating subsidies. At this time, the Canadian Federal government provides no standing incentives for transit authorities to retain or move toward electric transit modes. [Source: R.C. DeArmond]

# Construction on Edmonton's LRT line to NAIT now underway!

In early April, Edmonton Mayor Stephen Mandel announced that the city's planned 3.3 km light rail line from Downtown to NAIT had been awarded \$497 million in funding by the Alberta provincial government under its Green TRIP program. It is the first project to be funded under the TRIP program. The province had previously contributed \$70 million toward the total \$745 million cost of the line. Provincial officials indicated that the remainder of the province's share will flow as construction proceeds. Edmonton will need to provide 1/3 of the total funds required for the project.

"The [NAIT line] is vital to linking up the northern part of the city to the balance of the city," Mandel said, indicating that these funds have secured the future of the line. The section to NAIT is the first segment of a line that will ultimately connect Downtown with the north portion of the city limits near St. Albert.

In addition to stops at Churchill Station and NAIT, the line will also have stations at Grant MacEwan University as well as near the Royal Alexandra Hospital. Except for the portion linking into Churchill Station, most of the line will run above ground. Trains will cross most intersections at street level. The plan will see sections of 105 Avenue, 108 Avenue, 105 Street and 104 Street closed permanently to automobile traffic. Completion is expected in 2014.

Preparatory work on the line began early in 2011, with major work starting in April. The removal of several buildings along the path of the line will be required. Starting in May, sections of Kingsway Avenue will be closed between 101 Street and 111 Avenue as contractors shift Kingsway traffic lanes several metres to the south to create space for the future Kingsway/Royal Alex LRT Station. Because access to a number of facilities, including the hospital, will be impacted by the construction, a special team from the City has been designated to work with affected facilities to ensure that their services can be effectively maintained. Although a number of trees will be removed to make way for the line, the City plans to have even more trees in place after the line is finished than existed before.

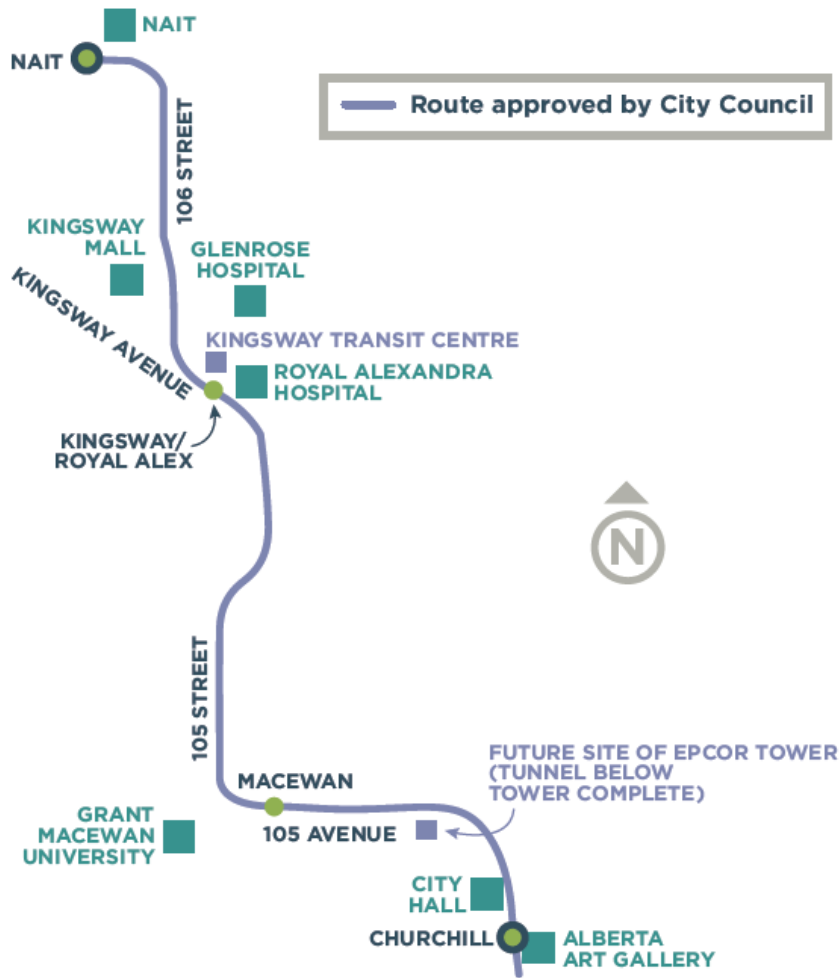
Commenting on recent LRT developments, Brian Tucker, Chair of the Edmonton Trolley Coalition, indicated that the expansion of light rail is a major step forward in improving the capacity and competitiveness of public transit in Edmonton. He emphasized the need for the city to expand its investment in electric traction beyond rail modes, however, as the age of petroleum-fuelled transport begins to wane. "In twenty years, the viability of using petroleum fuels for public transport is going to make us wish we had made a lot more investments in electric transit than just LRT."

[Sources: Edmonton Sun, April 5, 2011; City of Edmonton Web pages "North LRT to NAIT"]



LEFT: Artist's rendition of what the NAIT LRT station will look like at the northern terminus of the line. NAIT, the Northern Alberta Institute of Technology, offers 250 full-time programs and serves over 80,000 students in the course of a typical academic year.

[Source: City of Edmonton]



LEFT: Diagram of the LRT route to NAIT, as approved by Edmonton City Council. Stations along the line are: Churchill, MacEwan, Kingsway/Royal Alexandra Hospital and NAIT.

[Source: City of Edmonton].

## David Onodera gone from Regina Transit

One day after the Mayor of Regina praised his efforts, RTS Director David Onodera, known for his dedication to the improvement of transit in Saskatchewan's Queen City, was no longer in charge. Neither city officials nor Onodera wished to comment on the reasons for his departure in early December 2010, but it is a certainty that he will be missed.

In his short stay, Onodera "lived a model leadership role", said Catherine Verall, President of Transport Action Prairie. "David insisted that public transit must serve the people. He was always willing - even eager - to meet, and truly listen to anyone, and take their concerns seriously. He publicly commended the work, ideas and support of citizen groups such as the Regina Citizens' Public Transit Coalition. He made the citizens feel part of the team."

Onodera presided over many significant developments in Regina's transit system, including a wide-sweeping transit system review, an ongoing renewal of the city's bus fleet, and the implementation of a new swipe-card payment and usage tracking system. He also played a key role in preparations for Regina Transit's 100<sup>th</sup> Anniversary, to be celebrated this year. Onodera helped bring about the restoration of a late 1950's model General Motors "Old Look" bus that will be used in the city's celebrations.

[Sources: News Talk 980 CJME, December 2, 2010; Regina Leader Post, Jan. 21, 2011]

## Streetcar line Extension Opens in Tampa, Florida

On January 31<sup>st</sup>, officials celebrated the grand opening of the \$5.3 million extension of Tampa's TECO Streetcar Line from Channelside to a new station in the Whiting Street business district.

The one-third mile extension that opened in late December 2010 extends the streetcar line to 2.7 miles from its eastern terminus in Ybor City and provides a closer link to downtown activity.

Officials expect once downtown employees and visitors become better aware of the extension, it will generate more ridership to Channelside and Ybor City restaurant and entertainment venues and enhance the city's competitive position to draw conferences and conventions.

"We can't stop here," U.S. Rep Kathy Castor for the District of Tampa said, calling for a further extension of the streetcar line to the David A. Straz Jr. Center for the Performing Arts, the Curtis Hixon Waterfront Park, the Childrens' Museum and to the proposed high-speed rail station.

Tampa Mayor Pam Iorio agreed the streetcar extension into the business district is an important downtown element and called for renewed efforts to build a light rail line and modernize the Tampa bus system. [Source: Tampa Tribune, January 31, 2010]

## Electric-Battery "Hybrid" Streetcar Unveiled

In December, Kinkisharyo International L.L.C. unveiled the LFX-300, its prototype 100 percent low-floor, electro-hybrid streetcar specifically designed for North America. The streetcar will be tested in Charlotte, N.C. The new streetcar has been dubbed AmeriTram.

Rainer Hombach, President of Kinkisharyo International, explained that the new low-floor streetcar is powered by e-Brid, a propulsion technology that enables operation powered by overhead catenary or by on-board lithium-ion batteries. E-Brid charges the batteries while running on catenary power. In battery mode, e-Brid uses electricity stored from regenerative braking. Depending on conditions, AmeriTram can run on battery power for up to five miles.

"Municipalities across the country have greater expectations of their urban transit solution providers and the products and services they deliver," Hombach said. This new generation of streetcars must reduce capital investment and operational costs, improve environmental performance, enhance public safety and provide overall greater value."

The e-Brid propulsion system offers compelling advantages. The system can not only provide ample power for emergencies during which catenary power is lost, but it will also allow operation through areas where catenary cannot be installed, such as historic districts or low clearance bridges. The e-Brid system also lowers power consumption, helping to further reduce greenhouse gas emissions from power generation. [Rail Back on Track Forum, Dec. 11, 2010]



Congresswoman Kathy Castor speaks at the Opening of the TECO streetcar line extension. The recent extension was funded under the American Recovery and Reinvestment Act. [Office of Kathy Castor]



AmeriTram [Source: Rail Back on Track Forum]

## Los Angeles kisses Diesel Buses Goodbye; Streetcar Line planned

After almost two decades of effort to reduce vehicle emissions, the Los Angeles County Metropolitan Transportation Authority retired its last diesel bus on January 12<sup>th</sup>. In an urban area where diesel buses began operating in 1940, the MTA now only operates buses powered by compressed natural gas, electricity and gasoline-electric hybrid propulsion.

Transit officials estimate that the elimination of diesel engines has reduced the release of cancer-causing particulates from the bus fleet by 80% and greenhouse gases by about 300,000 pounds a day in one of the smoggiest areas of the country.

"Not only is this an important step for air quality, it sets the bar for other transportation agencies to follow," said Joe Lyou, president of the Coalition for Clean Air, a statewide organization based in Los Angeles. "Now when an MTA bus pulls up, you don't run away anymore from the huge cloud of exhaust." The last diesel coach, a 40-foot New Flyer purchased in 1998, was ceremoniously towed away at a special event on January 12<sup>th</sup>.

A month later, on February 8<sup>th</sup>, officials announced plans to build a 125-million-dollar streetcar system in downtown L.A. to boost the local economy. The system is expected to create 9,300 jobs and generate \$1.1 billion dollars in new development and \$24.5 million in new annual tourism and consumer spending, said city officials.

The streetcar project is included in Metro's long-range transportation plan, with environmental and engineering work expected to take about five years. The streetcars would serve a four-mile (6.4-kilometer) area including Bunker Hill, the Music Center, historic Broadway, L. A. Live and the L.A. Convention Center.

City Councilman Jose Huizar said the streetcar could be a major boon for the city's struggling budget. "Very soon, a modern, environmentally friendly streetcar will help create a better connected, pedestrian-oriented downtown, bringing jobs, economic development and revitalization all around the route," Huizar said, indicating that the project enjoys much public support and that just under half the funds needed have already been allocated.

[Sources: Los Angeles Times, January 13, 2011; Sci & Tech, February 9, 2011]

## European Trolleybus News

The Dutch city of *Arnhem*, well known for its extensive trolleybus network, opened a 6 km extension to its network on December 12th, 2010. The extension to Schuytgraaf at the southern end of Route 5 is served by alternate runs. A second extension at Preiskaaf opened 11 days later, on December 23rd. With these extensions, the transit operator reaffirmed its support for the continued operation of electric trolleybuses in Arnhem, a position wholeheartedly endorsed by the Arnhem city council. Because the transit system in Arnhem is operated on contract, it will be a condition of contract renewal in 2012 that the successful bidder continue trolley operations.

The City of *Salzburg, Austria* is in its 71<sup>st</sup> year of trolleybus operation. The 70<sup>th</sup> Anniversary of the system was commemorated in October 2010 with a special ceremony. There are plans for further expansion of the system in 2011, including a 1.5 km extension of Route 10 and a 1.9 km extension of Route 8.

The trolleybus vehicles for the new system in *Avellino, Italy* have been completed. The new system in *Lecce, Italy* is due to open sometime in 2011, although an official date has not yet been named. The first of the new trolleybuses for a new system in *Pescara, Italy* is scheduled for delivery in June 2011, with system opening planned for the Fall of 2012. *Naples, Italy* has announced plans for the electrification of its diesel bus route R4, with work expected to start this spring. A contract was signed last Fall for the delivery of 19 new Skoda trolleybuses to the Slovakian city of *Banska Bystrica* by June of this year. *Landskrona, Sweden*, with the smallest trolleybus fleet in Europe, recently added a fourth Solaris trolleybus to its fleet. *Zurich, Switzerland* plans to convert trolleybus route 32 to full operation with high capacity double articulated trolleybuses by the end of 2012. And *Winterthur, Switzerland* hopes to have a 350 metre extension of Route 3, serving a new shopping complex, in operation by May. [Sources: International Trolleybus News (R. C. DeArmond); Trolley-motion]