

# Tartu: Gas Buses in the whole City

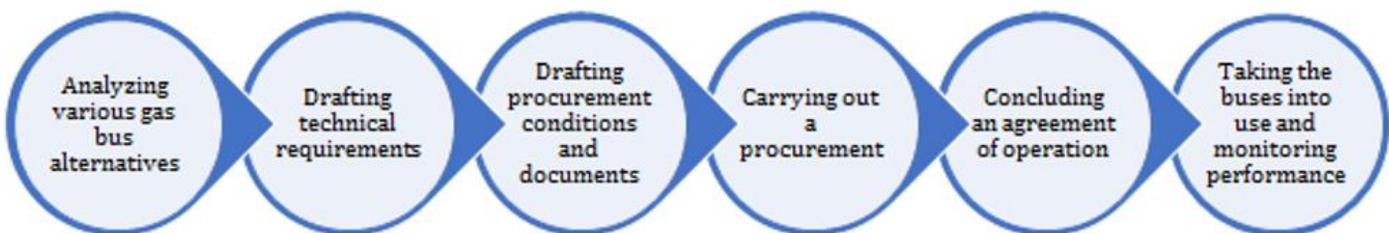
## Overview

On 1 July 2019, the new public transport route network along with a fleet of 64 new environmentally friendly biogas buses was launched in Tartu. There were also significant changes to the bus route network that was completely revamped by using mobile data, expert input and participative methods. The new route network reduced the number of bus lines down to 13 and added two night buses. The route network will be serviced by the 64 brand new gas buses that have A/C, low floors for better access and new validators. These allow passengers to purchase tickets with their contactless bank cards as well.

## Business Models

The gas buses are funded 100% by the City of Tartu. It is expected that the gas buses will cost ca. 20-25% more than diesel buses and the fuel consumption of both bus types is more or less equal (39.1 kg/100 km of gas vs. 39.5 l/100 km of diesel), but the savings mainly come from fuel prices – if diesel costs 1.11 EUR/l and gas 0.65 EUR/kg, the fuel cost of gas buses is ca. 42% smaller. For each 80,000 kilometers covered, this means 10,000 EUR of savings per bus.

## Process



## Benefits

- Increasing demand for biogas, thus creating opportunities for local producers
- Fuel autonomy
- More stable user prices
- Increased resource efficiency
- User comfort
- Independence in energy supply
- Reduction of carbon and nitrogen emissions
- Improving the quality of air
- Reducing traffic noise
- New business opportunities

## Citizen Engagement

Citizens were engaged in the form of awareness-raising measures like events, citizens will be informed about the benefits of gas buses and how the use of gas buses affect their living environment (less noise, less particulates, less GHG emissions etc.). The possibilities and benefits of the new route network was also communicated whilst promoting the use of public transport in general.



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## Stakeholders

<b>Owner(s)</b>	City of Tartu
<b>Service/Technology Provider</b>	GoBus, AS
<b>Users</b>	Citizens, visitors
<b>Investors</b>	City of Tartu

**Investment/Finance:** Ca. 16 million Euro

## Outcome/Successful implementation

The new gas buses started operation in Tartu city bus lines on 1st of July of 2019. In total 64 new buses, manufactured in the Scania factory, started travelling along the routes, equipped with air conditioning, low bottoms and running on an environmentally friendly source of fuel - biomethane. There are two types of buses: normal buses (12 m in length, 27 seats, and standing room for 52) and articulated buses (18 m in length, 41 seats and standing room for 96). As of 1 July 2019, the City of Tartu switched over to a new bus route network, which differs significantly from the recent network in terms of itineraries, the number of lines, as well as the frequency of departures. New bus line network consists 13 regular bus lines (formerly 26 lines) along with two night lines. The total mileage of city buses during first 8 months was about 3,300,000 kilometers in Tartu and about 8,500,000 journeys were made.

## Replication Potential

Biogas buses are already widely used all over Europe. In order to replicate this solution, however, some aspects have to be taken into account:

- In order to achieve efficiency and savings, the gas fueling station needs to be in close proximity – it is not reasonable for a bus driver to get additional fuel from the other side of the city. This will count as working hours while no passengers are served.
- The engines of gas buses will not start without a warm-up procedure once temperatures drop below -10°. In colder climates, engine malfunctions can thus be expected.

Securing long-term, sufficient and reliable fuel supplies is a prerequisite for introducing more biogas buses in a city.

## Contact

Jaanus Tamm  
 City of Tartu  
[jaanus.tamm@raad.tartu.ee](mailto:jaanus.tamm@raad.tartu.ee)



## More Details:

<https://smartency.eu/about/solutions/gas-buses-in-the-whole-city-of-tartu/>



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