Daimler reveals hybrid and electric Citaro plan

Daimler Buses used the Busworld show in Kortrijk to announce a hybrid version of the Citaro and set out its plans for an electric version from 2019.

The vehicle aims to keep the costs of its hybrid solution low by utilising a hybrid system derived from the Mercedes-Benz S-Class car. Meanwhile, Daimler has chosen to dispense with batteries to store energy from the hybrid system in favour of double-layer capacitors, also known as ‘supercaps’.

Daimler says these electricity storage units are characterised by a high power density. They are resistant to high power peaks and have a long life. Unlike batteries, supercaps are ideally suited to the continuous quick changeover between charging and discharging that occurs when stopping and pulling away again in typical city bus operation.

“Braking to a stop from a speed of 50 km/h just once is enough to recharge the power storage units in the Citaro hybrid,” claims Daimler.

Meanwhile, speaking at the show, Harmut Schick, head of Daimler Buses, confirmed plans for production of an electric version of the Citaro. He said that Daimler is currently on track to test prototype electric Citaros with customers from next year with serial production planned at Daimler’s Mannheim plant from 2019.

Responding to claims that Daimler was late to the market with plans for an electric Citaro, Schick said that the manufacturer was aiming to meet demand from large volume tenders from major operators seeking electric vehicles from 2020 onwards.

The vehicles will be an entirely new product too. “It has nothing to do with a diesel bus anymore,” said Schick. “The axles are different, the drive, all auxiliaries are electric and so on. Only the shell remains the same.”

Daimler is also planning a new ‘mobility solutions’ department that will support the electric Citaro. This operation will look at charging and infrastructure solutions, such as smart charging.

Meanwhile, Daimler is hoping to leverage economies of scale, as with the use of the S-Class hybrid system in the Citaro Hybrid, by building its own battery factory to supply batteries for vehicles across the various Daimler business units.

ABB Charging plans revealed

Smart charging solution for bus depots offered

ABB used last month’s Busworld show in Kortrijk, Belgium, to reveal a new depot-based smart charging solution for electric buses. The result of 12 years’ research, the design aims to be both modular and future-proof. Each 50kW station, which can be expanded to 100kW or 150kW, can be paired with up to three charge boxes. Vehicles are charged one by one in order to maximise availability.
**Electric bus rollout wins LowCVP award**

Go-Ahead London, BYD and TfL win grand prix top award

**AWARDS**
- A project to introduce 51 fully electric buses in London was named as the top award winner at the 2017 Low Carbon Champion Awards, organised by the Low Carbon Vehicle Partnership (LowCVP).

Bus operator Go-Ahead London won the grand prix award in partnership with Transport for London and electric bus manufacturer BYD. It followed the partnership winning top honours in the Low Carbon Vehicle Operator of the Year category.

The partners have worked together to introduce the vehicles, operational capacity and infrastructure to support the conversion of two London bus routes to fully electric operation.

The project has seen Go-Ahead London’s Waterloo garage on the South Bank remodelled to accommodate the vehicles and their charging infrastructure. Working with infrastructure supplier, SSE, the partnership has overcome technical challenges to transform the space-constrained garage into a large-scale, fully-electric operation.

Commenting on the Grand Prix award, the judges said: “To accommodate over 50 electric buses and charging infrastructure in a space-constrained environment, the group worked tirelessly to remodel the Waterloo bus garage.

“The manufacturer, BYD, and the operator, Go-Ahead London, worked with Transport for London and in close cooperation with infrastructure supplier SSE, to bring this challenging project to fruition.”

Elsewhere, The London EV Company, formerly known as the London Taxi Company, was named a Low Carbon Car/ Van Manufacturer of the Year. Meanwhile, BYD won the Low Carbon Heavy Duty Vehicle Manufacturer of the Year Award. David Martell, founder and chief executive of Chargemaster, one of the leading companies in the electric vehicle charging sector, was named as Outstanding Individual in Promoting Low Carbon Transport.

Commenting on the winners, transport minister Jesse Norman said the awards “highlight the progress being made”.

**INSIDE TRACK ON TRAP TECH**

Bus operator video reveals how SCRT system installed

**EMISSIONS**
- National Express West Midlands has produced a new video for its YouTube channel that allows viewers to see first hand how low emission suppression technology is being installed on its vehicles.

It takes a team of two NXWM engineers around six hours (reduced to just three minutes in the video) to fit a filter and a Selective Catalytic Reduction Trap (SCRT) with AdBlue injection system to each bus.

Once installation is finished, the harmful emissions coming out of the exhaust are reduced by as much as 96%.

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**VOLVO’S ELECTRIC PROGRESS**
- Swedish manufacturer Volvo launched a new version of its all-electric Volvo 7900 Electric bus at the Busworld show in Kortrijk, Belgium, last month.

With significantly extended range and more charging options, the changes aim to offer operators greater flexibility. The new Volvo 7900 Electric is available with a choice of 150, 200 and 250 kWh. This means that the bus can run far longer between charges, allowing it to be utilised more efficiently throughout the day. The first models will be available from the end of 2018.

**ELECTRIC OPEN TOPPER**
- Open Tour, RATP Dev’s global sightseeing tour bus operation, has teamed up with manufacturer UNVI to design the first 100% electric production open top buses. The prototype vehicle was displayed at the Busworld show in Kortrijk, Belgium, last month. The 12-metre-long vehicle can carry 75 passengers and has a range of 150 kilometres. The introduction of the vehicle will allow the entire Open Tour Paris fleet, comprising 40 vehicles, to be converted to fully electric operation by 2024.

**T-CHARGE IS INTRODUCED**
- London mayor Sadiq Khan launched the new Toxicity Charge (T-Charge) on October 23, which he claimed is the world’s toughest emission charge. It means drivers of pre-Euro 4 vehicles must now pay the £10 T-Charge fee on top of the existing £11.50 Congestion Charge. Up to 34,000 polluting vehicles every month could be liable for the T-Charge. Since the start of 2017, those vehicles have made more than 2.6 million trips within the existing C-Charge zone.

**IN BRIEF**

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