

# CLEAN AND INTEGRATED PUBLIC TRANSPORT SYSTEM PROJECT

Metropolitan Region of Florianópolis, Brazil

## Transport Sector and its relevance to NDC implementation

The transport sector in Brazil is responsible for 46% of greenhouse gas (GHG) emissions related to energy generation. This makes it an essential element in the agenda to combat climate change. In addition to the environmental importance of the sector, it has social importance: about 80% of the Brazilian population lives in urban centers, and is strongly affected by the quality of transport services for commuting to work. Brazil's Nationally Determined Contribution (NDC) and its implementation strategy highlight sustainable urban mobility as a pillar for achieving the climate goals set by the Paris Agreement and the Sustainable Development Goals.

## FELICITY Cooperation

The objective of the project supported by FELICITY in the metropolitan region of Florianópolis is to integrate the public transport systems of eight municipalities, and to renew the current bus fleet in the metropolitan region of the city, which serves almost 1.19 million inhabitants. The current fleet has around 450 buses with diesel engines, which will be gradually replaced by cleaner technologies. In addition, the project proposes the construction of an operational control center, new bus stops, digital

information and payment systems and the construction of two new terminals in the municipalities of Palhoça and Biguaçu.



### FELICITY in a nutshell

FELICITY, Financing Energy for Low-carbon Investment, is an initiative of GIZ and the European Investment Bank to support urban projects expected to reduce greenhouse gas emissions with significant sustainable economic development benefits for cities. As a project preparation facility, FELICITY offers technical assistance to cities in designing and structuring their low-carbon infrastructure investment projects. To this end, it prioritizes the interest of cities and incorporates the perspective of international financiers.

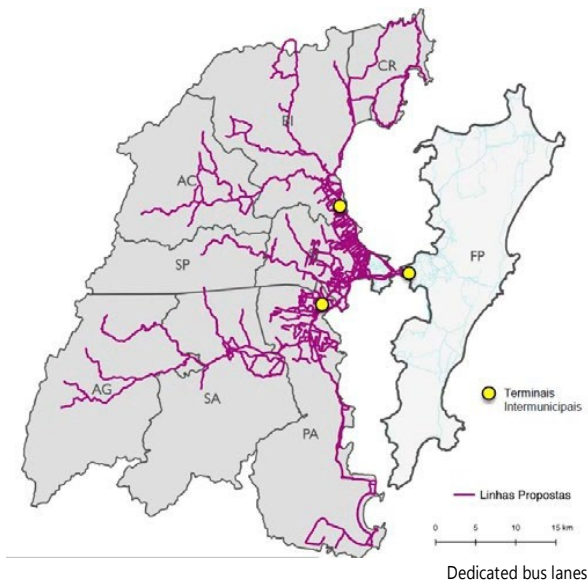
The project will be implemented in different stages, being the first stage a Pilot Project that counts on the sustainable transition of 4 bus lines, which will receive a clean and renewable technology. In this stage, which had technical, financial, and legal feasibility studies produced in cooperation with FELICITY, 8 electric buses will replace diesel technologies of the selected lines. FELICITY also commissioned studies to analyze the technical and financial feasibility for installing photovoltaic plants in garages and terminals so that electric buses can be powered by renewable energy.



SUDERF proposal integration of municipal and intercity bus lines

When fully implemented, the project will improve the quality of the public transport system and significantly reduce CO<sub>2</sub> emissions in the metropolitan region - an annual reduction of 16,150 tCO<sub>2</sub>eq is estimated with the operation of 8 electric buses, with the potential to additional large reduction by complete system integration. The proposal is rooted in the Integrated Plan for Sustainable Urban Mobility (PLAMUS), developed in a broad process of stakeholder engagement and implemented by the Regional Superintendence for the Development of the Metropolitan Region of Florianópolis (SUDERF), - of the Government of the state of Santa Catarina.

FELICITY supported SUDERF in the process of comparing clean vehicle technologies, using renewable energy sources, and associated infrastructure options, conducting total cost of ownership (TCO) analyses. These life cycle analyzes helped to reduce the financial and technical uncertainties related to the procurement of electric buses and project implementation.



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