

## CITY FEATURES



Palmas is a Brazilian municipality and the capital of the state of Tocantins in the Northern Region of Brazil. It is located along one of the main rivers of the state, the Tocantins River. The city is the youngest Brazilian capital and was founded in 1989. The planned city has a strategic network of urban parks, gardens and green spaces that creates an ecosystem of scenic beauty. It has a good network of wide avenues with landscaping and an urban area characterised by large residential and commercial blocks. The main sector of the economy is the tertiary sector, followed by the industry sector. The farming and cattle raising activities are worth noting as they are of great importance for the state of Tocantins, especially for the production of soybeans and cattle.



Population  
**313,349**  
 (2021)



Land area  
**2,227.3 km<sup>2</sup>**

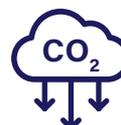


Average temperature  
**27°C**

## TRANSPORT FEATURES

The public transport of the city consists of buses and micro buses. Since it is a sprawling and more horizontal city layout, the trend, especially post-pandemic, has been an increase in the use of private transport and a decrease in public transport. Currently, the Palmas City Hall has started to plan some measures in order to better serve the population, such as the construction of new bus shelters, an exclusive and continuous lane system for buses, and a bus rapid transit (BRT) system.

### GHG Emission Levels<sup>1</sup>



Total GHG emissions  
**610,473 tCO<sub>2eq</sub>**  
 From road transport  
**291,541 tCO<sub>2eq</sub>**

## BUS SYSTEM AT A GLANCE



Number of bus trips<sup>2</sup>  
**653,833 (2019)**  
**398,099 (2022)**

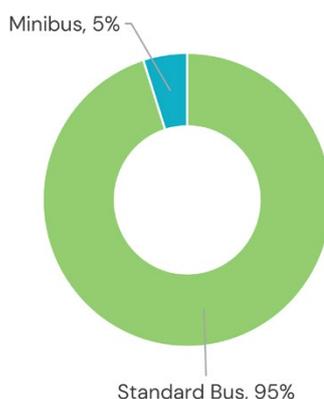


Number of buses  
**189**



**50** bus routes  
**6** bus depots

Buses by fleet type



Buses by fuel type



1 SEEG Municípios, 2019

2 Bus trips scheduled in the years 2019 and 2022. Source: Service Orders issued by the Municipality in 2019 and 2022.

## Existing Business Model<sup>3</sup>

A

**Model A:** Vertically integrated, private operator in BRT/integrated system

B

**Model B:** Divided responsibilities in BRT/integrated system

C

**Model C:** Large, more formal, private operator in traditional service

D

**Model D:** Small, informal, private operator in traditional service

E

**Model E:** Government-run system

E

In December 2022, Palmas City Hall took over the entire operation of urban public transport through the Palmas Public Transportation Agency (ATCP). ATCP became the operator of the entire system and its infrastructure, including bus fleet, terminals, stations, boarding points, equipment and ticketing control instruments, among other things. ATCP is a public law autarchy with administrative, financial and patrimonial autonomy linked to the Municipal Secretary of Security and Urban Mobility (SESMU).

3 Based on Accelerating a market transition in Latin America: New business models for electric bus deployment, P4G, Zebra and Dalberg, 2020

## OPPORTUNITIES AND CHALLENGES FOR ADOPTION OF E-BUS FLEETS



### Opportunities

- The municipality is developing an Urban Mobility Plan, so there is an opportunity to include the topic of electric and sustainable mobility.
- The city's current bus fleet of 189 buses is small as compared to other capitals, so having a smaller number of vehicles makes it easier to think about an electrification project.



### Challenges

- There is a challenge of financing and access to funds, since the vehicles and the necessary infrastructure are expensive, and the city would need financial support to realize a fleet electrification project.
- Another challenge is incorporating the change of adding electric buses in bus fleets without increasing the fare for the user or put burden on the municipality's finances.

### Acknowledgements

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### About the TUMI E-Bus Mission

Funded by the German Ministry for Economic Cooperation and Development (BMZ), a core group of organizations supports cities in their transition toward electric bus deployment. For more information please contact: [tumi-network@iclei.org](mailto:tumi-network@iclei.org) or visit <https://sustainablemobility.iclei.org/tumi/>