

ECOLOGICAL PUBLIC TRANSPORT AS A PART OF CITY LOGISTICS

Kazlouskaya M. A., Markava E. S., students
Scientific supervisor – Ladutska N. F., senior lecturer
Belarusian National Technical University
Minsk, Republic of Belarus

City logistics is the process of optimizing metropolitan logistics activities, in consideration of social, environmental, economic, financial, and energy impacts of urban passenger and goods movement.

The sphere of city logistics also includes the implementation of environmentally friendly public transport. We know such types of public transport as trams, trolleybuses, electric buses, but there are other less common passenger vehicles. For example, induction buses, monorail, solar-powered buses.

Induction buses don't have batteries and work on the principle of wireless charging from the cable laid under the road. This technology allows buses to move without a driver because the bus goes only the route where the cable is laid. But it has some disadvantages, for example, induction buses can't be used with a large number of road users. Therefore, this technology can only be used on tourist routes or in specific parts of the city.

Monorail transport is environmentally friendly, but not widely used. It has reduced noise and the ability to overcome steep vertical inclines. Disadvantages are the low speed and the technical complexity of construction. Monorails aren't widespread in Europe and America but are considered to be promising in Asian countries (Japan, Singapore, China).

Currently, public transport using alternative energy sources has begun to develop, e. g. solar-powered buses. Solar energy charges the battery that saves about 1,7 liters of fuel per 100 kilometers. Unfortunately, the operation of the solar battery directly depends on the season.

The introduction of environmentally friendly public transport gives positive social, environmental and economic effects due to the reduction of greenhouse gas emission and fuel consumption.