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Free and Hanseatic City of Hamburg

Neighbourhood buses and so-called Hamburg-Takt: Shaping the mobility transition in Hamburg



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Neighbourhood buses¹ and so-called Hamburg-Takt: Shaping the mobility transition in Hamburg

While public transport is often easily available downtown, peripheral areas are often less well connected, resulting in the need for owning a car. The Hamburg transport association HVV is planning supplementary bus lines to connect specific neighbourhoods without existing bus connection to metro and rapid-transit railway – so-called neighbourhood buses. The neighbourhoods in question are often characterised by narrow streets which make it hard to manoeuvre for conventional buses. Instead, small electric buses could be picking up citizens from close to their doors and taking them to the next public transport hub.

The general objective is to win more customers for public transport by making an offer that convinces them, says Hamburg's Minister of Transport and Mobility Transition Anjes Tjarks from the Green Party; thus, increasing the modal share of public transport in Hamburg from presently 22% to 30%. For this reason, the local government is planning to have 600 new bus stops built within the coming years.



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Presenting the new e-bus for testing as neighbourhood bus, Anjes Tjarks, Minister of Transport and Mobility Transition (left) and Henrik Falk, CEO of Hamburger Hochbahn AG, the largest public transport operator in Hamburg

¹German: Quartiersbusse

The first vehicle to be tested for one week by Hochbahn is an ATAK electric from Karsan, a Turkish manufacturer, electrified with batteries from BMW. It is fully electric with a range of 300 km without recharging, according to the manufacturer. With a length of 8.30 metres, it is significantly shorter than standard buses, which are between 12 and 24 metres. The midibus can service neighbourhoods with smaller streets and is more agile. It offers 22 seats and standing room for 26 persons. Needless to say that it provides access for people with impaired mobility. Due to the electric engines, the neighbourhood buses operate almost noiseless and free of exhaust gases, which is important for the acceptance by the residents.



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The mayor of Hamburg together with representatives of the city's transport operators introducing the so-called Hamburg-Takt (5-minute frequency) for public transport services

Buses from other manufacturers will be tested too, which will help Hochbahn to specify the requirements. Once the technical specifications documents have been compiled, the procurement process will begin, followed by contracting, production and delivery. In the meantime, Hochbahn is going to plan and fine-tune the individual bus lines and the exact location of stops in coordination with the local administration and the police. First neighbourhood buses will run in the district of Finkenwerder (Borough of Hamburg-Mitte) from December 2020 on, connecting neighbourhoods to the ferry terminal; as new electric midibuses are not procured yet and streets are wide enough, standard buses will be deployed here. Standard operations in several neighbourhoods are expected from the end of 2022 onwards. The head of Hochbahn Henrik Falk says that they have no experience with operating smaller buses, which will be a challenge, especially for maintenance.

However, neighbourhood buses are already being operated by VHH – the other Hamburg transport operator. Thus, Hochbahn can build on existing knowledge. However, neighbourhood buses are only one element of Hamburg's ambitious plans to foster a mobility transition. The city wants to transform its mobility system within the next decade. By offering attractive mobility options, people shall be incentivized to use less motorized individual transport and instead use more public transport (including on-demand services) in combination with cycling and walking and sharing mobility services, thus contributing to the European emission reduction targets. A comprehensive upgrading of the public transport services comprises the new metro line U5, the extension of metro line U4 and several urban railway lines as well as implementing numerous additional bus lines and bus stops. The plan is to increase the number of passengers by 50%.

Three components are central for increasing the attractiveness and usability of the public transport system in Hamburg: Implementing the so-called Hamburg-Takt (Hamburg frequency), developing express bus lines and introducing neighbourhood buses. Once this vision is reality, the use of private cars and the need for ownership will have been reduced significantly.

The *Hamburg-Takt* describes the overall aim that public transport services should be available anytime from any location within 5 minutes. This requires a consolidation of the bus network and shared mobility services, such as bikes, e-scooters and cars. In addition to high departure frequencies, the plans include an increase of density of the public transport stations. A cornerstone to effectively connect the outer areas to the inner city or connect outer areas with each other is express bus lines. These are specific lines which connect the outskirts within a short travel time, bypassing many stops and which can be used without extra fees. One major advantage: Express bus lines can be implemented significantly faster and cheaper than metro lines while providing a similar quality of service.



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Receiving public funding from the Federal Ministry for the Environment for the conversion to e-mobility

National funding for electric fleets

Two of Hamburg's transport operators, namely Hamburger Hochbahn and VHH (Verkehrsbetriebe Hamburg-Holstein), recently received 47 million euros from the German Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) for the conversion to e-mobility. The money will be used for the purchase of 96 e-buses and 128 battery chargers for depots at both companies. The aim is to replace all diesel buses in public transport operated in Hamburg by environment-friendly buses to improve the air quality in the city, thus achieving an even higher standard of living, and to tackle global climate change. The goal of a completely emission-free bus fleet is set for 2030.

Hochbahn and VHH state the total costs for converting their fleets at some 102 million euros. The national funding is related to the "Directive on the Promotion of the Purchase of Electric Buses in Local Public Transport" from 2018. Among other criteria, beneficiaries need to prove the use of renewable energy for charging the batteries. The metro and rapid-transit railway have been running on electricity from renewable energy sources for years. The same applies to the existing approximately 50 e-buses currently in operation at the two companies. The bus fleets will gradually be converted to alternative drives. As of 2020, both companies are only procuring vehicles without local emissions. Until the end of this year, Hochbahn will add 30 and VHH 22 e-buses to their fleet. Both companies have fleets of around 1,500 buses.

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eBussed project supports regions in the transition towards low-carbon mobility and more efficient public transport in Europe by promoting the use of e-buses.