

CFF IMPACT BRIEF | QUITO

Electrification of Ecovía and Extension of the Trolleybus Corridor in Quito

The C40 Cities Finance Facility (CFF) supported Quito's transition to low-emission transportation by 2050 by preparing two zero emission bus corridors.

- 1) ECOVIA BRT – Procurement of 276 electric 18-meter buses by 2033
- 2) Trolleybus Lane Extension from Labrador to Carapungo – Procurement of 69 (fully electric) trolleybuses, construction of a new BRT lane and other infrastructure planned for 2027.



The project demonstrates the economic and technical feasibility of sustainable and green transportation in Ecuador on a large-scale. It serves as a blueprint for other cities in their transition to low-emission mobility under the new energy efficiency law.

“Thanks to CFF, we have a vividly structured project that undoubtedly will serve as an example. Other Ecuadorian cities already approached our administration and asked for advice on how to implement the project in their cities.”

GUILLERMO ABAD

Secretary of Mobility, Municipio del Distrito Metropolitano de Quito



Project Profile


PROJECT PARTNER:

Secretaría de Movilidad, Quito


PROJECT SCALE:

Ecovía: 276 e-buses, 20 km

Trolebús: 69 e-trolleybuses, 22.5km, extending service by 8.7 km


FINANCE LEVERAGED:

Phase I: 50,850,000 USD

Phase II: 55,710,000 USD

Phase III: 104,580,000 USD


FINANCING SOLUTION:

As Quito has reached its debt ceiling to finance the metro, a PPP or concessional model was not possible. Consequently, the CFF supported the city in creating a leasing model with a staggered approach for implementation. Quito has identified available funding sources through bus fare revenues, municipal revenues, national transfers or grants.

Providing Cleaner and Safer Transit for Quito

The project will decrease GHG emissions, increase air quality and extend the public transport network



AVERAGE GHG EMISSIONS REDUCTION

22,237 tCO₂e per year



CURRENT USERS

600,000 passengers



NEW USERS FOR THE TROLLEY EXTENSION

~150,000 new passengers



"This project is part of the public policy of the city and the systems that already exist are part of the day-to-day-life of the city. We try to let citizens know that electromobility is beneficial for the whole city and has a positive impact on the quality and planning of our service as a public company, as well as on the environment."

ANDREA FLORES

CEO of the Metro Company,
former CEO of EPMT PQ



"We tend to believe that technical innovations can resolve everything, but in order to do that you need to resolve a lot of other factors, such as access to financing. By setting up a round table, CFF helped us to attract various international consortia to invest in electromobility in our city."

MARCO VENEGAS

Former Advisor to the Metropolitan
Director of International Relations

"Certainly, collaboration, organized and joint work are the best ways to achieve the objectives and goals set forth by both institutions [ICAM and CFF] to benefit Quito and the country."

MARTHA GICELA OSORIO

Metropolitan Director of Training



"It's the scope of the project that makes it special. It opened a door for transformation and migration towards more efficient technologies for the public transport. This directly leads to better service quality."

GUSTAVO HINOSTROZA

Former Deputy CEO Public
Metropolitan Transportation
Company, EPMT PQ

Response to Covid-19 pandemic

- CFF led a community of practice by the GIZ, which brought together Ecuadorian municipalities to share experiences and best practices on how to respond to Covid-19 in public mobility. They shared ideas on how to improve the design of active mobility and on reopening public transport services after the initial Covid-19 lockdown.

Leave No One Behind (LNOB) in Public Transportation

- The gender and social inclusion study shed light on the profiles of public transport users in Quito. It showed that women, children, students, and elderly people were among the most frequent user groups of public transportation rather than middle-aged men. It remains a challenge for the city to incorporate existing data into Quito's public transport planning. This could entail aligning policies with the needs of various groups, making public transport safe and targeting selected groups with publicity campaigns.



Planning for Transformation - Shifting to E-Mobility in Quito

The project provides a sound business model for e-buses that other cities can use to shift to low-emission public transportation



The project is prepared for leasing and for funding from the Ecuadorean Development Bank (BdE). All documents and studies are geared towards introducing e-buses to Quito's public transport system through leasing (as requested by the city) based on the Cuenca KfW BdE credit line.



17 virtual capacity development workshops were executed. An average of 20 participants attended each event with a distribution of 40% women and 60% men. The participants were not only from mobility-related organisations, but also from sectors such as environment, social inclusion, planning, territory and urban development.



Building on a successful programme implemented by the city to reduce sexual harassment in public transport, the CFF provided recommendations on improving gender and social inclusion in Quito's public transport system. Emphasis shall be placed on remodelling infrastructure in and around bus stations to eliminate obstacles and facilitate access for all users.



Quito shared experiences on shifting to e-mobility through five virtual webinars and one three-day virtual workshop on e-mobility with over 90 participants from 10 Ecuadorian cities, and Panama City.



"The way we structured the project with CFF support was very enlightening as it was divided into different phases and chapters instead of seeing it as one closed operation, as we are used to do. We identified all the possibilities and took the financial constraints of our city into account, when deciding on which financial strategy suits us best."

ANTONIO CHAMORRO

Technical Mechanical Specialist in the Metropolitan Direction of Mobility Management – Secretariat of Mobility



"This project is unique because we want to make a significant leap towards using renewable energy in the mobility sector. Since the set-up of the trolleybus system, Quito became a benchmark in the Latin American region when it comes to mobility but unfortunately, we have not managed to follow up. This project now makes it possible to revive the initiatives that Quito once had."

"The CFF study on gender and social inclusion gave us valuable statistical insight into the demographics of our passengers. The next step is to use this data and to adjust the public transport system in accordance with the users' needs."

MARCO VENEGAS

Former Advisor to the Metropolitan Director of International Relations

"Certainly, collaboration, organized and joint work are the best ways to achieve the objectives and goals set forth by both institutions [ICAM and CFF] to benefit Quito and the country."

MARTHA GICELA OSORIO

Metropolitan Director of Training



KEY CHALLENGES

- Given the new national policy outlawing the purchase of diesel buses after 2025, cities across Ecuador face the challenge to adapt business and operational models. By developing targeted tools and models for Quito, the CFF supported the city and operators to shift their mobility systems. Involving agents from the energy sector in the reorganisation of the mobility sector will contribute to increasing the sustainability of the sector.
- Challenges may also arise from the introduction of new disruptive technology or structural changes in society. Especially in situations where mandates and responsibilities are not clearly defined across all involved actors, the need for consensus building processes may arise. The CFF supported Quito through a consensus building process with private operators and provided studies and guidelines that can be replicated by other cities facing similar challenges.

LESSONS LEARNED

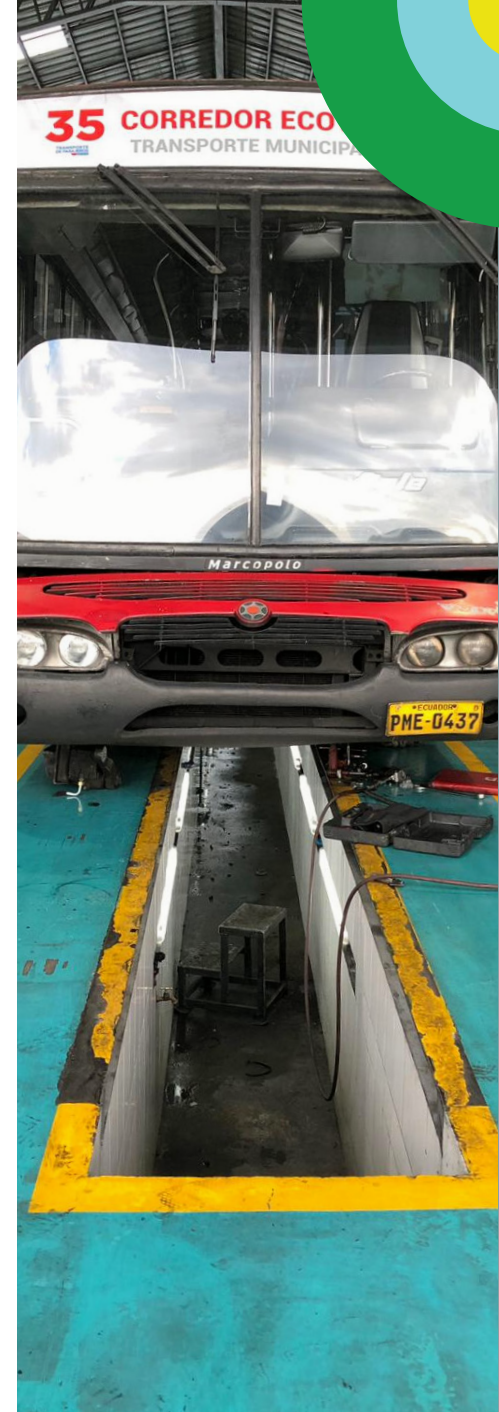
- When a change in municipal administration happens while executing a project, the commitments and obligations must be renegotiated with and accepted by the new administration in order to ensure project buy-in.
- The mayor's involvement in the project is essential to ensure effective communication and decision-making.
- In order to ensure a smooth cooperation, the MoU (between the city and partners) should define the scope of technical assistance and the commitments by each party to the cooperation. It should establish three levels of work: technical, strategic and political with a commitment to regular meetings and decision-making by the mayor, and already contain a timeline for critical project decisions.

BEST PRACTICES

- The early inclusion of other cities in knowledge sharing activities increases the opportunity to learn from each other in a two-way fashion. Ten municipalities in the region were involved in knowledge sharing events with Quito, either directly in the project or through the Covid-19 response community.

OUTLOOK

- Quito's transport company, EPMTQP, has the final studies for a phased transition to replace the city's diesel buses with e-buses, including the draft tender documents to begin the transition to e-buses by mid-2022. EPMTQP will apply for a credit line with the State Development Bank (BdE), which needs to analyse their debt ceiling according to the new public policy. KFW is financing projects through the BdE for infrastructure projects from municipalities. If the credit analysis goes well, BdE can easily finance the project as all studies are prepared.



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GUSTAVO HINOSTROZA
Former Deputy Ceo Public
Metropolitan Transportation
Company, EPMTQP