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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ECUADOR

CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) FOR ELECTRIC MOBILITY

(EC-L1268)

AND

FIRST INDIVIDUAL OPERATION UNDER THE CCLIP FOR FINANCING SUSTAINABLE ELECTRIC TRANSPORT IN ECUADOR

(EC-L1268)

PROJECT PROFILE

This document was prepared by the project team consisting of: Joan Prats (IFD/CMF), Team Leader; Jean Paul Armijos (INE/TSP) Alternate Team Leader; Benoit Lefevre (CSD/CCS), Alternate Team Leader; Kenol Thys (INE/ENE), Alternate Team Leader; Francisco Demichelis, Maria Netto, Isabelle Braly-Cartillier, Claudia Marquez, Sebastián Vargas and Cecilia Bernedo (IFD/CMF); Carlos Echeverria ant Marcelino Madrigal (INE/ENE); Pablo Guerrero (INE/TSP); Claudio Alatorre(CSD/CCS); Karina Calahorrano, Alexandra Sanchez (CAN/CEC); Pilar Jiménez de Arechaga (LEG/SGO); y Carolina Escudero and Juan Carlos Dugand (VPC/FMP).

PROJECT PROFILE

ECUADOR

I. BASIC DATA

Project Name:	Conditional Credit Line for Investment Projects (CCLIP) for Electric Mobility (EC-O0009) and First Individual Operation under the CCLIP for Financing Sustainable Electric Transport in Ecuador	
Project Number:	EC-L1268	
Project Team:	Joan Prats (IFD/CMF), Team Leader; Jean Paul Armijos (INE/TSP) Alternate Team Leader; Benoit Lefevre (CSD/CCS), Alternate Team Leader; Kenol Thys (INE/ENE), Alternate Team Leader; Francisco Demichelis, Maria Netto, Isabelle Braly-Cartillier, Claudia Marquez, Sebastián Vargas and Cecilia Bernedo (IFD/CMF); Carlos Echeverria ant Marcelino Madrigal (INE/ENE); Pablo Guerrero (INE/TSP); Claudio Alatorre(CSD/CCS); Karina Calahorrano, Alexandra Sanchez (CAN/CEC); Pilar Jiménez de Arechaga (LEG/SGO); y Carolina Escudero and Juan Carlos Dugand (VPC/FMP).	
Borrower:	Republic of Ecuador	
Executing Agency:	Ministry of Economic and Finance (MEF).	
Financial Plan CCLIP:	IDB (Ordinary Capital):	US$20.0 million
Financial Plan 1st Operation:	IDB (Ordinary Capital) – Loan:	US$10.0 million
	IDB (CTF)[1] – Loan:	US$23.0 million
	Total:	US$33.0 million
Safeguards for 1st Operation:	Policies triggered: OP-102, OP-703 (B1, B2, B3, B7, B.10, B.11, B13, B.17). Classification: B.13 (FI-3 or FI-2 to be confirmed during due diligence)	

II. GENERAL JUSTIFICATION AND OBJECTIVES

A. Background and justification

2.1 Transport accounts for 23% of global energy-related Greenhouse Gas (GHG) emissions.[2] In Latin America and the Caribbean (LAC), this share is 36%.[3] Innovations in low-emission technologies for urban transport offer the potential to achieve environmental objectives, with economic gains. Improving the fuel and vehicle efficiency of transport system is a key action assisting LAC countries in meeting their Paris Climate Agreement objectives (Nationally Determined Contributions (NDC)).

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1 Clean Technology Fund (CTF) funding for this loan program in the amount of US$23 million was submitted for approval by March 2020, and will be subject to the Financial Procedures Agreement between IDB and CTF. In addition, a TC in the amount of US$1.1 million which will be funded by CTF resources, is currently under preparation (EC-T1452) and will be processed and approved separately.

2 Mobilizing Sustainable Transport for Development, Analysis and Policy Recommendations from the United Nations Secretary-General's High-Level Advisory Group on Sustainable Transport, United Nations (UN), 2016.

3 Martinez, H. *El Desafío del Sector Transporte en el Contexto del Cumplimiento de las Contribuciones Determinadas a Nivel Nacional de América Latina*. Economic Commission for Latin America and the Caribbean (ECLAC), 2018.

2.2 Electric Vehicles (EV) are one of the available technologies to decarbonizing and lowering local air pollution.[4] Existing literature[5] suggests that operating an EV should be far less expensive than a combustion engine vehicle. The problem remains in the initial capital expenditures which are four times higher than conventional rolling stock. In emerging EV-technology markets, achieving financial viability for technology adoption is contingent on incentives that offset higher market-price[6], and to various technical, economic, cultural and regulatory factors prevailing in the context in which the technology is introduced.

2.3 **Transport sector in Ecuador.** The transport sector represents 6.7% of Ecuador's GDP[7] and employs 5.4% of the total workforce in the country.[8] Fossil CO_2 emissions have increased in the past ten years, with a 30% increase in 2018 compared to 2009, with the transport sector accounting for 41.9% of the emissions in 2018.[9] More significantly, the fossil CO_2 emissions from the transport sector increased in 78% during the same period, from 10.43 million of tCO_2e to 18.6 million of tCO_2e. The most used fuels are diesel (45% of total use), gasoline (41%) and fuel oil (7%).[10] Of all the gasoline consumed in the sector, 49% is consumed by passenger vehicles, 25% by heavy load transport vehicles and 24% by light load transport.[11]

2.4 Buses are the main vehicle used for public transport in Ecuadorian cities.[12] In this context, in order to reduce GHG emissions from the transport sector, the Government of Ecuador is working on a regulatory environment that seeks to promote investment and use of EV through technical norms and tax incentives, on which a National Plan for Electromobility will be developed and will also include differentiated electricity tariffs.[13] These measures follow the guiding principles set up in the National Plan for Energy Efficiency 2016-2035, the Law of Energy Efficiency and the National Development Plan 2017-2021. A key factor that will have a role in promoting the demand for EV is the requirement established by Law of Energy Efficiency that all new vehicles destined for the public transport system should be electric starting in the year 2025.

2.5 From the perspective of operators of public transport, the introduction of EV technology has important operational savings potential, particularly in the case of buses, as fuel and maintenance constitute a substantial share of the annual costs operating a bus (approximately 35,2% of total operating costs). Despite the high

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4 Furthermore, EV could also increase energy security, as reducing fossil liquid fuels consumption can contribute to energy supply stability.

5 Julián A. Gómez-Gélvez, Carlos Hernán Mojica, Veerender, Kaul, Lorena Isla. (2016) The Incorporation of electric cars in Latin America.

6 Yang, Zifei, et al (2016). *Principles for Effective Electric Vehicle Design*. White Paper. The International Council on Clean Transportation. The *authors* highlight the importance of placing the incentives at the upfront stage. The scrapping voucher that will be included in this program is in line with this optimal design.

7 *Banco Central del Ecuador* (2017).

8 *Instituto Nacional de Estadísticas y Censos* (2019).

9 Crippa, M., Oreggioni, G., Guizzardi, D., Muntean, M., Schaaf, E., Lo Vullo, E., Solazzo, E., Monforti-Ferrario, F., Olivier, J.G.J., Vignati, E. (2019), Fossil CO2 and GHG emissions of all world countries - 2019 Report, EUR 29849 EN, Publications Office of the European Union, Luxembourg.

10 Electricity use for transport is minimal.

11 *Ministerio del Ambiente* (2017). *Tercera Comunicación Nacional del Ecuador a la Convención Marco de las Naciones Unidas sobre el Cambio Climático.* Mayo.

12 INEC. *Op.cit.*

13 Discounted rates for EV recharging. *Ley Orgánica de Eficiencia Energética* (2019) and *Plan Nacional de Eficiencia Energética* (2016)

rate of subsidies for diesel and gasoline in Ecuador, a comparative analysis for the present operation estimates that an average electric bus could save 190% in energy costs compared to diesel buses. Similarly, an electric taxi could save 360% in fuel costs.[14]

2.6 Ecuador's energy matrix is mostly clean, with an 83.2% share of renewable energy (including large hydro),[15] which means a lower indirect carbon footprint for EV. Furthermore, the current cost of electricity[16] (relevant for charging costs) might allow EVs to achieve commercial success locally, if coupled with incentives associated to reducing the cost of capital and capacity building.

2.7 From a fiscal point of view, the introduction of EV will generate important savings in diesel[17] subsidies that currently are in place in the country. As a reference of the possible magnitude of savings, the current price of diesel is 1.04 US$/gallon while the 2019 projected price without subsidies was US$2.3/gallon.[18] Hence, the replacement of diesel for electric power in public transport can generate an important fiscal benefit to the country.

2.8 **Financial constraints on EV investment.** The Ecuadorian financial system, although stable, faces liquidity tightening prospects[19] and is unable to provide long-term financing to the private sector as needed. Indeed, credit to the private sector as a percentage of GDP is 35%, below the LAC average of 54%.[20] Medium to long-term financing for private investment is particularly scarce, primarily because the financial sector own inability to access long-maturity funding. This is due to structural factors, such as low levels of savings and long-term deposits, insufficient leveraging, a negligible presence of markets for money, debt, and capital,[21] and an incipient development of institutional investors needing to make long-term investments.

2.9 In the case of EV, although the significant lower Operational Cost (OPEX) of an EV is sufficient to amortize the investment, this requires a longer payback period since the Capital Expenditure (CAPEX) is much higher compared to a conventional combustion engine vehicle. Hence, the conditions of the financial system in Ecuador create a mismatch between the payback structure required to minimize the impact of financial costs of the projects and the available long-term funding conditions.

2.10 In addition to the current funding structure available, given the early stage of development of the market, there is a lack of familiarity with the complex nature of this type of investments that need to be incorporated in risk analysis by the financial institutions. Furthermore, there are other factors such as the uncertainty about the potential impact of regulation in tariffs and project returns, the limited number of

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14 Based on the ongoing market study for this project, it is estimated that the cost per km is US$0.15 for diesel buses and US$0.05 por electric buses. Similarly. A gasoline-fueled taxi represents US$0.04 per km while an electric taxis yields US$0.009 per km. Actual savings will vary depending on the distance traveled and fuel replaced.

15 *Agencia de Regulación y Control de Electricidad* (ARCONEL) (2018). *Estadística Anual y Multianual del Sector Eléctrico Ecuatoriano*.

16 Gómez-Gelvez, et al. (2016). *Op.Cit.*

17 Diesel is the fuel utilized by buses in the public transport sector.

18 This was the intended diesel price that was set before the government retracted an initiative (Decree 883) for lifting fuel subsidies.

19 IMF (2019). *Article IV.* Although credit has been growing, deposits have remained flat during the last year. Furthermore, a deterioration of oil prices could increase the likelihood of liquidity risk.

20 World Bank Development Indicators.

21 *Superintendencia de Bancos de Ecuador*. *Boletines financieros.*

suppliers of EV, maintenance and services and uncertainty about the future development of EV infrastructure and services, due to the current dominance of technology based in fossil fuels. As a result, the current pilots of electric buses and taxis operating in the public transport system have been mostly financed by public banks[22] (¶2.16). Furthermore, the mandate by the Law of Energy Efficiency for 2025 (¶2.4) does not include provisions for facilitating long-term financing for EV investment, hence providing a potential widening of the financing gap.

B. Intervention proposed and program objectives

2.11 **The CCLIP.** The objective of the CCLIP is to reduce fossil fuel consumption and GHE emissions in Ecuador through the promotion of investments in EV. A coordinated public policy program will be set in place in order to provide a robust model to incentivize the adoption of EV in the sector of bus and taxis. To this purpose, the project will create a Coordination Unit (CU) within the MEF in order to ensure an adequate coordination among the project major stakeholders and, hence, a sound management, evaluation and reporting of the program. The CLIPP is aligned with the overall policy objectives of the Government of Ecuador illustrated in the Law of EE; (ii) the initiatives undertaken by CFN in the area of EV; and (iii) the previous experience and current scrapping plan of the Ministry of Transport and Public Works (MTOP). This CCLIP will consist on two operations, with a second individual operation that could be expected for 2021.

2.12 **Objective of the First Individual Operation under the CCLIP.** The general objective of this program is to reduce fossil fuel consumption and GHG emissions in Ecuador through the promotion of low-carbon mobility. The specific objectives to achieve this will be to: (i) stimulate the financing of private investments in EV; and (ii) promote the replacement of combustion-engine vehicles.

2.13 Clean Technology Fund (CTF)[23] concessional loan resources blended with IDB's Ordinary Capital (OC) will provide long-term financing for EV projects via the Ministry of Finance (MEF). The MEF will execute these resources through special arrangements with *Corporación Financiera Nacional* (CFN), an Ecuadorian national development bank,[24] the MTOP, and the *Ministerio de Energía y Recursos Naturales No Renovables* (MoE). This parties will act as sub-executing agencies. A CU will be created to provide sound management and monitoring. CTF and OC resources will be directed to provide: (i) long term loans to replace fossil combustion-engine vehicles with new EVs (buses and taxis) fleets;[25] (ii) vehicle scrapping vouchers for EV transition[26]; and (iii) power generation for green mobility solutions, mainly EV charging stations (preferably solar powered). Financing will be delivered to final beneficiaries through CFN (operating as first-tier or second-tier bank) and, potentially, other first-tier Financial Institutions (FI). The scrapping voucher will be provided to transport

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22 However, the number of units financed is very small compared to the size of the relevant motor park.

23 CTF funding for this program was approved under the 3rd phase of the Dedicated Private Sector Programs, which is intended to make use of a range of financing instruments taking risks that commercial lenders are not able to bear.

24 Which operates as a first-tier and second-tier bank.

25 The program does not consider private light vehicles. The disposal of vehicles replaced will be treated in the safeguards of the program.

26 Scrapping vouchers are assigned when old units are replaced. Once vouchers had been issued, MTOP will transfer the funds to CFN who will be responsible to process and redeem the transaction according to the voucher's value. The value of the voucher will be an important incentive for bus and taxi companies to renew their fleets.

operators conditional on the scrapping of replaced vehicles. This will contribute to the reduction of upfront investment costs. The intended beneficiaries of the program are private concessionaires, electric companies and suppliers and operators of EV in Ecuador. For the first specific objective, the expected results are an increase in: (i) total investment in EV projects financed by the program, (ii) number of EV financed and operating; and (iii) relevant portfolio of the financial institutions participating in the program. For the second specific objective the result indicator is the share of scrapped vehicles over the total number of EV financed by the program. The impact indicator is the amount of GHG emissions averted by the EV that are financed by the program. Upon project completion, the results will be evaluated employing an ex-post cost-benefit analysis.

2.14 The program could combine the concessional loan instrument with the use of adapted risk transfer mechanisms, such as guarantee funds. The employment of these mechanisms will be discretionary, and loans will not be subject to its use. A guarantee could be instrumental to cover regulatory or demand risks, but this could be highly specific to the particular structure of the operation at the municipal level. Municipalities regulate transport routes and prices and will be a key actor in project structuring.

2.15 CTF resources will also finance complementary TC activities (EC-T1452) to support the overall implementation of the program, including establishment of an appropriate enabling environment and capacity building of CFN and other government stakeholders.

2.16 The program will be executed will use IDB (US$10 million) and CTF (US$23 million) loan and TC resources (US$1.047 million, EC-T1452) to be processed separately).[27] Funds will be channeled via accredited FIs on a first-come-first-served basis[28] or via CFN operating as first-tier bank, to program's beneficiaries that meet eligibility criteria that will be defined in the program's Operating Regulations (OR). CFN is a well-established institution which operates as a first-tier and second-tier bank throughout the country. It seeks to promote economic development in Ecuador's productive and strategic sector through financial and non-financial services and works with a range of clients that goes from MSME to corporations. There is an existing line of credit for EV financing for the public and commercial transport sector.[29] To this date, they have provided credit for approximately US$8.6 million for financing electrical taxis and buses in the country. In addition to this, CFN has been leading several initiatives destined to promote and identify demand for this EV investments, in which relevant stakeholders in the industry were involved. The program will build upon this initial expertise and efforts and further expand CFN capacity to finance this type of investments. Finally, it will be determined, during program's design phase and in conformity with Ecuador's legal framework, if other government's entity will participate in the execution stage.

2.17 **Program alignment.** The program is aligned with the Second IDB's Updated Institutional Strategy (UIS) 2020-2023 (AB-3190-2), with the challenge of

[27] Projects will be deemed eligible based on conditions established in the Operating Regulations, to be agreed between IDB and CFN.

[28] In this case, CFN will operate as second-tier bank.

[29] In 2017 CFN financed the acquisition of 40 electric taxis by a private operator in the city of Loja and in 2018 provided US$7.6 million in financing for the acquisition of 18 electric buses by a private operator in Guayaquil. Furthermore, CFN has conducted workshops with private operators across the country to identify and promote potential projects with EV across the country.

Productivity and Innovation through the financing of investments from the private banking sector mobilized by the project, and with the crosscutting theme of Climate Change (CC) and Environmental Sustainability, through promotion of the EV relaying on renewable energy projects. Following the joint MDB approach on climate finance tracking, an estimated 100% of IDB funding for this program will be invested in CC mitigation activities and will contribute to the IDB Group's climate finance goal of 30% of operational approvals by year's end 2020. Additionally, it will contribute to the Corporate Results Framework (CRF) 2020-2023 (GN-2727-12) in the performance indicators of reduction of CO_2 emissions from fuel combustion, and MSMEs financed. The program is also aligned with the objective to move forward on Ecuador's energy reform; boost the contribution of private investment and productivity to economic growth; and facilitate access investment financing of the IDB Country Strategy for Ecuador 2018-2021 (GN-2924). It is consistent with the Support to SMEs and Financial Access/Supervision Sector Framework Document (GN-2768-7), the Sustainable Infrastructure for Competitiveness and Inclusive Growth Strategy (GN-2710-5), and the Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and RE (GN-2609-1).

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

3.1 The proposal builds on prior work of IDB within the region[30, 31] on the adoption of hybrid or electric buses by private operators, through the preparation of in-depth assessments of potential opportunities, engagement with bus operators, bus providers and local financers; pre-investment support, preparation of technical studies among others. It also builds on IDB experience with similar programs with National Development Banks in the region.[32] Additionally, IDB is currently preparing a similar program in Peru; with which this operation will coordinate efforts. This operation will benefit from the lessons learned from these previous experiences, such as targeting a wider range of beneficiaries and strengthening the institutional framework relevant for the electromobility sector.

3.2 This is a MM-I type CCLIP because it has activities and objectives in various sectors (the financial, the transport, and the energy sectors), but it is executed by a single agency, the MEF, that will coordinate with other government entities. For the first operation, it will coordinate, with CFN and MTOP. For the second operation, it may also coordinate with other public banks and government agencies. The CCLIP instrument is used in order to improve execution incentives and to introduce lessons learned from the first operation into the second one in a more expedite manner.

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30 Through a dedicated electromobility initiative (see Electromobility Brief), IDB has supported pilot projects for the acquisition of electric fleets and the deployment of charging infrastructure, as well as the definition of electromobility policies and strategies in several countries in the region, among other Barbados (3843/OC-BA; 2748/OC-BA; 4865/OC-BA), Costa Rica (2747/OC-CR; 3589/OC-CR & ATN/OC-14497-CR; ATN/FM-14595-CR) and Dominican Republic (ATN/OC-17390-RG).

31 See TC Accelerating NDC implementation. Unlocking clean buses in LAC (ATN/AC-16601-RG, ATN/OC-16602-RG, ATN/OC-16603-RG). ATN/CF-15453-RG

32 In 2013, IDB approved the Bogota's Integrated Public Transit System Transformation Program (3003/TC-CO), funded with CTF resources, to support the financing of low carbon buses for Bogota's *Sistema Integrado de Transporte Público* via Colombia's national development bank, Bancóldex.

IV. Environmental Safeguards and Fiduciary Screening

4.1 Due to its financial intermediation structure and following Directive B.13 of the Environment and Safeguards Compliance Policy (OP-703), the program does not require classification ex ante. Consistent with the approach to financial intermediation operations, the Bank will conduct the analysis of the proposed program at two levels. The first level will be at the corporate level, specifically CFN's ability to manage and apply the IDB's environmental and social safeguards, identifying the capacity and expertise of areas within the entity to allow safeguards to be applied to projects and investments to be financed with IDB resources. The other level is in the analysis of specific subprojects or investments.

4.2 The results of the analysis of the operation will be summarized in the Environmental and Social Management Report (ESMR) that will define the environmental and social requirements of the program and will be integrated into the program's OR.

4.3 Since this is the first operation with CFN, an institutional assessment of CFN will be undertaken in order to review its capacity to manage IDB fiduciary requirements and identify, if applicable, mitigation actions.

V. Key Issues

5.1 The sustainability of EV investments in the future is closely related to the evolution of the demand for this type of investment. To achieve this, the Government of Ecuador is working on a regulatory environment to promote EV investment (¶2.4). Similarly, CFN has been conducting activities across the country to educate relevant stakeholders in the characteristics and financial benefits of EV investments and to identify potential projects. Demand is expected to benefit from the requirement established by the Law of Energy Efficiency that mandates that all new vehicles destined for public transport system should be electric starting in 2025. Pilot projects as the one presented in this CCLIP will be instrumental to rise key lessons in order to expand the public policy directed to promote EV. These lessons are related to the required coordination among stakeholders (central and subnational governments, private and public banks, transport firms and cooperatives, EV providers, and others), the appropriate use of public incentives for EV adoption, and the learning curve of financial intermediaries to deal with EV financial risks.

VI. Resources and Timetable

6.1 The CCLIP total amount will be US$20 million from Ordinary Capital, which will consist of two individual operations of US$10 million each. The total amount for the first operation will be of US$33 million (US$10 million from Ordinary Capital funds and US$23 million from the Clean Technology Trust Fund (CTF). The second operation is expected in 2021. Each individual project is expected to have a five years execution period.

6.2 Distribution of the POD for Quality and Risk Review (QRR) of the first operation is expected on July 15, 2020; the approval of the Draft Loan Proposal by the Operations Policy Committee (OPC) on September 15, 2020, and the consideration of the Loan Proposal by the Executive Board of Directors is expected by October 14, 2020. An estimated budget of US$48,985 (US$16,345 from

administrative funds and US$32,640 from CTF) and 1.102 FTEs are required to complete preparation of the proposal (see Annex V).

VII. ELIGIBILITY CRITERIA

7.1 The CCLIP meets all the eligibility criteria stablished in the CCLIP policy (GN-2246-13) since is overall objectives are aligned with the IDB Country Strategy for Ecuador 2018-2021 (GN-2924) and the first operation: (i) has solid executing agency with a strong track record and sound technical and administrative capacities; and (ii) is aligned with the overall objective of the CCLIP.

CONFIDENTIAL

[1] The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.

Safeguard Policy Filter Report

Operation Information

Operation		
EC-L1268 Financing Sustainable Electric Transport in Ecuador		
Environmental and Social Impact Category	High Risk Rating	
B13		
Country	Executing Agency	
ECUADOR	EC-MEF - MINISTERIO DE ECONOMIA Y FINANZAS	
Organizational Unit	IDB Sector/Subsector	
Connectivity Markets and Finance Division	FINANCING FOR ENVIRONMENTAL SUSTAINABILITY	
Team Leader	ESG Primary Team Member	
JOAN ORIOL PRATS CABRERA		
Type of Operation	Original IDB Amount	% Disbursed
Loan Operation	$33,000,000	0.000 %
Assessment Date	Author	
9 Mar 2020	ceciliabe Project Assistant	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	18 Mar 2020	
QRR (Estimated)	15 Jul 2020	
Board Approval (Estimated)		
Safeguard Performance Rating		
Rationale		

Safeguard Policy Filter Report

Potential Safeguard Policy Items

[No potential issues identified]

Safeguard Policy Items Identified

B.1 Bank Policies (Access to Information Policy– OP-102)

The Bank will make the relevant project documents available to the public.

B.2 Country Laws and Regulations

The operation is expected to be in compliance with laws and regulations of the country regarding specific women's rights, the environment, gender and indigenous peoples (including national obligations established under ratified multilateral environmental agreements).

B.3 Screening and Classification

The operation (including associated facilities) is screened and classified according to its potential environmental impacts.

B.7 Supervision and Compliance

The Bank is expected to monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.

B.10. Hazardous Materials

The operation has the potential to impact the environment and occupational health and safety due to the production, procurement, use, and/or disposal of hazardous material, including organic and inorganic toxic substances, pesticides and persistent organic pollutants (POPs).

B.11. Pollution Prevention and Abatement

The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases).

B.13. Noninvestment Lending and Flexible Lending Instruments

Ex-ante impact classification may not be feasible for this type of operation. This includes: policy-based loans, Financial Intermediaries (FIs) or loans that are based on performance criteria, sector-based approaches, and conditional credit lines for investment operations.

B.17. Procurement

Suitable safeguard provisions for the procurement of goods and services in Bank financed operations may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.

Recommended Actions

Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.

Safeguard Policy Filter Report

Additional Comments

As per IDB Directive B.13 of the Environment and Safeguards Compliance Policy (OP-703), the program does not require classification ex ante. The FI-3 o FI-2 categorization to be confirmed during due diligence.

Environmental and Social Strategy (ESS)	
Operation Name	Financing Sustainable Electric Transport in Ecuador
Operation Number	EC-L1268
Prepared by	Isabelle Braly-Cartillier/ Javier Gavilanez - IFD/CMF
Operation Details	
IDB Sector	IFD/CMF
Type of Operation	Investment Loan Operation
Environmental and Social Classification	B.13 (FI-3 or FI-2 to be confirmed during due diligence)
Disaster Risk Rating	N/A
Borrower	*Republic of Ecuador. Ministry of Economic and Finance*
Executing Agency	Republic of Ecuador. Ministry of Economic and Finance
IDB Loan US$ (and total project cost)	IDB (CTF) – Loan: US$23 million IDB (OC) – Loan: US$10 million TOTAL: US$33 million
Applicable Policies/Directives	OP-102, OP-703 (B1, B2, B3, B7, B.10, B.11, B13, B.17)

Operation Description

The general objective of this program is to reduce fossil fuel consumption and GHG emissions in Ecuador through the promotion of low-carbon mobility. The specific objectives to achieve this will be to: (i) stimulate the financing of private investments in EV; and (ii) promote the replacement of combustion-engine vehicles.

Clean Technology Fund (CTF)[1] concessional loan resources blended with IDB's OC capital will provide long-term financing for EV projects via the Ministry of Finance (MEF). The MEF will execute these resources through special arrangements with *Corporación Financiera Nacional* (CFN), an Ecuadorian national development bank, the Ministry of Transport and Public Works (MTOP), and the *Ministerio de Energía y Recursos Naturales No Renovables* (MoE). A coordination unit will be created to provide sound management and monitoring. CTF and OC resources will be directed to provide: (i) long term loans to replace fossil combustion-engine vehicles with new EVs (buses and taxis) fleets;[2] (ii) vehicle scrapping vouchers for EV transition; and (ii) power generation for green mobility solutions, mainly EV charging stations (preferably solar powered). Financing will be delivered to final beneficiaries through CFN (operating as first-tier or second-tier bank) and, potentially, other first-tier Financial Institutions (FI). The intended beneficiaries of the program are private concessionaires, electric companies and suppliers and operators of EV in Ecuador. The expected results are an increase in total

1 CTF funding for this program was approved under the 3rd phase of the Dedicated Private Sector Programs, which is intended to make use of a range of financing instruments taking risks that commercial lenders are not able to bear.

2 The program does not consider private light vehicles. The disposal of vehicles replaced will be treated in the safeguards of the program.

investment in EV projects financed by the program; increase in number of EV financed and operating. The expected impact is an increase in the amount of GHG emissions avoided by the EV that are financed by the program.

The program could combine the concessional loan instrument with the use of adapted risk transfer mechanisms, such as guarantees funds. The employment of these mechanisms will be discretionary, and loans will not be subject to its use. A guarantee could be instrumental to cover regulatory or demand risks, but this could be highly specific to the particular structure of the operation at the municipal level. Municipalities have the regulate transport routes and prices and will be a key actor in project structuring.

CTF resources will also finance complementary TC activities to support the overall implementation of the program, including establishment of an appropriate enabling environment and capacity building of CFN and other government stakeholders.

Key Potential ESHS[3] Risks and Impacts

As advanced before, the project aims at promoting low carbon transport and GHG emission reductions. Beyond those positive impacts, it is expected that the market structuring efforts and risk mitigation tools to be piloted under the Project could also result in increased market confidence regarding those activities, paving the way for future replication of the project.

Nevertheless, the subprojects that will be eligible for financing under the program could have some potential E&S risks and impacts. Those risks and impacts are expected to be low or moderate, mainly linked to the construction phase of the EV charging stations and to the disposal of the non EV vehicles replaced. Subprojects to be eligible for financing will only be of Category B or C, no Category A subproject will be eligible. Subprojects involving involuntary resettlement, or any negative impact on natural habitats, cultural heritage sites or indigenous people will not be eligible for financing.

Executing agency institutional capacity – The MEF will execute program's resources through special arrangements with CFN. CFN is a well-established institution which operates as a first-tier and second-tier bank throughout the country. It seeks to promote economic development in Ecuador's productive and strategic sector through financial and non-financial services and works with a range of clients that goes from MSME to corporations. Among its current products, there exists a line of credit for EV financing for the public and commercial transport sector. To the date, they have provided credit for approximately US$8.6 million for financing electrical taxis and buses in the country. In addition to this, CFN has been leading several initiatives destined to promote and identified demand for this EV investments in which relevant stakeholders in the industry were involved. The program will build upon this initial expertise and efforts and further expand CFN capacity to finance this type of investments.

Information Gaps and Strategy for Analysis and Management

Due to its financial intermediation structure and following Directive B.13 of the Environment and Safeguards Compliance Policy (OP-703), the program does not require classification ex-ante. Consistent with the approach to financial intermediation operations, the Bank will conduct the analysis of the proposed program at two levels; one at the corporate level, specifically CFN's

[3] Environment, Social, Health and Safety.

ability to manage and apply the Bank's environmental and social safeguards, identifying the capacity and expertise of areas within the entity to allow safeguards to be applied to projects and investments to be financed with IDB resources. The other level is in the analysis of specific sub-projects or investments.

In any case, during the environmental and social analysis of the program (E&S due diligence) the following topics will be analyzed:

a) Normativity applicable to the project and gap analysis of such normativity with the IDB safeguards
b) Institutional capacity of CFN in the management of environmental and social risks
c) Identification of potential E&S risks and impacts of eligible subprojects
d) Confirmation of FI-3 or FI-2 categorization
d) Management procedures to be applied by CFN to assess eligibility and mitigate the potential environmental risks of sub-projects that could be identified.

The results of the analysis of the operation will be summarized in the Environmental and Social Management Report (ESMR – IGAS in Spanish) that will define the environmental and social requirements of the program. This set of requirements (E&S Management System or ESMS) will be integrate into the Program's Operating Regulations.

Opportunities for IDB Additionality on Environment and Social matters

No opportunities for additionality was identified at this stage.

Annex Table: Operation Compliance with IDB Safeguard Policies

To be prepared during due diligence.

Additional Appendices (if any)

N/A

INDEX OF SECTOR STUDIES

Studies	Date	References and Links
Instituto Nacional de Estadísticas y Censos (INEC). *El Transporte Terrestre de Pasajeros en Ecuador y Quito: Perspectiva Histórica y Situación Actual.*	2010	https://www.ecuadorencifras.gob.ec/documentos/web-inec/Bibliotecas/Estudios/Estudios_Economicos/Transporte_Quito.pdf
Kreuzer, F. and Wilmsmeier, G., *Eficiencia energética y movilidad en América Latina y el Caribe*, ECLAC	2014	https://www.cepal.org/es/publicaciones/36798-eficiencia-energetica-movilidad-america-latina-caribe-hoja-ruta-la
Analysis of the ESI. Micale, Stadelmann, Boni.	2015	Energy Savings Insurance: Pilot Progress, Lessons Learned, and Replication Plan, Global Innovation Lab for Climate Finance Lab.
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Julián A. Gómez-Gélvez, Carlos Hernán Mojica, Veerender, Kaul, Lorena Isla. *The Incorporation of electric cars in Latin America.*	2016	https://publications.iadb.org/publications/english/document/The-Incorporation-of-Electric-Cars-in-Latin-America.pdf
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Ministerio del Ambiente. *Tercera Comunicación Nacional del Ecuador a la Convención Marco de las Naciones Unidas sobre el Cambio Climático.* Mayo.	2017	https://www.ambiente.gob.ec/wp-content/uploads/downloads/2017/10/TERCERA-COMUNICACION-BAJA-septiembre-20171-ilovepdf-compressed1.pdf
Ministerio de Electricidad y Energía Renovable. *Plan Nacional de Eficiencia Energética 2017-2035*	2017	https://www.celec.gob.ec/hidronacion/images/stories/pdf/PLANEE%20version%20espa%C3%B1ol.pdf

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Martinez, H. *El desafío del sector transporte en el contexto del cumplimiento de las contribuciones determinadas a nivel nacional de América Latina. Economic Commission for Latin America and the Caribbean* (ECLAC).	2018	https://www.cepal.org/es/publicaciones/44344-desafio-sector-transporte-contexto-cumplimiento-contribuciones-determinadas
HINICIO. *Consultoría en innovación del Sistema de transporte Terrestre y movilidad sostenible para el Archipiélago de Galápagos.*	2020	Estudio preparado para el BID por firma consultora HINICIO.
Crippa, M., Oreggioni, G., Guizzardi, D., Muntean, M., Schaaf, E., Lo Vullo, E., Solazzo, E., Monforti-Ferrario, F., Olivier, J.G.J., Vignati, E., *Fossil CO2 and GHG emissions of all world countries - 2019 Report*, EUR 29849 EN, Publications Office of the European Union, Luxembourg.	2019	https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/fossil-co2-and-ghg-emissions-all-world-countries-0
Jaramillo, M. Is it possible to achieve carbon-free prosperity?	2019	http://bit.ly/IDB-Cfree
IMF. Ecuador- Staff report for the 2019 Article IV consultation.	2019	https://www.imf.org/en/Publications/CR/Issues/2019/03/20/Ecuador-Staff-Report-for-the-2019-Article-IV-Consultation-and-Request-for-an-Extended-46682
CFN. *Plan de implementación, sostenimiento y evaluación de un sistema de transporte público basado en propulsión eléctrica en tres cantones del Ecuador- Resumen de demanda.*	2020	Avance de estudio de demanda en realización.
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Estudio de costo beneficio sobre la adicionalidad del programa.	2020	Estudio de costo beneficio, en preparación por parte del equipo de proyecto.
Análisis la capacidad institucional de CFN bajo la modalidad PACI.	2020	Análisis la capacidad institucional de CFN, en preparación. Consultoría para el BID

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