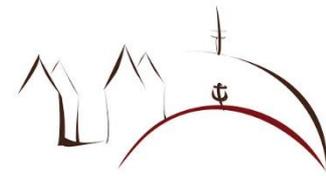




TükeBUSZ
Együtt célba érünk!



Pécsi Városfejlesztési
Nonprofit Zrt.

Public transport development in Pécs

Financed by the Integrated Transport Operational Programme

Pécs Urban Development Nonprofit Private Limited Company



Zoltán Csúcs,
CEO,
architect

31 March, 2021

The Pécs Urban Development Nonprofit Private Limited Company

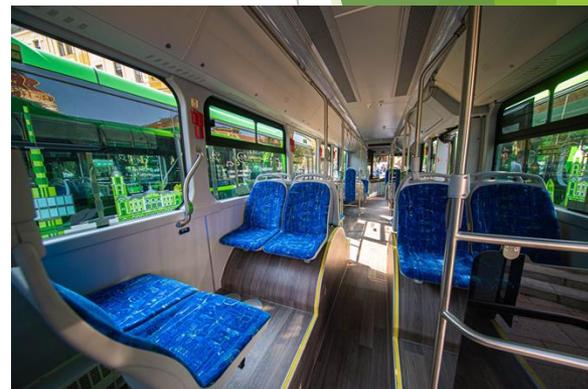
- The nonprofit company is responsible for planning and implementation of the municipality's EU-projects and is fully owned by the Municipality of Pécs. Number of employees: 18 persons.
- The company's main operation direction is the complex project management, particularly in the following development areas: transport development, energetic modernization, tourism development, social urban rehabilitation.
- Until last summer the company's employees drew down more than 30 billion HUF EU-subsidy, thus ensuring the feasibility of the development projects.
- In addition, the company's other main task is the preparation of the next EU-cycle's development projects.

Project background, project aims

Pécs is the centre of Baranya County and the South-Transdanubian Region, and - with more than 142 thousands residents - is the fifth largest city in Hungary.

One of the main goal of the Europe 2020 strategy is to reduce the greenhouse gas emission with at least 20%. To contribute to fulfill this aim, Pécs set the undermentioned aims:

1. Increasing of public transport's attraction
2. Reduction of emission
3. Prevention of deterioration of air quality.



The electric buses have no local emission, so a such procurement helps to achieve the above-mentioned aims. This new infrastructure contributes to establish a more sustainable city and raise the chance to win the „European Green Capital” award in the near future.

Milestones

Application submission:	10 May, 2017
Requested and awarded grant:	1.7 billion HUF
Subsidy contract:	13 September, 2017
Sales contract:	29 August, 2019
Ceremonial bus takeover:	31 July, 2020
Beginning of test period:	3 August, 2020
Entry into service of vehicles:	18 September, 2020



Project elements

- Procurement of 10 urban low-floored solo buses with exclusively electric drive through a public procurement procedure; the selected subcontractor was the BYD Europe B.V.
 - The public procurement procedure contained the installation of the related charging infrastructure.
 - Site development, which contained the construction of a 600 m² industrial hall;
- Unit prices: a bus with the related charging infrastructure costed 145,1 million HUF.



Main physical attributes of the electric buses

- The buses are 12 meters-long, two-axle, three-door and the number of seats are 64.
- The vehicles are equipped with automatic air-conditioning and a camera system which are capable making outside and inside records.
- The energy supply of a bus is based on a 348 kilowatt hours lithium-iron-phosphate accumulator.
- The accumulator's capacity on a daily run is approx. 300 km.
- The bus charging is possible through an AC-Type 2 plug, which is in the back of the bus.
- The buses are running on two, singly 150 KW high performance BYD wheel-hub engine.



Operational experiences at the Tüke Busz Private Limited Company

- The local public transport operator is the Tüke Busz Private Limited Company which is fully owned by the Municipality of Pécs.
 - The new e-buses were put into operation in the varied terrains of Pécs and these particularly affect the vehicles' transport performance: towards the outer east districts the energy recovery is lower because of the long straights - so the range is shorter.
- However, the topographic characteristics of the city make the buses' energy management more effective: a vehicle in downward run brakes more, so (thanks to the regenerative brake system) it sends back energy to the power supply to reduce the overall power consumption.
- On average, the buses produce one KWh per km energy consumption on fleet level, even in colder periods.



Operational experiences at the Tüke Busz Private Limited Company

- Based on the operational experiences, the e-buses are capable to perform the average traffic forda-tasks.
- It's important to note that the buses also provide adequate and safety transport alternative for the passengers with wheelchair.
- The vehicles have 24 pieces of fixed passenger seats.
- These new, air conditioned e-buses were entered into service in the traffic routes of the city's east-west axis and traffic routes towards the Mecsek Hill.
- It should be noted that the buses have a range of 280 km with one charging, even in the routes towards the Mecsek Hill, but more than once hapenned that the daily run exceeded the 300 km.

Conclusion: the buses produce the factory data, also in real operating conditions.





**Thank you for
your attention!**

For more information, please do not hesitate to contact us:

Zoltán Csúcs, CEO
Mobile: + 36 70 570 76 00
E-mail: csucs.zoltan@pvfzrt.hu