

# TRANSPORT INNOVATOR

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Welcome to *Transport Innovator*, a free newsletter dedicated to sharing information about innovative, cost-effective transportation solutions. We welcome comments and ideas for future stories. Please feel free to contact us – we look forward to hearing from you. Free subscriptions are available at [www.gobrt.org](http://www.gobrt.org)

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## Editorial

In September, 2005, we argued that the recent US federal transportation bill, SAFETEA-LU, was a missed opportunity, in part because it failed to adequately reform the "New Starts" program, which provides capital funding for new "fixed guideway" transit projects. Specifically, we noted that the creation of the "Small Starts" program did not go far enough to ensure that new capital investments are based upon performance, not arbitrary definitions of what constitutes a "fixed guideway."

Now, there is a new reason to be concerned about Small Starts: it is vulnerable to budget cuts. The President's FY 2007 budget proposal included \$100 million in Small Starts funding, one-half of the \$200 million authorized in SAFETEA-LU. Other transit programs were proposed to be fully funded.

If budget savings are truly a priority for the Administration, why go after Small Starts, a program set up with the express purpose of funding more cost-effective transit options like BRT? A better strategy would be to re-evaluate some of the multi-billion dollar rail projects embedded in the New Starts program.

For example, the Commonwealth of Virginia is proposing to expand the Washington Metrorail system to Loudoun County, Virginia through Dulles International Airport. The Commonwealth is seeking \$920 million in New Starts funding for the first 11 miles of the project, up from \$760 million just a year ago. Funding for the remaining 12 miles is yet to be determined.

The project received a "medium-low" cost-effectiveness rating from the Federal Transit Administration, making it ineligible for federal funding. Congress then exempted the project from the cost-effectiveness requirement, thus explicitly recognizing that the benefits do not justify the costs. Rather than an exemption, why not determine whether more cost-effective options, such as BRT, can provide a better return on the federal investment? The potential savings could far exceed the \$100 million proposed to be cut from Small Starts.

Unfortunately, re-evaluation of projects like rail to Dulles is not likely. The express purpose of the New Starts program is to fund "fixed guideway" transit, not to encourage innovative, cost-effective solutions that may or may not require a fixed guideway. Moreover, it is easier to slash programs like Small Starts than to seek savings from more established programs, like New Starts, that have strongly motivated constituencies.

To their credit, the American Public Transit Association is fighting to restore Small Starts funding. In the long run, however, a better strategy might be to re-combine New Starts and Small Starts and ensure that eligibility is based upon performance, not arbitrary physical definitions. A combined program may be less vulnerable to budget cuts, and a new focus on

performance would increase overall returns on the federal investment in transit.

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## Guest Column

### **New directions in busway station design for grade separated BRT networks**

Derek Trusler FRAIA, ANZIA

Our streets are littered with examples of ineffective bus transit structures. Often, these structures are little more than painted posts in the ground, often on a worn patch of ground and near a dejected piece of guard rail that serves as a bench.

A busway network can make bus transit more attractive and competitive with other mode options, like light rail. An example of an emerging busway network is the South East Busway in Brisbane Australia.

The South East Busway opened in 2001. In the first four years of operation, bus use increased by 120%. Currently, more than 100,000 daily passenger trips are made on the South East Busway. The busiest section carries up to 15,000 people per hour in the peak direction, far exceeding many light rail systems and even some heavy rail systems.

What was done differently to achieve this success? In short, a vision was established for a busway network, including busway stations, that exceeds expectations and is the envy of customers around the world.



Station design is critical to BRT's success –  
Brisbane South East Busway

Stations along the South East Busway are unattended, 24-hour, fully accessible facilities. They employ a number of features that improve functionality and the customer experience, including:

- real time passenger information signs and public announcements;
- closed circuit television with motion detection;
- emergency assistance;
- a cantilever design that ensures unobstructed lines of sight and obstruction-free boarding and alighting;
- transparent glass structures and horizontal roof forms that minimize visual intrusion and maximize visibility;
- protection from weather and the elements;
- attractive landscaping; and
- station access through bicycle and pedestrian paths as well as park and ride lots.

Stations have a designated stopping lane and a through lane. All services arrive and depart from the lead stop position, setting down and picking up passengers at the same location. This is important, because it avoids causing passengers to shuffle along the platform to predict where the vehicle will stop. It also helps avoid congestion in the through lane, because vehicles maneuvering to enter multiple stop positions can protrude into the through lane.

Currently, front door boarding is used for fare collection and ticket validation, but all door boarding, like that of trains, is planned. All door boarding enables clear passenger movement and even distribution of passengers on platforms.

Good station design requires understanding and avoiding the mistakes of the past. These include:



South East Busway Station

- Squeezing stations onto remnant parcels of land in a way that compromises functionality or access.
- Using stations as large layover and terminating facilities for vehicles, thus creating visual and physical impacts on the community.
- Failing to provide adequate cover and protection from weather conditions.
- Impeding sightlines or creating conflicting circulation patterns within the station environment.
- Not knowing or ignoring customer needs.
- Providing inadequate customer facilities, such as ticketing machines, maps, real time information, drinking fountains, rubbish bins, cigarette butt receptacles, toilets, bicycle parking and storage, park and ride, and kiss and ride zones.

- Providing poor access to natural light, inadequate air quality, or excessive noise levels.
- Providing low standard of finish, ugly structures, or insufficient landscaping.

The next phase of the Brisbane busway will continue to refine the most responsive station designs possible. The new Northern and Eastern Busways will extend the success of BRT station design by integrating stations into the urban fabric while retaining brand identity. The success of BRT in Brisbane is due in part to successful station design, and this design can be a model for other cities considering BRT.

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*Transport Innovator welcomes guest columns on any topic related to sustainable transportation. Submissions should be no more than 1-2 pages in length and may include graphic materials. Although we may edit for length and style, we will obtain the author's permission to publish edited columns. Please send all guest columns to [info@gobrt.org](mailto:info@gobrt.org).*

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## *In the Spotlight*

### **Hybrid Buses**

The U.S. market for hybrid-electric buses continues to grow. In November, a consortium of eleven transit agencies awarded Gillig a contract for the purchase of up to 157 diesel-electric hybrid buses. With options, the buses cost roughly \$490,000 each, a reported savings of about \$50,000 per bus through volume pricing. All buses will be delivered by late 2007.

The consortium is headed by the San Joaquin Regional Transit District (SJRTD) in Stockton, California. Based on current fuel prices and mileage, SJRTD expects the buses to pay for themselves over their 12-year lifespan. SJRTD also believes that the hybrids are a "gateway" to fuel cell buses.



Cleveland received delivery of its first 60-ft articulated hybrid bus from New Flyer. Twenty-one of these buses will be used to provide BRT service on Cleveland's Silver Line, which is expected to open in 2008, after the pilot bus completes testing.

Other recent hybrid bus purchases or purchase commitments include:

- The Washington Metropolitan Area Transit Authority (WMATA) expects to receive 50 New Flyer hybrids by the end of March 2006;
- The Port Authority of New York and New Jersey has authorized the purchase of twenty-one Orion hybrid-electric shuttle buses for airport service; and
- As reported in our November, 2005 issue, New York City Transit (NYCT) has placed an order for 500 vehicles (with an option for 389 more) to begin delivery this year. NYCT was one of the first transit agencies to deploy hybrids and has received delivery of 325 vehicles since 1998.

A recent National Renewable Energy Laboratory (NREL) report examining NYCT's hybrids found that they can offer significant air quality benefits. The report examined the NYCT hybrid buses and a comparable fleet of compressed natural gas (CNG) buses, evaluating fuel economy and costs, reliability, and maintenance requirements.

The report found that the hybrid buses achieved 45% higher fuel economy than ordinary diesel buses and an average of 100% higher fuel economy than CNG buses. The hybrids also demonstrated better reliability, with about 25% more miles between road calls due to the propulsion system than the CNG buses. However, propulsion-related maintenance costs were about 9% lower with the CNG buses than with the hybrids. NREL will release a final report at the end of 2006.

To date, hybrid buses have been largely a North American phenomenon, but there are a few hybrid bus trials starting up outside the U.S. and Canada. London began operating the first of six 10.3 m diesel-hybrid buses built by

Wrightbus of Northern Ireland with Enova Corporation's series drive system. Early results show a 40% reduction in fuel use. Similarly, two prototype hybrid buses, with Eaton's hybrid system, are being built by a Chinese bus company for testing in China.

It's not all good news for hybrids though. The Ottawa City Council placed on hold a procurement for 226 hybrid buses, requesting an independent analysis of cost-effectiveness and emissions as compared with CNG. The report is due in March.



London's new hybrid bus  
(Picture from Green Car  
Congress)

*Sources:*

Passenger Transport, Vol. 64, No. 4, 1/23/06

SJRTD press release, 11/18/05

[http://www.sanjoaquinrtd.com/press\\_releases/pdf/20051118NR\\_Hybrid\\_Consortium\\_Contract\\_Award.pdf](http://www.sanjoaquinrtd.com/press_releases/pdf/20051118NR_Hybrid_Consortium_Contract_Award.pdf)

New Flyer press release, 2/16/06

[http://www.newflyer.com/index/cleveland\\_brt](http://www.newflyer.com/index/cleveland_brt)

Yahoo Finance, 2/10/06 and 2/20/06

<http://biz.yahoo.com/prnews/060210/def009.html?.v=36&printer=1>

<http://biz.yahoo.com/bw/060320/20060320005556.html>

New York State press release, 2/15/06

<http://www.ny.gov/governor/press/06/0215062.html>

Port Authority press release, 2/27/06

<http://www.panynj.gov/AboutthePortAuthority/PressCenter/PressReleases/PressRelease/index.php?id=793>

NREL Interim Report:

[http://www.eere.energy.gov/vehiclesandfuels/avta/pdfs/heavy/nyct\\_interim\\_report\\_final.pdf](http://www.eere.energy.gov/vehiclesandfuels/avta/pdfs/heavy/nyct_interim_report_final.pdf)

Green Car Congress, 2/7/06 and 12/7/05

[http://www.greencarcongress.com/2006/02/mayor\\_launches\\_.html](http://www.greencarcongress.com/2006/02/mayor_launches_.html)

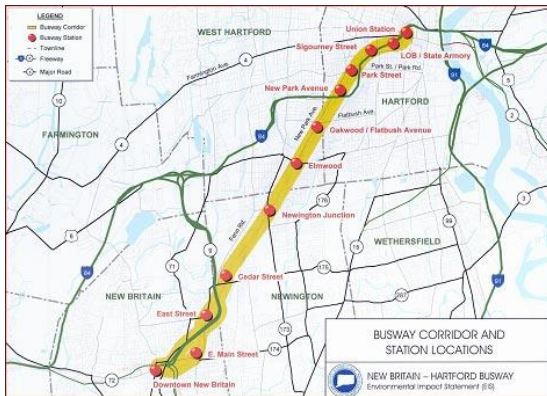
[http://www.greencarcongress.com/2005/12/ottawa\\_delays\\_c.html](http://www.greencarcongress.com/2005/12/ottawa_delays_c.html)

WMATA press release, 1/25/06

[http://www.wmata.com/about/met\\_news/PressReleaseDetail.cfm?ReleaseID=1080](http://www.wmata.com/about/met_news/PressReleaseDetail.cfm?ReleaseID=1080)

## Transport News from the United States

### **New Britain-Hartford Busway revived**



In February, the FTA upgraded its rating for Connecticut's New Britain-Hartford Busway project, making it eligible to receive federal funds. Current plans call for a 9.4-mile, 11-station, dedicated BRT system operating primarily on an abandoned railroad right-of-way. Half of the estimated 20,000 daily bus riders are expected to be former motorists. By 2025, 57,200 weekday boardings are projected.

ConnDOT must finalize the project's scope, schedule and right-of-way costs, as well as ensure needed financial commitments, by the end of September 2006. The day after FTA's ratings were released, the Connecticut governor proposed \$50 million to match anticipated federal funding for the busway.

*Source:*

FTA New Starts Report

[http://www.fta.dot.gov/documents/CT\\_Hartford\\_New\\_Britain\\_Hartford\\_Busway.doc](http://www.fta.dot.gov/documents/CT_Hartford_New_Britain_Hartford_Busway.doc)

Capitol Region Council of Governments

<http://www.crcog.org/Publications/Transportation/NBHBusway/BuswayMovesForward.pdf>

### **Los Angeles' Orange Line survey shows busway benefits**

In January, the Los Angeles County Metropolitan Transportation Authority (MTA) surveyed riders of the new Orange Line service. Of the 1,300 survey respondents, 85% said the busway was faster than their previous method of commuting. Seventeen percent of respondents had not ridden MTA's buses or trains before taking the Orange Line, and 14% previously drove alone in a car. Of those who previously drove on the neighboring 101 Freeway, 77% said the busway was faster.



The busway operates twenty-five 60-ft articulated, compressed natural gas buses on a 14-mile route. Service is scheduled between 4:00 a.m. to 1:00 a.m., with frequencies ranging from five to ten minutes. The Orange Line averages 16,000 daily boardings, far above the early projections.

LACMTA also is dealing with several complaints about excessive noise from the busway. Sound walls and rubberized asphalt have been installed and rooftop exhaust pipes have been modified to reduce noise. MTA is meeting with landlords/homeowners to find additional solutions, such as installing double panes on home windows to provide insulation from busway sounds.

*Source:*

MTA news release, 2/6/06

[http://www.mta.net/press/2006/02\\_February/metro\\_018.htm](http://www.mta.net/press/2006/02_February/metro_018.htm)

San Gabriel Valley Tribune, 2/4/06

[http://www.sgvtribune.com/portlet/article/html/fragments/print\\_article.jsp?article=3477245](http://www.sgvtribune.com/portlet/article/html/fragments/print_article.jsp?article=3477245)

LA Daily News, 2/10/06

[http://www.dailynews.com/news/ci\\_3497298](http://www.dailynews.com/news/ci_3497298)

## **Kansas City transit ridership increases attributed in part to new Rapid Bus service**



The Kansas City Area Transportation Authority (KCATA) reported a 5.6 percent increase in average weekday ridership in 2005, ending a three-year decline. KCATA's general manager attributed some of the increase to the rapid bus line, MAX, which was implemented in July 2005, as well as to expanded weekend service on four bus routes. The MAX corridor showed ridership increases of more than 20% over 2004. The KCATA also released a study showing that MAX riders are more satisfied than convention Metro bus riders. About 65% of MAX riders reported rated the service at 9 or 10 on a scale of 1-10; 45% of Metro bus riders reported the same level of satisfaction.

*Source:*

KCATA news release, 1/12/06

<http://www.kcata.org/media/2006Ridership.htm>

Kansas City Star, 1/22/06

<http://www.kansascity.com/mld/kansascity/news/local/13682052.htm>

## New Haven, Connecticut unveils hydrogen transit vehicle program

The Greater New Haven Transit District announced the creation of a consortium to design, build and demonstrate two hydrogen hybrid transit vehicles and two hydrogen generation and fueling systems. The first of the proposed 34-ft vehicles will feature a composite body and hybrid fuel cell drive. Production is expected to begin in mid-2006 with delivery in 2007. The second vehicle will feature the same chassis powered by a hybridized hydrogen internal combustion engine system. Delivery is expected in 2009.

New Haven also plans to develop a renewably-powered electrolytic hydrogen fueling station and a natural gas fueling system. Technical partners for this project include Gas Technology Institute (team leader), Hydrogenics (fuel cell), Avalence (electrolyzer), Mobile Energy Solutions (composite body and vehicle design), and Sabre Engineering (electrical systems engineering). Funding comes through the U.S. Federal Transit Administration.

*Source:*

EV World, 1/27/2006

<http://www.evworld.com/view.cfm?section=communique&newsid=10837>

Origen press release, 1/26/06

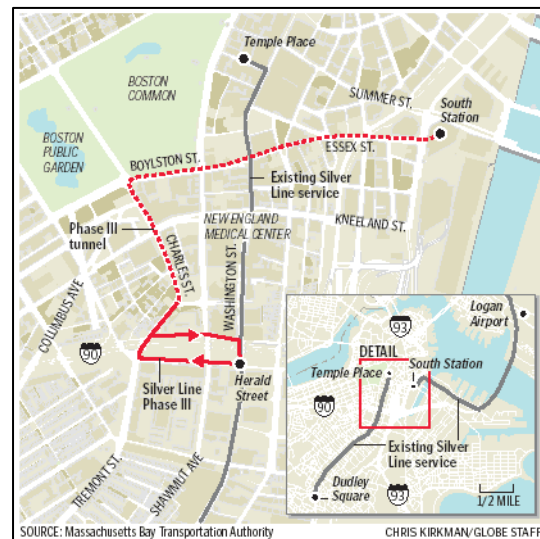
## Boston officials endorse new Silver Line proposal

After months of delay, transportation officials and business leaders endorsed a new plan to build a tunnel connecting two sections of the Silver Line BRT service. This is the final phase of the project and is necessary to make the Silver Line a one-seat ride from Roxbury to Logan Airport and the waterfront. Construction could start by 2009 and finish by 2013 or 2014. The final phase is awaiting federal approval.

*Source:*

Boston.com 3/10/06

[http://www.boston.com/news/local/articles/2006/03/10/officials\\_endorse\\_silver\\_line\\_tunnel/](http://www.boston.com/news/local/articles/2006/03/10/officials_endorse_silver_line_tunnel/)



## **San Francisco studying congestion pricing**

The U.S. Federal Highway Administration (FHWA) is providing a \$1 million grant to the San Francisco Transportation Authority to conduct a feasibility study of congestion pricing for downtown San Francisco. The study will examine where charging zones should be located, rates to be charged, collection strategies, administration, and how funds would be used to improve overall transportation access and mobility in the city. San Francisco is the first city to study congestion pricing under FHWA's Value Pricing Program, which is authorized for \$59 million through 2009 to study congestion pricing.

Congestion pricing has attracted interest following the success of London's program, introduced in 2003. London has cut congestion by a third within the pricing zone and is expanding the size of the zone in 2007. Stockholm began a 7-month pilot project in January 2006.

*Source:*

San Francisco Transportation Authority news release, 1/12/06  
<http://www.sfcta.org/GrantAnnouncementPressRelease1-12-06.pdf.pdf>

## **New York State offers funding for clean-fueled buses**

New York State has established a \$50 million fund to help the state's public transportation agencies purchase hybrid and CNG buses. New York City transit agencies are not eligible. Twenty million from the fund will be available through April 1, 2007. The remaining thirty million will be made available at a rate of ten million annually. The funding is provided through a Transportation Bond Act approved by voters in 2005.

*Source:*

New York State Department of Transportation, 2/15/06  
<http://www.dot.state.ny.us/news/2006/021506.shtml>

Metro Exchange online, 2/16/06

## **"Green" bus maintenance facility to be constructed in Arizona**

The Arizona cities of Tempe and Scottsdale, in cooperation with the regional transit agency, will soon break ground for the East Valley bus operations and maintenance center, a 22-acre facility that is designed to reduce environmental impacts and energy consumption.

Some of the facility's sustainable strategies include:

- Oil/water separator to filter stormwater runoff
- Reclaim/reuse 90% of bus washer water
- Under-floor air distribution system to reduce energy use by up to 47%
- Metal canopies over buses to reduce heat island effect
- Drought resistant native landscaping
- Natural lighting in regularly occupied office spaces
- Recycled content in carpet, tile, millwork and ceiling finishes
- Low Volatile Organic Chemical-emitting interior paint

The facility administration office will be submitted for LEED (Leadership in Energy and Environmental Design) Gold certification by the U.S. Green Building Council, with the remainder of project submitted for LEED Silver certification. The total cost will be \$47.5 million, with federal, local and public transit funding.



Grand Rapids' LEED-certified Rapid Central Station

Grand Rapids, Michigan's Rapid Central Station – the main hub for the rapid bus system — was the first LEED certified transit facility in the country. The station opened in 2004.

Source:

Passenger Transport, vol. 64, No. 5, 1/30/06

American Institute of Architects, Grand Valley Chapter  
[http://www.gvaia.org/2005\\_honor\\_award\\_winners.html](http://www.gvaia.org/2005_honor_award_winners.html)

## **BRT proposed for Baton Rouge, Louisiana**

Baton Rouge, Louisiana is seeking funding for a proposed Bus Rapid Transit system in East Baton Rouge Parish. The system would feature dedicated lanes and right-of-way at traffic signals and is estimated to cost \$150 million, most of which is hoped to be provided by the federal government. Baton Rouge also is considering express bus routes using freeway shoulders.

*Source:*

2theadvocate.com – WBRZ, 2/4/06  
<http://www.2theadvocate.com/news/2256682.html>

Business Report, 1/3/06

## **Bush Administration requests \$45 million for clean buses**

The Bush Administration's fiscal year 2007 budget includes a request for \$45 million to fund the Clean Fuels Grant Program, which was re-authorized under the four-year transportation legislation known as SAFETEA-LU. The program provides grants for clean fuel buses and facilities. This marks the first time that separate funding for this program has been requested since it was originally authorized in 1999.

*Source:*

EESI Clean Bus Update:

[www.eesi.org/publications/Newsletters/Clean%20Bus%20Update/Feb%202006.htm#news](http://www.eesi.org/publications/Newsletters/Clean%20Bus%20Update/Feb%202006.htm#news)

Federal Transit Administration:

[www.fta.dot.gov/documents/FAQ\\_Clean\\_Fuels\\_Grant.doc](http://www.fta.dot.gov/documents/FAQ_Clean_Fuels_Grant.doc)

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## **Transport News from Around the World**

### **London aims to operate 70 hydrogen vehicles by 2010**

Mayor Ken Livingstone seeks to introduce 70 new hydrogen vehicles by 2010. The hydrogen vehicle plan is one of several measures in the mayor's 2006-2007 budget to address air quality, health issues and global climate change.



London's fuel cell bus  
Courtesy: NREL

The procurement process for ten fuel cell buses has already begun. The city currently operates three Daimler Chrysler fuel cell buses as part of the CUTE (Clean Urban Transport for Europe) project, a European Commission-funded project that supports the demonstration of 27 fuel cell buses in nine European cities.

*Source:*

Fuel Cell Today, 2/28/06

<http://www.fuelcelltoday.com/FuelCellToday/IndustryInformation/IndustryInformationExternal/NewsDisplayArticle/0,1602,7308,00.html>

## **Lagos, Nigeria contracts for high capacity buses and bus assembly plant for BRT**

Lagos is making a major investment in BRT. The state ordered 200 high capacity buses from Marcopolo International, which will begin to ship 15 buses per week beginning in February 2006. In addition, the state has entered into an agreement with Marcopolo and BHL Investment and Technology to establish a bus assembly plant in Lagos state with a capacity of 300 buses per year.

BRT was adopted by Lagos State Government to address the “chaotic transportation system” in the city. The BRT route system will have dedicated lanes with associated road and terminal infrastructure. The Lagos government has begun to allocate funding for BRT roadway and station infrastructure, the bus assembly plant, and recurring expenditures.

*Source:*

Daily Independent, 2/13/06

<http://www.independentng.com/news/nfeb130606.htm>

## **Sweden, Iceland aim to eliminate fossil fuel dependence**

Sweden’s prime minister recently announced a goal of eliminating Sweden’s dependence on oil by 2020. Measures recommended include boosting research into alternative fuels and giving tax breaks for use of renewable fuels in the transport sector. Sweden currently uses more ethanol per capita than any other EU country, due to a pilot project where about 5% ethanol is mixed into gasoline. Although about 1% of Sweden’s 4 million vehicles run on alternative fuels, sales of such cars have almost doubled in the last year. A law passed in December 2005 makes it mandatory for all major gas stations to offer at least one alternative fuel at pumps.

Iceland also wants to reduce oil dependency by converting all cars, buses, trucks to run on renewably-produced hydrogen. Iceland uses its natural hot springs to heat homes and businesses, and its electricity is provided by water run through turbines. By the middle of this century, Iceland seeks to have all cars running on hydrogen produced by water electrolysis.

*Sources:*

Fuel Cell Works, 1/18/06

<http://www.fuelcellworks.com/Suppage4338.html>

Environmental Data Interactive Exchange, 1/19/06

[http://www.edie.net/news/news\\_story.asp?id=10987](http://www.edie.net/news/news_story.asp?id=10987)

Environmental News Network

<http://www.enn.com/today.html?id=9822>

## European fuel cell buses' run extended for one year

The European Union is funding a one-year extension for DaimlerChrysler's fuel cell bus demonstrations in seven European cities: Amsterdam, Barcelona, Hamburg, London, Luxembourg, Madrid and Reykjavik. The buses already have completed a two-year demonstration as part of the CUTE and ECTOS (Ecological City TranspOrt System) projects, which demonstrated thirty Mercedes-Benz Citaro buses with Ballard fuel cells in ten cities. Six additional buses were placed into service in Beijing and Perth, Australia. Since 2003, the 36 buses have logged almost 1.1 million kilometers, with the Ballard fuel cell stacks in operation for more than 2,000 hours without a loss of performance, according to DaimlerChrysler. The EU is funding this extension as part of the HyFleet:CUTE project, which will also feature new hydrogen powered buses, including hydrogen internal combustion engine buses and new fuel cell buses with hybridized systems.



*Source:*

Fuel Cell Today

<http://www.fuelcelltoday.com/FuelCellToday/IndustryInformation/IndustryInformationExternal/NewsDisplayArticle/0,1602,7332,00.html>

Cordis News Service, 3/3/06

[http://icadc.cordis.europa.eu.int/fep-cgi/srchidadb?CALLER=EN\\_NEWS&ACTION=D&RCN=25297&DOC=1&CAT=NEWS&QUERY=1](http://icadc.cordis.europa.eu.int/fep-cgi/srchidadb?CALLER=EN_NEWS&ACTION=D&RCN=25297&DOC=1&CAT=NEWS&QUERY=1)

New Fuels and Vehicles, 3/3/06

[http://fuelsandvehicles.com/secure/FUELS/fuels\\_docnum.asp?f=ew\\_2002.ask&docnum=ew2006\\_0660&q=\[registration required\]](http://fuelsandvehicles.com/secure/FUELS/fuels_docnum.asp?f=ew_2002.ask&docnum=ew2006_0660&q=[registration%20required])

## Group urges Chennai, India to adopt BRT

Pattali Makkal Katchi (PMK) is opposing a state government plan to build a 300 km monorail in Chennai, India, and is strongly recommending bus rapid transit system instead. The BRT plan is supported by Pasumai Thaayagam (Green Motherland), a pressure group which has launched its own "Campaign for Sustainable Transport" in Chennai. Both groups believe that only BRT is capable of meeting the transport needs of Chennai's populace. They also

support development of a separate path for bicycles on all roads, improved rights of way for pedestrians and better air quality. The BRT plan is backed by the Indian Railway Minister for the state.

Most of Chennai's population utilizes public transport, bicycles and pedestrian pathways. However, bus ridership has declined from 4.3 million in 1998 to 3.3 million in 2005.

*Source:*

People and Planet, 2/21/06  
<http://www.peopleandplanet.net/doc.php?id=2679>

The Hindu, 1/25/06  
<http://www.hindu.com/2006/01/25/stories/2006012507140400.htm>

### **TransJakarta opens two new busway corridors**

TransJakarta opened two new busway corridors on January 15, 2006, although construction was not yet complete and only eight of 71 CNG buses were delivered. Full opening of the corridors (Pulogadung-Harmoni, 14.3 km and Harmoni-Kalideres, 18.7 km) is expected to occur in April 2006. In the interim, TransJakarta is borrowing 15 buses from Blok M-Kota, Jakarta's first busway, which opened in January 2004. Initial ridership was 28,000 passengers per day and had increased to more than 65,000 passengers per day by mid-2005.



*Source: Jakarta Post, 1/13/06*

*Source:*

Indahnesia.com, 1/16/06  
[http://news.indahnesia.com/item/200601162/new\\_busway\\_routes\\_up\\_and\\_running.php](http://news.indahnesia.com/item/200601162/new_busway_routes_up_and_running.php)

### **BRT route proposed for Melbourne, Australia**

A plan to introduce bus rapid transit to Melbourne, Australia has been proposed by Bus Association Victoria and the city's largest bus operator, Ventura National Bus Line.

The proposed BRT route would operate from the eastern suburbs of the city to the central business district, running along the Eastern Freeway and terminating at Spencer Street. The plan is anticipated to reduce travel time by 10 to 15 minutes. Daily service would be provided until midnight, with service provided every two to three minute during peak hours. Estimated

cost would be \$10 million (AU). Melbourne city officials are also exploring the possibility of developing bus lanes along several other city roadways.

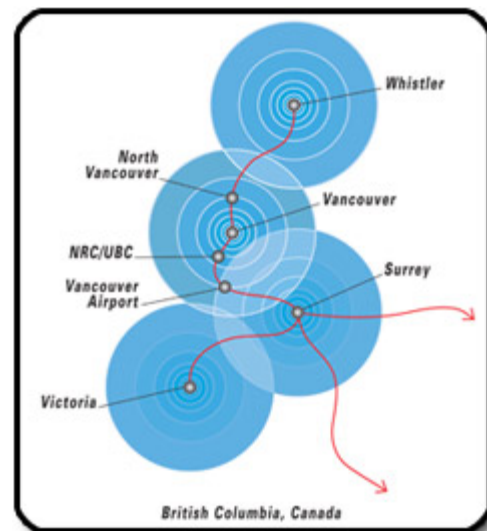
*Source:*

The Age, 3/2/06

<http://www.theage.com.au/news/national/plan-for-fast-regular-bus-trips-to-city/2006/03/01/1141191733731.html>

## **Fleet of 20 fuel cell buses planned for British Columbia**

B.C. Transit is working to secure federal funding to deploy 20 hybrid fuel cell buses and a hydrogen fueling station in Whistler, Victoria for the 2010 Olympics. The fuel cell buses would replace older buses in the Whistler fleet and will serve Whistler and other communities, as well as showcase Canada-based technologies during the 2010 Games. A hydrogen fuelling station to be built in Whistler would serve as the northern terminus for a "Hydrogen Highway" which would extend south through Vancouver. British Columbia officials ultimately hope to connect the highway to California's hydrogen highway. The seven-year, \$89 million project was initiated under the old Liberal government, but officials believe the project still has federal support. B.C. Transit has already issued a request for expressions of interest from industry for the project.



Planned Canada Hydrogen Highway

*Source:*

Whistler Question, 2/9/06

<http://www.whistlerquestion.com/madison%5CWQuestion.nsf/0/9A603BEB42EAE37882571100003D5A3?OpenDocument>

WestStart/Calstart Newsnote, 12/19/05

[http://calstart.org/info/newsnotes/nn\\_detail.php?id=7924](http://calstart.org/info/newsnotes/nn_detail.php?id=7924)

## **Bangkok BRT project may be cancelled**

According to the Bangkok Metropolitan Administration (BMA), the city may cancel plans for development of a bus rapid transit system. The BRT plan was originally announced in September 2004 and was a priority of the city's

mayor. However, the plan experienced several setbacks, including lack of funding and lack of support from at least two city agencies – the traffic police and the highways department.

*Sources:*

The Nation, 2/24/06

[http://nationmultimedia.com/2006/02/24/national/national\\_20001469.php](http://nationmultimedia.com/2006/02/24/national/national_20001469.php)

Bangkok Post, 2/24/06

[http://www.bangkokpost.com/News/24Feb2006\\_news13.php](http://www.bangkokpost.com/News/24Feb2006_news13.php)