

"Public Transport 2014" in Paris: Urbanway range is filled out with electric hybrid and high-service-level versions

"Making fuel economies has never been so simple" for Iveco Bus clients

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Through its presence at the "Public Transport 2014 / The European Mobility Exhibition", Iveco Bus is reaffirming its company values of sustainable development, technological excellence, total cost of ownership and higher added value for the client in terms of quality, comfort, design and profitability.

Urbanway is the new reference for city bus in Europe, completely renewing the Iveco Bus range, responding even more closely to the expectations of public authorities and operators for yet more attractive vehicles that respect the urban environment.

Following the 2013 presentation of the 12-metre diesel Euro VI (Cursor 9 transverse and Tector 7 longitudinal versions) and the 18-metre articulated version (Cursor 9 transverse version), Urbanway in 2014 has expanded its range with two new versions that are to be seen on the Iveco Bus stand in Paris:

- ▶ **Urbanway 18 m Full Hybrid** fitted with the new "Arrive & Go" facility → **World première!**
- ▶ **Urbanway 12 m BHNS** (Bus à Haut Niveau de Service = High Service Level Bus) → **World première!**

The Iveco Bus stand is also highlighting the following:

- ▶ **Crossway LE** (Low Entry) **10.80 m long** – homologated as a city bus.

Urbanway is cutting edge technology combined with attractive design

The Urbanway is truly a "city lounge" and is available in a variety of forms. The range demonstrates the high-performance, lasting and economical solutions that Iveco Bus is now offering the European public transport sector.

The Urbanway bus steel structure combines reduced weight and very high strength. This frame has anticorrosion protection applied by cathodic dip during a total immersion process, guaranteeing excellent durability over time.

The Urbanway concept brings together state-of-the-art technology and a design that provides plenty of light and complete operational safety. LED headlights combine daylight running lights (DRL) and an LED lighting module for rear, braking, flashing and reversing lights, where all the separate elements are elegantly combined and integrated into the coachwork. This reflects the new style that now characterises the whole Iveco Bus Euro VI range of buses and coaches.

Concerning the interior, Urbanway has been working with a completely new roof design where overall performance has been made significantly more attractive in terms of quality of light and climate comfort. The interior lighting system is made up of two continuous banks of LED lamps that



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can be personalised in different ways, along with an indirect ambient lighting design incorporating LED spots into the upper part of the support columns.

The new interior air distribution system is made up of ducting that accommodates both the heating and air-conditioning systems; for instance, an "air curtain" is now deployed at each door (including the 4-door articulated version). A strengthened fixing system that is kept separate from the interior cladding panels means that running noise is reduced. The result is significantly improved air circulation within a silent passenger space. No compromise where comfort is concerned!

The new range of passenger seating is characterised by reduced weight, modular adaptability and simplified maintenance.

The Urbanway range now has a completely new driver space configuration. It has been developed following the latest European Bus System of the Future recommendations (EBSF) under the aegis of the Union Internationale des Transports Publics (UITP), and has already become a benchmark in terms of ergonomics, ease of use, and comfort. The raised driver position provides excellent visibility of the exterior and less stressful driving while offering better driver protection in the case of a frontal collision.

Urbanway buses are built at the Iveco Bus factory at Annonay in France. The factory employs more than 1200 salaried staff. It won the World Class Manufacturing (WCM) bronze medal in 2013. This international WCM scheme monitors and encourages production processes to be in line with the most advanced world standards. This Iveco Bus Annonay factory success has made the site part of the official circle of the most productive factories in the world.

Urbanway Euro VI motorisation activity has a simple Hi-eSCR depolluting solution

Well known for their reliability, performance and reduced fuel consumption, the Tector and Cursor Euro V EEV (Enhanced Environmentally-friendly Vehicle) engines - with respectively 5.9 and 7.8 litres displacement - now get larger capacity in **Euro VI** versions: the 6.7 litres **Tector 7** and the 8.7 litres **Cursor 9** units have more power and torque while consuming less fuel!

The Cursor 9 Euro VI is fitted with the latest generation Common Rail fuel injection system under the rocker cover (an FPT Industrial exclusive). This solution also realises a significant reduction in internal noise.

To fulfil Euro VI requirements, the adopted system is a Hi-eSCR (High Efficiency SCR) catalytic reduction process patented by FPT Industrial. This exclusive technology retains optimal combustion for an engine that can work only on fresh air. Pollution removal is entirely done at the post-processing stage, that is, downstream of the engine which, for this reason, does not need to resort to recycling exhaust gases (EGR). The Hi-eSCR solution is particularly suitable for use in urban situations that are characterised by low commercial vehicle operating speeds and many stops. Also bus rear-mounted engines have heightened cooling requirements (the exhaust gases circuit, itself, brings a minimum 30% increased cooling need for the equivalent power).

The Hi-eSCR system is protected by many patents, and brings a simple solution to the major challenge of reducing polluting emissions to the levels imposed by Euro VI, without the addition of complex components, without engine and peripherals chemical pollution, and without generating excessive heat. All this has resulted in a reduction in weight and increased reliability.

All this, combined with many other refinements including transmission modernisation and optimisation and a reduction in vehicle weight, has resulted in a **reduction in fuel consumption of between 5% and 10%** compared with Euro V units (depending on model and type of use).

The 12 m Urbanway bus fitted with a 286 bhp Tector 7 unit, has lost more than 800kg in weight compared to its 12 m Citelis predecessor (with a 290 bhp Cursor 8 unit), and offers 10% increased passenger capacity, thus increasing operating profitability.

Along with the Cursor 9, the 12 m Urbanway is offered in 310 or 360 bhp versions, whilst the 18 m Urbanway is available in 360 bhp or 400 bhp versions. With the 400 bhp unit installed, the articulated Urbanway is particularly suitable for steep bus routes, and for operation in situations that require a larger compressor for intensive air-conditioning use. These performance figures were obtained without deviating from the fuel consumption figures. Another significant advantage is that the vehicle retains the same passenger capacity as the old 18m Citelis Euro V EEV unit. Note that passengers travelling in the articulated section now have a dedicated ventilation system, and that the accordion connecting section is translucent on each side.

Taken as a whole, the economic case for the new units that are now part of the Urbanway range is very favourable. The drop in the Total Cost of Ownership figure means a quick return on the additional costs engendered by using Euro VI technology.

The Urbanway Full Hybrid is silent, simple, clean and efficient

Because of the recognised Iveco Bus leadership in the field of alternative propulsion systems, the company has been anticipating the continually growing expectations of the political authorities and the operators for clean vehicles that respect natural resources, the environment and public health.

Several studies, such as those from Austria's Graz University and Finland's Helsinki VTT Institut, have recently shown that the battery-operated Iveco Bus Hybrid series design is the most suitable for urban requirements.

Effectively the hybrid traction system offers gentle acceleration without jolts (there is no gearbox) whilst the batteries are able to recover a large amount of energy when decelerating, which can be used for acceleration at the start.

Beginning with the experience gained from the first Citelis-based "Stop & Start" Hybrid bus generation in 2010, Iveco Bus has now developed the "**Arrive & Go**" second generation, along with developing the new Urbanway generation.

In this way, when approaching and departing from bus stations, and at red traffic lights, the Urbanway Hybrid traction series bus is capable of moving off in pure electric mode for a total distance of about 60 metres, silently and without generating any pollution.

The environmental performance guaranteed by the new "Arrive & Go" function is remarkable. The complete shut-down of the Tector 7 Euro VI engine eliminates unwanted sound and vibration. This function kicks in automatically without any intervention from the driver. The comfort experienced by residents, pedestrians, passengers and driver is immediate, and benefits all in such a soothing environment.

With their lighter – but still more robust – structure, and with the compact longitudinal placement of the Tector engine, generator and electric motor assembly, the 12m and 18m Full Hybrid Urbanway units have a significant weight reduction compared with the previous generation, and have a 10- to 12-passenger increased capacity, without any loss of passenger seats. The maximum capacity of the 18m Urbanway Hybrid bus can reach up to 170 passengers.

In total the Full Hybrid Urbanway series with the "Arrive & Go" function provides up to 35% fuel economy compared with that of a conventional bus, and gives out a remarkably low CO₂ rate per passenger, that is 10% lower for the 12m version and 12% lower for the 18m version, compared with the first generation Citelis Hybrid. This puts in place one more step towards decarbonised mobility.

Iveco Bus is the European leader in natural gas engined buses

The virtuous urban transport system recommended by Iveco Bus includes the use of natural gas. This fuel mode has interested many networks, and continues to win over new followers who want to deal with urban pollution, a subject currently at the heart of the worries of many European cities.

The CNG Cursor 8 engine is known for its technical excellence. It is known for its particularly efficient combustion, so called stoichiometric. The engine's polluting emissions are lower than those recommended by the Euro VI Directive, mainly in the category of the fine particles responsible for respiratory illnesses in an urban situation. Furthermore, the Cursor 8 natural-gas noise emissions are halved, and engine and road vibrations are reduced at all operating speeds compared with a diesel vehicle, to the very great benefit of city dwellers and passengers.

In France, Iveco Bus and its previous brands have close to 95% of the natural gas bus fleet with more than 2100 vehicles. 3000 other vehicles in several sizeable fleets across Europe can be added to this. Countries concerned include Italy, The Netherlands, the Czech Republic and Greece, totalling more than 5000 vehicles in service.

Iveco Bus CNG buses are 100% compatible with the second-generation biofuel known as biomethane, which comes from our waste. In this case Iveco Bus natural gas buses can guarantee a carbon-neutral balance and can offer a practical step in a necessary energy transition. In other words, the use of natural gas in this way does not bring about any climatic heating. It is therefore a solution that is able to respond now to the 21st century road transport challenges of air quality, climate protection and silence of operation, without giving anything away in terms of the fundamental advantages of the bus, which is flexibility of operation and low operational costs. The one hundred and fifty Iveco Bus buses used today by the Lille network represent a perfect example of vehicles that transport passengers without emitting any carbon, and without using fossil fuels. The economic fall-out from this circular thread is substantial. It includes the creation of added-value and non-transferable jobs, transforming waste into a resource, securing energy independence and improving the national commercial balance.

The Iveco Cursor 8 natural gas engine is made at the Bourbon-Lancy factory in France. This site employs 1400 salaried staff. 24,000 CNG Cursor 8 units have left this industrial site since 2003, finding road and industrial applications across the world. Their activity has included in fitting out buses for the Beijing bus network.

The new High Service Level Urbanway provides high added value for BRT projects

The High Service Level Bus (BHNS in French, Bus à Haut Niveau de Service) is an urban transport network global value-enhancing system that brings together rolling stock and the operating and infrastructure systems to bring about a significant improvement in frequency, operating speeds and regularity for the transport network. The objective is to prioritise overall passenger mobility, and create a modal shift in operational practice.

Iveco Bus has been the forerunner in High Service Level Bus vehicles for more than ten years, as demonstrated by its Cristalis, Citelis BHNS and Crealis ranges. The company has delivered more than 600 units in total. The net increased frequency that networks using these vehicles have noted bears witness to the attractiveness of the High Service Level Bus concept proposed by Iveco Bus.

With its High Service Level Urbanway bus system, Iveco Bus continues to provide innovative and competitive solutions to the challenge of enhancing the notion of comfort and service for the traveller. This is done by providing a modern and welcoming interior ambience, and offering a strong custom-designed vehicle image that suggests dynamism and fluidity.

Excellent accessibility for all, high-level comfort and the attractiveness associated with high-value design: these are the characteristics that are seen as satisfying the requirements for this specific type of operation. They translate into a huge assortment of 3500 stylistic combinations, from the most basic to the most sophisticated, allowing clients to establish their level of service on their 12m or 18m, Euro VI diesel, CNG or Hybrid Urbanway bus. Other examples include wheel and cab streamlining, additional side glazing to increase natural light input, transparent roof trapdoors, translucent seat backs and personalised coverings.

All these options are fully industrialised, ensuring a constant quality and an availability of spare parts for the life of the vehicle.

Transport engineering specialists consider that a High Service Level Bus line is two to three times less costly than a tramway line with an equivalent transport capacity – and yet it is quicker to implement. Another key point is that a High Service Level Bus network can be progressively developed in line with project budgets and phases.

Short Low Entry (LE) Crossway (10.80 m) "city bus" version

The Crossway coach is the indisputable leader in its category in Europe. It has been adopted by the major European transport groups and retains a substantial majority of the market in France. The Crossway coach is the ideal extension for urban transport, including excursion missions along with school transport and interurban systems.

It makes up a true range that demonstrates its flexibility in being available in three lengths (10.8 m, 12 m and 13 m), all available in two- or three-door versions, and in five versions one of which is characterised by its front and central Low Entry access points: the **LE** version.

The vehicle shown on the Iveco Bus stand at the "Public Transport 2014" exhibition is a 10.80 m Crossway LE homologated as a city bus.

The Crossway LE is a real income source because of its flexibility and profitability of operation, reinforcing its leader qualities in terms of accessibility for all, manoeuvrability and comfort. The coming into being of Euro VI has also allowed the strengthening of engine compartment insulation, significantly improving on-board comfort; for example, the interior noise level has been reduced by more than half.

Professionals have recognised the Crossway Euro VI driving position as being the "best ergonomically-designed space for the driver", largely because of its 10-cm front extension. The ergonomics of the driver working environment has been highlighted through the new style dashboard, and the driver seat pivoting to 65°.

Iveco Bus

Iveco Bus is a bus brand-of CNH Industrial N.V., a global leader in capital goods listed on the New York Stock Exchange and on the Borsa Italiana in Milan.

A major player in the field of public transport, and among the leading bus and coach manufacturers in Europe, Iveco Bus designs, manufactures and markets a broad range of vehicles that meets all the needs of public and private operators:

- school, intercity and tourism coaches
- standard and articulated city buses, including BRT dedicated versions, with a strong leadership in clean technologies such as CNG and Hybrids
- minibuses for all passenger transport missions
- chassis for bodybuilders.

Iveco Bus employs over 5,000 people across two production units, in Annonay, France and in Vysoké Myto, Czech Republic .

The extensive Iveco Bus and Iveco service network guarantees assistance around the world wherever an Iveco Bus vehicle is at work.

For more on Iveco visit: www.iveco.com

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