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Quebec Goes Electric!

Green Funds announced for Montreal Trolleybus Plan

In November 2013, the province of Quebec announced a \$519 million plan to make Quebec a leader in electric transportation. As part of the plan, the purchase of battery electric cars will be subsidized, 5,000 electric charging stations will be installed across the province to recharge them, and 525 electric taxis will be placed in service. But an even more appealing part of the plan comprises funding of the construction of an electric trolleybus line on St. Michel Boulevard in Montreal and the purchase of 25 electric trolleybuses. \$150 million will be made available for this undertaking, which will move a significant number of Montreal bus commuters onto pollution-free vehicles.

Trolleybuses are not new to the city. Various lines used to run in Montreal, but the network gave way—like in so many other Canadian cities—to the sales campaigns of diesel bus manufacturers and oil companies who promoted the supposed flexibility offered by petroleum fuelled vehicles. “In fact the disadvantages of diesel buses far exceed their alleged advantages: they are highly contaminant, diesel engines have a much shorter lifespan, and they are much noisier than trolleybuses,” says an article in the Montreal Times published on the day of the announcement. The trolleybuses will also cope well with Montreal’s geography, which includes many hilly sections.

[Montreal Gazette, November 1, 2013; Montreal Times, November 9, 2013]

Edmonton Launches Campaign to Garner LRT Support

The City of Edmonton has launched a social media campaign to encourage Edmontonians to show their support for the extension of the city’s light rail transit network. The campaign is part of efforts to secure funding for the “Valley Line” which will serve the southeast portion of the city. The campaign includes a video featuring Edmonton Mayor Don Iveson talking to transit users about the importance of expanding the LRT. Edmontonians were asked to tweet their support for LRT expansion using the hashtag #yeg4LRT.

(con’t on p. 2)

Hydrogen Highway goes Downhill

Hydrogen fuel cell buses purchased for use on a route serving Whistler during the 2010 Vancouver Olympic Games turned out to be “nothing more than a costly exercise to watch water drip from tailpipes”, according to an article in the Vancouver Sun. The supposedly green technology will be much too expensive to retain in service after \$89 million in pilot project funding and a \$1.8 million provincial operating subsidy run out this spring, and there was really no reduction in pollution either.

(continued p. 2)



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

Edited by Robert R. Clark, Retired Supervisor of ETS Planning

Hydrogen (con't)

The hydrogen had to be trucked from Quebec at a total fuel cost three times that of diesel, and this endeavor only served to spread a greater carbon footprint across the country. The purchase price of the buses was already four times that of the diesel buses they replaced, but they promised lower maintenance costs. In the end, the cost of maintaining them turned out to be 50 per cent higher than diesel vehicles.

The electricity used to break up water into hydrogen and oxygen to make the hydrogen might just as well be used directly to run trolleybuses, as has been done economically for decades, the Vancouver Sun points out. Producing hydrogen just adds a wasteful intermediate step.

Problems with keeping the vehicles in operation included water in the fuel cells, which froze in winter and prevented the buses from starting or running efficiently.

BC Transit records showed that hydrogen fuel costs averaged \$2.28/km and maintenance costs averaged \$1 per kilometer. By contrast, diesel buses cost around 0.80/km for fuel and about 0.65/km for maintenance.

The fuel cell vehicles were part of a vision for a "hydrogen highway" that would stretch from the BC Coast to California. The highway did not materialize.

[Vancouver Sun, November 25 and November 28, 2013]

Edmonton LRT (con't)

"We are excited to launch a campaign that allows Edmontonians to show their support for expanding our LRT network," said Iveson. "It's important for our project partners to hear the diversity of voices that will benefit from these projects and how critical a complete LRT system is to our city's future."

LRT is the City's number one priority for new infrastructure spending, however \$750 million is still required to make the project a reality. To close this gap, the city is seeking \$150 million in new funding from the Federal government and \$365 million in new funding from the Government of Alberta. This is further to the \$235 million previously requested for GreenTRIP funding from the provincial government.

This funding would be used to build the 13.1 km section of the "Valley Line" from Mill Woods to downtown. Without funding commitments from the provincial and federal governments, the project will be delayed.

It is not known what happened to the \$100 million in savings that is supposed to have resulted from the decommissioning of the city's large trolleybus system. According to former City Transportation Manager Bob Boutilier, the savings could finance half the proposed northeast LRT extension to Gorman Estates.

[www.edmonton.ca February 20, 2014; Edmonton City Council Proceedings, June 18, 2008]

Vancouver to Host Electric Vehicles Conference in October

BC Hydro and the City of Vancouver will host EV2014, the 6th Annual Conference and Trade Show of *Electric Mobility Canada* on October 28 to 30 at the Sheraton Wall Centre. Vancouver was chosen because it abounds with examples of electric transport and will be inspirational to delegates of the conference. The theme of EV2014 is "ElectriCITIES - Move Electric", and the hosts will help us realize that goal.

The EV 2014 program committee is looking forward to presentations on EV infrastructure, electric public transportation, service vehicles, personal transportation, recreational vehicles, specialty vehicles and autonomous vehicles.

More details are available at <http://emc-mec.ca/ev2014ve/en/>

[Electric Mobility Canada, Press Release, March 27, 2014]

Battery Electric Buses Tour North America

Spokane Tests Battery Electric Bus

Spokane Transit recently participated in a Washington state-wide evaluation of a battery-electric bus produced in China. The zero-emissions bus debuted March 7th in Spokane. "We will be running the vehicle for about a month," said E. Susan Meyer, STA CEO. "We are always interested in exploring new fuel alternatives." The bus alternated between routes 22, 24, 25, 26, 27 and 28 throughout March.

STA integrated the first hybrid diesel-electric buses into its fleet in 2007. That number has grown to 28. STA claims that its hybrid buses have 17 percent better fuel economy than standard diesel buses and produce fewer emissions. In addition, STA has upgraded the transmission systems on its buses for additional fuel economy and fewer emissions.

STA is also engaged in the planning of a zero-emission, high capacity electric trolleybus line to serve core areas of Spokane. [KXLY News, March 10, 2014; Press Release, BYD, March 7, 2014]

Battery Electric Bus Pilot Comes to Edmonton

Two battery electric buses from Chinese Builder BYD could hit Edmonton streets as soon as May as part of a pilot to see how they fare in Edmonton's harsh winters. The Chinese buses have already been put to test in Los Angeles, Montreal, Spokane and a number of other cities. A summer version and a winter version of the vehicle would be tested in Edmonton. Regional partners will be sought to cover some of the trial's costs.

ETS Manager Charles Stolte indicated that a key factor in purchasing alternative fuel vehicles has always been the purchase price--about a million per vehicle in this case, more than twice the cost of a standard diesel bus. But Stolte felt some maintenance might overlap with that of electric rail cars. He indicated the City was not prepared to go out and purchase the battery electric vehicles in any number if they could still buy diesel buses.

[Information sources: Edmonton Sun, March 5, 2014; Edmonton Journal, March 5, 2014]

Vancouver: Battery Electric Buses pale in comparison with Electric Trolleys

A recent visit of a battery-electric prototype bus to Vancouver prompted speculation as to whether such vehicles might be added to the local bus fleet. But Coast Mountain Bus Company fleet manager Dave Leicester told the media that the vehicles were far too expensive. The purchase cost would run about \$1 million per vehicle. There is also the potential for other costs, such as the addition of charging stations to allow the vehicles to top up their charge en route. These would add a cost of \$1.5 million per km.

"We have certainly done some testing of battery buses," he said, "we think they're promising, but they're very expensive." Coast Mountain Bus Company already operates a large fleet of zero-emission electric trolleybuses. When all aspects of energy production, conversion and consumption are considered, battery electric buses are about half as energy efficient as electric trolleybuses. [24 Hours, Vancouver edition, March 13, 2014; Transport Canada 2000]

New Streetcars debut in Toronto Easter Parade

Toronto's new low floor streetcar made an appearance in the Easter Parade on April 20th. The next generation of streetcars is being built by Bombardier Canada and is known as the Flexity Outlook. In total, 204 such vehicles will be constructed for Toronto. The first vehicles in the batch are slated to enter service on route 510 Spadina on August 31st.

In the April 20th parade, the Flexity Outlook rode the rails along with representatives of previous generations of streetcars that have served Toronto: a Peter Witt car (1921-1963), a PCC car (1938 – 1995) and a CLRV from the current fleet of streetcars. [TTC, April 20, 2014]

Lines now Live on Edmonton's Metro Line

While it will still be more than 6 months before the public gets to take LRT to NAIT in Edmonton, the overhead lines on the new "Metro" line to NAIT were powered up on April 8th. The City issued a press release to ensure that citizens are aware that the lines are now carrying electricity.

The Metro Line is scheduled to open by the end of 2014. It represents a major step in transforming Edmonton's transportation system. It is expected to add 13,200 weekday riders to Edmonton's LRT network and provide an important link to major destinations like NAIT, the Royal Alexandra Hospital and MacEwan University. [Information Source: City of Edmonton]

San Francisco Confirms order for 60 Low Floor Articulated Trolleybuses

The San Francisco Municipal Transportation Agency (SFMTA) announced March 11th that it will purchase 60 new electric trolleybuses following approval from the San Francisco Board of Supervisors and SFMTA Board of Directors. The new vehicles will replace vehicles currently in service that are over 20 years old.

"Replacing aging vehicles will help improve Muni's reliability and performance," said Mayor Ed Lee. "San Francisco deserves a safe, reliable and affordable 21st Century transit system, and these sustainable upgrades will improve service for our city's working families and workforce for many years to come."

"By investing in new, high-performing, quiet and green electric trolley vehicles, we are able to provide better options for moving around the city," said Ed Reiskin, SFMTA's Director of Transportation.

Trolleybuses are the backbone of San Francisco's transportation system, carrying over 200,000 riders every day. They serve 14 routes and including the 1 California, 14 Mission, 5 Fulton and 30 Stockton, which alone carries 32,000 riders daily. Not only do trolleybuses offer a smoother, quieter ride but they contribute zero greenhouse gases.

In order to expedite the purchasing process, the SFMTA joined a current, competitively bid vehicle contract with King County Metro in Washington State and a leading North American bus manufacturer. The purchase is funded through federal, state and local support, including Proposition K funds. The SFMTA expects to have a prototype on the road for evaluation in 2015. [SFMTA Press Release March 11, 2014 courtesy P. Maier]

Once obsolete, Electric Streetcar now has New Life in U.S. cities

When the auto plant in Kenosha closed, the prosperous Wisconsin port city on Lake Michigan lost more than its largest employer. Its liveliness seemed to drain away, and the downtown, with its brick storefronts, lost its vitality. City officials had to find a way to re-energize the city core.

What they came up with was an electric streetcar. Kenosha decided to bring back something that once served metropolitan areas in many American cities, but was abandoned on the so-called march to modernity.

More than a decade after its reintroduction in Kenosha, the streetcar is now popping up all over. More than 30 cities around the country are planning to build streetcar systems or have done so recently. Dallas, Portland and Seattle all have new streetcar lines. Most projects involve spending millions of dollars to put back something that used to be there — often in the same stretches of pavement.

"It goes along with the revival of inner cities all over America," said Steve Novick, transportation commissioner in Portland, which has spent more than \$250 million to rebuild the streetcar lines the city shut down in 1950. "It's too bad

Streetcars in U.S. Cities (con't from Page 4)

that they weren't kept here all along."

Many city planners are convinced that vintage cars tethered to overhead electric cables or their updated descendants — futuristic and low-slung — ignite economic development in a way that buses cannot — and with a whiff of romance. Embedding rails in roads is part of resurrecting entertainment districts and capitalizing on the return to urban living by young professionals and empty-nesters bored with suburban life.

"It really is about creating a certain kind of neighborhood feel and fabric," said Patrick Quinton, executive director of the Portland Development Commission. Since Portland's line opened, \$3.5 billion in development has sprouted within blocks of the tracks. A section of old rail yards and warehouses is now the trendy Pearl District, home to galleries, restaurants, shops and housing. The system has been expanded to nearly eight miles and each weekday carries 13,000 people, who can track the streetcars on their smartphones.

Salt Lake City, where the last streetcars vanished in 1946, is set to open a two-mile line next month. It's part of a planned "greenway" of parks, bike paths and trails designed to attract 4,000 new households and 7,700 jobs by 2030.

American companies are making streetcars again for the first time since the 1950s. Most new systems use sleek cabins with doors that slide open at street level. Just like their forerunners, they run with traffic rather than on separated lines so the systems can cost as little as \$50 million, a fraction of the expense of heavier rail systems.

Voters in Los Angeles and Kansas City have approved new taxes for streetcar projects. A handful of cities, including New Orleans and Philadelphia, are delighted they don't have to. Their streetcars survived the mid-century purge and continue making their rounds.

Kenosha built its system in 2000 for about \$6 million, mostly funded by a federal grant, using 1950s-era cars cast off by the city of Toronto. It revived a line that had carried passengers from 1903 to 1932. Before the two-mile streetcar loop was laid, the downtown "was very dark," said Joe Catuara, standing outside his bustling hot dog shop named Trolley Dogs. "Now it's lit up more, there are businesses." A row of shops, bookstores and cafes borders one side of the line. The line helped hook the developer who put hundreds of new condos on the site of the old demolished Chrysler plant.

The old cars with their rounded edges and original bulbous light fixtures appear in street murals and in black and white photos on the walls of downtown shops, and each year the town holds a streetcar festival. "It makes a bigger town seem smaller," said Jenna Hass, 29, who pays \$1 to ride the streetcars with her 3-year-old son, Tyler, between museums or just for fun.

Kenosha plans to double the size of the system beginning this year with a new leg that would help take in 85 percent of the downtown businesses, as well as residential areas and a hospital, with the goal of luring more offices and housing downtown.

[Yahoo News, November 12, 2013]



Portland's streetcar system consists of two routes which opened in 2001 and 2012. It covers about 12 km and carries 13,000 riders daily. [A. Wong]



Seattle's South Lake Union Streetcar was inaugurated in December 2007. It is a 2.1 km long line connecting Fairview/Campus Drive and Lake Union Park with Downtown. A second streetcar line, the First Hill Streetcar, is under construction and scheduled to open this year. [A. Wong]



In addition to a fleet of modern streetcars, San Francisco operates a fleet of heritage streetcars on the F Market & Wharves line as an integral part of its multi-modal transit system. The F Market line opened in 1995. The cars include vintage vehicles from the Milan Tramway in Italy as well as PCC cars from various U.S. cities. [A. Wong]

Our Editorial – by Robert Clark

When Montreal scrapped its tram fleet in 1958, the average life of the cars was 35 years. The replacement buses were from a variety of sources: CanCar, Mack, White, and one or two General Motors. In the early '60s, M.T.C. delivered a paper to C.U.T.A. on the life expectancy of buses, reporting that 14 years was the economic norm.

This changed when G.M. introduced the "New Look" series, with recorded lifetimes approaching 30 years. In 1981 Edmonton ordered trolleys with the same body design as the diesels. They were still in good condition when they were Mandelized in 2009 at an inordinate cost.

The introduction of low floor vehicles changed the outlook, with the stresses necessarily being transferred from the lower members to the roof structure, resulting in body twisting that has reduced economic life back down to 14 years.

Likewise with our LRT. The very wise decision was taken to solve the accessibility problem with floor level platforms. Plans to change horses in mid-stream and adopt low floor cars designed for street running, for no apparent reason, is a short-sighted policy that will cost taxpayers dearly for years to come. It is not too late to reverse this decision and continue to have just one homogenous system.

Low floor cars could find a purpose as feeders, say along Whyte Avenue or 137th Avenue.

San Antonio Streetcar gets Green Light

The US Federal Transit Administration has given approval to Via Metropolitan Transit of San Antonio Texas to continue the development of a federal funding investment request for a modern streetcar system. This approval puts Via on the path toward federal funding for future phases of the streetcar project. Local funding for the streetcar project is already in place through a unique partnership with the city of San Antonio and Bexar County Department of Transportation.

The modern streetcar project is part of Via's SmartMove initiative. When completed, the streetcar will enhance mobility in the heart of San Antonio by integrating with existing transit services. It will also stimulate economic development consistent with the city's future vision for its downtown.

[Metropolitan Transit, March 5, 2014]

Kansas City Streetcar Construction Begins Soon

Kansas City officials have negotiated a final maximum streetcar construction price for their planned downtown streetcar project. 800 tons of rail will be trucked from Pennsylvania to Kansas City before the end of April, 2014. The guaranteed maximum construction price for the project will be \$61.7 million, which was negotiated down from a higher estimate in January. It is within the total project budget of about \$102 million, Public Works Director Sherri McIntyre told the Kansas City Council. The \$102 million price includes design, four streetcar vehicles, and a maintenance facility.

And before the streetcar project has even been built, it has already been extended! The Kansas City Council recently unanimously endorsed a plan to extend the downtown streetcar starter route by eight miles. Councilman Jim Glover and other councilors said the streetcar expansion is essential to restoring the central city's economic vitality and connectivity. Glover also pointed out that the cost, while expensive, is still less than the amount needed for proposed local highway improvements.

The plan also envisions adding 9 miles of bus rapid transit MAX from downtown along 12th Street and then south on Prospect Avenue to 85th Street. Construction of the streetcar extension is not anticipated to begin until 2019.

Many residents at a recent Council discussion of the streetcar extension were so enthusiastic that they would be willing to tax themselves to make it a reality. "I'm 100 percent in favor of paying ... for the betterment of the city," said Andrew Ray, who lives and owns property in one of the neighborhoods.

[Kansas City Star, April 10, 2014; Kansas City Star, March 28, 2014]

Knoxville, Tennessee takes delivery of Hybrid Buses

The City of Knoxville announced the acquisition of three standard hybrid diesel buses for the Knoxville Area Transit fleet on January 31st of this year. An additional three hybrids will come in the months to follow, but these will be buses in the shape of replica antique streetcar-style vehicles. The first batch of hybrid vehicles will run on some of KAT's busier routes, including Kingston Pike, Broadway and Magnolia Avenue, where it is believed they will provide greater fuel efficiency and lower maintenance costs than conventional transit buses. This was not found to be the case in some jurisdictions that have tried hybrids, however, where the vehicles were found to be expensive to operate and required more maintenance than regular diesel buses.

Knoxville Mayor Madeline Rogero said in a statement to the media that the buses will further the City's sustainability goals. KAT's passenger counts have been climbing since 2010 with the opening of Knoxville Station. The hybrid vehicles cost approximately \$620,000 each and were purchased through a Congestion Mitigation Air Quality (CMAQ) grant, which was 100 percent federally funded.

[<http://www.cityofknoxville.org/>, accessed January 31, 2014]

UK Charged for Failing to Deal with Air Pollution

The European Commission has launched legal proceedings against the UK for failing to deal with air pollution. The EU says that levels of nitrogen dioxide, mainly from diesel engines used in buses and trucks, are "excessive" in many British cities. The Commission says that this gas can lead to respiratory illnesses and premature deaths.

Britain was supposed to meet EU limits by 2010, but the government admits that London won't achieve this standard until 2025. The UK's dirty air is in violation of the EU's air pollution directive, which came into force in 2008. It set limits on the levels of air-borne contaminants, including particulate matter and nitrogen oxides, both of which are produced by the burning of fossil fuels.

Last year campaigners from the organization Client Earth brought a case to the UK Supreme Court charging that the government was in breach of an agreement to reduce air pollution.

Tougher emission standards for European diesel vehicles have achieved little in the way of reducing noxious air borne contaminants. [BBC News, February 20, 2014]

Students rally for Leeds trolleybus scheme

Transport bosses seeking to implement a £249 million trolleybus system in the City of Leeds, England have won the support of the Leeds University Students' Union. Representing 30,000 Leeds students, the Union officially registered their support for the proposed New Generation Transport (NGT) system in a statement submitted to the Department for Transport.

The support follows a consultation and a vote in which a majority of students were in favour of the scheme. The University itself also submitted a letter of support for the scheme to the DfT, stating that the NGT trolleybuses would, "act as a catalyst and drive economic growth and regeneration within the city and the region."

These statements will be presented as part of a Public Inquiry that opens on April 29th, where Leeds City Council and Metro will demonstrate the major transport and economic benefits of the scheme.

Frankie O'Byrne, Community Officer at Leeds University Students' Union said: "The trolleybus is something that we recognize can bring huge benefits to the students and residents of Leeds. As well as improving public transport by reducing over-crowding, it will speed up journey times and also improve the area for local users. And it's important that we look to invest in the future to provide a good deal for students and local residents."

[Leeds Guardian, March 12, 2014]

Osnabrück, Germany proposes Trolley System

Osnabrück is a large town in northern Germany. Its latest transport plan calls for the introduction of a trolley-/battery-bus system.

According to preliminary plans, the central "old town area" will remain unwired. but the arterial roads outwards from the ring road around the city centre will be provided with overhead infrastructure. This will allow the electric buses to recharge their batteries when heading to and from the city centre, but operate on battery power within the historic "old town" area. This will eliminate the cost of time loss at recharging stations, as would be required with current battery-only electric vehicles.

The overhead system will be constructed in 13 sections (labelled A to J and L) and will be equipped with a total of 52 km of overhead line.

[TrolleyMotion, Martin Wright, November 18, 2013]

Adelaide, Australia implements Electric Trains

Adelaide officials boarded a new electric train to travel from Seaford to Brighton on the morning of November 28, 2013. The 75 metre long A-City 4000 class triple carriage train can carry up to 540 passengers and travel at speeds of up to 110 km/h. The newly electrified Seaford to Adelaide line also covers the 1.1 kilometre span of the Onkaparinga River Delta Bridge.

As of February this year, mixed diesel and electric services have been running on the line, with the full complement of 22 electric trains expected to have taken over full operation by December, 2014.

[ABC Adelaide, November 28, 2013]

Valparaiso, Chile to Expand Trolley System

In Valparaiso, Chile, recent news reports indicate that at least ten trolleybuses will be purchased to add to the current fleet. These will be used vehicles from Lucerne, Switzerland, dating from 1989. These vehicles will be used to ease the strain on the in-service fleet by replacing the oldest articulated vehicles. Most of Valparaiso's fleet dates from before 1967 – a testimony to the longevity of trolleybuses.

Management has also announced plans to expand the trolley system. At least two new lines are being proposed.

Valparaiso still operates Pullman trolleybuses dating from the late 1940's and early 1950s. These vehicles were declared a national monument in 2003, and are much appreciated by both locals and tourists alike for the unique flavour they add to the Chilean city.

[International Trolleybus News, R C DeArmond, April 2 and 3rd, 2014]

Beijing Realizes Mistake, Reverses Decision to Decommission Trolley System

One assumes that the world has learned from past mistakes, but apparently not. The abandonment of electric transportation systems in favour of petroleum powered ones for the dubious benefit of "flexibility" has almost always been followed by regret. But in this case, Beijing officials realized their mistake soon enough to be able to reverse it, and a city that had begun to tear down trolleybus overhead wires is now putting them back up.

The Chinese capital now has set a goal to introduce 4,000 trolleybuses between now and 2017, and to convert a number of diesel bus routes to trolley operation.

Since 2008, Beijing has been testing battery electric buses that recharge at specific points along the route. The vehicles have not met expectations, according to officials. The cost of installing and maintaining charging stations en route is high, and the transport authority has not been able to keep the schedule set in its initial plans. Zoning changes necessary to install the charging stations have also caused delays. Moreover, though, it was discovered that the batteries in the vehicles only have a three-year lifespan, at which point they fail to hold sufficient charge and need to be replaced. The new batteries are expensive and significantly increase the cost of operation.

Officials have concluded it made more sense to use electric trolleys with lithium ion battery packs for limited off-wire travel. Xu Kangming, a transport expert and founder of 3E Transportation Systems, said that when widely introduced, the trolleybus can be very effective in combating pollution and easing traffic congestion. "With little noise, zero emissions and a low cost to maintain and operate, the trolleybus has proved to be efficient worldwide in protecting the environment," he said. Xu added that the trolley bus also has an advantage over battery buses, which require many charging stations that place a strain on limited land resources in the capital.

The first of the diesel-to-trolley route conversions took place on December 19, 2013 on Route 104-Kuai.

[International Trolleybus News, Z. Jiang, December 17, 2013]

Turkey constructs new Trolleybus System

A new trolleybus system is currently under construction in Malatya, Turkey. The system is expected to be operational by late spring. Ten double articulated and 2 articulated trolleybuses will be used, manufactured by the Bozankaya group of Ankara. Part of a MAN bus factory will be used to build these vehicles.

[International Trolleybus News, Mehmet Semih Yasar, December 30, 2013]

Bombardier's Primove Inductive Charging Battery Electric Bus System Begins Revenue Service in Braunschweig, Germany

Braunschweig's first electric bus equipped with Bombardier's Primove technology began revenue service March 27 in Germany. In the presence of federal and state representatives, the Primove vehicle completed its first regular passenger trip in the city. The electric service is being provided on a central circulator line numbered M19 using a single 12 meter long battery electric bus. Beginning in October, four 18 m articulated e-buses will be phased in.

Each bus is equipped with a wireless fast-charging system and batteries. The vehicles are recharged at intervals along the route in just a few seconds with a 200 kW output inductive charger, enabling them to cover the distance to the next charging station.

In recent weeks, the 12 m e-bus underwent final system and load tests, enabling the TUV approval of the entire Primove system in Braunschweig in time for the start of passenger operation. These tests included 280 recorded charging cycles, almost 3,000 km traveled, and various tests for electrical safety and electromagnetic emissions.

The Primove high power charging pads are embedded in concrete and installed under the road surface at selected stops. The cooling units for the wayside power electronics have been integrated into an advertising pillar in shelters at the bus stops.

[Media Release, Bombardier Transportation, March 27, 2014]

Wellington Councillors Fight Backwards Move by Regional Transport Plan

A backwards plan to retire Wellington's extensive trolley bus system by 2017 has run into some serious road bumps, with at least two regional councillors declaring they will fight the move. .

Wellington's Dominion Post recently reported that a draft regional public transport plan proposes replacing 60 trolleybuses and 218 other buses with new vehicles of an unspecified type.

At this writing, Greater Wellington Regional Council had not yet decided whether or not to adopt the plan, but Green councillors Paul Bruce and Sue Kedgley called the move "short-sighted and foolhardy". Ms Kedgley said Wellington spent \$27 million upgrading the fleet seven years ago and that trolleybuses used hydro-electricity and were non-polluting. "Until such time as there is a proven, realistic, zero-emitting, sustainable alternative, we should ditch this proposal," she said.

Mr Bruce said the trolleys were strongly supported by Wellingtonians, and there was no viable, eco-friendly replacement. "There is a lot of talk about self-contained battery electric buses, but the technology is still in its infancy and is only used for small buses," he said. More than 300 cities around the world have trolley bus fleets and many were upgrading and expanding them."

Paul Swain, the council's public transport portfolio leader, was said to be behind the move. Close scrutiny of the arguments put forward for abandoning the electric bus system revealed them to be seriously flawed, and planners seemed ignorant of developments worldwide that indicates trolleybuses will play an important role in the future of public transit.

[Dominion Post, March 17, 2014; International Trolleybus News, R C. DeArmond, March 18, 2014]