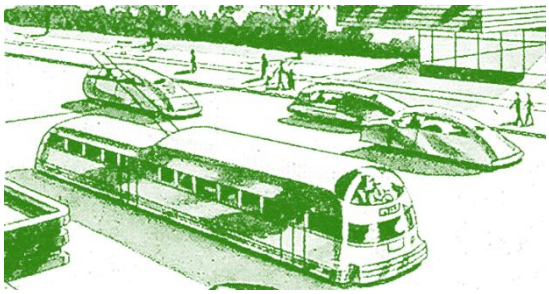
Bob Clark's *Electric*
Transit Talk



VOL. 50 May 2025

New Generation of Trolleybuses coming for Vancouver

European Builder Solaris wins Contract to Supply Vehicles

After two decades and more than 205 million kilometres of service, Vancouver's large fleet of 262 electric trolleybuses is approaching the end of its service life. After evaluating responses to a Request for Proposal for the supply of new trolleybuses issued in mid-2024, TransLink has selected Solaris Bus and Coach, a leading European bus builder based in Poland, as its supplier. Solaris has been seeking to enter the North American market for some time. A Solaris trolleybus visited Vancouver in August of 2023 on a demonstration tour.

Vancouver's new trolleybus fleet will consist of Solaris Trollino 12 (standard 40-foot) and Trollino 18 (60-foot articulated) vehicles. First to arrive will be 107 40-foot standard vehicles. According to TransLink spokesperson Dan Mountain, at least 155 additional vehicles are currently being planned for, to include at least 74 articulated trolleys, but those numbers could change. The contract with Solaris includes options for up to 201 additional 40-foot trolleybuses and up to 204 60-foot articulated vehicles.

The Solaris Trollino vehicles are state-of-the art, fully accessible low-floor vehicles and will be air conditioned for comfort. Mountain indicated that Solaris has a solid track record of providing high quality products. The vehicles will feature In Motion Charging, the latest in trolleybus technology that allows the vehicles to charge traction batteries while connected to the overhead and then travel considerable distances off-wire. According to TransLink, the new Vancouver trolleybuses will be capable of around 20 kilometres of off-wire operation, which could open up new possibilities for where trolleybus can go.

The electric traction systems for the new trolley fleet will be supplied by MEDCOM. Based in Warsaw, Poland, they are one of the leading manufacturers of high-power power electronic devices in the world. For more than 30 years, MEDCOM has supplied traction equipment for public transit systems as well as power supply systems for industrial installations and the power sector. Electric vehicles with MEDCOM equipment carry millions of passengers every week within the EU and in countries such as the U.S., Canada, Brazil, Russia, Turkey, Ukraine, and Belarus. The destination signs for the new vehicles will be supplied by Luminator.

The new trolleybus vehicles are currently in the design stage, with work underway to develop a vehicle that meets the specifications of Coast Mountain Bus Company, the operating entity. The first pilot vehicle is scheduled to arrive sometime in 2026. Testing of the pilot vehicle will offer an opportunity to gather operating data prior to the assembly and arrival of the remaining vehicles so that any necessary fine-tuning of the specifications can take place.

(continued on Page 2)

Published by the Electric Traction Committee
of the Edmonton Trolley Coalition
www.trolleycoalition.org
Edited by Retired Employees of the Edmonton Transit Service

Vancouver (con't from Page 1)

A Strong Commitment to Electric Transit

While countless other cities dabble in battery buses and hydrogen fuel cells in hopes of finding a path to a sustainable fleet, and while a few have even gone backwards in recent decades to embrace internal combustion technologies, Vancouver has stayed the course and held fast to electric transit since streetcar days. And that commitment is now paying off, as Vancouver is far ahead of any other Canadian municipality in terms of its ability to provide sustainable bus transit that does not rely on petroleum fuels. In fact, with its extensive electric trolleybus system and the potential offered by In Motion Charging, the city is now in a position to develop what could well prove to be the best electric bus network in Canada.

Vancouver's first electric streetcar was rolled out in June of 1890, and streetcars along with electric interurban cars soon connected most parts of the city and many areas of the lower mainland. After the stresses of the World War II era took their toll on the streetcar system, Vancouver converted to electric trolleybuses. GE-powered Canadian Car Brill trolleybuses from Fort William (now Thunder Bay), Ontario--built using a design developed by American Car and Foundry-Brill (ACF-Brill) of Philadelphia—began revenue service on August 16th, 1948, serving Fraser and Cambie streets. The system rapidly expanded, and by the time the last Brill trolleybus was delivered in January of 1954, Vancouver had the largest electric trolleybus system in all of Canada with 327 vehicles in operation. There were 82 model T44 Brills, and 245 larger T48 variants.

In the late 1950's, 25 1947 Pullman-Standard trolleybuses were bought second-hand from Birmingham, Alabama to cope with high ridership. These vehicles only remained in service for three years. They were less nimble than the aluminum-bodied Brills and so were used mostly on long, straight routes like the 41st Avenue service. They were declared surplus to needs in 1960 and were scrapped in 1961.

The retirement of the smaller T44 Brills in the 1970's brought the first Winnipeg-built trolleybuses to Vancouver. Arriving in 1975 and 76, the 50 Flyer E800 trolleybuses used recycled electrical components that had been salvaged from the T44 Brills. The E800s served as trolleys for about 12 years. A Hess 60-foot articulated trolleybus from Switzerland was tested in Vancouver for several months in 1974, but none were purchased.

What is generally viewed as the second generation of trolleybuses began arriving in Vancouver in the early 1980's, built by Flyer Industries of Winnipeg with Westinghouse electrical components. By the end of March 1984, the venerable Brill trolleybuses had all been retired, and 245 of these Flyer E-901A and E-902 trolleybuses, outfitted with air-assisted steering and very limited off-wire capability, took over full duties. These vehicles witnessed several significant extensions to the trolleybus system and served Vancouver well until 2008.

Vancouver's current (third generation) trolleybus fleet arrived between 2005 and 2008—188 New Flyer E40LFR-style 40-foot trolleybuses and 74 E60LFR 60-foot articulated trolleybuses. The first vehicle, coach 2101, was officially received in a special ceremony held at the new Stanley Park loop on July 20th, 2005. The vehicles were built by New Flyer of Winnipeg, but the electrical equipment was supplied by Kiepe of Germany—a name dating back to 1906. Although intended only for short diversions during emergencies or road blockages, the auxiliary propulsion system on these vehicles was far superior to that of the previous generation and could move the bus at a decent pace for up to several blocks. For housing and maintaining this new fleet, a new depot was opened in September 2006 at 9149 Hudson Street in the Marpole area. It is said to be the second largest transit depot in North America and will also serve the coming fleet of Solaris trolleybuses.

Solaris is not the first European builder to supply trolleybuses for the North American market. The first trolleybuses used in Montreal and Edmonton in the late 1930's came from England. More recently, Seattle operated MAN articulated trolleybuses of a West German design and Breda vehicles of Italian origin. Dayton, Ohio and San Francisco both operated trolleybus fleets based on a Škoda design from the Czech Republic. But the arrival of Solaris on the North American scene will be greeted with great enthusiasm by many because it helps address the longstanding problem in the North American marketplace of demand outstripping the ability of existing manufacturers to supply vehicles. The backlog at Canada's New Flyer plant in Winnipeg, for instance, is well known to the transit industry. [Information Sources: The Buzzer Blog (TransLink), March 3, 2025; Daily Hive/Urbanized, March 3, 2025; Vancouver's Trolley Buses 1948-1998 (BC Transit, 1998)]

Vancouver Trolleybuses in Pictures

Three years before trolleybus service began in Vancouver, BC Electric tested a 1940 Twin Coach loaned from Seattle for ten days to gauge public opinion. [Photo: TransLink]

On Sunday, August 15th, 1948, a day before regular service began, BC Electric offered free rides to the public. Here, passengers wait to board a new CCF Brill T44 at 29th and Cambie. [Photo: TransLink]

Seen at Oakridge Transit Centre is one of 25 1947 Pullman-Standard trolleybuses acquired second-hand from Birmingham, Alabama in 1957. They saw only short term use. [Photo: Peter Cox]

On August 19, 1983, nearing retirement, one of the larger T48 model Brills takes the lead passing through the Granville Mall, followed by two Flyers. [Photo: Wallace Young]

A Hess articulated trolleybus from Switzerland operates Vancouver's Fraser service on a demonstration tour in 1974. None of these vehicles were ever purchased. [Photo: TransLink]

Sporting the red and white paint scheme of then newly formed BC Transit, one of 50 Winnipeg-built E800 Flyers glides down Granville Street in 1983. [Wallace Young]

Though their weary suspensions may have rocked going over the Granville Street Bridge as they aged, these E-901A and 902 Flyer trolleybuses served Vancouver faithfully for 25 years. After retirement, they were sent off to Mendoza, Argentina for further service. Coach 2777 is seen across from Waterfront Station in 1998. [Photo: K. Brown]

Large numbers of New Flyer E40LFR trolleybuses began arriving in 2006 to replace the aging E901A and E902 vehicles. The "R" designates an updated design with a reworked front end, which still gives the vehicle a modern look despite it being close to 20 years old. 188 of these vehicles were purchased. [Photo: T. DeJong]

Turning in front of the Harbour Centre (formerly Sears Tower) at 555 West Hastings Street, the articulated section of this New Flyer E60LFR comes into plain view. These are the first articulated trolleys to serve in Vancouver's fleet and are a common sight on Routes 3, 8, 10 and 20. The propulsion systems were supplied by Kiepe of Germany and provide off-wire capability for emergencies. [Photo: T. DeJong]

The first Solaris Trollino 12 trolleybus operated in Vancouver in August of 2023, demonstrating its abilities to TransLink and operator Coast Mountain Bus Company. The vehicles on order will be similar, but built to CMBC specifications and so will not have the three sets of doors shown on this vehicle. [TransLink]

High-Speed Rail with 300 km/h Trains to Run Between Toronto and Quebec City

In mid-February, the Canadian Federal government launched a six-year, $3.9-billion design and development plan to connect Quebec City and Toronto with a high-speed rail line—a project former Prime Minister Trudeau described as a "game changer for Canadians". Trudeau said the new rail line will run electric trains along 1,000 kilometres of track at speeds of up to 300 km/hour, with stops in Toronto, Peterborough, Ottawa, Montreal, Laval, Trois-Rivières and Quebec City. A government statement said the project will stimulate the economy, "boosting GDP by up to $35 billion annually, and creating over 51,000 good-paying jobs during construction."

Dubbed Alto, the new high-speed rail line will take passengers from Montreal to Toronto in three hours — about half the time it takes to drive and at double the speed of Via Rail's current trains.

Construction on the new line will not begin until the design phase is done, which could take four to five years. Since funds for construction will not be allocated until the end of that time period, there is a possibility a future government could modify or cancel the project. Conservative candidates did not provide comment on the project, but Mark Carney, still a Liberal leadership candidate at the time, reacted positively to the news, in particular to the project's economic benefits and job creation potential.

A consortium called Cadence — made up of CDPQ Infra, AtkinsRéalis, Keolis, SYSTRA, SNCF Voyageurs and Air Canada — was selected to build the line. Transport Minister Anita Anand said that a Crown corporation has been created to oversee the Alto project and will be signing a contract with Cadence that will outline the first-phase design work, such as where track will be laid and where stations will be built.

Martin Imbleau, Alto's president and CEO, said that a long lead time is necessary to ensure the project will not encounter problems when construction begins. "We're going to take our time, properly develop the project, look at the different phases and in four or five years, we'll know what we're building," Imbleau said. [Source: CBC News, February 19, 2025]

More Electric Trolleybus News . . .

Bucharest Buys More Trolleybuses

Bucharest, Romania will add 22 more electric trolleybuses to its transit fleet using European funds allocated through the National Recovery and Resilience Plan (PNRR), Mayor Nicuşor Dan has announced.

The vehicles will all be 12-meter (40-foot) trolleybuses with a minimum off-wire capability of 20 km. Each vehicle will have a capacity of at least 85 passengers, including a minimum of 26 seated.

The trolleybuses are to come with a manufacturer's warranty of at least 350,000 km or five years, covering all components, with delivery completed within 12 months from the signing of the contract, Mayor Dan announced.

This investment is part of Bucharest's broader efforts to modernize its public transport network. In recent years, the city has purchased 100 battery-electric buses, 100 trams, and 100 trolleybuses.

[Source: Romania-Insider, February 7, 2025]

Škoda working on Power Systems for 112 Trolleybuses for Genoa, Italy

In 2024, Solaris Bus & Coach contracted with Škoda Group for the supply of traction power systems for an order of 112 trolleybuses for Genoa, Italy. Work got underway in September of 2024 and will continue throughout 2025.

The traction equipment for the 112 18-metre articulated trolleybuses vehicles is being manufactured, installed and tested by Škoda. This testing will first take place in Pilsen, Czech Republic, prior to the vehicles being sent to Genoa.

The equipment for the Genoa trolleybuses includes traction batteries with a capacity of 81 kWh, which will enable the vehicles to operate for substantial distances off-wire. The package also includes automatic current collectors and advanced diagnostics. [Source: Bus-News.com]

Bozenkaya Trolleybuses for Prague's Growing New System

Turkish manufacturer Bozankaya has won a tender to provide 70 new standard 12-metre trolleybuses for the Czech city of Prague over the next five years.

The proposed model is called the SNG 12 and will be fitted with electrical equipment supplied by Polish manufacturer MEDCOM. The trolleybuses will be equipped with traction batteries that will provide up to 15 km of off-wire travel. The vehicles will be deployed on the Route 52 line currently under construction. The contract includes special hardware and software for diagnosing vehicle faults as well as portable chargers and an energy management system for remote monitoring and control of the charging process.

The Bozankaya SNG 12s for Prague will accommodate 82 passengers, 32 of whom can be seated. There will be two folding seats, and passengers will have access through three doors. They will be full-low-floor, air-conditioned vehicles.

The off-wire capability will allow the Prague Transport Company to convert more than 10 motor bus lines to trolleybuses, partially in autonomous (off-wire) travel. Thirty-five trolleybuses are already in operation, delivered between 2023 and 2024, including 20 24-meter Solaris Trollino models, providing service on Route 59 to the Airport, and 15 18-meter SOR/Cegelec vehicles which are active on Route 58. With the delivery of the Bozenkaya vehicles, 105 trolleybuses will be in service, which will be supplemented by subsequent orders until an entirely zero-emission fleet has been achieved.

Turkish manufacturer Bozankaya is also supplying twelve 24-meter trolleybuses to Malatya, Turkey; 12 18-meter vehicles to Sanliurfa, Turkey and 33 trolleybuses to Timisoara, Romania.

[Sustainable Bus, January 24, 2025]

Size matters:
12 metres = 40 feet
18 metres = 60 feet

New Trolleybus Line Inaugurated in Nancy, France

On April 5th 2025, the transportation network in Nancy, France, STAN, inaugurated its new T1 trolleybus line.

The new trolleybus line replaces the old TVR service which had been in use from 2000-2023, operating as a guided system on a reserved right of way. At a cost of € 47 million, preparations for the transition took 18 months to complete and included replacement of the overhead lines and removal of the TVR's track.

The new T1 line largely follows the route of the TVR system and has 23 stops in addition to two termini. Some sections are without an overhead line, particularly in the city centre, which are traversed without issue by new Hess lighTram.25 trolleybuses using battery power.

The Hess vehicles are 24.4 metres in length and are double-articulated with a capacity of 154 passengers.

STAN has been operated by Keolis since 2019, who have consistently sought to improve the service. In its April 8th news release, Keolis states: "The electric trolleybus represents a significant advancement in the transformation of urban transport modes, in response to ecological challenges and the growing demand for greener transport solutions."

[Sources: Sustainable Bus, April 5, 2025; Keolis News Release, April 8, 2025]

Up to 70 New Škoda Trolleybuses for Tallinn, Estonia

In January, Škoda announced that it won a 40-unit trolleybus tender for Tallinn, Estonia, with an option for a further 30 vehicles. According to the contract, the Czech company will deliver 22 18-metre model 33Tr articulated trolleybuses and 18 12-metre model 32Tr standard trolleybuses. The contract includes comprehensive service and maintenance for up to 400,000 km.

The first new trolleybuses are expected to arrive in Tallinn in the first half of 2026.

With the increasing effects of global warming being felt across Europe and the need to focus on sustainability, the Tallinn municipal government took the decision in 2024 to re-invest in its trolleybus network and upgrade the overhead contact system. This was a change from previous policy that had emphasized natural gas-powered vehicles. This change resulted in the tender for new trolleybuses.

Tallinn's new models will be equipped with an auxiliary battery drive system that will permit an off-wire operational range of up to 25 kilometres. The vehicles will also feature air conditioning, a fully low-floor design, and modern information systems, including Wi-Fi connectivity. They will have sliding doors and an electric ramp for boarding individuals with wheelchairs and strollers. The articulated trolleybuses will have two driven axles, improving manoeuvrability and allowing for better traction in winter conditions.

"When we temporarily suspended trolleybus operations in the past, many thought that this mode of transport might never return. We are pleased to confirm that trolleybuses are returning in a big way. In addition to completely new vehicles, the entire trolleybus infrastructure will be modernized," stated Kaido Padar, Board Member of Aktsiaselts Tallinna Linnatransport, the local public transit operator.

Tallinn's Mayor Jevgeni Ossinovski commented: "The acquisition of new trolleybuses is part of a broader vision focused on prioritizing public transport, into which we plan to invest more than €100 million in the coming years. Trolleybuses have great potential to expand their reach into other parts of the city. In addition to trolleybuses, we will build two new tram lines by 2029." [Source: Sustainable Bus, January 9, 2025]

New trolleybuses for Quito's BRT

30 years ago, a Bus Rapid Transit system was set up in the Ecuadorian capital of Quito. It operates through the city centre as a trolleybus under overhead lines. The vehicles are of high floor design and stop at raised, barrier-free platforms. In Quito – at 2,850 metres above sea level – electric drive has proven itself to be a superior alternative to diesel engines, as the diesel's efficiency is much lower here due to the lower oxygen content of the air.

113 articulated Mercedes-Benz O 405 GT trolleybuses, delivered between 1995 and 1999, currently serve the line, which opened in stages between 1995 and 2008. These vehicles have now covered over 1 million kilometres each and are need of replacement; about 100 are currently operational.

60 high-floor articulated trolleybuses from Chinese manufacturer Yutong have been ordered, and the first vehicle has now arrived in Ecuador. The new articulated trolleybuses are 18.24 metres long and offer 32 seats and space for 128

(con't on Page 7)

QUITO (con't)

standees. On-board traction batteries can provide up to 75 kilometres of off-wire capability, allowing regular travel beyond the overhead lines.

To fully replace the old Mercedes fleet, further orders will be necessary. In the interim, about 30 of the oldest Mercedes trolleybuses are being updated and refurbished.

[Source: Urban Transport Magazine, January 25, 2025]

☞ Three new Solaris Trollino trolleybuses had entered full service in *Landskrona, Sweden* by the end of December, 2024. *Milano, Italy* has also received the first of an order of ten Solaris trolleybuses. *Esslingen, Germany* has ordered 46 12-metre trolleybuses from Czech maker Škoda.

☞ The first of an order of 58 Hess lighTram Model 19DC trolleybuses arrived in *Lyon, France* in January.

☞ Work on installation of overhead on *Mexico City*'s new Route 12 is nearly completed. Mexican President Claudia Sheinbaum announced that the trolleybus BRT serving Chalco-Santa Martha should be open by the end of this April.

[Sources: TM, March-April, 2025; SB, March 31, 2025; infobae, March 12, 2025]

Ikarus-Yutong submits Most Competitive Bid for New Budapest Trolleybuses

Manufacturers Ikarus and Yutong submitted a joint bid for Budapest's recent trolleybus procurement, a process initiated by the Budapesti Közlekedési Központ (BKK) in early 2024. As things turned out, their bid was the most competitive. As of this writing, a decision had not yet been announced, however.

The tender, which covers up to 160 trolleybuses with battery off-wire capability—both standard and articulated models—is expected to be financed through European Union funds. However, funding for the procurement has not yet been secured, leaving the timeline for vehicle deliveries uncertain.

The transit agency, BKK, has ambitious plans to expand Budapest's trolleybus network, aiming to double the current 155 km of routes by 2030.

Initially, four manufacturers expressed interest: Ikarus-Yutong, Solaris, Škoda Group, and Bozankaya. However, Škoda later withdrew, leaving three contenders. According to available information, Ikarus-Yutong's offer stands out due to its competitive pricing. The bid includes the lowest unit prices, with standard trolleybuses offered at €451,500 and articulated models at €649,500.

The vehicles proposed for Budapest are based on Yutong's U12 and U18 electric bus platforms.

The second-ranked bid came from Bozankaya, a Turkish manufacturer expanding its presence in Central Europe. The company offered its SNG T12 and SNG T18 trolleybuses, which are already operating in Timișoara, Romania. Its unit prices were notably higher than Ikarus-Yutong's, with standard trolleybuses priced at €569,000 and articulated versions at €729,000. Like Ikarus-Yutong, Bozankaya included a 36-month extended warranty in its bid.

Solaris, the supplier of Budapest's current Trollino trolleybus fleet, ranked third, price-wise. Its standard trolleybuses were priced at €799,000, while the articulated versions reached €973,000.

[Source: Sustainable Bus, March 21, 2025]

Ground Broken on Final Tunnel Segment of Toronto's Eglinton Crosstown West Extension

Electric Rail News

In early April, the government of Ontario broke ground on the final tunnel segment of the Eglinton Crosstown West Extension. Crews have now started excavating the twin 500-meter tunnels under Eglinton Avenue West, from Jane Street to the future Mount Dennis Station. The 500-meter twin tunnels will be built using the sequential excavation method, advancing one to two meters per day.

Once complete, the nine-kilometer line will connect seven new stations to the Eglinton Crosstown Light Rail Transit (LRT) project, making travel faster and more convenient while bringing more than 37,500 people within a 10-minute walk of transit.

"Premier Doug Ford and our government have a plan to tackle gridlock and shorten commutes for drivers and public transit users in the Greater Toronto Area (GTA)," said Ontario's Minister of Transportation Prabmeet Sarkaria. The government of Ontario is investing nearly C$70 billion over the next decade in public transit. The Eglinton Crosstown West Extension will create more than 4,500 jobs from engineers to construction workers, crane, and heavy equipment operators.

[Source: Mass Transit Magazine, April 9, 2025]

Battery Bus News

King County's Tukwila Base Nears Completion

King County Metro's Tukwila Base in the Greater Seattle Area is nearing completion and will soon start testing its charging infrastructure.

The 544,000 square foot, 100 percent electric bus storage, charging and maintenance facility will serve more than 120 new battery-electric buses, exemplifying King County's commitment to building a sustainable future. It will be in full operation by the spring of 2026.

"Powered by the hydroelectric energy of our region, this base is quickly becoming a national and international model for constructing a clean energy facility," said King County Executive Shannon Braddock. King County Metro has a strong focus on becoming one of the first large transit agencies in the U.S. to be fully zero-emission.

The new base will also be home to zero-emission support vehicles, including electric sedans and utility carts, all powered by new charging infrastructure installed at an adjacent parking garage.

[Sources: KNXX Public Radio, April 23, 2025; Mass Transit News, April 24, 2025]

Streetcar News

TTC Revamps Hillcrest Complex for New Streetcars

The Toronto Transit Commission has begun construction at its Hillcrest complex to expand and upgrade the Harvey Shops for the storage and maintenance of approximately 25 new streetcars. The upgrades are being funded by the Canadian Federal government and the City of Toronto.

"Hillcrest is the closest facility to the routes that the new streetcars are expected to serve – 512 St Clair and potentially 511 Bathurst," said TTC CEO Greg Percy. "So we can save on some costs by modifying existing infrastructure, rather than building a new facility."

The Hillcrest Complex construction project will be done in two phases and is expected to take approximately five years to complete. In addition to the upgrades for streetcar storage and maintenance, the project will include much-needed maintenance work and landscaping improvements.

The TTC is currently receiving 60 new streetcars worth $568 million Canadian, jointly funded by the Federal, provincial and local city government.

"Streetcars are a vital part of the TTC and the city, and I am pleased that we are expanding Hillcrest to ensure that we can store and maintain additional streetcars," said TTC Chair Jamaal Myers. "Our goal is to run a sustainable transit system that our customers can continue to rely on and be proud of. This is a big step in that direction." The streetcars will enable more frequent service on the Dundas, Bathurst and St. Clair streetcar lines.

[Sources: Steve Munro, March 6, 2025; Mass Transit News, March 7, 2025]

Vancouver's TransLink Demonstrates Battery-Powered Mini-Bus

For two weeks beginning in late March, TransLink offered free rides on a new electric mini-bus with a duck-beak-shaped nose. It was a test of a new vehicle built by Quebec-based manufacturer Letenda. The mini-bus ran on regular transit routes.

The Letenda Electrip is a 30 ft., two-door bus with a capacity of up to 44 passengers—22 seated passengers and 22 standees. This puts the Electrip's capacity somewhere between a standard 40 foot bus and a small 20-24 passenger community shuttle.

The Electrip has a range of about 250 km, and it features rear-axle steering, which makes it more maneuverable than typical buses. It is strategically designed for Canada's harsh winters, featuring heated floors to melt and dry tracked-in snow and heated windshields for improved visibility.

The results of this demonstration will be used to determine whether TransLink should adopt this particular vehicle for any of its future fleet requirements. [Source: Daily Hive/ Urbanized, March 11, 2025]

LEFT: The Letenda Electrip Battery Mini-Bus on test in Vancouver. [TransLink]

RIGHT: The Solaris Urbino 15 LE 15-metre battery bus, on order for Nobina in Stockholm, features twin rear axles. [Solaris]

Milton, Ontario Council rides Converted Bus

The Town Council of Milton, Ontario got its first ride on a diesel-to-battery bus conversion in late March. The Town Council is working with Milton-based MTB Transit Solutions on the pilot conversion project, which will provide useful details on charging, maintenance, performance and cost related to such a conversion process. Once in service, the 12-meter (40-foot) electric bus will eliminate tailpipe emissions and offer passengers a ride with reduced noise and vibration to make their experience more comfortable.

[Source: Mass Transit News, March 26, 2025]

Solaris to deliver Battery Buses to Stockholm, Sweden

In early April, Solaris announced it had secured a contract to deliver 89 battery buses to Stockholm for transit operator Nobina. The order is for Solaris Urbino 15 LE models, which are 15 metres in length—slightly larger than a standard bus.

Solaris is the top seller of zero-emission buses in Europe with 5,500 in service, including trolleybuses.

[Source: Sustainable Bus, April 4, 2025]

Washington Metropolitan Area Transit (WMATA) buys Battery and Hybrid Buses

In early February, WMATA (Metrobus) awarded New Flyer of America a contract for 75 hybrid-electric 40-foot transit buses and 25 35-foot battery buses, with an option for up to 400 additional vehicles.

With a fleet of 1500 buses, WMATA provides Metrobus services for more than six million people across the U.S. National Capital Region, which includes the District of Columbia, Maryland and Virginia. It also operates Metrorail. [Source: New Flyer Media Release, Feb. 6, 2025]

Orange County, California buys Battery and Fuel Cell Buses

The Orange County Transportation Authority (OCTA) has purchased 50 New Flyer zero-emission buses from New Flyer of America, consisting of 40 Xcelsior 40-foot hydrogen fuel cell-electric buses and 10 Xcelsior 40-foot battery buses. The units were added to NFI's Q4 2024 backlog and are supported by a combination of Federal Transit Administration (FTA) and local funding.

OCTA first launched a hydrogen fuel cell-electric pilot program in 2020 and a battery bus pilot in 2022. As part of this initiative, they constructed what is the biggest hydrogen fuelling station in the United States, demonstrating a strong commitment to hydrogen fuel cell technology.

[Source: New Flyer Media Release, February 26, 2025]

Missoula, Montana's Mountain Line: Zero Emissions, and Zero Fare

With wildfires and winter air inversions affecting air quality, Mountain Line, operating in Missoula, Montana, has committed to achieving a zero-emissions fleet by 2035. Since 2019, the agency has been acquiring battery electric buses, with 40% of its fleet now operating on electricity. With the help of government and local non-profits, the agency also successfully switched to a zero-fare system. The result of these changes has brought ridership up a whopping 70%! Congratulations, Missoula! [Source: www.mountainline.com accessed April 18, 2024]

Trade War Expected to take Toll on E-Bus Roll-Outs

Electric bus manufacturers hit hard by pandemic-era supply chain chaos may now be pummelled by a trade war. Josipa Petrunic, the president and CEO of the Canadian Urban Transit Research and Innovation Consortium (CUTRIC), warned that the "immediate effect of tariffs is that buses become more expensive overnight." Petrunic said the highly integrated North American industry could see companies hike prices, leaving cash-strapped transit agencies with a big problem. "All of a sudden a city that has only so much money can afford fewer buses than what it planned," she said.

Cities across Canada are already making difficult choices in the face of intolerably long manufacturing waits, including buying more diesel buses instead. Manufacturers worry outdated payment models and incredible levels of customization have forced them into a corner, which Petrunic says has brought the industry to the point of an "existential crisis."

Petrunic also foresees a "double whammy". North American integration means that companies would be hit by tariffs on parts that head north to their Canadian factories and then again on completed vehicles sent to American customers.

[Source: CBC, February 19, 2025]

AC Transit Study highlights Lower Service Availability of Battery and Fuel Cell Buses

As part of what was termed a "5x5" study focussed on battery and fuel cell buses, Alameda Contra Costa (AC) Transit operating in the San Francisco Bay Area measured the availability of its various vehicle types for the morning pull out. The study was intended to help with planning for the conversion of its fleet to zero emissions by 2040.

Results showed that from July to December 2021, battery buses were available 60% of the time, and the agency's newer fuel cell-electric buses were available 65% of the time. Diesel hybrids had an availability of 63%, while diesel buses came in at 90%. Older fuel cell vehicles in the fleet were considered to have about a 50% availability.

Between January and June 2022, the results showed battery buses were available 66% of the time, newer fuel cell-electrics 78% of the time, , hybrids 51% of the time, diesels 89% of the time and older (legacy) fuel cells 57% of the time.

The study noted that of the newer fuel cell-electric vehicles, one experienced a converter issue; the hybrids had two engine failures and supply chain issues, and older fuel cells incurred low power output due to the failure of some cells.

This summarizes just one small portion of the study, but it highlights the need for a larger spare ratio with fuel cell, battery and hybrid vehicles as compared to diesel, which translates into a significantly higher capital investment.

[Information Source: Mass Transit Magazine, February 18, 2025]

Can Zero Emission Mandates be Met? County Connection Voices Concern

Starting in 2016, County Connection — the transit authority linking Clayton, Concord, Martinez, Orinda and Walnut Creek in California — fired up eight new battery buses along with charging infrastructure at the Walnut Creek BART station. This initial fleet was custom-built by Gillig, one of the largest transit bus manufacturers in North America, for two high-ridership routes.

Things went awry when the modems on County Connection's battery buses stopped communicating with the induction charging system. Scott Mitchell, County Connection's Chief Operating Officer, explained that Wave, the manufacturer of the innovative wireless charging station, was bought out by Ideanomics in 2021. Ideanomics then filed for bankruptcy following months of poor financial performance, staff shortages and delayed maintenance requests.

Four of County Connection's battery buses returned to the road after the connectivity issues were resolved late last year, but Mitchell said supply chain issues continue to bog down attempts to repair and replace the equipment. Moreover, when the agency began swapping out aging power boards, he said it learned that the manufacturer of the buses' battery packs had stopped producing and servicing that system altogether.

"All things considered, we've had better luck with our battery buses than other transit agencies," said Mitchell. "A lot (of other buses) are off the road, parked in maintenance yards and unable to run at all." In fact, bankruptcies, inflation and supply chain issues have taken battery buses offline in cities across the country, fouling operations in cities like Philadelphia and Austin, Texas.

Mitchell is concerned equipment manufacturers, maintenance crews and power suppliers won't be able to keep up with demand as transit agencies in his state race to meet the California Air Resources Board's 2040 zero-emission mandate.

[Information Source: Contra Costa Times, January 31, 2025]