



NANTES  
MÉTROPOLE

# E-Busway

Nantes Line 4 welcomes the new generation of electric buses to the bus lanes: the e-Busways. An innovative mobility solution that enables the number of travellers to be increased while reducing polluting emissions! Special feature: these e-Busways recharge en route...

## A MOBILITY ISSUE

Coming into service in 2006, line 4 carries more than 40,000 passengers daily on its 7 kilometre bus lane. Its usage frequency has doubled since its opening and continues to increase. To meet this success, which has reached the line's capacity limits, Nantes Métropole and Semitan, the mixed-economy company which operates the public transport network for the Nantes urban district, have opted for larger and more environmentally friendly vehicles: the e-Busway. The 22 electric buses deployed on line 4 have capacity for 150 passengers, 35% more than the Busways they are replacing. Something with which to transport 56,000 travellers daily, from 2020.

## ZERO EMISSIONS

The 22 e-Busways are no longer emitting greenhouse gases and are also producing less noise than their predecessors across three municipalities, from Foch-Cathédrale, to the heart of the city centre, to Porte de Vertou in the south of the urban district, via the Île de Nantes. Less CO<sub>2</sub> and more passengers: the e-Busways perfectly, and silently, meet the energy transition roadmap initiated by the métropole. A first in France: these 24-metre long articulated buses

## KEY DATA

- > 22 new 100% electric buses
- > 24 metres long
- > 150 passengers
- > 7 KM of bus lane
- > 56,000 travellers/day starting 2020

recharge their batteries by "bottle-feeding". A telescopic device located on the roof of the bus connects to a totem pole when it stops at the station. Two stations, Gréneraie and Beaulieu, and the two line terminuses are therefore equipped with this recharging mechanism: a power supply cylinder more than two metres long suspended from a mast that is 4.50 metres high. This system, known as opportunist electric charging, does not impact travel time, and also enables not having bulky overhead contact lines.

## A STRONG IDENTITY

The charging totem poles express a powerful design language and are lit up at night in order to embody the modernity of the device and give it a strong identity. Not that the e-Busways fall short in that area: in fact, each of the 22 articulated electric buses has been decorated by an artist. In partnership with local public company (LPC, Société Publique Locale) Le Voyage à Nantes, Nantes Métropole and Semitan offered 22 international artists the job of turning these e-buses into works of art in motion. Thus, art now traverses the city. The interior hasn't been



neglected either: the seats, with backlit backrests, all have a USB socket, and six big screens having a one metre diagonal give travellers information.

### AN IMPORTANT SITE

It took three years to get from the decision to increase the capacity of line 4 to the entry into service of the first e-Busways in September 2019, between calls for tenders, tests, registration, the training of drivers and work. The

### KEY FIGURES

- > **€54.5 M**: the operation's financial envelope
- > **€38.3 M**: Nantes Métropole
- > **€6.6 M**: State, via the City of Tomorrow Investment for the Future Program
- > **€6.4 M**: Département
- > **€2.5 M**: Region
- > **€605,000** : European funds

### DIRECT

“ The Line 4 e-Busways represent an exemplar operation for more than one reason. Firstly, this new rolling stock which is innovative both in terms of its charging technology and its dimensions, enables increasing the transport capacity while suppressing local polluting emissions: a win-win situation. But what should also be underlined is that this technology change took place without a break in operation. During almost all of the work, continuity of service has been maintained.”

**Guillaume Le Denmat**,  
Investments and traffic director  
in Nantes Métropole

infrastructure – stations, turning areas, terminus – had to be modified to accommodate these longer e-Busways. The charging systems have been rolled out with their electrical substations. Finally, a new 18,300 m<sup>2</sup> technical and operations centre has been built on the Vertonne site, in Vertou, to house, maintain and manage e-Busways operations. Between the adaptation of the infrastructure and the acquisition of vehicles from the Swiss manufacturer Hess, the operation represented a total investment of €54.5 million. After a gradual entry into service starting on 6 November 2019, the 22 new e-Busways are operating on line 4.



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