

Colombia

National Urban Mobility Policies and Investment Programme

Completed

Basic information

Population	→	50,662,678 (2020)
Growth rate	→	0.8%
Percentage of urban population	→	77.1%
GDP per capita	→	USD 5,334
Percentage of the population living below the national poverty line	→	27%
Annual average infrastructure expenditures as a percent of GDP	→	1.8%
Nationally Determined Contribution (NDC)	→	Committed reduction of 51% of overall GHG emissions compared to BAU by 2030, unquantified mobility target
National GHG emissions per capita	→	3.75 (tCO ₂ e)
Proportion of transport-related GHG emissions	→	12%
Exposure to climate change	→	VERY HIGH



Context

Colombia is Latin America's third-most populous country, after Brazil and Mexico. Bogota is the country's capital, the most populated city, and the economic, political, and financial centre. 77.1% of Colombian citizens live in cities. Access to education, public health, and other essential services remains limited in rural areas. Poverty and inequality are significant challenges for Colombia, with a multidimensional poverty index of 20.2% and a GINI index of 0.522, placing it as the second-most unequal country in Latin America, only after Honduras. According to reports from Colombia's Ministry of Finance and Public Credit, Colombia's Gross Domestic Product (GDP) has grown over the last two decades, with an average annual growth rate of 3.8%. This economic growth is remarkable, given the country's long-standing internal conflict. Colombia is an upper-middle-income country. Historically, oil and other energy products have played an important role in Colombia's economy. The country's export and industrial growth sectors include oil, electronics, agriculture, information technology, and shipbuilding.

In 2018, road transportation in Colombia accounted for 12% of the country's overall GHG emissions (37.8 MtCO₂e), underscoring the importance of tackling the transport sector to meet climate change mitigation goals. Electric mobility can be a powerful tool for achieving such

goals. Additionally, public concern about the negative impacts of air pollution on public health has increased in recent years. The transport sector (mainly diesel freight and public transport) is responsible for 25% of PM_{2,5} emissions in large cities, the most relevant air pollutant in the Colombian context.

Buses are important in Colombia's transport landscape, from small feeder buses to bi-articulated high-frequency buses. They account for 23% of Bogotá's local air pollution. However, given the increasing urban population density and deteriorating air quality, the various configurations of bus systems present an untapped opportunity to provide access to clean urban mobility. Electrification of public transport is an intersectoral priority across at least four national policy agendas (Energy Efficiency, Climate Change, Air Pollution, and Urban Mobility) and three international policy commitments: the Paris Agreement, the New Urban Agenda, and the Sustainable Development Goals.

Support from the Partnership

Technical Assistance: Development of National Urban Mobility Policy or Programme (NUMP)

Type of NUMP: Programme NUMP

Funded by: German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Funding amount: EUR 800,000

Implemented by: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) through the TRANSfer III project

Local counterpart: Ministry of Transportation

Main purpose of the NUMP:

The TRANSfer project helped develop a National E-Bus Promotion Programme. This programme comprises a national investment fund to finance upgrades to public transportation fleets. It is intended to establish the institutional arrangements and capacities for a large-scale monitoring, reporting, and verification methodology for e-bus deployment.

Since the electrification of transport is vital to meeting climate commitments, promoting green growth, and protecting human health, the national government began developing a National E-Mobility Strategy in 2019. As electric buses have considerably higher upfront investment costs than traditional technologies and are relatively new in Colombia, the technical assistance aimed to overcome these barriers through a program that supports the electrification of Colombia's public passenger transportation systems. The technical assistance had four workstreams aiming at creating a suitable environment for electromobility deployment in cities without significant zero-emission fleets:

- Technical and regulatory design: Identify the technical and regulatory needs that should be addressed at the country's transport policy level to enable the transition to electric public transport systems.
- Financial design: Analyse the context, barriers, costs, and economic conditions of public passenger transportation in Colombia to construct, jointly with other counterparts, an instrument to facilitate investments in electric fleets and infrastructure.
- Design a coordination and governance scheme: Through a systemic process with national government counterparts, define the decision-making frameworks and methods for approving and following up on policies and plans that enable technological advancement.
- Design of an MRV system: Develop methodologies and capacities to monitor the development of policies and their impacts, especially those aimed at mitigating greenhouse gas emissions.

Supported activities:

- Financial and economic analysis for e-bus deployment at a large scale.
- Pre-feasibility of a public investment fund.
- Support to legally structure a national fund for e-buses.
- Supporting the implementation of a national framework on e-mobility and its governance.
- Diagnosis of technical gaps and barriers for policymakers.
- Ex-ante and ex-post MRV system preparation.

Status of project implementation

Project start date: 2019 Q1

NUMP adoption date: 2022 Q1

Completed outputs:

- Zero-emissions vehicles' investment fund for buses and freight is legally established
- Fleet replacement and investment scenarios for every transport system in the country
- Pre-feasibility, structure proposal and stakeholder awareness for the instrument
- National-scale institutional arrangement for e-mobility
- Operation and maintenance of an e-bus training program in place with an employability and gender perspective
- Course for e-buses system planning and electricity procurement for operators
- Mitigation potential and MRV methodologies for e-buses in line with the National Registry of Emissions Reductions (RENARE)
- Assessment of regulatory and capacity building needs, technical and policy barriers for e-bus deployment
- International course on transport systems based on e-buses (with Moving Chile)
- Employability strategy and technical curriculum with a gender perspective
- Electricity procurement guidelines
- E-bus workshop in Cali, Colombia (24-25 February 2020, 70 participants from cities, the Ministry of Transportation, and academia)
- The fund is included in the current Government (2022-2026) plan, which extends taxi funding.

NUMP key measures and cost estimates

The following table highlights the most significant measures identified in the NUMP.

Measure	Cost estimate (EUR) ¹
Public fund to finance bus fleet renewal (estimated from medium investment scenarios)	391,389,432.49

¹ Exchange rate (USD→EUR): 1 USD = 0.85 EUR

The following table summarises the total capital expenditure (CAPEX) estimates for different types of measures in the NUMP.

Urban transport investment measures	CAPEX Estimate (EUR)
Nationwide bus fleet renewal (estimated from medium investment scenarios)	723,219,603.51
Street shaping urban roads and traffic management	0
Other measures	0
Total	723,219,603.51

Finance leverage

Leveraged financing (resulting from or enabled by the NUMP preparation process)

Description	Source of financing	Status	Type	Amount (EUR)
E-motion project funding proposal for Latin America to the Green Climate Fund	AFD	Secured	Grant	570,000
Public fund investment manuals and implementation	IADB	Secured	Grant	300,000
259 e-buses (Bogotá) ²	Colombian development bank financing agreement	Secured	Loan	63.813.494,43
National Credit line ³	AFD and the Colombian development bank	Secured	Loan	90,000,000
(401 e-buses) ⁴	IADB	Secured	Loan	121.671.062,71
Bogotá & National co-financing for 269 e-buses (TransMilenio) ⁵	National government and the city of Bogota	Planned	Loan	280.780.000

Projected impacts

Indicator	Impact 2030 (NUMP vs BAU)	Baseline - 2019	Projected 2030 BAU	Projected 2030 NUMP scenario
Total annual GHG emissions (Mt CO ₂ eq)	-5.7 ⁶ Mt CO ₂ eq	34 Mt CO ₂ eq	43.4 Mt CO ₂ eq	37.7 Mt CO ₂ eq
Annual transport-related GHG emissions per capita (kg CO ₂ eq)	- 113 kg CO ₂ eq / capita	675 kg CO ₂ eq / capita	862 kg CO ₂ eq / capita	749 kg CO ₂ eq / capita

² https://cms.fdn.com.co/sites/default/files/2022-03/fdncomunicadomarzo2021financiacionbuseselectricos_0.pdf

³ <https://www.afd.fr/es/actualites/communique-de-presse/colombia-afd-y-fdn-firman-convenio-credito-para-financiacion-buses-electricos>

⁴ <https://idbinvest.org/es/medios-y-prensa/bid-invest-y-enel-x-unen-fuerzas-para-impulsar-la-electromovilidad-en-colombia>

⁵ <https://www.eltiempo.com/bogota/nacion-y-distrito-firman-del-acuerdo-para-cofinanciar-flota-de-buses-electricos-y-asegurar-la-linea-1-y-2-del-metro-de-bogota-3505239>

⁶ Calculations made by the MobiliseYourCity Secretariat based on Colombia's first NDC (<https://unfccc.int/NDCREG>) and Colombia's MRV method (<https://changing-transport.org/wp-content/uploads/Infografia-traCS-EN-1.pdf>)

Insights from practice: lessons learned from the NUMP process

The decision-maker's ownership of the project contributes to keeping it alive

The experience with Colombia's technology upgrade fund showed that the key to achieving the project's adoption and implementation is to generate ownership among decision-makers and their advising teams. Also, it is necessary to shield the process from political conditions by securing legal approval as part of larger initiatives.

The electrification of public transport in Colombia still needs public investment to cover capital costs.

Studies indicated that the total cost of ownership of an internal combustion engine bus was considerably higher than that of an electric unit. As a result, transport authorities and public transport operators in intermediate and small cities cannot cover the capital costs of electrification through soft loans. Instead, a substantial package of subsidies from the national government is required to make e-bus technology competitive in terms of capital investment costs.

Nationwide emission-reduction programmes in the transport sector can be comprehensive but flexible.

The technical assistance in Colombia did not follow the traditional NUMP formulation approach. It aimed to address four pre-identified barriers to the deployment of electric mobility nationwide and achieve effective mitigation outcomes. Thus, the project's four workstreams (finance, governance, capacities, and MRV) interacted harmoniously to deliver concrete results in line with the political and financial commitment to renewing the country's public transport fleet. However, the project did not follow the guidelines for formulating a NUMP.

The sustainability of electrification extends beyond securing funding to include support infrastructure, capacity development, and systemic change.

Building capacity for electric mobility within the transport sector is critical to ensuring the sustainability of a robust fleet-renewal policy. Transport authorities must engage with the energy sector to create favourable conditions for the deployment of electromobility. Moreover, operators and technicians need to be trained in the maintenance and mechanics of electric vehicle systems so that operation management is not at risk. Including a gender focus in this component is intended to close the gender gap and enable women to access jobs in the transport sector.

Progress on NUMP implementation

The Colombian Congress approved a 2021 Law creating the national fund for e-bus renewal.

In 2021, a national law for climate action (Ley 2169 – 2021) was enacted, aiming to establish goals and actions to achieve carbon neutrality, climate resilience, and low-carbon development in Colombia in the short-, medium-, and medium-long-term. The law establishes a national fund to support the technological upgrading of public transport systems and freight fleets. This fund will promote the purchase of low- or zero-emission vehicles and support the infrastructure required for the energy supply. Potential financial sources for the fund include local authorities, non-reimbursable

technical cooperation, grants, and other revenue sources. Together with the government, the implementing partner (GIZ) is committed to identifying feasible funding alternatives to support the fund.

BMZ has supported the implementation of the e-bus NUMP in Colombia

Through two GIZ-implemented projects, the German government has continued to support the electrification of e-buses in Colombian cities.

ProMOVIS I⁷ focused on consolidating the national framework for sustainable urban mobility in Colombia by updating policy guidance to systematically integrate low-emission and electric transport components into mobility planning instruments. It combined this regulatory support with targeted capacity building, providing technical training to municipal and national stakeholders on implementing sustainable mobility measures, including electric bus systems, cycling infrastructure, and integrated multimodal networks. In parallel, the programme supported pilot interventions in intermediate cities, serving as demonstration projects to test integrated, scalable solutions for inclusive and low-carbon urban mobility.

Building on this foundation, ProMOVIS II⁸ (ongoing) deepens the financial and institutional dimensions of implementation. It develops detailed guidance on alternative financing mechanisms for sustainable public transport, including business models that embed e-mobility into long-term operational and investment frameworks. The programme also strengthens institutional coordination, monitoring systems, and stakeholder engagement processes to enhance implementation capacity. Through continued capacity development and the co-creation of city-level implementation plans, ProMOVIS II aims to accelerate the adoption of low-carbon public transport solutions across Colombian cities.

E-Motion will support the electrification of public transport in Colombia⁹.

This is through a comprehensive regional initiative designed to accelerate the transition to sustainable and low-carbon mobility across Latin America, including Colombia. The programme, co-financed by the Green Climate Fund and implemented in partnership with agencies such as AFD, Proparco and GIZ, aims to strengthen policy and business frameworks that make large-scale electric mobility viable, reduce investment risk for public and private actors, and foster the enabling environment for widespread deployment of electric buses and related charging infrastructure. In Colombia specifically, E-Motion will provide technical assistance for designing regulatory and financial instruments, bolster capacity for planning and implementing e-mobility solutions and support the development of innovative business models that integrate electric public transport into broader urban mobility systems. By fostering collaboration across countries and institutions, the E-Motion initiative contributes to national climate goals while improving access to affordable, attractive, and low-carbon urban transport for vulnerable populations that rely on public services.

⁷ <https://transformative-mobility.org/regions/colombia-promovis/>

⁸ <https://www.giz.de/en/projects/promovis-ii-decarbonisation-urban-mobility>

⁹ <https://www.greenclimate.fund/project/fp237>

Highlights in the past year

Colombia's government is funding the largest electric bus deployment via CONPES 4168

CONPES 4168 (2025)¹⁰ establishes a high-level national policy and investment framework to co-finance the largest deployment of electric buses in Colombia's history for the Sistema Integrado de Transporte Público (SITP) in Bogotá and the adjacent municipality of Soacha. Under this strategic policy document, the national government and the District Capital approved a total investment of approximately 1.5 trillion COP (EUR 280 million) to acquire 269 electric buses, including 157 articulated and 112 bi-articulated vehicles, to electrify the troncal component of Bogotá's BRT system, which currently still relies on fossil fuels along key routes. The co-financing structure sets the national contribution at 62.4% and the District Capital's share at 37.6%, with execution managed through a joint agreement between the national ministries and TransMilenio S.A. to support procurement, charging infrastructure, and fleet operations.

Colombia is building a domestic electric bus industry as part of an integrated industrial and transport transition policy¹¹.

In late 2025, the government issued Decreto 1294 de 2025, which introduced a 10% tariff on certain imported electric buses, with the explicit aim of encouraging local assembly and production rather than relying solely on imports. This reflects a deliberate industrial strategy to strengthen national manufacturing capacity and competitive supply chains. The policy is grounded in the recognition that Colombia already has an established electric bus assembly ecosystem, including bi-articulated bus production, growing integration of local components, and a supplier network capable of producing up to 1,500 units per year, with potential expansion to 3,000 units through further investment. This tariff incentive is intended not to slow electrification but to consolidate and scale domestic production, deepen industrial linkages, generate skilled employment, and position Colombia as a regional hub for electric mobility manufacturing that can serve both internal demand and export markets, thus aligning the country's transport decarbonisation objectives with broader goals of reindustrialisation and economic competitiveness.

¹⁰ colaboracion.dnp.gov.co/CDT/Conpes/Economicos/4168.pdf

¹¹ <https://www.colombiaencifras.com/se-fortalece-la-produccion-de-buses-electricos/>

Bogotá's international green bond issuance shows how cities can tap global climate capital to support transport decarbonisation

Bogotá's 2025 international green bond issuance, a historic USD 600 million green bond placed in global capital markets, illustrates how a city government can access international climate finance to support sustainable infrastructure, including low-carbon transport projects. The bond, structured under the city's Green, Social and Sustainable Bond Framework and marketed primarily to foreign investors (about 93% allocated to international investors), marks the first time a Latin American city has issued a green bond at this scale on international markets and has attracted such strong global demand¹².

The proceeds are intended to finance a portfolio of environmentally beneficial projects, notably in clean and efficient urban mobility, such as expanding metro lines, improving transit corridors, and expanding cable transport, all aligned with Bogotá's climate goals. This issuance demonstrates local government sophistication in leveraging innovative finance: by adopting international green debt standards, aligning with global investors' environmental criteria, and diversifying funding beyond traditional fiscal instruments, Bogotá has unlocked private climate capital to help decarbonise transport infrastructure and accelerate sustainable urban development¹³.

Last updated December 2025

¹² <https://www.ifc.org/en/pressroom/2025/bogot-leads-the-way-in-sustainable-finance-with-historic-green-bond-backed-by-ifc->

¹³ <https://gggi.org/bogota-leads-latin-america-first-city-to-issue-an-international-green-bond-with-support-from-the-european-union-and-gggi-under-the-global-green-bond-initiative>