



Accelerating the Move to Electric Buses in Costa Rica

Part I: Project Information

Name of Parent Program

Global Programme to Support Countries with the Shift to Electric Mobility.

GEF ID

10284

Project Type

MSP

Type of Trust Fund

GET

CBIT/NGI

CBIT

NGI

Project Title

Accelerating the Move to Electric Buses in Costa Rica

Countries

Costa Rica

Agency(ies)

UNEP

Other Executing Partner(s):

Ministry of Environment and Energy, Costa Rican USA Foundation for Cooperation (CRUSA)

Executing Partner Type

CSO

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Climate Change, Climate Change Mitigation, Technology Transfer, Sustainable Urban Systems and Transport, United Nations Framework Convention on Climate Change, Paris Agreement, Nationally Determined Contribution, Influencing models, Transform policy and regulatory environments, Demonstrate innovative approaches, Strengthen institutional capacity and decision-making, Deploy innovative financial instruments, Convene multi-stakeholder alliances, Stakeholders, Beneficiaries, Communications, Behavior change, Awareness Raising, Education, Type of Engagement, Participation, Information Dissemination, Consultation, Private Sector, SMEs, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, Civil Society, Non-Governmental Organization, Academia, Gender Equality, Gender results areas, Capacity Development, Access to benefits and services, Participation and leadership, Knowledge Generation and Exchange, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Capacity, Knowledge and Research, Knowledge Generation, Workshop, Training, Innovation, Learning, Indicators to measure change, Theory of change, Knowledge Exchange, South-South, North-South

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 2

Climate Change Adaptation

Climate Change Adaptation 0

Submission Date

11/25/2020

Expected Implementation Start

2/1/2021

Expected Completion Date

1/31/2024

Duration

48In Months

Agency Fee(\$)

79,688.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCM-1-2	Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technology and electric mobility	GET	876,712.00	8,007,290.00
Total Project Cost(\$)			876,712.00	8,007,290.00

B. Project description summary

Project Objective

Reduce greenhouse gas emissions through the large-scale deployment of electric public transport vehicles in the Greater Metropolitan Area of Costa Rica.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 1. Institutionalization of low-carbon electric mobility	Technical Assistance	1. The Government demonstrates enhanced coordination and promotes electric mobility	1.1. Stakeholders are trained on technical, regulatory, financial and operational aspects of scaling-up electric taxis 1.2. An electric mobility multi-stakeholder working group is created and an online platform strengthened for enhancing coordination of national decision-makers	GET	102,000.00	240,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 2. Short term barrier removal through low-carbon e-mobility demonstrations	Investment	2. Costa Rican citizens begin to use electric mobility for their public transport needs	<p>2.1. The technical, social and economic viability of six electric vehicles in airport taxi fleets is demonstrated to local and national stakeholders</p> <p>2.2. Taxi data management practices are tested by taxi drivers and government officials to facilitate the uptake of electric vehicle taxis</p>	GET	397,500.00	7,350,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 3. Preparing for scale-up and replication of low-carbon electric mobility	Technical Assistance	3. Taxi drivers demonstrate willingness to purchase electric vehicles	<p>3.1 Financial instruments and fiscal incentives to encourage taxi owners to purchase electric vehicles are strengthened</p> <p>3.2. Standards for regulating electric and internal combustion engine vehicles are presented for adoption by the Ministry of Environment and Energy</p> <p>3.3. Long-term roadmaps for the electrification of public buses and taxis are presented for adoption by the Ministry of Environment and Energy and the Ministry of Public Works and Transportation</p>	GET	218,500.00	118,290.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 4. Long-term environmental sustainability of low-carbon electric mobility	Technical Assistance	4. The Costa Rican government takes action towards implementing a policy framework for ensuring the environmental sustainability of low-carbon electric mobility	4.1. Updated laws and regulations for waste management of electric vehicle batteries are presented for adoption by the Ministry of Health	GET	41,612.00	155,000.00
Monitoring and evaluation				GET	40,000.00	
Sub Total (\$)					799,612.00	7,863,290.00
Project Management Cost (PMC)						
				GET	77,100.00	144,000.00
Sub Total(\$)					77,100.00	144,000.00
Total Project Cost(\$)					876,712.00	8,007,290.00

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Donor Agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	In-kind	Recurrent expenditures	125,000.00
Civil Society Organization	Costa Rican USA Foundation for Cooperation (CRUSA)	In-kind	Recurrent expenditures	80,000.00
Civil Society Organization	Costa Rican USA Foundation for Cooperation (CRUSA)	Grant	Investment mobilized	488,290.00
Private Sector	Empresa de Servicios Públicos de Heredia S.A. (ESPH)	Public Investment	Investment mobilized	200,000.00
Recipient Country Government	Ministry of Environment and Energy (MINAE)	In-kind	Recurrent expenditures	64,000.00
Recipient Country Government	Costa Rican Institute of Electricity (Grupo ICE)	Public Investment	Investment mobilized	7,000,000.00
Civil Society Organization	Costa Rican Electric Mobility Association (ASOMOVE)	In-kind	Recurrent expenditures	50,000.00
			Total Co-Financing(\$)	8,007,290.00

Describe how any "Investment Mobilized" was identified

Investment mobilized was identified through discussions with different stakeholders, including government actors, civil society actors, international cooperation and multilateral entities. Many of these are involved in the Costa Rican Committee for Electrification of Public Transport (CETP) (see baseline section). Co-finance was also identified in coordination with the Energy Directorate of MINAE, and the Presidential First Lady’s Office, who coordinates deployment of electric mobility at a high-political and decision-making level in the country. Investment mobilized identified as complementing and supporting the goals of this project are: ● Grant from CRUSA, a Costa Rican-based non-governmental organization, linked to several electric mobility projects. The first is a project named “Leapfrogging to e-buses (electric buses) in Costa Rica”, which contributes USD\$ 138,290 in co-financing and includes the activation of a multi-stakeholder national task force including private and civil society (this will serve as a basis for this project's steering committee and Component 1), evaluation of technical and financial feasibility of electric buses in the Metropolitan Area of San Jose, capacity building of key stakeholders and the development of a five-year strategic plan to promote electric mobility innovation. The second project is funded by CRUSA-IDB Lab and led by CRUSA, and is called “Road to Decarbonization Project: Promoting the Economy of Hydrogen in Costa Rica.” This includes the technical evaluation of a hydrogen-fueled bus and light-duty vehicles in the country. It contributes USD\$

350,000 as co-financing for this project. ● Public investment by utilities in electric charging infrastructure: ○ Grupo ICE is currently planning the further installation of 150 kW chargers, beginning in 2021 as part of the National Fast Charger Network, with a total value of US\$7 million. These investments will serve as co-financing in supporting the scale up of electric mobility at the national level, especially for taxi services and other light-duty vehicles. As part of this, Grupo ICE will co-finance charging stations for the demonstrations in component 2 of this project. ○ Empresa de Servicios Públicos de Heredia S.A. (ESPH) (USD\$ 200,000) through the installation of fast chargers for electric vehicles, equipment for vehicles and the development of electric tariffs.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)
UNEP	GET	Costa Rica	Climate Change	CC STAR Allocation	876,712	79,688
Total Grant Resources(\$)					876,712.00	79,688.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required

PPG Amount (\$)

40,000

PPG Agency Fee (\$)

3,600

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)
UNEP	GET	Costa Rica	Climate Change	CC STAR Allocation	40,000	3,600
Total Project Costs(\$)					40,000.00	3,600.00

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	0	664536	0	0
Expected metric tons of CO ₂ e (indirect)	0	1550291	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)		664,536		
Expected metric tons of CO ₂ e (indirect)		1,550,291		
Anticipated start year of accounting		2021		
Duration of accounting		15		

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)	25,608,969,693			

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		1,625		
Male		675		
Total	0	2300	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

For explanation of indicator 6, see section 6 and annex M. Indicator 11 was calculated identifying the direct beneficiaries of workshops and training carried out by the project, and direct beneficiaries of the project pilots. The project plans to deliver 6 trainings, 4 workshops, and one support program for taxi operators. A projection of approximately 30 people participating as beneficiaries per training/workshop has been made, with the exception of 4 trainings that are carried out during the pilot project and the projection assumes fewer beneficiaries (10 people) due to the scope of the pilot. According to a 2016 IDB study, 17% of people working in the transport sector in Costa Rica are women. This project aims to ensure and increase participation of women in planning, decision making and policy making, however, parity would be unrealistic considering the baseline scenario. Therefore, for workshops and trainings, participation is projected towards 20/80 participation of women and men respectively. In addition to training activities and workshops, the project will benefit airport taxi users through the pilot demonstration. The number of beneficiaries has been calculated based on data of monthly trips (during high season and low season) and average trip occupations provided by the airport administration authorities and taxi operators. An average of 13000 monthly trips is used for high season (6 months/year) and 9500 for low season (6 months/year), with an average occupation of 1.4 people per trip. A 70% fleet availability correction is used, assuming that while the original data responds to the availability of 103 taxis, the pilot will deploy six taxis, so these will not be available all of the time due to charging and demand. The number of beneficiaries also assumes a difference in demand for taxis by men and women. Based on national statistics for taxi use, beneficiaries for the demonstration pilot are assumed to be 70% women and 30% men. Finally, due to the recent COVID-19 crisis, which is impacting tourism worldwide, another correction has been applied to the beneficiaries' calculation, assuming that tourism will be operating at a 30% capacity in comparison to past trends at the time the airport taxi pilot starts.

Part II. Project Justification

1a. Project Description

a. Global environmental and/or adaptation problems, root causes and barriers that need to be addressed

Global environmental problem:

A global transition to low- and zero- emission mobility is essential to meet international climate commitments, including the Paris Climate Agreement. The transport sector is currently responsible for approximately one quarter of energy-related carbon dioxide emissions;^[1] this is expected to grow by 2050. In addition, the transport sector is a leading contributor to short-lived climate pollution, especially black carbon.

The global vehicle fleet is set to double by 2050, and almost all this growth will take place in low- and middle-income countries. By 2050, three out of five cars will be found in developing countries.^[2] This means that achieving global climate targets will require a shift to zero-emissions mobility in all countries, including low- and middle-income ones.

One of Costa Rica's most significant environmental challenges is greenhouse gas emissions (GHG) due to transport. In terms of power generation, the country's energy matrix is already low-emission, with hydropower representing 74%, other renewables such as geothermal, biomass, solar and wind power making up around 24%, and the remaining

fraction (2%) being generated by thermal sources (heavy fuel oil).[3]³ The resulting carbon intensity of the national electricity matrix was approximately 0.0365kg CO₂/kWh in 2019,[4]⁴ far lower than the global average.

As Costa Rica has a clean electricity matrix, it is the transport sector that dominates GHG emissions and air pollution. The sector is the country's biggest source of GHG emissions, emitting 54% of the total.[5]⁵ It is also the biggest energy consumer, consuming 52% of all energy and 83% percent of hydrocarbons used in the country. Furthermore, transport is the largest contributor to air pollution in the country. Nitrogen oxide and particulate matter (PM) levels surpass those recommended by the World Health Organization (WHO) in several locations in the Greater Metropolitan Area of Costa Rica (GAM).[6]⁶ Costa Rica does not produce nor refine hydrocarbons, thus its dependence on combustion vehicles and fossil fuels for transport also generates high costs from imported fuels and makes the country vulnerable to global oil price fluctuations.

Of equal concern is the fact that GHG emissions in the transport sector continue to grow. According to Costa Rica's biennial update report (BUR) to the United Nations Framework Convention on Climate Change (UNFCCC), it is projected that the country's business-as-usual (BAU) GHG emissions will increase by 56% in 2050 in comparison to 2015. The energy sector is the biggest contributor to these emissions (49% increase to 2050), and transport the biggest contributor to energy emissions, increasing 44% by 2050. With the middle-class growing and cars consequently becoming economically accessible to a larger population, it is projected that the number of private vehicles in the BAU scenario will increase, leading to higher energy use, higher GHG and PM emissions, increased traffic congestion, increased road safety issues, and thus an overall reduction in the quality of public health and quality of life.

This global environmental problem in Costa Rica highlights the need to accelerate the transition to a national low-emission transport sector. With one of the cleanest electricity matrices in the world, the country has significant potential to achieve it. A key guiding document for the country is the National Electric Transport Plan 2018-2030, which describes actions to strengthen and promote electric transportation in Costa Rica, and its Law No. 9518 "Incentives and promotion of electric transport" (see section 2 for further information). While the country has made significant advances in implementing the plan with regards to buses (see section 2, table 1), it has yet to advance on the plan's actions with regards to electrifying the country's 13,000 taxis. Achieving this is key for Costa Rica as a stepping stone to the broad adoption of electric vehicles by private consumers.

Root causes of the problem and barriers to change:

There are four root causes, with associated barriers, that currently impede Costa Rica from facilitating a transition to a low-emission transport sector and avoiding the business as usual scenario. These apply particularly to the Greater Metropolitan Area of Costa Rica.

1. Lack of institutional capacity and inclusive governance

a) In the context of Costa Rica's national goal to become carbon neutral by 2050 (see section 2), and its clean electricity matrix, there is growing national and international momentum to support the country to achieve a low-emission transport sector. However, local stakeholders do not have the capacity to accompany the speed of the transition and rapidly need to build capacity on electric mobility, especially in the context of integrating electric vehicles into taxis. Although there have been efforts in building the capacity of government officials and decision-makers related to electric mobility, particularly in the bus sector (see section 2), there are still gaps in capacities on electric mobility in key sectors. In particular, local financial institutions, who are beginning to express interest in financing electric vehicles, have a lack of understanding of good practices on the financing of electric-mobility.^[7] The taxi industry also needs to build capacity. In particular, taxi drivers have a lack of understanding on how to calculate the total cost of ownership and the payback period of electric vehicles. This means that they are unable to understand its cost-effectiveness in the medium- to long-term. This has led to lack of purchasing of electric vehicles by the industry. Finally, customs officers and vehicle importers have limited capacity to understand and effectively apply existing regulations on fuel efficiency, resulting in non-compliant and cheap internal combustion engines vehicles being imported into the country, reducing the market competitiveness of electric vehicles.

b) There is also a void of broader governance and consultation mechanisms that incorporate the views of key transport actors in the private sector and civil society in the design, development and implementation of initiatives to advance electric-mobility in the country. In recent years, coordination mechanisms have been established to support electric vehicle scale-up, such as a political group led by the First Lady's Office and a technical group called the Costa Rican Committee for Electrification of Public Transport (CETP), led by the Energy Directorate of MINAE. However, these are currently limited to the participation of government entities and international organizations, resulting in governance structures that do not effectively consider the views and interests of the local private sector and civil society. As the country moves forward to scale up electric mobility through

new projects and regulatory changes (for instance, as proposed through this project, see below), more long-term and inclusive governance and consultation structures are required to ensure such changes are socially and economically viable..

2. Limited experiences with and information related to electric taxis

a) In Costa Rica, less than 1,200 electric vehicles are in operation in a country of more than 1.3 million vehicles. This is despite the establishment of a public national fast charging network, with 56 stations installed and US\$7 million of further investment planned (see section 2). One of the key reasons for this is that consumers have a lack of confidence in the technical viability of electric vehicles to replace internal combustion vehicles. To address this, the government is prioritizing the electrification of public transport, in particular buses and taxis, through its National Electric Transport Plan and as stipulated by Law 9518. While it is advancing in demonstrating electric buses (see section 2), it has not yet progressed on the taxi sector. Consequently, taxi drivers are unsure of how electric vehicles would perform under the industry's usage patterns and local conditions (hilly terrain across the country), and what maintenance requirements would be. Without this knowledge, they are unwilling to take the plunge on purchasing an electric vehicle. This lack of experience with electric taxis also results in passengers holding a lack of confidence and awareness as to the technical viability of electric vehicles in the Costa Rican context. In this context, even with effective financing mechanisms that covered the incremental cost difference barrier (as described in 3(a) below), there would be slower uptake of electric vehicles in the taxi industry and beyond without experiences with and confidence in the technology in local conditions.

b) The lack of experience with electric vehicles is compounded by an absence of data and data measurement mechanisms on taxi and electric taxi usage. Without these, key government ministries and agencies, such as the Ministry of Environment and Energy, the Ministry of Public Works and Transport, and the Public Transport Council, are unable to design, monitor and assess the effectiveness of policies and regulations related to the electrification of public transport. Furthermore, rental car companies have noted that they have an absence of data on the performance of electric vehicles under high-usage conditions. This absence affects their ability to generate effective business models for electric vehicle rental based on an accurate understanding of operational costs.

3. Inadequate financing instruments and lack of regulations for low-emission transport options

a) A key barrier to the uptake of electric vehicles in Costa Rica is their higher upfront cost compared to internal combustion engine vehicles. This results in the perception that they are more expensive to consumers if a total cost of ownership (TCO) analysis is not performed. To address this barrier, the government is working to implement its National Electric Transport Plan. This aims to build a strong electric vehicle and local finance market, through the deployment of electric vehicles in the public transport sector. This sector has high usage rates and thus is particularly suited to electric vehicles when the TCO is considered.

For public buses, the government is working to address the higher incremental cost through the implementation of financial instruments specifically for the public bus sector, to ensure that electric buses are incorporated into the national bus concessions to be given in late 2021 (see section 2). Another key area of the national plan is on taxis, however the government has not yet advanced successfully in addressing financial barriers for this sector: while incentives and financial mechanisms have been introduced, there is not one electric taxi in the Greater Metropolitan Area of Costa Rica.

Currently the cost differential for a standard sedan (used for taxis) is approximately US\$15,000. To address this, the government established Law 9518, which denotes that electric vehicles are exempt from a consumption tax, sales tax and custom duty. This reduced the cost difference by an average of \$5,000 for all private consumers. However, it does not translate into a fiscal incentive for taxi owners, as they already receive partial or complete purchase tax exemptions through law 7969 (regulation of taxis).

Local financial institutions (Banco Popular, Banco Promerica, Banco de Costa Rica and Banco Nacional) began to address the differential for private electric vehicles and taxis by introducing financial products in late 2019 (see section 2). These products aim to support interested consumers by providing special low interest rates, longer loan terms and other reductions for electric vehicles.^[8] Their aim is to highlight that while electric vehicles have a higher upfront cost, the vehicle will be cheaper in the medium to long-term due to lower operation, maintenance and financing costs. This would be especially applicable for taxis, which have higher usage rates. Unfortunately, to date the aforementioned products have not had success. In the year since the introduction of these products, financial institutions are yet to provide a loan to a single taxi driver for the purchasing of an electric vehicle. This is despite the country moving forward to implement a broader charging network as previously noted (see section 2).

This lack of impact in the taxi sector is due to the following reasons. Firstly, the taxi industry is atomized; the majority of taxis are owned and run by individuals. Such drivers have a lack of understanding of how to create a business model for calculating the total cost of ownership of an electric vehicle. There are currently no estimates of the payback period for electric vehicles in the taxi industry. Secondly, while the success of financial products launched in late 2019 has been affected by the COVID pandemic, the Costa Rican Banking Association has noted that financial products developed were based on limited local studies, a lack of local data and limited consideration of global best practices.[9] For instance, local financial institutions have not yet developed a methodology for estimating taxi driver income, cash flow and the payback period for a loan for the purchasing of an electric taxi. Thirdly, existing laws 7969 and 9518 for incentivizing the purchasing of electric taxis are not complementary and still incentivize the purchasing of internal combustion engine or liquified petroleum gas vehicles, thus not resulting in a significant reduction in the cost differential or total cost of ownership for this sector.

b) While the country has advanced with plans, policies and standards for low-emission transport (see section 2), there is a lack of energy efficiency vehicle standards to disincentivize the purchase and use of internal combustion engine vehicles and create an even playing field for electric vehicles. Current regulations on energy consumption of internal combustion engine vehicles are outdated. Decree 25584, which implements national law 7447 and regulates energy usage in vehicles, was published in 1996 and has not been updated since then. The result is that inefficient internal combustion engine vehicles continue to be imported into the country and are significantly cheaper than electric vehicles. While work is underway for developing regulations for buses within the existing law 7447, there continues to be an absence of regulations for light-duty vehicles. Furthermore, while the country has implemented tight fuel efficiency standards through decree 39724, these are not being effectively applied by customs and importers, leading to the continual introduction of non-complying vehicles into the local market. Together the lack of effectiveness of the two decrees is resulting in an increased cost differential between internal combustion engine and electric vehicles.

c) There is also a lack of long-term planning on electrification of public transport services, the absence of which introduces uncertainty in key public and private sector actors as to how electrification of their services will occur. The country has defined goals for promoting electrification in the National Decarbonization Plan, the National Electric Transport Plan, and Law 9518, but has not created strategic roadmaps which identify the necessary steps and timeframes required to achieve the goals contained in the aforementioned plans. This impacts the confidence that stakeholders have in the process of electrification in the medium- to long-term, signifies an absence of a clear market signal to the private sector and results in uncoordinated efforts to facilitate the adoption of electric vehicles in the bus and taxi industries. Furthermore, national concessions for buses occur every seven years, with the next occurrence to happen in late 2021. This presents a key strategic moment to develop concession specifications aligned with a long-term plan for electrification of the bus sector. Failure to do so could lead to a seven-year lock-in of a new fleet of inefficient buses. As for taxi services, Law 9518 stipulates that 10% of license plate concessions be given to providers that utilize electric vehicles. However, the government has yet to develop a roadmap to implement this disposition.

4. Lack of regulations for managing the reuse and disposal of electric vehicle batteries

a) While Costa Rica has a strong image and reputation as a global environmental leader, it lacks regulations, safety standards, and procedures for managing the waste and reuse of electric vehicle batteries. Its law 8839 on waste management currently doesn't consider electric vehicle batteries. This uncertainty about management of the long-term environmental impact and related costs of the reuse and disposal of electric vehicle batteries leads to policy hesitation on promoting the introduction of the technology into the country. It also sends an unclear signal to the private sector on the implications of introducing electric vehicles (e.g. uncertainty on liability for waste). The main preoccupation that arises among key public and private stakeholders is on how EV batteries can be reused (i.e. second-life), treated and disposed of in a sound environmental manner to mitigate and avoid soil contamination. The existing waste management framework (law 8839) could support new norms and standards for EV batteries.

b. Baseline scenario and any associated baseline projects

Baseline scenario for the energy sector

As noted in section 1, Costa Rica has a clean electric grid, with hydropower representing 74% of electric generation, other renewables such as geothermal, biomass, solar and wind power making up around 24%, and the remaining fraction (2% or less) being generated by thermal sources (heavy fuel oil).[10]¹⁰ The resulting carbon intensity of the national electricity matrix is approximately 0.0365 kg CO₂/kWh,[11]¹¹ far lower than the global average. The average cost of electricity in 2019 was US\$ 0.171 kW/h.[12]¹² In accordance with its NDC and national targets (see below) the country is aiming to maintain a low-carbon electricity generation industry until 2050.

Baseline scenario for transport sector

As noted previously, the transport sector is the primary source of GHG emissions in Costa Rica, accounting for 54% of the total.[13]¹³ The largest generation of transport emissions in Costa Rica comes from the Greater Metropolitan Area of Costa Rica (GAM), the center of economic activity of the country. This includes the capital city of San José and has a population of approximately 2.2 million habitants (almost 50% of the country's population).

Public transport (bus, taxi, train) is the main mode of transportation used in the Greater Metropolitan Area (52% of total trips made). Buses account for 42.5% of all trips made (with a fleet of around 5,000 units in public transport services). Concessions for the purchasing of new buses occurs every seven years, with the next concession to take place in late 2021. Current buses are regulated by the last public bus concession in 2014 to be EURO III, although some buses on the streets are EURO IV and V. For the 2021 concession, the government is exploring including tighter efficiency standards for public buses and the introduction of electric buses, in accordance with the National Electric Transport Plan. Taxis account for 4.9% of trips with a fleet of around 13,000 vehicles, with other modes making up the rest. Public transport use is decreasing due to poor service, deficient infrastructure and inefficient design, which leads to longer commutes. Ridership is shifting to an increasing use of private vehicles (28% in 2015 to 42% in 2018) instead of public transport (64% in 2015 to 52% in 2018).[14]¹⁴ This shift has resulted in an accelerated increase in Costa Rica's vehicle fleet, which has been growing at a rate of a 6.7% increase per year between 2007-2016 (79,2% in the whole period, see also figure 2).[15]¹⁵ Taxis are the third most used mode of transport, with bicycles (1.68%), Uber (0.68%), train (0.28%) and other modes (1.4%) making up the rest of the trips surveyed. See figure 1 for further information. Most vehicles in the fleet (around 76% according to the national inspection and maintenance facility operator) are gasoline vehicles. The most popular brands in the market are Asian companies such as Toyota, Nissan, Hyundai, Kia and Suzuki. Vehicles are classified as luxury products and subject to a 35% selective consumption tax, as well as VAT and other customs taxes. The taxi fleet has an average age of 8.8 years, with the age limit for taxis being 18 years.[16]¹⁶

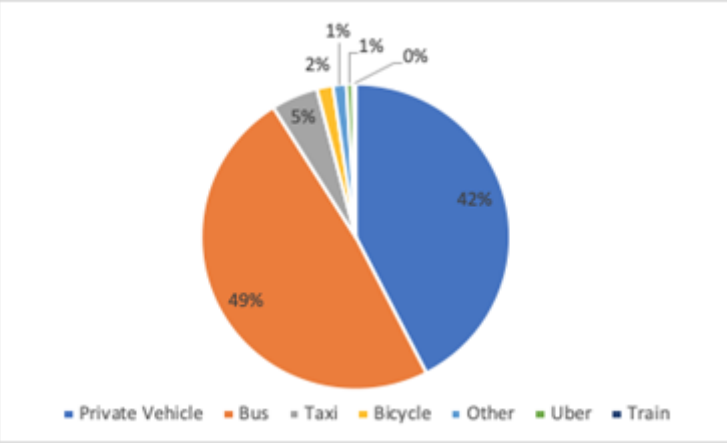


Figure 1. Modal distribution of transport in Costa Rica

Source: CGR Public Service Consultation (2018)

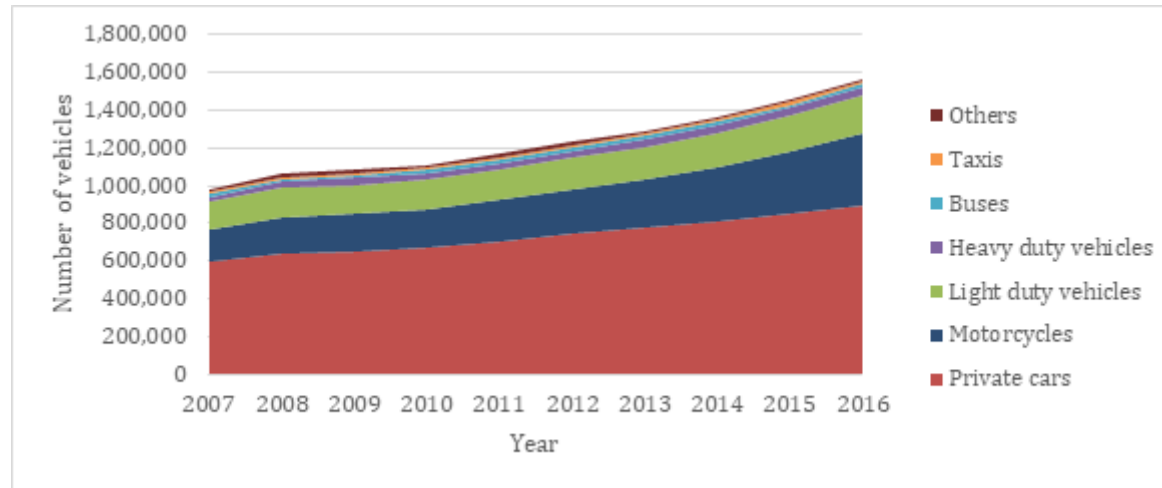


Figure 2. Costa Rican fleet composition during the 2007-2016 period.

Source: Energy Directorate (2018)

The majority of taxis are purchased by individual owner-operators who pertain to a taxi association. Purchases are made through a combination of capital and a loan through a local financial institution. By Law 7969, taxis are exempted 60% from usage taxes. In addition, taxi purchasers receive a 60% reduction in import taxes for the purchasing of a taxi which they can use once every four years, with a 70% exemption granted the first time this benefit is utilized. This is granted irrespective of custom, insurance and freight (CIF) value. By law 7969, purchasers of ‘clean technology’ vehicles, including liquified petroleum gas, electric vehicles and other clean technologies, receive a 100% reduction in import taxes and tariffs. The Public Transport Council provides concessions for taxis, through a competitive process. Concessions are provided for 10 years. At this point in time it is not clear when the next concession process will take place. To date, no provision has been made to incorporate law 9518 establishing that at least 10% of new taxi concessions be given to EVs (Article 30) (see below for more information). The taxi service is regulated, which means a tariff for its operation is set by a regulating authority (ARESEP), based on the service costs and estimated profit margins of the taxi drivers.

Consistent with the recently observed trends, it is projected that the transport sector will continue to be the biggest contributor to energy emissions in the long-term, with such emissions projected to increase by 44% until 2050. According to data of the Costa Rican Petroleum Refinery (RECOPE), hydrocarbon consumption has tripled during the 1986-2018 period (Figure 3). Most of these hydrocarbons are utilized in the transportation sector, in the form of diesel fuel and gasolines (RON 91 and RON 95), represented by fuel

sales in Figure 3. All these fuels are imported, which represent a challenge for the country in terms of energy and trade security, especially considering that transportation is the largest energy consumer. Associated with this growth in energy consumption, and especially in hydrocarbons, is the increase in the stock of vehicles in the country. If this growth is sustained, it is expected to impact the overall greenhouse gas emissions if no mitigation strategies are undertaken.

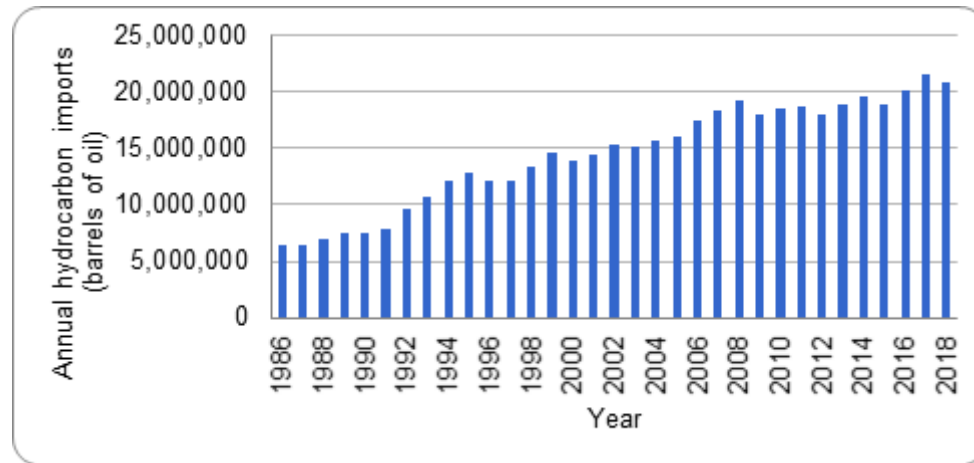


Figure 3. Hydrocarbon imports during the 1986-2018 period.

Source: RECOPE public data (2020).

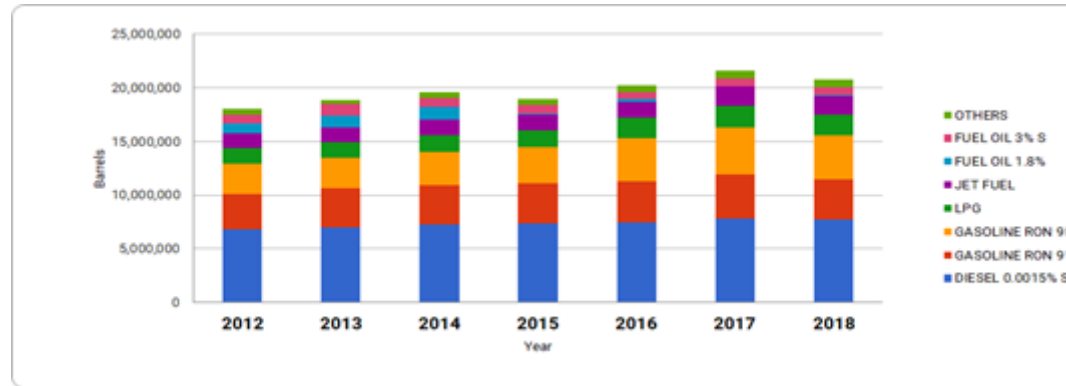


Figure 4A. Fuel sales during the 2005-2018 period.

Source: RECOPE public data (2020).

On electric mobility, vehicles have begun to be introduced to the country in recent years (Figure 5). As of 2020, EVs are still a small fraction of new registrations, representing 0.78% and 1.22% in 2018 and 2019 respectively. It is projected that for 2020 these will make up to 3% of new registrations.[17]¹⁷ There are 1,191 electric vehicles in operation in the country, amongst a total vehicle fleet of more than 1.3 million. Currently the cost differential between an electric and internal combustion vehicle for a standard sedan is approximately US\$15,000. Law 9518, which denotes that electric vehicles are exempt of the selective consumption tax, sales tax and custom duty (see below), has helped to reduce the differential by an average of US\$5,000. However, the remaining differential of US\$10,000 is a significant increase on the price of a comparable internal combustion vehicle and untenable for taxi drivers and the majority of private consumers. This is despite the fact that initial total-cost of ownership analyses are beginning to suggest that over a 10-year period battery-electric vehicles now have cost parity with conventional internal combustion energy vehicles, especially for taxis (which have higher usage, etc.). See figure 4B. These estimates are based on current business-as-usual conditions (e.g. with regards to policies, laws, etc. which are described in the following sections).

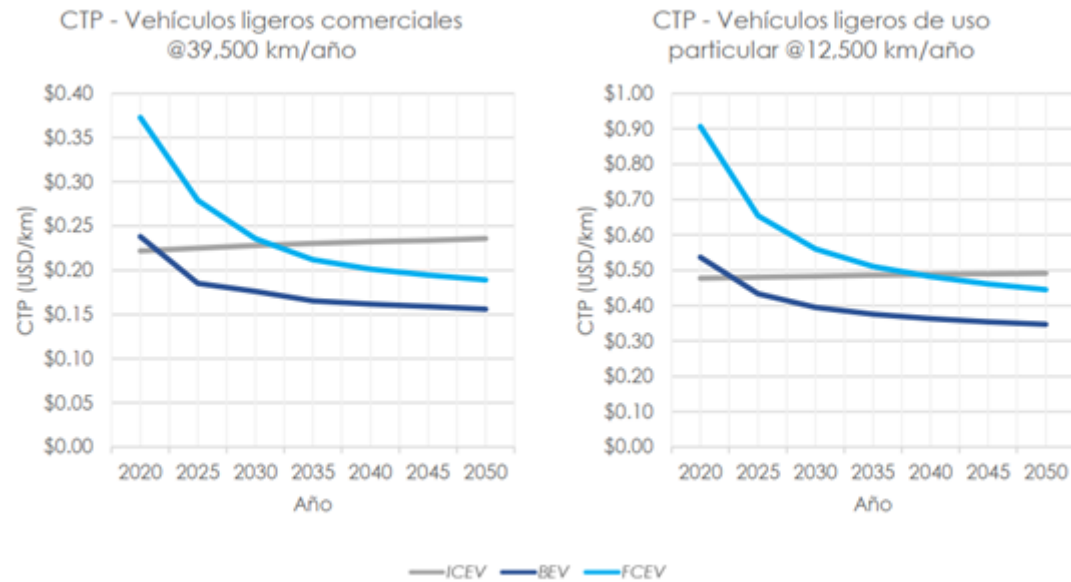


Figure 4B. Total cost of ownership for 10-year usage of commercial light vehicles (e.g. taxis) and personal use light-vehicles.

The graphs indicate that in 2020 battery electric vehicles are almost at parity with conventional vehicles and that in the following years will be cheaper. This is based on a business-as-usual with existing policy conditions. It should be noted that this is an initial study and not an official governmental report. Source: HINICIO-CRUSA, *Informe del análisis de Costo Total de Posesión (CTP) de los vehículos eléctricos y escenarios de penetración* (June 2020).

Electric vehicles are exempt of the selective consumption tax, sales tax and custom duty through Law 9518. The benefit is scaled based on their cost, insurance, and freight (CIF) value (the higher the CIF value, the lower the benefit) with a threshold of up to \$60,000. This benefit expires in 2023. The law has supported the uptake of a small number of electric vehicles (as noted previously), however its effectiveness has been limited due to the lack of a broad-reaching charging network (now being addressed, see below) and a lack of confidence in the technological viability (proposed to be addressed through this GEF-7 project). The law does not translate into a fiscal incentive for taxi owners to switch to electric vehicles, as they already receive partial or complete purchase tax exemptions through law 7969 as noted previously.

There are two electric buses in operation, which are used for demonstration purposes – one belongs to an electric utility and the other was imported for a temporary demonstration project. Three additional electric buses are expected to arrive to the country in late 2020 or early 2021 (see below for further information) and an extended electric bus pilot project to introduce 12 more units by several private bus operators was announced in March 2020.[18]¹⁸ However, due to the COVID-19 crisis, it is currently uncertain if this extended pilot will take place. There is one electric taxi, located outside the Greater Metropolitan Area, in the city of Perez Zeledon (south of the country). The taxi has been on the road since August 2019 and there are no reports on its performance.

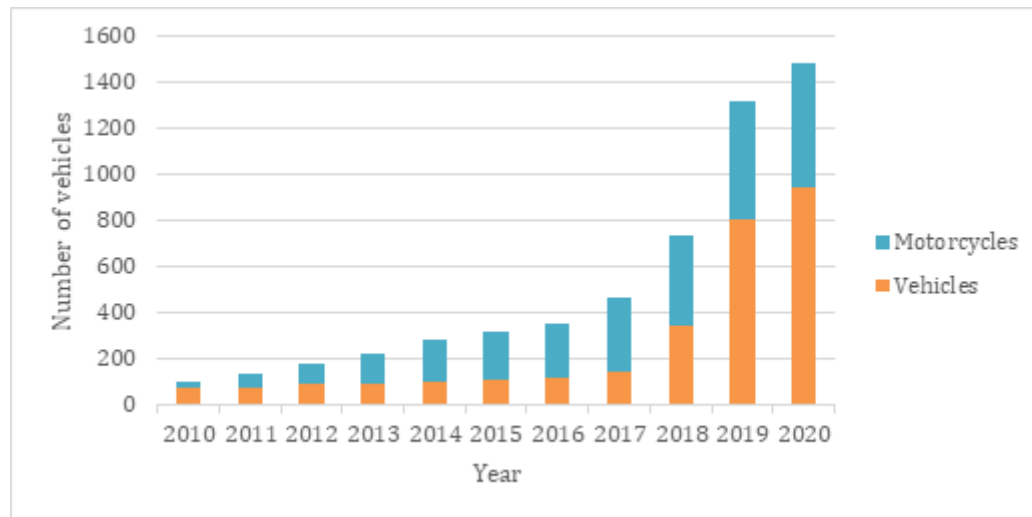


Figure 5. Evolution of electric vehicles in Costa Rica.

Source: Energy Directorate (2020)

On charging infrastructure, in 2019, through executive decree 41642, Costa Rica launched a National Fast Charging Network, including decisions on charging locations and technical specifications.[19]¹⁹ The public charging stations are being installed by electric utilities such as Grupo ICE and its subsidiary CNFL, and the Empresa de Servicios Públicos de Heredia (ESPH). As of July 2020, 56 charging stations have been installed across the country, with Grupo ICE installing 35 semi-rapid, 9 rapid, and 3 others, CNFL

installing 4 semi-rapid and ESPH 5 semi-rapid. Grupo ICE is currently planning the further installation of 150 KW chargers, beginning in 2021 as part of the National Fast Charger Network, with a total value of US\$7 million. These investments will serve as co-financing to this project in supporting the scale up of electric mobility at the national level, especially for taxi services and other light-duty vehicles.



Figure 6. Grupo ICE charging network, July 2020

Source: Grupo ICE (2020)

Baseline policies and strategies

Costa Rica is committed to supporting the implementation of the Paris Agreement and has announced the ambitious national target of becoming carbon neutral by 2050. It has identified that to achieve this aim, it will need to make significant reductions to greenhouse gas emissions in the transport sector.

In its Nationally Determined Contributions (NDC), Costa Rica has an absolute and unconditional emissions reduction target to keep net GHG emissions below 9.37 metric tons of carbon dioxide equivalent (MtCO₂e) by 2030. Acknowledging that transport is key to achieving this target, the government has begun to develop policies and commitments for

this sector. These policies include those aiming to shift mode distribution towards public transport and active transport. In addition, electrification of transport is an essential element of efforts to attain the country's NDC goals, as in the past years over 95% of generated electricity has come from renewable energy sources.

Under a scenario where measures are adopted considering the national policies, GHG emissions could reduce by up to 63% (Figure 6) and the BAU scenario. Among the main mitigation measures proposed for the sector are the electrification of and energy efficiency improvements in the public transport services in order to reduce the dependence on imported fossil fuels, hence decreasing greenhouse gases and particulate matter emitted by the sector.

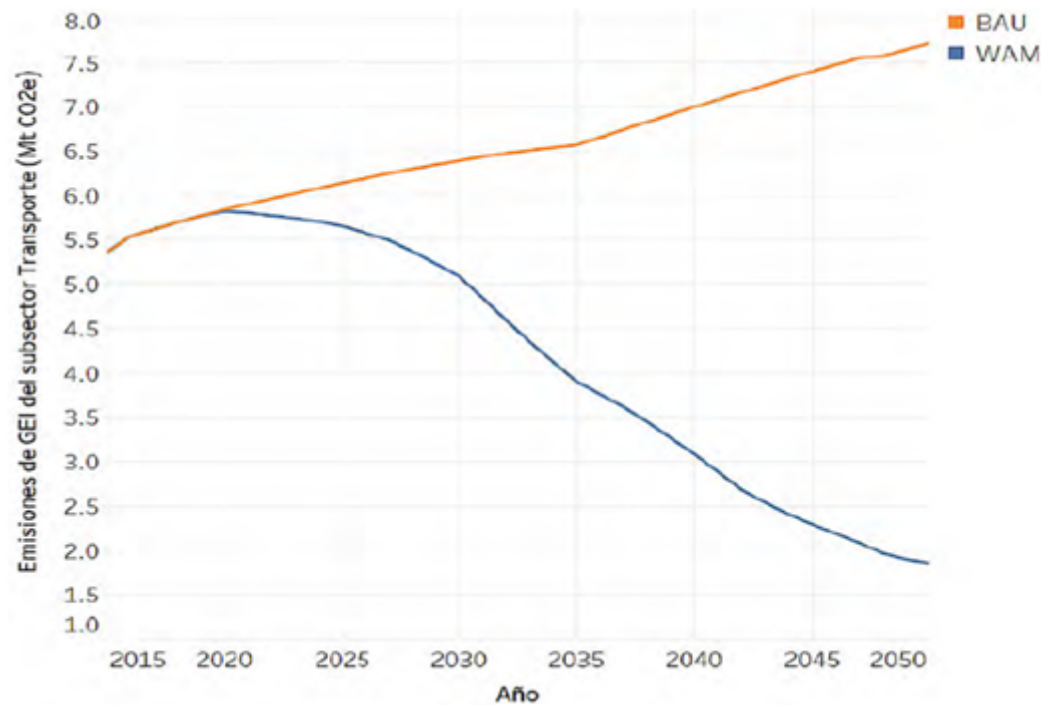


Figure 6. Greenhouse gas emissions projections from the transportation sector.

Source: Costa Rica's Biannual Update Report, 2019.

Key policies and goals on electric mobility are:

- **National Decarbonization Plan:** This is also Costa Rica's Long-Term Strategy to the UNFCCC, submitted on 12 December 2019. It stipulates that 30% of the public transport vehicle fleet will be electric by 2035 and 85% of buses and taxis will be zero-emission by 2050. This is the main national policy guiding the transition towards a decarbonized economy in Costa Rica by 2050.
 - **National Electric Transport Plan:** Defines a framework for scaling-up EVs in public and private transport and charging infrastructure (see table 1). It also defines electric charging tariffs, which impact the transport tariffs for electric public transport (including both buses and taxis). It mentions that public institutions such as MOPT, CTP, MINAE, the public transport service providers and the electric utilities are to develop roadmaps for the electrification of the bus and taxi services. These roadmaps are yet to be developed and are proposed to be developed by the GEF project.
 - **Law 9518:** Provides fiscal and non-fiscal incentives to EVs and charging infrastructure, although these are set to expire in 2023. Fiscal incentives are attached to vehicle custom, insurance and freight (CIF) value. The cheaper the vehicle, the more incentives it gets – with a threshold of up to US\$ 60,000 in CIF value. Law 9518 establishes a national priority to transition public transport to electric drive technologies. It dictates that 5% of the bus fleet will be replaced by electric equivalents every two years and establishes that at least 10% of new taxi concessions be given to EVs (Article 30).
 - **Law 7969:** taxi regulation which establishes that purchasers of 'clean technology' vehicles for the use as a taxi, including liquified petroleum (LP) gas, electric vehicles and other clean technologies, receive a 100% reduction in import taxes and tariffs.
 - **N°39724-MOPT-MINAE-S:** "*Regulation for the control of polluting emissions produced by motor vehicles with internal combustion engines,*" (2016) regulates emission standards of light-duty vehicles up to 3500 kgs.[20]²⁰ It regulated the adoption of EURO 4 emission standards with the scale up to EURO 6 as of 1 January 2021. The development of these regulations was supported by the GEF Global Fuel Economy Initiative and the Partnership for Cleaner Fuels and Vehicles (see further information in the section on previous projects). Unfortunately, to date the regulation has not been applied effectively by Costa Rican Customs, with non-compliant vehicles continuing to enter the country.
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- **Law 7447:** Entering into force in 1994, the *Law for the Regulation of Rational Use of Energy* law governs energy efficient for equipment including vehicles. Decree 25584 provides regulations to implement the law, including determining energy efficiency limits and incentives for what are considered efficient vehicles. The decree has not been updated since 1996, thus currently it is not effective in regulating the energy efficiency of vehicles (as all now meet the requirements of the decree). With the support of *The Cleaner and More Efficient Fuels and Vehicles* project, led by UNEP, CEGESTI, and the Centro Mario Molina Chile, and supported by the GEF Global Fuel Economy Initiative and the Partnership for Cleaner Fuels and Vehicles, in 2016 Costa Rica developed a draft proposal for updated vehicle energy efficiency technical standards, including energy efficiency labeling. Unfortunately due to a change in government in 2018 the proposal was not adopted and has become outdated.
- **Technical ruling No. 41426-H-MINAE-MOPT Incentives for Used EVs:** Establishes incentives for importing used EVs of all types, 5 years old or newer.
- **Technical ruling No. 41427- MOPT:** Promotes sustainable mobility in state institutions. Includes incentives for government institutions to change their vehicle fleet to EVs.
- **Sectoral agreement for the Decarbonization of the Transport Sector:** The transport sector has agreed to emit a maximum of 5 Mt CO₂e by 2024, achieving a reduction of 0,5 Mt CO₂e from BAU emissions. This is to be achieved through actions by MOPT to optimize the use of the transportation network for all types of vehicles. It also promotes the use of zero-emission modes such as active transport, electric and fuel- cell vehicles.
- **Law 8839:** Concerning waste management, and its regulation N°38272-S, which classifies vehicles as a type of special management waste that requires different conditions. There are no specific regulations to this date regarding electric vehicle batteries.

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While the above highlights that Costa Rica has made advances on policy frameworks for electric mobility, gaps still exist, as noted in section 1. In particular, there is a lack of up-to-date energy efficiency vehicle standards to disincentivize the purchase and use of internal combustion engine vehicles and create an even playing field with electric vehicles. Furthermore, despite the prioritization of the public transport, current laws are not complementary (as noted previously), with most of the fiscal incentives contained in Law 9518 meant for private electric vehicles. There is also the need to develop long-term roadmaps to chart the course and identify specific actions and budgets required to achieve long term goals contained in the national decarbonization plan and national electric transport plan. Furthermore, there is an absence of regulations related to the reuse, recycling and final disposal of electric vehicle batteries.

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Baseline initiatives and coordination for the national electric transport plan

The aforementioned National Electric Transport Plan is the main policy document guiding the country’s transition to a low-emission transport sector. Its main areas of action focus on the public transport fleet, the institutional fleets (of national government institutions) and the private transport fleet. Table 1 highlights how different initiatives are supporting the public transport aspects of the plan. The actions in the table below are those focused on the bus and taxi industry; there are other segments focused on areas including tourism, commuter and student services.

Table 1. National Electric Transport Plan outputs regarding public transport and their status.

Element of the plan	An initiative addressing this element?	Supported by
Buses		
Development of pilot projects to promote and demonstrate the benefits of electric transport in the bus industry.	✓	MiTransporte project, implementer: German Development Cooperation (GIZ); Extension of the bus pilot project, implementer: Inter-American Development Bank (IDB).
Development of financial feasibility, business models, financing schemes and incentive option studies for the bus sector.	✓	Study undertaken by IDB, results to be presented by IDB during 2020.
Technical studies that analyze the impact on tariffs from the introduction of electric vehicles for bus services.	✓	Study undertaken by the World Bank. Results presented to the Public Service Regulation Authority (ARESEP) in 2019.

Technical requirements and specifications for electric buses.	✓	Study undertaken by UNEP and GIZ results to be presented in 2020.
Technical requirements for the electric charging infrastructure for electric buses.	✓	Study undertaken by UNEP, results to be presented in 2020.
Development of a gradual bus fleet substitution roadmap to be included in the bus service concessions.	✗	Element not yet covered through existing or planned activities. GEF-7 project proposes to cover in Output 3.3 (see section 3).
Taxis		
Development of pilot projects to promote and demonstrate the benefits of electric transport in the taxi industry.	✗	Element not yet covered through existing or planned activities. GEF-7 project proposes to cover in Output 2.1.
Development of financial feasibility, business models, financing schemes and incentive option studies for the taxi industry.	✗	Element not yet covered through existing or planned activities. GEF-7 project proposes to cover in Output 3.1.
Technical studies that analyze the impact on tariffs from the introduction of electric vehicles for taxi services.	✗	Element not yet covered through existing or planned activities. GEF-7 project proposes to partially cover in Output 2.2.
Development of a gradual taxi fleet substitution roadmap, which includes at least 10% of electric vehicles in the taxi service concessions.	✗	Element not yet covered through existing or planned activities. GEF-7 project proposes to cover in Output 3.3.

The government is coordinating efforts to ensure that all activities related to the electrification of the public transport sector are undertaken in accordance with the National Electric Transport Plan. Nationally, there are two groups that address the electrification of transport and lead the achievement of the plan: one political and another technical.

The high-level political group is led by the Office of the First Lady of the President of the Republic and its main function is to coordinate public stakeholders and take decisions to advance the deployment of electric mobility in the country. It is integrated by heads of public institutions including the Ministry of Public Works and Transport (MOPT), the public transport board (CTP), MINAE, the Ministry of Health (MINSA), Grupo ICE, the Ministry of Finance, ARESEP, the National Learning Institute (INA) and the Customs Agency.

The technical group is known as the Costa Rican Committee for Electrification of Public Transport (CETP), formerly known as IETP-Bus, it includes technical officers from the aforementioned institutions. CETP is led by the Energy Directorate of MINAE. The technical group identifies areas that require attention and elevates these needs to the political group for decision. Both groups meet on a monthly basis to discuss findings that require action either at the political or technical level. Currently, these groups do not include representation of the private sector or civil society, or gender-related entities such as the National Women's Institute (INAMU). This lack of participation of the broader society in the governance mechanisms for electric mobility results in less effective development, implementation and monitoring of interventions related to electric mobility, as the views and interests of civil society and private sector stakeholders are not effectively taken into consideration.

Baseline projects

In the context of the national electric transport plan, there are ongoing projects and others recently finalized that are supporting the plan's implementation.

Table 2. Summary of on-going projects supporting electric mobility in Costa Rica

Project Name	Donor	Description	Closing date	Budget (US\$)
<p>MiTransporte Project</p> <p>Implementer: GIZ</p>	<p>BMUB/GIZ</p>	<ul style="list-style-type: none"> ● Demonstration of three electric buses (two in Costa Rican streets and one for selected usage). ● Development of electric mobility regulations for buses. ● Design of an operation model for electric buses. ● Improve waste management for EV batteries (see further information following this table). ● The project also has elements which focus on other aspects of transport, including heavy-duty vehicle transport, active mobility and innovation. 	<p>2021</p>	<p>6,750,000</p>
<p>Leapfrogging to e-buses in Costa Rica</p> <p>Implementer: UNEP</p>	<p>CRUSA</p>	<ul style="list-style-type: none"> ● Activate a Public Transport Electrification Committee. ● Evaluate technical and financial feasibility of the metropolitan area of San Jose bus lines. ● Build capacity of key stakeholders for promoting the electrification of the public bus industry (MOPT, MINAE, ARESEP, Grupo ICE, the bus sector). ● Develop a five-year strategic plan to promote electric mobility innovation. 	<p>Early 2021</p>	<p>750,000</p>

<p>Green Climate Fund Readiness: Advancing a regional approach to e-mobility in Latin America</p> <p>Implementer: UNEP</p>	<p>Green Climate Fund</p>	<p>Regional knowledge exchange, capacity building and development of proposals for climate finance through the Green Climate Fund. Work began in late 2020.</p>	<p>Mid 2022</p>	<p>2,800,000 total 200,000 (for Costa Rica)</p>
<p>Electric bus business models</p>	<p>IDB</p>	<p>Support the First Lady's Office to develop a business model proposal for the sustainability of electric buses in Costa Rica. To date a total cost of ownership analysis has been undertaken for electric buses, however no reports have been finalized or published to date. Other activities are on hold due to the COVID-19 pandemic.</p>	<p>On hold, pending COVID</p>	<p>US \$90,000</p>
<p>Electric bus economic instruments</p>	<p>Economic Commission for Latin America and the Caribbean (ECLAC)</p>	<p>Support to the Ministry of Planning for an economic analysis that will assess and propose alternatives for economic instruments to facilitate the introduction of electric buses in Costa Rica. ECLAC is currently finalizing the final report, with results to be shared once government approval is given;</p>	<p>2020</p>	<p>US\$ 85,000</p>
<p>CR-T1224: Support for the Strategy of Strengthening Mass Public Transport of People by Bus</p>	<p>IDB</p>	<p>Accompany and support the Ministry of Public Works and Transport (MOPT), in the technical preparation and implementation of: i) a strategy and action plan to face the impact of COVID 19 on public transport and infrastructure works in search of job creation in the sector, ii) technical support for the implementation of the public transport electrification project, bus modality, iii) the project of intelligent transport systems for passengers, such as the electronic payment system.</p>	<p>TBC (approved July 2020)</p>	<p>US\$ 450,000</p>

Sustainable Cities Impact Programme	Global Environment Facility	The project aims to allow Costa Rica to achieve decarbonization in the Greater Metropolitan Area (GAM) through fiscal and policy reform and sustainable integrated urban planning. Structural environment and finance policy reforms will be tested in the GAM where the greening of the transportation, urban renovation, and improvements in solid waste and wastewater management will be conducive to delivering global environmental benefits.	2021-2025	US\$ 10,317,970
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In addition to the above projects, in the area of EV battery waste management, a task force with the Ministry of Health, GIZ, Grupo ICE, ECAC Institute (a technical education organization), UNEP, academia, MINAE and private sector stakeholders has been recently established to initiate coordination, determine needs and lines of action that need to be taken to safeguard the environment and health. It will also draft an action plan on addressing existing gaps in terms of regulation, market structures, governance and policy in this topic. Costa Rica has in place Law 8839, which concerns waste management, and in its regulation N°38272-S, which classifies vehicles as a type of special management waste that requires different conditions. Nonetheless, these conditions have not yet been defined and the current talks will stop at the generation of a report on lines of action. It is proposed that the GEF-7 project will take up on these efforts where they stop to support the revising of Law 8839 for regulating EV battery waste management.

Concluded projects that that will provide inputs into project activities are:

- *The Cleaner and More Efficient Fuels and Vehicles* project, led by UNEP, CEGESTI, and the Centro Mario Molina Chile, and supported by the GEF Global Fuel Economy Initiative (GFEI) and the Partnership for Cleaner Fuels and Vehicles (2014-2018). Through this project, Costa Rica developed, inter alia, recommendations for promoting fuel economy regulations and a draft proposal for vehicle energy efficiency technical standards, including energy efficiency labeling. With the support of the project, in 2016 Costa Rica adopted EURO 4 fuel economy regulations for light-duty vehicles through decree N°39724-MOPT-MINAE-S. Due to political changes, unfortunately the country did not progress on vehicle efficiency standards and the proposal has become outdated.
- Support (US\$40,000) from CABEI to compare technical and financial differences between internal combustion and electric technologies and its implications for electricity demand for Costa Rica. This project was developed for Grupo ICE. It closed in 2019, but results are not publicly available;
- Support (US\$250,000) from the World Bank to the Public Service Regulation Authority (ARESEP) to define a tariff calculation methodology for electric bus services (closed in 2019).

- GEF project 5838: *Sustainable Urban Mobility Program for San Jose*, supported by the Inter-American Development Bank, concluded in 2018. The project supported MOPT developed activities support Costa Rica in moving towards a low-carbon development path, through improved land use management, transport planning, and the implementation of an integrated public transport network in the San Jose Metropolitan area. The project 1) undertook studies to integrate public transport with non-motorized transport and private motorized trips; 2) developed a travel demand (TDM) policy for San Jose; 3) Development of land-use and transport studies; 4) implement a pilot project of fuel and vehicle technology in San José. The GEF-7 project will build upon these activities, in particular activity 4, in the execution of its outputs (see outputs 3.2 and 3.3).

Baseline domestic financial support

To support the implementation of the National Electric Transport Plan, Costa Rican local financial entities have begun to offer funding instruments for the purchasing of electric vehicles for public transport and private use. These services were launched in the last quarter of 2019, to support the transport and decarbonization plans.[21]²¹ These products aim to support interested consumers by providing special low interest rates, longer loan terms and other reductions for electric vehicles.[22]²² These are provided with the understanding that while electric vehicles have a higher upfront cost, the vehicle will be cheaper in the medium to long-term due to lower operation, maintenance and financing costs. This would especially applicable for taxis, which have higher and constant usage rates. Unfortunately, to date the aforementioned messages have not had much success. The total number of electric vehicles in the country is less than 1200. On taxis, in the year since the introduction of the products, financial institutions are yet to provide a loan to a single taxi driver for the purchasing of an electric vehicle (reasons for this were noted in section 1). Table 3A summarizes the products available versus those for conventional vehicles, and Table 3B describes such instruments available for financing the acquisition of electric vehicles in Costa Rica.

Table 3A. Financial products in Costa Rica supporting the transition to electric mobility[23]²³

Financing conditions	Light-duty conventional vehicle	Electric vehicle
Interest rate	TBP + 5-6%	TBP + 2.5%

Loan commission	3.25%	1.30%
Maximum % of loan	80%	80%
Loan period	84 months	84 months

TBP = Basic passive interest rate issued by the central bank.

Table 3B. Financial products in Costa Rica supporting the transition to electric mobility

Financial entity	Financial product
Banco Popular	Banco Popular (a local public commercial bank) announced a dedicated credit line to finance environmentally friendly investment plans in September 2019. This product is offered to enterprises and individuals who would like to access credit to invest in environmentally friendly products or equipment, including electric vehicles. Interest rates are the lowest in the market. On electric taxis, it established a special credit line of credit in colons with a rate maintained at the national basic passive rate (TBP), ^[24] commissions of 0.5% and term of up to 10 years. Banco Popular also offers services of financial education that target individuals and companies can be used to increase consumer capacity to access its investment products.
Banco Promerica	Banco Promerica (a local private bank) offers green loans to finance electric vehicles. Clients can access this credit to lease or purchase an EV. Banco Promerica also offers lines of credit for bus concessions. These lines of credit offer a relatively low-interest rate. There are no dedicated products for taxis. Promerica also has a variety of training courses led by its Corporate Social Responsibility Unit, including a course designed to build capacity on green finance.
Banco de Costa Rica	Banco de Costa Rica (a local public commercial bank) announced “PRO-Eco” loan credits in September 2019, which are offered to any individual who would like to buy an EV. The interest rate has a discount for people who are accessing it for taxis. The interest rate is discounted with respect to the current vehicle product, up to 80% financing is provide for up to 5 years. Discounts are offered on the commission and there is no penalty for advance payment. Banco de Costa Rica is working with policy-makers including the relevant stakeholders for this project to expand its offer in financial services. Banco de Costa Rica is also providing financial support to electric charger providers.

Banco Nacional

Banco Nacional (a local public commercial bank) announced lower rates and commissions for those seeking to access credit to finance the purchase of electric buses and EVs in September 2019.

c. Proposed alternative scenario with a description of project components, outcomes, outputs and deliverables

The GEF-7 project aims to support Costa Rica to implement the National Electric Transport Plan and scale-up the adoption of electric vehicles to reduce GHG and PM emissions. To date the majority of actions undertaken have focused on the private vehicles and public buses. Of key strategic interest to Costa Rica is on how to advance with implementing the transport plan for electrifying taxis, a highly visible public transport sub-sector with more than 13,000 units across the country. Costa Rica is yet to advance in implementing the transport plan for this sector. Addressing this is key for Costa Rica as a stepping stone to the broad adoption of electric vehicles by private consumers. This project thus aims to build upon the baseline activities and identified co-financing by focusing on electric taxis.

Firstly, the project will enhance governance and capacity on electric mobility. It will support the establishment of an inclusive and permanent electric mobility working group, to enhance coherence and inclusiveness in the design, implementation and monitoring of electric mobility interventions. It will also build the capacity of local financial institutions, taxi-drivers and law-makers on electric mobility, as actors key to supporting the scale-up of electric mobility and whom have not benefited from previous capacity-building initiatives.

Secondly, the project aims to generate confidence, experiences and lessons learned on electric vehicles in day-to-day operation by undertaking a demonstration in a highly visible and unattended public transport sub-sector: the taxi sub-sector. In accordance with the National Electric Transport Plan, the demonstration through the GEF project will serve to build confidence in electric vehicle technology in local circumstances, thus paving the way to broad technology adoption in the taxi sector and among private consumers. The project will also aim to strengthen data collection of electric vehicle interventions, to strengthen their monitoring and evaluation.

Thirdly, the project will aim to scale up project demonstrations through a strengthening of the national enabling framework. The project will support the government and local financial institutions to strengthen fiscal incentives and financing products for electric mobility, to ensure they effectively create demand. The project will also support the development of vehicle efficiency regulations and long-term roadmaps for the electrification of the bus and taxi services, to ensure a strong policy framework and national planning for scaling up the demonstrations.

Finally, the project will develop mechanisms for the sustainable long-term environmental management of the transition, ensuring that the reuse and end-of-use of electric batteries are managed in an environmentally sustainable way. Together, the project's interventions will ensure that Costa Rica creates the conditions for transitioning to a low-emission transport sector, supporting it to achieve its long-term goal of carbon neutrality by 2050.

Component 1: Institutionalization of low-carbon electric mobility

Component 1 aims to build institutional capacity and coordination in developing policies for catalyzing the transformation to electric public transport. Firstly, it aims to build the capacities of institutions and actors in the different sectors on financial, technical, regulatory, and operational aspects to facilitate effective deployment of EVs at the scale required by national plans. Secondly, it aims to strengthen governance on the electrification of the public transport sector by facilitating the inclusion and participation of the private sector, civil society and academia in governance and consultation mechanisms.

Outcome 1: The Government demonstrates enhanced coordination and promotes electric mobility.

Outputs:

- Output 1.1. Stakeholders are trained on technical, regulatory, financial and operational aspects of scaling-up electric taxis.

This output will focus on building the capacity of local financial institutions, taxi drivers, and custom officials and importers as key actors in the scale-up of electric mobility who have not benefited from capacity-building provided through other initiatives. For local financial institutions, training will focus on building their capacity to understand the technology (to reduce perceived risk) and on how to create and enhance financial products and services that stimulate market demand. This is especially relevant at the

management level, which often has less understanding of the technology that bank specialists.[25]²⁵ A focus will also be given to supporting local financial institutions to strengthen their own existing capacity building activities (see section 2), to ensure a train-the-trainer approach facilitates sustainable and long-term capacity-building.

Training for the taxi industry will also focus on financing. Capacity-building activities will be aimed at supporting drivers to develop financing plans for purchasing electric vehicles based on a calculation of the total cost of ownership and the payback period of an electric vehicle in the medium- to long-term. This will draw upon analysis performed under output 3.1 in developing estimates on the payback period for electric vehicles in the taxi industry, based on methodologies for estimating taxi driver incomes. The taxi industry will also be trained on vehicle technology, operations, maintenance, safety and data collection, to support them to understand how electric vehicles could meet their needs. Finally, customs officers and vehicle importers will be trained to understand how to apply existing regulations on fuel efficiency, to ensure vehicles imported into Costa Rica meet with the strict national requirements as per decree 39724 (see section 2 and output 3.2). The project will support the development of train-the-trainer content, to ensure sustainable and on-going capacity development beyond project completion. The activities will include a gender perspective to support the addressing of capacity-building challenges faced by women and other vulnerable groups and ensure their effective participation in electric mobility interventions. This will be ensured by designing gender-sensitive training programmes and content and designing the events to facilitate the participation of women.

Selected individuals will participate in activities of the support and investment platform for Latin America and the Caribbean, part of the Global Programme on Electric Mobility and hosted by Centro Mario Molina Chile. They will share good practices, experiences and lessons learned received from the global programme with larger groups of local stakeholders in capacity-building activities adjusted to specific local circumstances. The Support Platform of the Global Programme will also provide a help desk which will support the identification of national and international experts for the training and capacity building activities. This output will build upon co-financing of the CRUSA project “Leapfrogging to e-buses (electric buses) in Costa Rica,” which is supporting the building of capacity of stakeholders in the bus industry (representatives of MOPT, MINAE, ARESEP, Grupo ICE, and the bus sector).

- D.1.1.1: Capacity building package on electric mobility technologies and financing for the taxi industry, consisting of one workshop (M12) and one train-the-trainer report (M30).
 - D.1.1.2: Capacity building package on electric mobility technologies and financing for local financial institutions, consisting of one workshop (M15) and one train-the-trainer report (M30).
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- D.1.1.3: Capacity building package on electric mobility regulations for custom officials and vehicle importers for local financial institutions on electric mobility, consisting of one workshop (M18) and one train-the-trainer report (M30).
- D.1.1.4: Final report on capacity-building efforts undertaken, lessons learned and recommendations to facilitate sustainable capacity-building efforts beyond the project's conclusion (M33).



- Output 1.2: An electric mobility multi-stakeholder working group is created and an online platform strengthened for enhancing coordination of national decision-makers.

As noted in sections 1 and 2, stakeholders from the private sector, academia and civil society are yet to participate in the existing technical and political working groups coordinating and promoting electric mobility in the country. This output will facilitate the inclusion of such stakeholders in existing governance structures, enhancing the effectiveness of these with the aim of accelerating the introduction of electric mobility through an inclusive process that takes into account different societal viewpoints. Through a more inclusive governance mechanism, the output also aims to ensure the longevity of governance beyond the momentum of the existing political administration.

This output will expand the existing Costa Rican Committee for Electrification of Public Transport (CETP), formerly known as IETP-Bus, into an enhanced multi-stakeholder working group including private sector and civil society stakeholders. Key stakeholders relevant to public transport services will participate, including representatives related to the bus and taxi industries, in addition to INAMU, the National Women's Institute. The multi-stakeholder working group will be led by the Directorate of Energy, MINAE, which is currently leading activities on the National Electric Transport Plan. The group will play a key role in consultations for project activities, particularly the development of long-term measures for electric mobility under Component 3 (such as the financial products and services and policies and regulations). It will include feedback mechanisms to detect capacity needs to be addressed by Output 1.1. All the knowledge and documents generated by the working group and from project activities (e.g. Outputs 2.2, 3.1, 3.2 and 3.2) will be made available through an enhanced existing online platform hosted by the Directorate of Energy. The working group will encourage the participation of stakeholders that consider the needs of women and other vulnerable populations.

- D.1.2.1: Proposal for multi-stakeholder working group (including terms of reference and workplan) is prepared and presented for approval by the Directorate of Energy, MINAE (M8).
- D.1.2.2: Quarterly meetings from date of inception of the working group and minutes of each meeting (minimum eight meetings).
- D.1.2.3: Enhanced MINAE public e-mobility online platform (M15).

Component 2: Short-term barrier removal through low-carbon e-mobility demonstrations

This component aims to address one of the major barriers identified for the uptake of EVs in Costa Rica: a lack of confidence on the technological viability of electric vehicles in local conditions. The component will focus on demonstrating technological viability in the taxi sector, a key element of the National Electric Transport Plan, as a stepping stone to building confidence among the general public. This component will generate experiences and lessons learned amongst key taxi stakeholders (including drivers and passengers) creating confidence and momentum towards a broad electrification of this sector and beyond. The demonstrations will be scaled up through component 3. Information generated through the demonstrations will support the enhancement of financial instruments and incentives (output 3.1) and inform the development of a roadmap to electrify the taxi industry through component 3 (Output 3.3), supporting the long-term implementation and achievement of the National Electric Transport Plan and the implementation of Law 9518. This component will build upon co-financing of Grupo ICE and ESPH, the electricity utilities, which are installing fast electric vehicle chargers through-out the country as part of the national fast charger network and management platform, and also specifically for this demonstration.

Outcome 2: Costa Rican citizens begin to use electric mobility for their public transport needs.

Outputs:

- Output 2.1: The technical, social and economic viability of electric vehicles in airport taxi fleets is demonstrated to local and national stakeholders.

This output aims to address the barrier related to local and national stakeholders having a lack of confidence in electric vehicles servicing the needs of the taxi industry and private consumers. To address this, the output will demonstrate electric vehicles in airport taxi fleets due to their high operational demand, longer distances of usage and visibility with civil society (both local, national and international). Through the demonstration, the pilots will provide taxi drivers, customers and policy-makers with information that allows them to reduce uncertainties associated with the electric vehicle range, performance, charging patterns and costs, supporting the scale-up of electric taxis through-out the country. Furthermore, the demonstrations will use renting companies to acquire the vehicles with the aim of incentivizing this industry to increase its participation in the electric mobility sector (including through the expansion of EV availability through leasing schemes and access to meaningful data on usage).[26]²⁶

The pilot program will rent 6 vehicles through the support of a rental company[27]²⁷ and test them for 12 months. Project funds will pay for the rent of the vehicles and cover operation and maintenance costs. The vehicles will be allocated to interested drivers via the taxi companies operating in the airport. The vehicles will be tested by each driver for a minimum 20 days and then rotated to another driver. In this way, it is envisioned that all airport taxi drivers will have the opportunity to test the technology. Evaluations of the perceptions of the driver before and after the trials will be carried out. The operation will ensure that a group of 14 female airport taxi drivers participate in the demonstration, especially as they have previously expressed interest in purchasing electric taxis.[28]²⁸

The project will finance data collection through onboard vehicle devices. Data from the pilots will be publicly available during and after the pilots (see output 2.2). Data from the electric taxis will be processed on a quarterly basis to analyze the demonstrations and adjust the demonstrations operations as needed (see Output 2.2). Quarterly results will be published and made publicly available on the online platform (D.1.2.4). Based on the quarterly results, information on any adjustments required to enhance the pilot will be shared with both drivers and regulators to improve the conditions of the pilot project and support policy development on a broader scale.

At least one fast charging station for the electric taxis will be provided through co-financing by Grupo ICE, the largest electricity utility, with an additional two stations under evaluation. Grupo ICE will also invest USD \$7,000,000 in the establishment of a national charging network through co-financing (see annex O). A dedicated site next to the airport has been identified and assessed, where one of Grupo ICE's EV fast-charging stations will be installed. It will have a capacity of 120kW, with CHAdeMO, GB/T, and CCS1 connectors and capable of charging up to two vehicles simultaneously. In addition, the project will finance and install four 3kW slow chargers, ensuring that during the

night-time (during low demand) all vehicles can be charged. During project execution, work to design the details of the pilot project will draw on support provided by the support and investment platform for Latin America and the Caribbean of the Global Programme, particularly that of the LAC task team on light-duty vehicles, the regional trainings on this theme and the help desk.

- D.2.1.1: Obtaining of government permits for vehicle pilots and chargers (by month 14);
- D.2.1.2: Report on pilot project design (by M9). Including:
 - Stakeholder mapping;
 - Needs assessment, including consideration of existing taxi drivers' usage patterns;
 - Overview of international good practices and lessons learned on the use of electric vehicles in taxi services;
 - Gender action plan including recommendations for promoting the participation of women in the pilot;
 - Technical requirements for the vehicle and electric charging equipment;
 - Vehicle rental plan;
 - Vehicle charging plan;
 - Plan and requirements of maintenance and support conditions.
 - Pilot protocols for operations, safety, maintenance and identification of improvements
- D.2.1.3: Purchase and installation of 4 x 3kW slow chargers according to technical specifications as per D.2.1.2 (M14)
- D.2.1.4: Rental of vehicles according to technical specifications as per D.2.1.1 (M14).
- D.2.1.5: Workshop to train drivers and other key stakeholders on vehicle usage, data management, and pilot protocols (M14).

- D.2.1.6: Quarterly operation and performance reports (4 in total).
- D.2.1.7: Quarterly workshops to train drivers and taxi service regulators as required for ensuring effective operation of the pilot project (3 in total).
- D.2.1.8: Final report on pilot project containing results, analysis, and lessons learned (M33).

Box 1. Pilot project preliminary design details:

- **Location:** Taxi terminal in the Juan Santamaría International Airport
- **No. of Vehicles:** 6 electric passenger vehicles acquired through renting with GEF project funds by the executing agency, CRUSA.
- **Duration:**
- The pilot will have a duration of twelve months.
- Each driver will operate the vehicle as a taxi unit for at least 20 days
- **Technical requirements:**
- At least one 120kW EV fast-charging station will be provided by Grupo ICE with CHAdeMO, GB/T, and CCS1 connectors and the capacity to charge up to two vehicles simultaneously.
- Four 3kW EV slow-charging stations financed through the GEF project
- Drivers will pay for charging costs (as a substitute for fuel costs in conventional vehicles).
- Support for coordination with the airport manager will be provided by the Presidency's and First Lady's Offices.
- The Public Transport Board (CTP) will provide the permits to operate the vehicles and ARESEP will provide support for the payment methods and electric vehicle charging tariffs.
- The National Learning Institute (INA) and National Women's Institute (INAMU) will support training on technical and gender aspects of the pilot.

- Output 2.2: Taxi data management practices are tested by taxi drivers and government officials to facilitate the uptake of electric vehicle taxis.

As noted in section 1, the lack of experience with electric vehicles is further compounded by an absence of data on the transportation sector and mechanisms for collecting data on the use of electric vehicles (and all vehicles) in public transport. To address this, this output will collect data on the pilot project (output 2.1) and on the use of other airport taxis (as baseline data). This data will serve as initial inputs for enhancing tariff models and financial products for the (electric) taxi sector and rental industry in output 3.1. It will also serve to inform rental companies and the taxi industry on electric vehicle performance under high-intensity usage. GPS and electronic payment mechanisms will be installed in the pilot taxis. Data will also be collected from conventional taxis through conventional means (e.g. odometers) to contribute to more detailed baseline information on the industry. The data generated by the pilot project will be made publicly available through the online platform in Output 1.2. It will be accessible by actors in charge of financial, operational and regulatory aspects of transport and inform decisions to accelerate the deployment of EVs in the taxi and rental industries. Concretely, it serve as inputs to the development of Outputs 3.1, 3.2 and 3.3, supporting the enhancing of financial products and incentives. It will also support the regulation development and the elaboration of roadmaps for scaling-up electric taxis.

- D.2.2.1: Report assessing global good practices on data acquisition and management systems for electric taxi services (M11).
- D.2.2.2: Procurement and installation of data management equipment for the pilot project (M14).
- D.2.2.3: Data management pilot project for the pilot electric and conventional airport taxis.
- D.2.2.4: Report on the results of the data management pilot, with recommendations for the development of a data acquisition and management system delivered to the taxi industry, the Ministry of Transport and Public Works (including the Public Transport Council) and the Ministry of Environment and Energy for adoption (M30).

Component 3: Preparing for scale-up and replication of low-carbon electric mobility

Component 3 aims to scale up the demonstrations in component 2 to support a broad electrification of the taxi industry and the private vehicle fleet, in accordance with the National Electric Transport Plan. This component aims to scale up the project demonstrations by addressing the barrier of higher upfront costs of electric vehicles compared to internal combustion engine vehicle. Once taxi drivers have developed confidence in the technological viability through the demonstrations, this output will incentivize them to replace their existing internal combustion engine vehicles with electric ones. It aims to achieve this by working with the financial sector and government to enhance financial products and incentives, and strengthen regulations and roadmaps. Through three outputs, it will create an enabling environment which incentivizes electric vehicle purchasing for the taxi industry and beyond, and develops a clear roadmap for planning the controlled and long-term uptake of electric public buses and taxis.

Outcome 3: Taxi drivers demonstrate willingness to purchase electric vehicles.

Outputs:

- Output 3.1: Financial instruments and fiscal incentives to encourage taxi owners to purchase electric vehicles are strengthened.

This output aims to support local financial institutions to enhance the effectiveness of their existing financing instruments, which to date have not provided a single loan.^[29] It will analyze national experiences and summarize global best practices on the financing of electric taxis. It will develop estimates of the payback period for electric vehicles in the taxi industry, and methodologies for estimating taxi driver incomes and operational costs, with the aim of enhancing existing financial products. Furthermore, it will analyze and strengthen financial products for leasing and rental companies participating in the taxi sector to purchase electric vehicles. It will also analyze risk mitigation mechanisms, such as extended warranties. Drawing on data received from the pilots and the aforementioned activities, recommendations for enhancing existing financial products and best practices for Costa Rican local financial institutions will be presented to the National Bank Association (ABC), for implementation by local financial institutions (including Banco Popular, Banco Promerica, Banco de Costa Rica and Banco Nacional), car distributors and leasing companies. This work will be undertaken including through a process of consultation with key local actors.^[30]

Secondly, the output will support the updating of existing laws with the aim of strengthening public incentives for the purchasing of electric vehicles. It will focus on law 7969: *Regulatory Law of the Public Service of Paid Transport of People in Vehicles in the Taxi modality*, and law 9518: *Incentives and promotion for electric transport*. On law 7969, the project will aim to reduce the existing import tax exemptions for the purchasing of internal combustion engine taxis (60% reductions) and on LPG and other non-electric 'clean technology' vehicles (100%), which achieving an increased exemption for electric vehicles. Furthermore, exploration will be made to increase other tax reductions (60%) for electric vehicles or reduce those of ICEs (60%). On law 9518, this is currently due to expire in in 2023. The project will support national processes to review its effectiveness and ensure it is enhanced and continued. As noted previously (see section 2), currently the combination of these two laws does not translate into an additional fiscal incentive for taxi owners. Under this output, the two laws will be reviewed together with the aim of resulting in complementary laws that effectively incentivize taxi drivers to purchase electric vehicles.

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The output will draw upon data obtained through the pilots in component 2 and consultations undertaken under output 1.2. Project activities will also draw on the activities of the support and investment platform for Latin America and the Caribbean of the Global Programme on Electric Mobility, in particular the help desk, working groups on light-duty vehicles and the marketplace meetings on technology and finance. The output and particularly the work on legal reforms will also link directly with the work under the GEF-7 project on sustainable cities in Costa Rica. The reforms developed here will be aligned with and guided by the roadmap for a transition to a green economy which is developed under that project.

- D.3.1.1: Report presented to the National Bank Association (ABC), car distributors and leasing companies (by month 16) containing:
 - Analysis of national experiences, client needs and global good practices on local financial institution financing of electric vehicles (new and used) and particularly electric taxis;
 - Methodology for estimating taxi incomes and operational costs, including total cost of ownership for internal combustion engine and electric vehicle taxis;
 - Recommendations for enhancing existing financial products and risk mitigation products presented to Costa Rican local financial institutions, car distributors, leasing companies and rental companies for application.
- D.3.1.2: Report analysing national experiences and global good practices on electric vehicle incentives for taxis and private consumers, and recommendations for updating laws 9518 and 7969 with regards to such incentives (M18).

- D.3.1.3: Workshop on recommendations for updating laws 7969 and 9518 on electric vehicle incentives (M19).
- D.3.1.4: Proposal for updating laws 7969 and 9518 on electric vehicle incentives presented to the Ministry of Environment and Energy and the Ministry of Public Works and Transportation for adoption, and technical assistance to support the approval process (M22).
- Output 3.2: Standards for regulating electric and internal combustion engine vehicles are presented for adoption by the Ministry of Environment and Energy.

This output will complement output 3.1 in addressing the cost differential barrier by updating standards that regulate the energy efficiency of combustion and electric vehicles. It will focus on updating Decree 25584, which provides regulations to implement Law 7447 on the rational use of energy of equipment and vehicles. The decree determines energy efficiency limits and incentives for defined efficient vehicles. The decree has not been updated since 1996, thus currently it is not effective in regulating the energy efficiency of vehicles. The output will build upon the draft proposal for updated vehicle energy efficiency technical standards, including energy efficiency labeling, developed with the support of the Global Fuel Economy Initiative (GFEI) and the Partnership for Cleaner Fuels and Vehicles. It will also build upon UNEP and GIZ's current efforts to develop related standards for electric buses.

The output will also seek to strengthen the applicability of decree 39724, which governs vehicle emission standards. The current decree dictates that Euro 4 standards are to govern all vehicles imported from 1 January 2018, and Euro 6 standards for all vehicles imported from 1 January 2021. However, the decree has not been effectively applied to date by National Customs due to a lack of capacity (to be addressed through output 1.1) and a lack of political support.

Building on lessons learned from the previous attempt to update such standards, work under this output will focus on consultation with key government agencies, civil society and the private sector. This will be undertaken to ensure that proposed regulatory changes do not result in negative social impacts (based on a holistic consideration of the proposed regulatory changes), and that they are embraced as standards that will be applied and enforced. Work under this output will draw on data developed through output 2.2 and consultations under output 1.2. Development of the proposal for revising decree 25584 will draw on the support of the regional platform of the global programme, especially as Centro Mario Molina Chile, which is the host of the regional platform, participated in activities under the GFEI. The output will also link directly with the work under the GEF-7

project on sustainable cities in Costa Rica. The reforms developed here will be aligned with and guided by the roadmap for a transition to a green economy which is developed under that project.

- D.3.2.1: Report reviewing global good practices on standards for vehicle energy efficiency, developed including by building upon previous GFEI efforts and drawing on the Global Programme's support, and recommendations for updating decree 25584 (month 16).
- D.3.2.2: Workshop with relevant stakeholders on possible energy efficiency standards in the context of law 7447 and decree 25584 and on ways to ensure the applicability of decree 39724 on vehicle emission standards (M20).
- D.3.2.3: Proposal for energy efficiency standards as part of a revised decree 25584 and proposal on the effective application of decree 39724 on vehicle emission standards are presented to the Ministry of Environment and Energy for adoption, and technical assistance to support the approval process (M26).

- Output 3.3: Long-term roadmaps for the electrification of public buses and taxis are presented for adoption by the Ministry of Environment and Energy and the Ministry of Public Works and Transportation.

While the National Decarbonization Plan defines long-term targets for the deployment of electric mobility by 2030 and 2050, it lacks specific actions or steps to accomplish those goals. The National Electric Transport Plan contains the broad steps for achieving the decarbonization for the transport sector and contains a short-term action plan (between 2020 and 2022) with specific actions for the deployment of electric mobility in the country. However, Costa Rica is lacking long-term roadmaps with specific actions for achieving the national electric transport plan, particularly with regards to the electrification of the public transport system. There is also a lack of a clear roadmap on how to implement law 9518's ruling that 5% of the bus fleet will be replaced by electric equivalents every two years and that at least 10% of new taxi concessions be given to EVs (Article 30). On buses, national concessions occur every seven years, with the next occurrence in late 2021. The timing of this GEF-7 project thus presents a key strategic moment to develop concession specifications aligned with law 9518 and the plan for this concession in 2021. Similarly, a long-term roadmap for the electrification of taxis in the ASMJ will support the achievement of the goals set in the National Decarbonization Plan, the National Electric Transport Plan, and Law 9518. More generally, such roadmaps will have the co-benefit of supporting a modernization of the sector, leading to improvements in the quality of the service provided.

For developing the roadmaps, a first workshop will be held to determine the criteria to be included in an assessment of existing conditions. Secondly, an evaluation of the baseline conditions (including those related to gender) will be undertaken, including by drawing on data developed under Output 2.2 and shared through the platform of Output 1.2. This evaluation will assess the existing fleets and renewal schedules and the electrical conditions of existing infrastructure at the depots for the companies operating in the AMSJ. It will build on work undertaken by cooperation agencies that analyzed the viability of the electrification of bus services. After the assessment is carried out, a draft report will be shared with stakeholders through the multi-criteria working group (Output 1.2) to receive feedback that will be incorporated into the report's recommendations (D.3.3.2).

Thirdly, electrification roadmaps will be created separately for the bus and taxi fleets in ASMJ. These will include an analysis of the existing fleet, an estimate of different scenarios of electric vehicle adoption and estimates of investment required in electric charging infrastructure for both buses and taxis. The roadmaps will also estimate the projected electricity demand from the controlled increase in electric buses and taxis, and the estimated impact that such demand will have on the electricity grid. These roadmaps will take into account safety, gender equality and other social practices. After the draft roadmaps have been reviewed by stakeholders (output 1.2) and their observations integrated into the recommendations, the long-term roadmaps will be finalized and presented to MOPT and MINAE for adoption. It is important to note that the bus roadmap needs to finalize prior to the offering of new bus concessions in late 2021.

In developing the roadmaps, this output will build upon work undertaken in the Costa Rican GEF-7 sustainable cities project: *Transitioning to an urban green economy and delivering global environmental benefits*. In particular, output 3.3 will be aligned with and build upon the GEF-7 sustainable city project's work to develop sustainable mobility plans for municipalities of the Greater Metropolitan Area of Costa Rica (GAM). The sustainable mobility plans have a broader technical focus and a more limited geographical scope (municipality) than the electrification roadmaps, which have a more limited technical focus but a broader geographical scope (ASMJ). The technical teams of both projects will coordinate to ensure that the plans and roadmaps are aligned and complementary, drawing on inputs of each.

The output will also build upon studies on travel demand and land-use developed under the GEF IDB project on sustainable mobility (see section 2). It will also build upon in-kind co-financing provided by MINAE. It will further build upon co-financing of CRUSA, which, through its *Leapfrogging to e-buses in Costa Rica* project has evaluated the technical and financial feasibility of electric buses in the Metropolitan Area of San José.

- D.3.3.1: Workshop to determine criteria for assessing the baseline conditions of bus and taxi public transport services in the Metropolitan Area of San Jose (ASMJ) (by month 5).
- D.3.3.2: Report on assessment of existing bus public transport service fleets in ASMJ and gender-sensitive recommendations for their electrification (M5).

- D.3.3.3: Report on assessment of existing taxi public transport service fleets in ASMJ and gender-sensitive recommendations for their electrification (M31).
- D.3.3.4: Roadmap for electrification of bus public transport services in ASMJ, including timeframes for implementation of roadmap actions, is presented to MOPT and MINAE for adoption (M6).
- D.3.3.5: Roadmap for electrification of taxi public transport services in ASMJ, including timeframes for implementation of roadmap actions, is presented to MOPT and MINAE for adoption (M34).

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Component 4: Long-term environmental sustainability of low-carbon electric mobility

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This component aims to address a preoccupation in Costa Rica related to the potential environmental impacts arising from the inappropriate reuse and disposal of EV batteries. Through this component, project stakeholders will enhance regulations to ensure environmentally sustainable electric battery waste management (including reuse, recycling and final disposal).

Outcome 4. The Costa Rican government takes action towards implementing a policy framework for ensuring the environmental sustainability of low-carbon electric mobility.

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Outputs:

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- Output 4.1: Updated laws and regulations for waste management of electric vehicle batteries are presented for adoption by the Ministry of Health.

This output aims to facilitate the long-term environmental sustainability of low-carbon electric mobility by supporting the development of standards for reuse, recycling and disposal of batteries from electric vehicles. This will work to strengthen law 8839, which concerns waste management, and its regulation N°38272-S, which classifies vehicles as a type of special management waste that requires different conditions. In the development of this framework, effort will be made to ensure that any costs arising from such regulations will not be passed onto the car purchaser (which would increase the cost differential between internal combustion engines and electric vehicles). Current work being undertaken by other cooperation agencies (see section 2) does not cover the development of standards, norms, and policies to guarantee an effective waste management of EV batteries. These stop at the generation of a report on lines of action. The GEF-7 project will build upon this report and proposed recommendations to strengthen law 8839 and related regulation N°38272-S for EV battery waste management. Through the multi-stakeholder working group (output 1.2), it will be ensured that the standards developed draw on the work and findings of other cooperation agencies and draw on the inputs of the private sector and civil society. This output will build upon in-kind co-financing provided by MINAE.

- D.4.1.1: Report of regional and global good practices for standards and laws for regulating the waste management (including reuse and recycling) of electric vehicle batteries, and recommendations for such management in the Costa Rican context (by month 9).
- D.4.1.2: Workshop to consider possible options for updating law 8839 and its related regulations for regulating the waste management (including re-use and recycling) of electric vehicle batteries and identify options for a proposal to be submitted to the Ministry of Health (M10).
- D.4.1.3: Proposal for updating law 8839 and its related regulations for the waste management (including re-use and recycling) of electric vehicle batteries submitted to the Ministry of Health for adoption, and technical assistance to support the approval process (M12).

4) Alignment with GEF Focal Area and/or Impact Program strategies

This programme is aligned with Objective 1 of the Climate Change Focal Area to “Promote innovation and technology transfer for sustainable energy breakthroughs”, through CCM 1-2 - Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEF Trust Fund (GEFTF), Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), and co-financing

As noted in section 1, key barriers exist which impede Costa Rica from transitioning to electric mobility. As noted in that section, there is, inter alia, a lack of technological confidence in electric vehicles and a lack of successful experiences with such vehicles in local conditions. Consequently, the baseline or business-as-usual scenario estimates a slow uptake in Costa Rica of electric vehicles sales, resulting in a negligible market share (1% of electric LDV sales by 2025, 10% by 2030 and 20% by 2040). In this context, based on the business-as-usual scenario the transport sector will continue to predominate national GHG emissions until 2040 and beyond. The incremental cost reasoning of the GEF trust fund intervention contends that by addressing the aforementioned barriers, Costa Rica can accelerate the uptake of electric mobility significantly beyond the baseline of 20% by 2040. As the country's electric grid is clean, the intervention will have significant global environment benefits, through the mitigation of greenhouse gas emissions as quantified in section 6. The global environmental benefits will be tracked through the project results framework, in particular the core indicator A: tons of direct GHG emissions avoided during project. Co-financing plays a key role in the incremental cost reasoning. In particular, co-financing provided by Grupo ICE to build a national grid of electric vehicle chargers, to the value of US\$7,000,000, supports the GEF interventions in addressing barriers related to a lack of technical confidence and successful experiences with electric vehicles.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

The impact of the proposed project in terms of GHG emission mitigation has been estimated by the UNEP Air Quality and Mobility (AQM) Unit using its GHG emission reduction calculation model. Details of the model are provided in Annex M.

The model estimates business as usual fleet projections into the future based on historic fleet growth rates and country current population and expected growth as well as trends of GDP per capita. It estimates light-duty vehicle (LDV) sales based on GDP per capita, with an elasticity of 0.7 until GDP per capita reaches USD 20,000 and 0.5 until GDP per capita reaches USD 30,000. An average LDV consumption of 0.20 kWh/km was considered and an average annual mileage for taxis of 15,000 km per year.^[31]³¹ Regarding well-to-tank electricity grid emission factor, data was obtained from the Costa Rican Meteorology Institute for years before 2018 (the year with the latest officially available data). From 2018 onwards, it was assumed that the average electricity emission factor remained constant and equal to the value in 2018 in the baseline scenario (0.0395 kg CO₂e/kWh).

In the Electric Mobility Calculator (EMOB) scenario, by 2020 it was assumed that the average emission factor remained constant and equal to the value in 2018. The country’s National Decarbonization Plan assumes that electricity production will be 100% renewable before 2030, hence a tenth of the 2018 emission factor is assumed from 2030 onwards (0.00395 kg CO₂e/kWh).[32]³²

In terms of direct emission reductions of the project, these are estimated based on the operation of the six electric taxis rented for the pilot for 12 months. On indirect reductions, in the baseline model, alternative technologies to internal combustion engine technologies are negligible (1% of electric LDV sales by 2025, 10% by 2030 and 20% by 2040). The electric mobility scenario considers a 10% sales share of electric LDV by 2025 and grows steadily to 50% by 2050, as an influence of the project policies – a conservative figure when considering that the Costa Rican National Decarbonization Plan has set a target of 100% sales share of private battery electric vehicles by 2050. The emissions avoided by these vehicles are used for computing the indirect benefits of the project. Indirect emission reductions are estimated for a 15-year period after the beginning of the project. A conservative causality factor of 40% is used to quantify the amount of the benefits obtained as a result of the project execution and its influences. The project GHG emission reductions and energy saving impacts are summarized in the table below.

Table 4. GHG reductions and energy savings estimation for Costa Rica

Total top-down emission reduction potential 2021 to 2036, tCO₂	5,536,988
Of which	
Total direct emission mitigation from demonstration, tCO ₂	664,536
Total indirect emission mitigation, tCO ₂	1,550,291
Total project related emissions reductions, tCO₂	2,214,828
Total top-down energy savings potential 2021 to 2036 MJ	64,019,600,094
Of which	

Total direct energy savings from demonstration, MJ	7,683,707,598
Total indirect energy savings, MJ	17,925,262,095
Total project related emissions reductions, tCO2	25,608,969,693

7) Innovativeness, sustainability and potential for scaling up

This project introduces specific innovations:

1. **Engagement with the private sector and civil society in electric mobility governance and decision making:** The current governance structures for decision-making and electric mobility deployment involve public sector institutions and international cooperation entities. There is a limited participation of other stakeholders such as the private sector and civil society, that can significantly contribute to accelerating the deployment of EVs in different sectors. This project, based on international best practices for governance of electric mobility, will create a multi-stakeholder working group to improve that governance and involve the sectors that currently don't have a seat at the table, to strengthen measures, policies and actions taken towards electric mobility.
2. **Introduction of EVs as airport taxis:** there is only one electric taxi in the whole country, and it is operating under regular taxi service, not in the airport. Having electric airport taxis in Costa Rica will be a technological innovation which will introduce not only drivers but also taxi users to a new, clean technology that might otherwise be out of their reach. Introducing electric vehicles for airport taxi services will require other innovations in terms of infrastructure (introducing electric vehicles chargers in the airport), policy (adjusting and making more flexible taxi service regulations to allow a different type of vehicle), and knowledge (training of transport operators and drivers), amongst other elements, which will serve as enablers for the broad adoption of this technology.

3. **Electric taxi data generation:** Beyond a technology innovation in terms of vehicles and charging infrastructure, the demonstration project will include the use of GPS and other technologies to extract and analyze data on the performance of electric vehicles under taxi modality. This data will serve as an input to propose a roadmap of following steps for the long-term deployment of electric vehicles for the taxi sector. The generated data, accompanied with training and capacity building on how to effectively use it for decision making and transport planning, will also be made available to public officials to use for upscaling from the pilot to a more widespread implementation of electric vehicles for taxi services.

4. **Innovations on financial products and services:** This project will innovate in the financial sector by strengthening innovative financing products and services that cater specifically to the needs of the taxi sector.

5. **Gender-perspective integration:** The innovation is summarized as the inclusion of women in decision making, the inclusion of a gender perspective in the sector, and the design and monitoring of indicators that include a gender focus. This project will include women in decision making and service offerings for the use of electric vehicles, as well as create and gather data and information to inform initiatives in the sector. The project will include a gender perspective (see section 3) by working with women leaders in this sector, developing training, improving the participation of women as decision makers on gender issues linked to transport, and aiming to provide an opportunity for more women to take part in safe, zero-carbon transport. In addition, the project will start generating sex-disaggregated transport data which Costa Rica currently does not have. The project will enable innovative chains of collaboration across different sectors, contributing to close the gender gaps and improve women's access to services.

Environmental Sustainability

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Costa Rica's most significant environmental challenges in the urban context are greenhouse gas emissions and air pollution due to transport. At the same time, its electricity is 100% renewable for most of the year. Therefore, replacing fossil fuel-based vehicles with EVs will have a large impact in reducing both greenhouse gas and air pollution due to transport in the medium- to long-term. In the context of GHG emissions and air pollution it is environmentally sustainable, as it will lead to ever reducing emissions as electric vehicle uptake increases.

Other relevant environmental impacts related to this project are those regarding electric vehicle batteries and the lifecycle of those vehicles that are substituted by EVs. Regarding the environmental risks associated with the management of electric vehicle batteries, this project will contribute to supporting the development of regulations to provide a national framework for the adequate management of this waste and safeguard the environment and health, thus supporting environmental sustainability with regards to potential soil and water contamination.

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Sustainability of market development after the project:

This project will ensure the sustainability of market development primarily through component 3. Through that component, the project will strengthen financial products and services for electric mobility, reducing the cost differential between conventional internal combustion engine and electric vehicles in the short- to medium-term until global markets eliminate the differential. Furthermore, work under outputs 3.2 and 3.3 will support the development of a sustainable market by evening the playing field for electric vehicles through the application of tighter standards on conventional ICEs and the introduction of long-term roadmaps. Together, these three outputs are focused on creating a sustainable market that goes beyond the project's duration. Additionally, through the demonstration, training and capacity building, uncertainty related to adopting or investing in a new technology, brand or type of vehicle will also be reduced. Ultimately the project will push the transition towards electric vehicles, including taxis, incentivizing taxi operators (both airport taxis and other types) to opt into EVs as their first choice.

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Potential for scaling-up:

This project has several elements with potential for scaling up the deployment of electric vehicles in public transport. First, the capacity, knowledge and experience that this project will generate through its demonstration pilots (component 2) in areas such as electric vehicle operation, data management and regulation adjustments to facilitate service provision using new technologies, even if only for a specific sector such as airport taxis, will facilitate the transition for other taxi service providers, in the Great Metropolitan Area and the rest of the country, and for other transport sectors wishing to transition towards electric mobility, such as tourism services, corporate transport services, student transport services, ride hailing services, etc. The demonstration phase of this project will support scale-up with users of airport taxis by demonstrating to them the technology's social, technological and economic viability and benefits. This will help dispel myths and build confidence about the technology's suitability for the local context, serving as a catalyzing agent for broader adoption of electric vehicles.

The support on strengthening of data collection systems for the taxi sub-sector will also play a key role in supporting scale-up, as it will provide a data foundation for the design of future interventions. Such data will play a key role in scale-up and is currently absent from the operations of the sector. Once there is experience in operating and regulating electric vehicles for the taxi sector and data is gathered on how to plan and most efficiently operate taxi services using this technology, financial options created or strengthened through the project will support taxi operators for the airport and beyond to move towards acquiring an electric vehicle. Through the strengthening of financial products and services that cater specifically to the taxi sector (see component 3), and through the provision of advisory services to strengthen the sector's readiness to engage in these financial services and projects, the project will enable a higher potential for scaling up the deployment of electric taxis in the future.

Another element with a significant potential for scaling up is the development of roadmaps for the electrification of bus and taxi services in the Metropolitan Area of San Jose (see component 3). Costa Rica's National Transport Plan and Law 9518 require actions towards a long term strategy to substitute the country's bus and taxi fleets to electric vehicles. The bus roadmap will include an evaluation of the current bus fleet and its substitution plans, as well as an assessment of the conditions for electric charging infrastructure in the surroundings of the bus depots. The taxi roadmap will be developed based on the data and experiences derived from the demonstration pilots, with recommendations to enable the long term deployment of electric vehicles for this sector. The roadmaps that this project will generate to electrify electric transport operating in the Metropolitan Area of San José can be scaled up, serving as a base for a national scale strategy or to be replicated in other regions for the country as per established in national policy.

Concretely, Costa Rica will also explore how to scale up the GEF-7 project through a possible Green Climate Fund (GCF) project. The country is currently participating in a regional readiness programme on electric mobility, which started late 2020. As the GEF-7 project starts in 2021, effort will be made to ensure the development of a pipeline of GCF project proposals that builds upon the GEF project, for example, through the scaling up of the electric taxi fleet based on GEF-7 project experiences. The coordination and building of synergies between the two initiatives will be ensured through the coordination groups led by the Office of the First Lady and the technical working group strengthened under output 1.2.

[1] CO2EMISSIONS FROM FUEL COMBUSTION Highlights (2019 edition), IEA 2019.

[2] IEA Mobility Model, 2017.

[3] Secretaría de Planificación del Subsector Energía (SEPSE), Balance Energético 2016

[4] Factores de emisión de gases de efecto invernadero, novena edición IMN, 2020:

<http://cglobal.imn.ac.cr/documentos/publicaciones/factoresemision/factoresemision2020/offline/FactoresEmision-GEI-2020.pdf>

[5] Costa Rica 2019: 2do. Informe Bienal de Actualización ante la CMNUCC

https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/7160385_Costa%20Rica-BUR2-1-IBA-2019.pdf

[6] [National University of Costa Rica \(UNA\) et al, 2016](#)

[7] Interviews with National Bank Association (ABC) and local financial institutions.

[8] <https://www.presidencia.go.cr/comunicados/2019/10/bancos-publicos-anuncian-creditos-especiales-para-vehiculos-taxis-y-autobuses-electricos/>

[9] Noted by the Costa Rican Banking Association.

[10] Secretaría de Planificación del Subsector Energía (SEPSE), Balance Energético 2016

[11] Factores de emisión de gases de efecto invernadero, novena edición IMN, 2020:

<http://cglobal.imn.ac.cr/documentos/publicaciones/factoresemision/factoresemision2020/offline/FactoresEmision-GEI-2020.pdf>

[12] <https://global-climatescope.org/results/CR#doing-business>.

[13] Costa Rica 2019: 2do. Informe Bienal de Actualización ante la CMNUCC

https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/7160385_Costa%20Rica-BUR2-1-IBA-2019.pdf

[14] [General Comptroller of the Republic \(CGR\), 2018](#)

[15] Estado de la Nación, 2018

[16] <https://www.nacion.com/el-pais/servicios/antiguedad-de-taxis-se-eleva-de-15-a-18-anos/VWOLYLQKEJBKHEPYLXMWVCCDK4/story/>.

[17] <https://web.energia.go.cr/2020/06/09/movilidad-electrica-costa-rica/>

[18] <https://www.presidencia.go.cr/comunicados/2020/03/costa-rica-amplia-plan-piloto-de-buses-electricos-como-parte-de-la-modernizacion-del-transporte-publico/>

[19] <https://www.presidencia.go.cr/comunicados/2019/04/gobierno-anuncia-red-nacional-de-carga-rapida-para-vehiculos-electricos-en-todo-el-pais/>.

[20] Bus efficiency standards are defined through concession rulings rather than laws. See description early in the baseline section on the concessions.

[21] <https://www.presidencia.go.cr/comunicados/2019/10/bancos-publicos-anuncian-creditos-especiales-para-vehiculos-taxis-y-autobuses-electricos/>

[22] <https://www.presidencia.go.cr/comunicados/2019/10/bancos-publicos-anuncian-creditos-especiales-para-vehiculos-taxis-y-autobuses-electricos/>

[23] HINICIO-CRUSA (June 2020), Informe del análisis de Costo Total de Posesión (CTP) de los vehículos eléctricos y escenarios de penetración, based on <https://www.presidencia.go.cr/comunicados/2019/10/bancos-publicos-anuncian-creditos-especiales-para-vehiculos-taxis-y-autobuses-electricos/>.

[24] <https://www.elfinancierocr.com/finanzas/que-es-la-tasa-basica-pasiva-y-para-que-sirve/RRVY2NS5VVHIPKQ76APQ6VSEKA/story/>.

[25] Conversations with local financial institutions.

[26] Grupo ANC (Alamo, National Car Rental and Enterprise in Costa Rica) has noted that it would benefit from data on the performance of electric vehicles under high-usage conditions. It said that this would help them understand how to develop business models for managing a future fleet of electric vehicles for rent.

[27] Grupo ANC (Alamo, National Car Rental and Enterprise in Costa Rica) has expressed interest to provide the vehicles. See annex O.

[28] <https://www.elfinancierocr.com/negocios/banco-publicos-ofrecen-tasas-diferenciadas-para/JJYNUTP2RZEUDFAJHBW5AGW4UM/story/> (Due to COVID-19, the women did not take the loan indicated in the link).

[29] These products were launched in late 2019 but have been affected by the COVID pandemic. With no loans taken to date, it is too early to assess their effectiveness.

[30] For instance, with the participation of local financial institutions such as Banco Popular, Banco Promerica, Banco de Costa Rica and Banco Nacional. As the financial products were launched in late 2019 and then affected by the COVID pandemic, it was not possible to evaluate their effectiveness in 2020 (which is also a short time-period for analysis). Furthermore, car manufacturers (BYD) and rental companies (Grupo ANC) have also expressed interest to participate in this work.

[31] A conservative number compared to data provided by the Costa Rican Vehicle Technical Revision latest annual report: <https://www.rtv.co.cr/wp-content/uploads/AnuarioRiteve2018.pdf>.

[32] Costa Rica’s National Decarbonization Plan sets a target for zero-emission and renewable based electricity generation before 2030: <https://minae.go.cr/images/pdf/Plan-de-Descarbonizacion-1.pdf>

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

San Jose is the capital city of Costa Rica and is located in the Central Valley (Image 1). The interventions proposed for this project will take place in the Greater Metropolitan Area of Costa Rica, with most of the interventions occurring in or around the Metropolitan Area of San Jose (AMSJ) and the Juan Santamaria International Airport. The Greater Metropolitan Area (GAM) is where most of the Costa Rica population lives (up to 2.5 million people) with 31 municipalities making up for its area. The Metropolitan Area of San Jose is a smaller territory comprised by 14 municipalities inhabited by 1.5 million people.



Image 1. Location of the Greater Metropolitan Area of Costa Rica.

Source: Municipality of San Jose, 2011.

Table 5. Location of project sites

Demonstration sites	<i>Latitude</i>	<i>Longitude</i>
Metropolitan Area of San Jose	9°94’N	84°14’W

Juan Santamaria International Airport	9°99'N	84°20'W
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1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

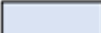

The current project is hosted under the “Global Programme to Support Countries with the Shift to Electric Mobility”, led by UNEP.

The Global Programme to Support Countries with the Shift to Electric Mobility was submitted (June 2019 GEF Council) with child projects in Antigua and Barbuda, Armenia, Burundi, Chile, Costa Rica, India, Côte d’Ivoire, Jamaica, Madagascar, Maldives, Peru; Seychelles, Sierra Leone, Saint Lucia, Togo, Ukraine, Uzbekistan, as well as a global child project. For each child project, a concept note was prepared including national background, policy status, baseline scenario and description of individual national components.

The Global Programme is divided into 4 components:

- Component 1: Global thematic working groups and knowledge materials
- Component 2: Support and Investment Platforms
- Component 3: Country project implementation
- Component 4: Tracking progress, monitoring and dissemination

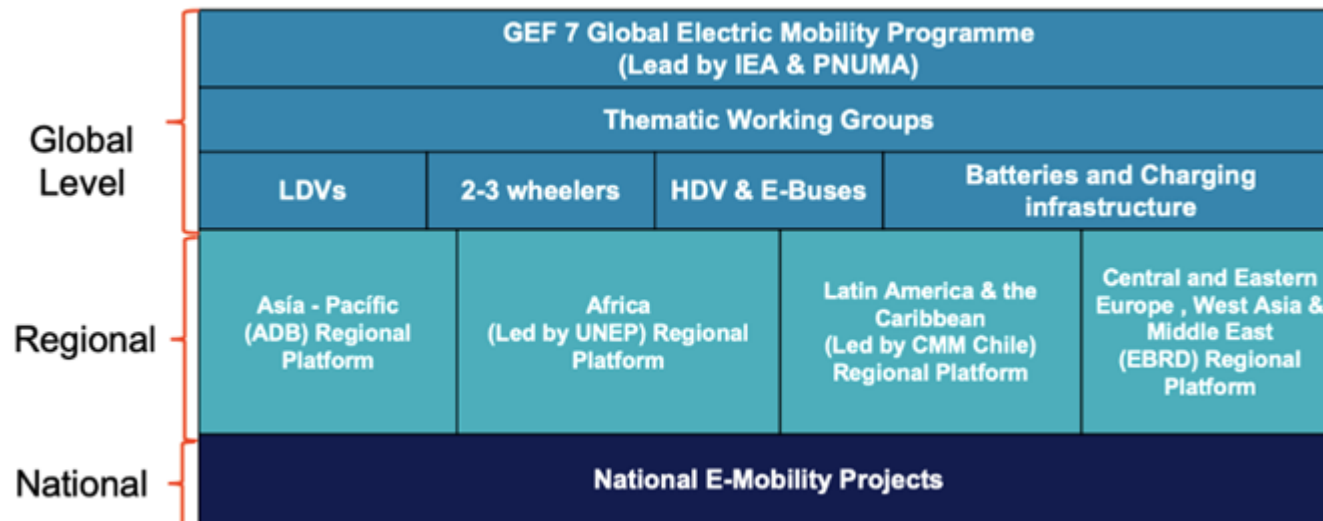
The Global Programme has put in place the monitoring framework below to track progress both globally and at the level of the country child projects. 10 indicators have been designed for this purpose: 4 relying on global level information (highlighted in blue) and 6 relying on country level information (highlighted in green).

Global E-mobility Programme Monitoring Framework			
	 Global level monitoring	 Country level monitoring	
Component 1 Global thematic working groups and knowledge materials	Component 2 Support and Investment Platforms	Component 3 Country project implementation (Child Projects)	Component 4 Tracking progress, monitoring and dissemination
Outcome 1 Knowledge products are generated to support policy making and investment decision-making through four global thematic working groups	Outcome 2 Conditions are created for market expansion and investment in electric mobility through support and investment platforms	Outcome 3 Conditions are created at country and city level for the introduction of electric mobility demonstration projects, and wider up take of electric mobility	Outcome 4 Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility
<u>Indicator 1.1</u> # of knowledge products developed by the four thematic working groups and used by the Support and Investment platforms in their training and outreach activities	<u>Indicator 2.1</u> # of countries using services and knowledge products offered by the Support and Investment Platform	<u>Indicator 3.1</u> # of countries with an improved institutional framework and a strategy to promote the uptake of low-carbon electric mobility	<u>Indicator 4.1</u> # of countries generating and sharing best practices and other lessons learned on low-carbon electric mobility with the global programme
	<u>Indicator 2.2</u> # of US\$ leveraged to scale-up low-carbon electric mobility through the support and investment platforms	<u>Indicator 3.2</u> # of countries with nationally generated evidence of the technical, financial and/or environmental benefits of low-carbon electric mobility	<u>Indicator 4.2</u> # of e-mobility knowledge products refined based on evidence coming from the country projects
		<u>Indicator 3.3</u> # of countries that have improved preparedness to accelerate market transformation towards low-carbon electric mobility	<u>Indicator 4.3</u> # of non-e-mobility programme countries committing to actively promote the uptake of low-carbon e-mobility
		<u>Indicator 3.4</u> # of countries with measures in place to ensure the long-term environmental sustainability of low-carbon electric mobility	

The global project will report against this framework on an annual basis, using (1) the global level data from the Global Thematic Working Groups and from the Support and Investment Platforms, and (2) country level data provided by each country project during their annual Project Implementation Review (PIR) process.

For this purpose and whenever applicable, the global level indicators highlighted in green are translated into a country-level indicator in the Project Results Framework located in Annex A of the present CEO Endorsement Document. During project implementation, the project executing agency (CRUSA) will be requested to report against the indicators of the country Project Results Framework (Annex A) on an annual basis, during the PIR process.

At the global level, a steering committee integrated by the International Energy Agency (IEA) and the United Nations Environment Programme will coordinate and monitor the implementation and the outputs of the GEF 7 Electric Mobility Programme. On technical gaps, four thematic working groups at the global level will support the rapid introduction of electric mobility in GEF recipient countries. These working groups will generate universal knowledge products that contain best practices, factsheets, interactive tools and guidance, as well as experiences from countries that have advanced their e-mobility market. The working groups will be integrated by representatives from the global programme regional platforms, GEF-7 countries, IEA, vehicle manufacturers, utilities, researchers and the civil society. The governance structure is presented in the figure below. For Latin America and the Caribbean, the regional platform will be led by Centro Mario Molina Chile.



Governance structure between the global programme, the national e-mobility projects, and the regional platform

The coordination between the global program, the steering committee, the thematic working groups, and the national projects will be facilitated by the regional platform. The role of the regional platform is to provide customized technical assistance to ensure the success of the country projects. Moreover, knowledge products developed by the working groups will be adapted and disseminated by the regional platform according to the regional and national context, specific needs and languages.

The LAC regional platform will interact with and support participating countries in the region to link with each other through the following activities:

- The creation of a community of practice for the GEF 7 regional countries;
- Facilitation of knowledge transfer between countries, and regions, especially those with common characteristics like SIDS;
- The creation of thematic groups in light-duty vehicles (LDVs), 2-3 wheelers, and buses at regional level;
- A marketplace between countries, technology providers and financial institutions;
- Help desk for technical assistance to GEF 7 LAC countries;
- Personalized assistance from international experts in electric mobility;
- Generation of training sessions and workshops.

The national child projects will generate a learning curve on electric mobility that can be transferred to other countries within and outside of the region through the global programme. As a first contact point, the regional platform will facilitate the flow of learnt lessons from child projects, such as: data and demonstration results, working business models, operational know-how, working financial instruments, and working policies and regulations. At the global level, the scenarios proposed to share country knowledge and experiences on electric mobility are the thematic working groups, while at the regional level the countries will participate in the community of practice, the thematic regional groups, the marketplace, trainings and workshops.

2. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Table 6. Summary of project stakeholders

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged and opportunities within the context of the project	Content engagement, contributions to the project
	First Lady's Office	The First Lady's Office coordinates the national sustainable mobility agenda and is a key stakeholder.	Through all components: They are currently coordinating the electric mobility and sustainable transport activities nationally.

<p>Government</p>	<p>Ministry of Public Works and Transportation (MOPT)</p>	<p>The Ministry has several activities related to public transport occurring at the moment, especially the deadline for the next period of bus service concessions will be up in September 2021. MOPT will define the contractual obligations with which service providers will need to comply with, including the introduction of electric buses in their services. With regards to taxi services, it has license plates available for concessions. With MINAE there is a National Commitment to reduce GHG emissions from the transportation sector.</p>	<p>For Component 1: The Ministry of Public Works and Transportation will be a key stakeholder in participating and identifying knowledge needs within its institution for Output 1.1. Their participation and expertise in the working group to be formed for Output 1.2 is also indispensable.</p> <p>For Component 2: will have the authority to coordinate the different stakeholders when it comes to the use of infrastructure in the airport, due to contractual obligations. It will work alongside CTP to facilitate the processes needed to use EVs in the airport taxi service (Output 2.1). It will also be key in the discussions in Output 1.2 to determine the information that will be collected, and which shall be regulated as part of the service (Output 2.2).</p> <p>Component 3: will contribute as a coordinator with several sub sectors (service providers, financial) that are key to accelerate the transition towards electric mobility (Output 3.1). Will approve the proposals for regulation and the roadmaps for the electrification of the public transport services (Outputs 3.2 and 3.3).</p> <p>Component 4: stakeholder as part of the discussions regarding EV battery waste management.</p>
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<p>Ministry of Environment and Energy (MINAE)</p>	<p>Has set the NDC with important reductions coming from the transportation sector. Has the shared responsibility on electric mobility alongside MOPT and has an energy efficiency law to enhance its ambition regarding the transportation sector.</p>	<p>All components: MINAE is the focal point and responsible for the National Project Director for the GEF project, the lead authority (alongside MOPT).</p> <p>Component 1: It is the coordinator of the Electrification of Public Transport Committee (CETP) in Costa Rica. It will provide support in articulating the different stakeholders to accelerate the transition (Output 1.2). The publication of results arising through this project will be disseminated with their support.</p> <p>Component 3: MINAE will support, in coordination with MOPT, the development of draft standards on technical specifications for electric and internal combustion engine vehicles (Output 3.2).</p>
<p>Ministry of Finance</p>	<p>Implements laws regarding tax incentives, such as Law 9518 which promotes EVs.</p>	<p>Component 3: Will participate in working to strengthen financial products and services to facilitate the acquisition of EVs in public transportation (Output 3.1). If changes in regulation are needed, it will be involved for an early stage.</p>
<p>Ministry of Health (MINSAs)</p>	<p>The Ministry is interested in efforts to promote cleaner technologies and devise strategies to adequately manage waste from EVs (especially batteries).</p>	<p>Component 4: Participation in workshops and supervising the development of the battery waste management draft regulation as the health and waste authority in Costa Rica.</p>

	INAMU	INAMU is in charge of the National Policy on Gender Equality (PIEG). National office promoting actions to guarantee gender equality to all spaces. Functions as a technical expert that supports the national entities in gender-based approaches.	<p>Component 1: As most ministries do not have a gender office, it will be an important ally during the project and especially during the capacity building activities to promote gender equality measures to improve the public transport services (Output 1.1).</p> <p>Component 2: Participate in building capacity during the pilot project, in actions related to gender and the data acquisition processes (to have gender disaggregated data) (Outputs 2.1 and 2.2).</p> <p>Component 3: Participate in workshops to support incorporation of gender sensitivity into the financial products and services (Output 3.1).</p>
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Public Transport Board (CTP)	<p>The Public Transport Council (CTP) is the most important institution when it comes to public transport. It is responsible for directing and planning public transportation in Costa Rica and is part of the MOPT's structure. CTP has the opening on the concessions for bus services in September 2021 and taxi services license plates.</p>	<p>Component 1: It will be a key stakeholder in both the capacity building processes as well as improvements in governance for electric mobility in public transport services (Outputs 1.1 and 1.2).</p> <p>Component 2: it is responsible for awarding the concessions required to operate public transport services, such as buses and taxis, among others (Output 2.1). Their participation in designing the pilot projects for the operation of vehicles and the acquisition of data will be indispensable because of their role (Output 3.2).</p> <p>Component 3: CTP will participate in efforts to strengthen financial products and services, as it needs to understand the different opinions and communicate the requirements by several sectors involved to promote policies that allow for the acceleration of the transition towards EVs in public transport (Output 3.1). In terms of regulations, they are the main stakeholders to be able to promote EVs in the taxi industry (Output 3.2). It will be key to have access to information required for the evaluation on the bus fleets by each provider and for coordination duties. Their role in approving the proposals and roadmaps is vital for the success of the project (Output 3.3).</p>
Costa Rican Tourism Board (ICT)	<p>Has an interest to promote electrification of transportation in the country as part of its promotional efforts and the country's essential brand, especially since airport taxis are one of the first sights a tourist will get from the country.</p>	<p>Component 1: The ICT will be a relevant input in the multi stakeholder platform due to the importance of the tourism sector nationally (Output 1.2). It will provide a good insight on how to make the services more accessible and of better quality to tourists and other users.</p> <p>Component 2: In the design of the pilot project they will have an important voice in promoting the electric taxis and looking for partnerships to replicate and scale-up such efforts.</p>

ARESEP	Is in charge of defining the tariffs for electricity used in transportation (already an experimental one in place) and for the transport tariff in taxis (will benefit from the data obtained through the pilot projects).	<p>Component 1: Will be relevant in identifying areas of need inside the institution in terms of regulation to be able to create capacities (Output 1.1). As a participant in Output 1.2 it will be able to provide critical insight into the regulatory framework for public transportation in terms of tariffs for both the energy and transport sectors.</p> <p>Component 2: As taxi services are a regulated public service, ARESEP will be involved in the design of the project (Output 2.1). They would also require specific information from the pilot project to improve their tariff models (Output 2.2). In data acquisition and management systems they will be the most relevant stakeholder alongside the CTP. Both have legal implications in the regulation of public transport.</p> <p>Component 3: For the roadmaps for the substitution of bus and taxi services towards EVs will provide key information (Outputs 3.2 and 3.3).</p>
General Superintendence of Financial Institutions	-	<p>Component 1: Understanding the need of the regulator in financial aspects will be key to creating capacity building programs in this area (Output 1.1).</p> <p>Component 3: Its participation shall provide insight on the financial situations that could require change in order to accelerate the transition towards the electrification of public transport (Output 3.1).</p>

	INA	The country will need to build capacities in several levels in the country and INA is, by law, the institution in charge of the technical programs nationally, including as related to electric mobility.	<p>Component 1: INA has the legal mandate to promote technical capacities in electric mobility. It will be key in coordinating and imparting several capacity building processes (Output 1.1).</p> <p>Component 2: Will participate in the capacity building processes and training for the pilot project (Output 2.1).</p>
Cooperation agencies	GIZ	Its MiTransporte project is promoting sustainable mobility in Costa Rica and has a specific component for electric mobility (see section 2).	Component 1: Could provide technical support for the capacity building (Output 1.1).
Financial institutions	IADB	Supporting Costa Rica through technical assistance in regard to electric mobility (see section 2).	<p>Component 1: Could provide technical support for the capacity building (Output 1.1).</p> <p>Component 3: Participation and inputs for the financial products and services will be valuable (Output 3.1). The current IADB projects related to this issue being developed will provide important baseline information for the execution of output 3.1.</p>
	CABEI	Supporting Costa Rica through technical assistance in regard to electric mobility. Has worked with Grupo ICE in business models for EVs. It is interested in investing money in banks to promote EVs.	Component 3: Previous studies by CABEI will assist the improvement of financial products and services (Output 3.1). Their participation in workshops is key to analyze possibilities available nationally to finance the transition to EVs.
	World Bank	Existing activities as noted in section 2. It is interested in supporting further efforts by Costa Rica in the electrification of its transport sector.	Component 3: Will be an important stakeholder in the financial products and services workshops (Output 3.1).

State-Owned Commercial Banks	Banco Popular	Has established the National Decarbonization Plan, and the electric mobility component, as an area of opportunity for the bank. Currently manages credit programs to promote EVs and other programs to support women and SMEs (see section 2).	<p>Component 1: possibility to provide financial capacity building programs for the public transport sector (Output 1.1).</p> <p>Component 2: May participate in the pilot project as a means to evaluate new mechanisms by which it can promote EVs in public transport (Outputs 2.1 and 2.2).</p> <p>Component 3: Valuable insights and inputs for the strengthening of financial products and services to accelerate the adoption of EVs in public transport (Output 3.1). Will provide information for the evaluation of the conditions of beneficiaries for the pilot project.</p>
	Banco Nacional	Has developed financial products for the bus sector mainly. Has seen electric mobility as an opportunity and provides favorable conditions for the purchase of electric vehicles for private use (see section 2).	<p>Component 1: Could provide financial capacity building programs for the public transport sector (Output 1.1).</p> <p>Component 2: Could be interested in participating in the pilot project to evaluate new mechanisms by which it can promote EVs in public transport (Outputs 2.1 and 2.2).</p> <p>Component 3: Valuable insights and inputs for the strengthening of financial products and services to accelerate the adoption of EVs in public transport (Output 3.1). Will provide information for the evaluation of the conditions of beneficiaries for the pilot project.</p>

	Banco de Costa Rica	Has financial products for the taxi sector and provides financial products for the bus sector. Has seen electric mobility as an opportunity and is willing to further its allocation of funds for different types of vehicles (see section 2).	<p>Component 1: Could provide financial capacity building programs for the public transport sector (Output 1.1).</p> <p>Component 2: Could be interested in participating in the pilot project as a means to evaluate new mechanisms by which it can promote EVs in public transport (Outputs 2.1 and 2.2).</p> <p>Component 3: Valuable insights and inputs for the strengthening of financial products and services to accelerate the adoption of EVs in public transport (Output 3.1). Will provide information for the evaluation of the conditions of beneficiaries for the pilot project.</p>
Private sector	Private commercial banks and associations (Asociación Bancaria Costarricense ABC)	Could be interested in participating in the pilot project to evaluate new mechanisms by which it can promote EVs. Some already have defined the transportation sector as an important part of their allocated funds and have differentiated conditions for more efficient vehicles.	<p>Component 1: Could provide financial capacity building programs for the public transport sector (Output 1.1).</p> <p>Component 2: Could be interested in participating in the pilot project as a means to evaluate new mechanisms by which it can promote EVs in public transport (Outputs 2.1 and 2.2).</p> <p>Component 3: Valuable insights and inputs for the strengthening of financial products and services to accelerate the adoption of EVs in public transport (Output 3.1). Will provide information for the evaluation of the conditions of beneficiaries for the pilot project.</p>
	Insurance industry (General Superintendence of Insurance, National Insurance Institute, and other insurance companies)	-	Component 1: Their participation will be relevant to assess their needs and create capacities in this sector (Output 1.1).

<p>Vehicle distributors for both internal combustion engine vehicles and electric vehicles (e.g. BYD, Nissan)</p>	<p>Are both the champions of electric mobility (for those distributors which have electric vehicles) and lobbyists against its introduction (for those that have a strong market in internal combustion engine vehicles).</p>	<p>Component 1: Their participation will be relevant to assess their needs (Output 1.1), to ensure they are supported in transitioning to electric mobility. Their participation will also be important to support the building of capacity (Output 1.1).</p> <p>Component 2: Will provide the vehicles for the pilot project (through leasing companies).</p> <p>Component 3: Important actors to participate in the development of regulations and laws under outputs 3.1 and 3.2.</p>
<p>Public transport service providers (buses)</p>	<p>GIZ already has a project to test electric buses with three different operators. Ongoing talks to expand the project to involve ten more public transport bus service providers are underway and expected to be official during late 2020 or early 2021.</p>	<p>Component 1: Their participation will be relevant to assess their needs and create capacities in this sector (Output 1.1).</p> <p>Component 3: The sector is key for the success of the definition of the roadmaps to electrify their services (Output 3.3).</p>
<p>Public transport service providers (taxi drivers and associations)</p>	<p>There has been interest in exploring electric vehicles for their services.</p>	<p>Component 1: Their participation will be relevant to assess their needs and create capacities in this sector (Output 1.1).</p> <p>Component 2: The participation through the design of the pilot projects is of the utmost importance (Outputs 2.1 and 2.2). It will be necessary to design a scheme that works for all parts involved.</p> <p>Component 3: Participation in the strengthening of the financial products and services is important to understand the current situation being faced by the sector in regard to the electrification or the vehicles to provide the service (Output 3.1). Capacity building in financial education as part of their readiness support will be valuable to the sector to enhance their options and access to different products.</p>

	Juan Santamaría International Airport (AERIS) Costa Rica	Coordination with the airport operator (working through a concession) has been done by the government.	Component 2: Support will be needed by the airport to provide a space for the electric taxis and to allow for the installation of the electric vehicle chargers (Output 2.1).
	Automobile Technology Institute (ECAC)	Developing a program to build capacities in diagnose and maintenance of electric vehicles alongside Technological Institute of Costa Rica. Has been proactive in the capacity building processes.	Component 1: Their participation will be relevant to assess their needs and create capacities to accelerate the adoption of electric vehicles in Costa Rica (Output 1.1).
	Rental car companies (ANC Group, Thrifty, Europcar)	Offer cars for rent, interested to participate in the pilot to gain experience on use of electric cars as part of rental car fleets.	Component 2: Provide electric vehicles to be rented for use in the project pilots. Obtain data on the use of such vehicles, for developing rental business models. Component 3: participate in development of business models for private sector financiers.
Utilities	Grupo ICE	The electrification of transportation will represent new customers to electrical utility companies. It could also provide services for data management through one of its subsidiaries.	Component 1: They will also require capacity building programs in regard to EVs and associated services arising from the use of this technology (Output 1.1). Component 2: will co-financing charging infrastructure at the airport (Output 2.1). May help with monitoring the pilot project. May provide advice and services on data collection and management (Output 2.2). Component 3: Their participation to define the criteria necessary to evaluate the public transport service providers' facilities will be key (Output 3.3).
	Other electric utility companies (JASEC, ESPH)	As of now, unknown in matters related to electric mobility. Almost all of the efforts have come through Grupo ICE, although they are interested in electric mobility in general.	Component 1: Will participate in the capacity building needs assessment to ensure technological transfer from the Greater Metropolitan Area to the rest of the country (Output 1.1).

Academia	University of Costa Rica (UCR)	Studying the impact of electric vehicles in the national electrical grid. Has professionals that are studying battery performance and possible areas to reuse them.	<p>Component 1: Their participation will be relevant to assess their needs and create capacities to accelerate the adoption of electric vehicles in Costa Rica (Output 1.1).</p> <p>Component 2: Could be interested in the monitoring and data collection and management aspects of the pilot project (Output 2.2).</p> <p>Component 4: Will participate and provide input into the workshop and regulation development.</p>
	Technological Institute of Costa Rica (TEC)	Working alongside the ECAC Institute to build a program to create capacities in diagnose and maintenance of electric vehicles. They have a laboratory to study electric vehicles.	<p>Component 1: Their participation will be relevant to assess their needs and create capacities to accelerate the adoption of electric vehicles in Costa Rica (Output 1.1)</p> <p>Component 4: Could be interested in waste management from EV batteries as part of their research projects.</p>
NGOs	CRUSA	Is committed to cleaner transportation and is currently financing and implementing projects related to zero emission transportation.	Executing agency of the project.
	Centro para la Sostenibilidad Urbana	The foundation is promoting sustainable mobility as a whole and is one of the organizations in the civil sector that has been taken into account for this topic.	Component 1: Their participation will be relevant to assess the needs from the public opinion and create capacities to accelerate the adoption of electric vehicles in Costa Rica (Outputs 1.1 and 1.2).
	Costa Rica Limpia	Another civil sector organization with great projection on electric mobility and decarbonization activities.	Component 1: Their participation will be relevant to assess the needs from the public opinion and create capacities to accelerate the adoption of electric vehicles in Costa Rica (Outputs 1.1 and 1.2).

Costa Rican Electric Mobility Association (ASOMOVE)	Main organized group by electric vehicle owners, companies and electric charger suppliers. It is an important lobby group.	Component 1: Their participation will be relevant to assess the needs from the public opinion and create capacities to accelerate the adoption of electric vehicles in Costa Rica (Outputs 1.1 and 1.2) are an important source of information due to the active work to promote EVs in the country.
Ruta Eléctrica Costa Rica/CORCLIMA	Civil society organization that promotes the development of an EV charging network in the tourism industry. The charging network is communicated to both national and international tourists to give them certainty that on their trip they will have the option to charge their vehicles.	Component 1: Through the multi stakeholder platform they will have the opportunity to provide input on the needs of the main touristic areas of the country (Output 1.2).
Centro Feminista de Información y Acción	Civil society organization that focuses on the defense and promotion of women's rights.	Component 1: Through the multi stakeholder platform they will have the opportunity to provide input to ensure that activities on electric mobility in Costa Rica incorporate gender considerations and are gender sensitive (Output 1.2).

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

The Costa Rican Committee for Electrification of Public Transport (CETP), strengthened through output 1.2, will coordinate and facilitate the participation of the above actors in the project actors.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier; Yes

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

Gender analysis:

Background and context

This gender assessment is based on a documentation review, data analysis and information gathering from other institutions that work in coordination with the government of Costa Rica and other stakeholders. This gender analysis is based on the following country assessments and consultation with the relevant institutions that led each specific framework or analysis document:

- o INAMU (2018). National Policy on Gender Equality (PIEG) 2018-2030.
- o MINAE (2018). National Decarbonization Plan.

- o National Government of Costa Rica (2019). Gender as a Fundamental Axis for the Climate Crisis Adaptation and Mitigation: PRECOP25.
- o MINAE (2018) National Policy for Climate Change Adaptation.
- o IDB (2019). IDB Group Costa Rica Country Strategy 2019-2022.
- o GIZ (2018). Gender Analysis in the Transport Sector in Costa Rica.

During the past decades, the Government of Costa Rica started to develop institutional actions for the promotion of gender equality. Women's organizations, academia and international organizations influenced and leveraged the discussion and their implementation. The most relevant laws are: the enactment of the Law for the Promotion of Real Equality of Women (1990), the design and implementation of the National Plan for Equal Opportunities between Women and Men (1996- 1998), and the creation of the INAMU in 1998 (Law No. 7801), as an autonomous institution, with its own assets and with the mandate to formulate the national policy for gender equality. Laws and regulations are extended to all Government branches. During the 1990s, the Executive Branch, the Judiciary Branch, and Local Governments created mechanisms (gender divisions and units), introduced regulatory changes, and defined public policy that support women and gender equity. The Supreme Electoral Tribunal (TSE) became the guarantor of the application of women's political rights, and in the Legislative Branch the Special Permanent Commission of Women was created to enact bills that affect women. Also, the Defensoría de la Mujer was created, as a Ministry of Justice's dependency, and its objective was to address violence against women that occurred in private spheres; since 1993 its functions were expanded as part of the Defensoría de los Habitantes.

In 1998, INAMU began the creation of Municipal Offices for Women (OFIM) conceived as mechanisms for the promotion of women's rights at the local level. Although the Municipal Governments are responsible for the OFIMs, the INAMU provides support and technical advice. There are currently 67 OFIMs (out of a total of 82 municipalities).

Costa Rica also has a series of public institutions that are dedicated to research on gender equality. Academic units specialized in gender issues were created, to create capacity and skills for the national discussion on the progress towards gender equality. Some of the most important institutions are the Center for Research in Women's Studies at the UCR; the Women Institute of Studies at the UNA, the Institutional Program for Gender Equity at the State Distance University; the Gender Equality Program at the TEC; and the Master's Program in Women's Studies (UCR) and the Master's Program on Human Rights' Gender Perspective (UNA) . The country had made a great effort to create data and information related to gender equality, and in the beginning of 1990, the System of Statistical Indicators of Gender (SGEI) was created. The SGEI provides information on gaps

between women and men. However, the INEC is advancing in the inclusion of gender indicators that continue improving the system and are able to monitor the progress of the results of the policies to close these inequalities.

For the period 2007-2018, the PIEG was implemented aimed at strengthening the institution and public policies to promote gender equality. The 2007-2018 PIEG included 6 main objectives: (i) care as a social responsibility; (ii) the job quality remuneration and income generation for women; (iii) education and high-quality health to promote gender equality; (iv) effective protection of the rights of women and against all forms of violence; (v) increasing political participation of women's; and (vi) institutional strengthening in favor of gender equality and equity. Among the main challenges identified to advance further the agenda, the 2007-2018 PIEG identified main areas that needed to be addressed before the kick-off of a new period. Some of these main challenges were: improving the registration for diverse women and include broader approach to work with masculinities; establishment of penalties on the institutions that not fulfilled compliance of goals and indicators; improve inter-institutional coordination for gender mainstreaming provision of human, equipment and financial resources to the gender units within the government bodies; endowment of the INAMU with greater political power; an intersectoral approach to include cultural change; promotion of the advance of gender equality agenda as a social priority (in particular on the issues of sexual diversity and the street sexual harassment; among others.

Currently, the PIEG (2018-2030), under the leadership of INAMU, contributes to the strengthening of public institutions and policies to promote gender equality across all levels of the government and with a multisectoral approach. One of its scopes is to achieve gender equality by improving the access of women to more productive sectors and to ensure public spaces without violence. In 2018, a new law to sanction street harassment was proposed and approved by the Legislative Branch.

Thanks to a strong legal framework and the implementation of targeted public policies and programs, Costa Rica improved its position in the Global Gender Gap Report (GGGR)[1] during the past seven years, but challenges still remain unsolved. The last GGGR from the World Economic Forum (WEF) shows that Costa Rica ranked in the position 13 out 153 countries included in the study, an improvement in comparison to the results achieved in 2006, which placed the country in the position 30 out of 115 countries. Costa Rica places the second-best position in Latin America and the Caribbean, only surpassed by Nicaragua (top 5 globally). The GGGR shows that all sub-indexes but health and survival experienced improvements. The country recorded a great jump when women almost doubled their political and empowerment participation reflecting parity in ministerial bodies at central government and achieving a score of 0.84 for women in parliaments. A better situation of gender equality mainly responds to improvements in access to economic opportunities reflecting more women as part of the labor force. Although, Costa Rican women are working more than 14 years ago, there is still a big gender gap compared to men, and only about half of the female who are capable of working are included in the active labor force (based on recent data from the National Statistics and

Census Institute (INEC) the net labor market participation rate of women at the end of 2019 was 54.1). A research study of the *Programa Estado de la Nación* (2019) concludes that Costa Rican women are not working because of the lack of opportunities for jobs with lower levels of education and the low quality of the employment. 76% of women who work do it in low productive sectors.[2]

Some of the most important characteristics to better understand how economic context impacts on women are reflected in what the country achieved and what is lagging behind. For instance, despite not having a gender gap in educational attainment, this is not translating into gender parity in wages and participation in the labor market, indicating that not having a gender gap in access to education has not generated the same revenues regarding the economic participation of women. As a consequence, about 33% of women do not have their own income, a higher percentage than the weighted average for Latin America (29%) and Costa Rican men (11%).[3] Without their own income and lower wages, it is difficult for women to make decisions about their lives and achieve their autonomy. The economic participation of women, their sexual and reproductive health, and a life free of violence are human rights of women who in turn play a key role in the development of countries, contributing significantly to the reduction of poverty and inequality, and increase in Gross Domestic Product (GDP). Having less income to invest in basic needs is a barrier for women to access as users to the public transportation services.

Deeping the analysis, based on similar qualifications and work, women earn about 89%[4] of what men make, this scenario gets worse when comparing wages of women at jobs with lower qualifications levels (women earn about 66% and 73% of what men make), and a gender gap affecting women persists when taking a look on the transport sector, one of the most productive and profitable fields because of the Science, Technology, Engineering and Mathematics (STEM) scope. At the university level, Costa Rican women are not choosing STEM careers, and only about 8% of women who are enrolled in the formal education system are pursuing a career in this field. This data is 3 times lower in comparison to 27.3% of men; when zooming in the engineering, manufacturing and construction, women are even less represented and only 4.4% of women are selecting these careers, men enrolled in these fields are about 13% of them. This context impacts negatively as employees of the transportation systems. The explained scenario for women still needs improvements. On one hand, women have less purchase power than men, meaning that changes if the prices of services will have a greater impact on women, especially the most vulnerable; on the other hand, women are less trained and professionalized in STEM fields thereby they are not employable for this dynamic and profitable market that will .

Gender and transport in Costa Rica

Urban mobility has a great impact on women. A recent mobility study in Costa Rica[5] shows that about 60% of the users of public transportation are women. Women are also less likely to have access to a private vehicle: 28% of them indicate that they are not able to use a private car, this figure is more than 3 times higher than what men indicate (about 8%). The same study concludes that in the country, about 70% of women and 75% of men spend more than a daily hour in public transportation systems, generating economic and

efficiency losses. Globally, women are more likely to make shorter but more frequent travels than men. Women's travel patterns are more complex and heterogeneous than men's. The strong persistence of the economy of care in low- and middle-income countries results in many women making trips that are shorter in both time and distance. Women are more willing to combine trips, make more household-serving trips, and travel with children and with more packages than men do.[6]

As mentioned, in the country less than a fifth (17%)[7] of the human resources employed in the transport sector are women, this number is slightly higher than the 15% recorded for LAC region. There is also a gender gap when accessing the right to drive, based on the COSEVI data (2020), in Costa Rica most of the drivers (people with a driver's license) are men (70%) and only about 30% are women. In the past years, men received a license almost twice as women. This gap is wider when analyzing by the type of license the drivers have. Only 10% of the authorized bus drivers are women and about 7% and 12% of airport taxis and regular taxis permits belong to women. Bus drivers, taxi drivers, mechanics, and other professions that are associated with the public transport sector earn about US\$20 per day, however, in general women only earn about US\$13. Only about 7% of the concessions of airport taxis belong to women and about 12% of regular taxis.

Another form of exclusion that inhibited women to access to transportation and other services that are facilitated by the use of buses, trains or taxis is violence against women and girls. Costa Rican women experienced constantly sexual harassment, sexual violence, and other forms of violence while they are using public transport services. The effects of this kind of behavior result in economic losses while women are not able to access their jobs or other services they need.

There is a lack of data and information regarding safety and the experience of violence women face in public transportation. The INAMU[8] shows that about 70% of women in the country face some form of violence in public spaces, this also includes situations that occur while using public transport services. The national authorities have advanced in the creation of new rules and protocols that seek to prevent and address this type of violence. The INAMU and other relevant governmental institutions are acting to implement a sexual harassment prevention protocol applicable to all public spaces, including the public transport. It is necessary to protect women's safety in an environment as important as public transport.

The implementation of the protocol responds to a generalized violence environment women experience. For instance, the GIZ (2018) conducted a survey to analyze issues related to safety in urban public transport. Women not only feel less safe while using the services (47% of women say they do not feel safe, compared to 42% of men), they are also more

often victims of crime (73% of women were robbery victims compared to 63% of men) and sexual harassment (a result consistent with information provided by INAMU, about 55% of women compared to 33% of men). Moreover, about 35% of women (compared to 23% of men) have been touched without their consent while using public transport.

These violent practices could be perpetuated within new forms of public transport, in particular because women considered transport as an important service, they use daily. In the survey carried out by the GCR (2019) reports women perceive transportation as one of the main priorities in their lives. Figure 7 shows perceptions on personal priorities on public services, besides main basic services (not included in the figure 7), women placed citizen security, health, and public transportation as their top choices. Despite men representing less of the total number of users, they placed transportation as number one priority.

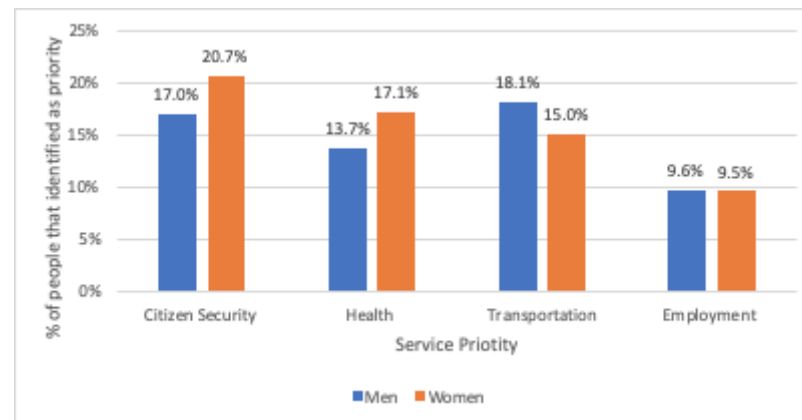


Figure 7. Perceptions on Personal Priorities of Public Services in Costa Rica by Sex

Source: Self-reported information based on data from GCR, 2019

The public transportation system in Costa Rica is perceived as a priority for men, this sector is also highly men-dominated, reflecting a necessity to design and implement actions to attract more women to the challenging and shifting sector as users and services providers.

However, despite this usage of women, they are often excluded from access to public transit, and have less accessibility and mobility due to concerns about their safety. Sometimes this is a result of the high rates of sexual harassment in massive transit systems, a phenomenon that is present all around the world (Osmond and Woodcock 2015; Simicevic, Milosavljevic, and Djoric 2016). The affordability of transportation is a challenge, as travel expenditures consume 30% or more of the income of the poor in the region, adding to already - high travel time costs (Kaltheier 2002; Vasconcellos 2001).

The Government and other non-governmental actors are implementing actions that contribute to the inclusion of gender mainstreaming and gender-specific actions in the national agenda. Based on a review from GIZ (2018) the following are some of the most relevant initiatives that contribute to close gender gaps or contributes to women’s empowerment within the sector:

Table 7. Relevant initiatives related to gender issues in the transport sector

Name of the Project	Name of the Institution that Leads the Process	Type of Institution	Gender-Specific Are or Gender Mainstreaming action
Women in Motion	NGOs, MOPT	Government	Leadership, Safety

Costa Rica's Decarbonization Plan	MINAE	Government	Gender Mainstreaming (Climate Change)
Participation within the Inter-Ministerial Climate Change Technical Committee	MINAE in collaboration with the INAMU	Government	Gender Mainstreaming (Climate Change)
Ecovillas	UN-Development Program	International Organization	Mainstreaming (Safe Public Spaces for Women)
Police Officers Addressing Sexual Harassment in Public Transport	INAMU in collaboration with the Public Security Ministry and other institutions.	Government	Safety for women.
Preventing and Addressing violence against women in bus routes	CANTRANS	Private Sector	Safety
Women in Engineering	UCR	Academia	Women's Economic Opportunities

The country still needs more data regarding women's participation in the sector such as information on how many women are in the decision making positions, what percentage women represent as service providers or users of public transport such as taxis, and what the perceptions and cases of violence and harassment are for women and men.

Based on the analysis of the available information, sector transport in Costa Rica still remains male-dominated at all spheres of the decision making and transport services provision. Initiatives that consider gender perspective are scattered and not institutionalized in the Costa Rican transport context, and projects such as the one proposed could trigger positive impacts on women.

Potential risks of the project to gender equality

Potential risks of the project by component include:

Table 8. Potential risks of the project to gender equality

<i>Component</i>	<i>Potential Risks on Gender Equality</i>
<i>Component 1</i>	<ul style="list-style-type: none"> - Women not being involved effectively in the project because men dominate the processes as decision makers and services providers. This occurs from inefficient communications and lack of activities that encourage women to be present and considered. This exclusion could be presented in the multisectoral group, bidding processes, etc. - Confusion and lack of knowledge of the benefits of the inclusion of gender mainstreaming actions deteriorate the project's cycle creating inefficiencies and time dilation.
<i>Component 2</i>	<ul style="list-style-type: none"> - Women are excluded from the pilots if proper communication and invitations are not sent and managed to encourage their participation. - In the expansion and scalability of the project, if gender data and information and the analysis does not consider the gender lens this might create gaps or exacerbate gaps and inequalities women experience. This situation might lead to a poor design of new projects.
<i>Component 3</i>	<ul style="list-style-type: none"> - Regulations and roadmaps do not include a gender perspective and consequently result in a widening of the gender gap. If the design and implementation does not consider the women's context, it could lead to an exclusion of women for participation in the sector. The development of roadmaps for electrification, if not applying a gender lens, result in a continuing unsafe environment for women and men while using electric public transport.
<i>Component 4</i>	N/A

Opportunities

The actions and implementation of the project might support the empowerment of women and might close gender gaps could be (and are expected) resulted from the project:

Table 9. Opportunities for the project to contribute to gender equality

<i>Component</i>	<i>Potential Opportunities on Gender Equality</i>
<i>Component 1</i>	<ul style="list-style-type: none"> - The effective involvement of women in decision making and other levels of the public transport sector could expand women’s opportunities and access to other services. This could also result in improvements to close gender gaps. It could also lead the development of more effective policies due to the incorporation of a broader range of views reflecting the composition of society.
<i>Component 2</i>	<ul style="list-style-type: none"> - Leveraging of women’s voice and agency across the taxi sector. - Exploration of application of electric vehicle technology as potential new form of income for women and they are included as drivers of the EVs and other services providers such as mechanics, charger’s maintenance techniques, etc. Women would be able to get new skills throughout training and capacity building in a non-traditional sector. - Gender-gaps could be addressed with information extracted from specific data and information resulted from the project. - Opportunity to demonstrate how safety using taxis can be increased through the training of the drivers of electric taxis.

<p><i>Component 3</i></p>	<ul style="list-style-type: none"> - The identification and the proposal of solutions to close and address gender gaps, including but not limited to women’s participation in the transport sector and accessing financial services for electric mobility. The process could inform the development of more effective public policies on transport and electric mobility, which also reduce gender inequalities. - Efforts to build the electric mobility market through the roadmaps could increase women’s income by facilitating access to a new market as providers and consumers
<p><i>Component 4</i></p>	<ul style="list-style-type: none"> - Women could expand the potential of this new activity to create new sources of income.

Gender Action Plan:

Effective sustainable urban mobility includes a gender lens in the design and implementation of the interventions, thus leading to an improvement of accessibility to the services for all members of society. The gender-perspective included in the interventions and carried out by gender action plan will (i) facilitate the inclusion of women in decision-making processes; (ii) improve their accessibility to services (not limited to transport, such as access to jobs, markets, etc.); (iii) and enhance their safety and comfort. In Costa Rica, improving the accessibility to better public transportation will help women to access markets, jobs, and other services that are essential to their own and their families.

The implementation of this action plan will be part of the coordination across different sectors and stakeholders representing the government, the private sector and civil society. The PMU and the MINAE in constant consultation with the INAMU will make sure the activities are included across all the stages of the project and will inform the Office of the First Lady [9] on the progress made.

The expected outcomes of the project will include gender mainstreaming throughout their outputs:

Outcome 1.1

Project output 1.1

Women will be included in output activities. The project will create and implement capacity building activities that include the gender perspective. This will build capacity of key actors to develop and implement actions related to electric mobility that also incorporate gender considerations, such as related to participation of women and the addressing of their needs. The capacity building activities will train participants to include gender analysis and proactive actions that close or address gender-specific gaps or issues related to transitioning to EVs. The activities in this output will create awareness, skills and capacities to systematically include women in the decision-making processes that could be replicated and expanded in the public transport sector. For the purposes of the reporting and evaluating, the project executors will record the starting participant's knowledge gaps on gender equality and, after the activities, the changes the participants experienced on how to address gender issues. With the average participation of women in the transport sector being 17%, this project will seek for at least 25% participation of women. Efforts to achieve this will include designing a gender actor plan which identifies strategies to increase participation.

Project output 1.2

The working group will include women's participation and will include a protocol that safeguards for the discussion and visibility of gender equality issues within national operations on electric mobility. With the average participation of women in the transport sector being 17%, this project will seek for at least 20% participation of women. Efforts to achieve this will include designing a gender actor plan which identifies strategies to increase participation.

Table 10. Gender Indicators for Outcome 1

<i>Indicator</i>	Baseline	Target	<i>Mean of Verification</i>
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Number of gender action plans incorporated into capacity building plans.	0	1	One document developed and included in the main report D.1.1.1
Number of people (disaggregated by sex) trained in gender equality issues.	0	60 M: 45, W:15	Lists of participants disaggregated by sex gathered after each training
Percentage of women included in the long-term, multi-stakeholder coordination mechanisms to support the transition towards electric mobility.	0	20%	Agreement for the conformation of multi-stakeholder coordination platform that also includes the number of women who are participating

These indicators will be tracked a gender consultant funded through the project budget.

Outcome 2

Project output 2.1

A gender assessment and proposals for incorporating gender mainstreaming into the project pilots will be undertaken. Also, women will participate in the demonstrations. Pilot stakeholders will be trained for enhancing the safety of women in using the pilots (as drivers, customers, or otherwise). The project will ensure that women participate as drivers and in the execution of other services needed for the success of the demonstrations. While the average participation of women in the transport sector is 17%, the percentage of women airport taxi drivers is currently less than 5%. This project will seek to train at least 10 women (= to 10%) for participation in the demonstrations. Efforts to achieve this will include designing a gender actor plan which identifies strategies to increase participation.

Table 11. Gender Indicators for Outcome 2

<i>Indicator</i>	<i>Baseline</i>	<i>Target</i>	<i>Mean of Verification</i>
Number of gender action plans developed and included in the final report of the pilot design	0	1	One document developed and included in the main report D.2.1.1
Number of women trained which drive the EVs in the demonstrations	0	10 (there are approximately 100 airport taxis)	Lists of participants disaggregated by sex gathered after each training

These indicators will be verified by the tracking of women that participated in the pilot project, the inclusion of women in the decision making and the final gender action plan validated and included in the final report of the pilot. These indicators will be tracked by a gender consultant.

Outcome 3

Project output 3.3

Gender sensitive long-term roadmaps for electrification of bus and taxi public transport services in ASMJ will be developed. This will include timeframes for implementation of roadmap actions, and will be presented to MOPT and MINAE for adoption.

Table 12. Gender Indicators for Outcome 3

<i>Indicator</i>	<i>Baseline</i>	<i>Target</i>	<i>Mean of Verification</i>
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Gender-sensitive long-term roadmaps for electrification of bus and taxi public transport services in ASMJ, including timeframes for implementation of roadmap actions.	0	1	One document developed and included as a deliverable.
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Outcome 4

Project output. 4.1

The management of batteries and their implications may impact all sectors of the population. A gender perspective will be included in the training delivery for ensuring the participation of women and to create gender-sensitive solutions. With the average participation of women in the transport sector being 17%, this project will seek for at least 20% participation of women. Efforts to achieve this will include building on gender actor plans designed through the project which identify strategies to increase participation.

Table 13. Gender Indicators for Outcome 4

<i>Indicator</i>	<i>Baseline</i>	<i>Target</i>	<i>Mean of Verification</i>
Percentage of women that participated in the training.	0	20%	This indicator will be verified with the information gathered in the report of the workshops

These indicators will be verified by the tracking of women that participated in the workshops, the inclusion of gender perspective in the training.

[1] WEF (2019). Global Gender Gap Report 2020.

[2] ECLAC (2019). Gender Indicators.

[3] ECLAC (2019)

[4] INEC (2019). Labor Statistics

[5] GIZ (2018) Estudio para conocer la percepción sobre el transporte público en San José, Costa Rica

[6] IDB (2019)

[7] IDB (2016)

[8] INAMU and Public Citizen Security (2018). Police Intervention Protocol to Address Sexual Harassment in Public Spaces.

[9] The Office of the First Lady is not responsible for designing or implementing the gender equality agenda in the country.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on private sector engagement in the project, if any

The private sector will be a key stakeholder in the implementation of this project due to the nature of its activities and the governance in Costa Rica. As most of the public transport in Costa Rica (buses and taxis) is currently licensed to private operators, any activity or plan to electrify the sector must be co-created and validated with them. There is a diversity of other private sector stakeholders that are also involved in the governance of the sector and in the road to electrifying transport, in particular, electric utilities, financial institutions, public and private banks and insurance companies (see section above on stakeholders).

Concretely, the private sector will be involved in the project in the following ways:

- The multi-stakeholder working group proposed in Output 1.2 aims precisely to provide a continuous channel for the private sector to participate and communicate its needs alongside public sector decision makers, international cooperation and civil society.
- For Output 2.1, the private sector will be a key partner in supplying electric vehicles for the demonstrations, through vehicle distributors. Furthermore, as the demonstration project is carried out with the taxi operators as the main partners and beneficiaries, these actors will be the main private stakeholders in this stage of the project. The design of the implementation plan for the demonstration project will include consultation and validation workshops with the operators, jointly with other stakeholders like banks and vehicle distributors, to design a system that will successfully balance out different needs and insights.
- Furthermore, the private sector will play a key role in supporting the improvement of financial products and services to support electric mobility (output 3.1), as such banks and other private financial institutions may be the final providers of such financial services.

Furthermore, the private sector will be a project beneficiary: the project's activities are expected to increase demand for EV in Costa Rica, to the benefit of car-dealers and importers interested in trading and providing maintenance services to EV.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Table 14. Risks and risk mitigation strategies for the project

Risk description	Main categories	Risk level probability	Risk level impact	Risk Mitigation Strategy and Safeguards	By Whom / When?
Electric vehicles are not widely available in Costa Rica for purchasing as taxis	Economic	Low	High	<ul style="list-style-type: none"> · Hold meetings with car distributors and importers periodically from the beginning of the project · Implement activities which incentivize the introduction of electric vehicles in the country at an early stage of the project · Hold periodic meetings with the Office of the First Lady, to inform of the situation and seek political support to incentivize private sector actors where necessary. 	Executing agency, high-level political group, through-out the project.
Rental companies do not participate in the project.	Economic	Low	High	<ul style="list-style-type: none"> · A letter of interest to supply electric vehicles for the pilot has been provided by a rental company that has already offered electric vehicles in the past (see annex O). · Maintain constant contact with potential rental companies from the beginning of the project, to inform them of progress and maintain interest · Organize meetings between government officials and rental companies to build high-level political support with the companies. 	Executing agency and high-level political group from the beginning of the project.

<p>The executing agency (CRUSA), as a non-governmental agency, is not able to achieve effective participation and support of governmental stakeholders</p>	<p>Political</p>	<p>Low</p>	<p>Low</p>	<ul style="list-style-type: none"> · The proposed executing agency has a history of working with the government and international donors on electric mobility in Costa Rica. · Hold monthly meetings between the executing agency and the project director (pertaining to MINAE) · Ensure executing agency participates in the multi-stakeholder working group on electric mobility 	<p>Executing agency, MINAE (Project Director), and multi-stakeholder working group. From the beginning of the project.</p>
<p>Low commitment from the public sector stakeholders affect the execution of project activities</p>	<p>Political</p>	<p>Moderate</p>	<p>Moderate</p>	<ul style="list-style-type: none"> ● Leverage support from electric mobility champions, such as the Office of the First Lady, to mobilize other public sector offices. ● Engage with other non-governmental stakeholders that can champion e-mobility and generate support in implementation, while at the same time generating demand for continued action and accountability from the government (e.g. through the multi-stakeholder working group in component 1). ● Create public agreements during the early stages to support the project. 	<p>Executing agency, Office of the First Lady, multi-stakeholder working group.</p> <p>Through-out the project, but particularly in the initial stages.</p>

Lack of interest or participation and resistance from market players and the private sector effects execution of project activities.	Economic	Low	Moderate	<ul style="list-style-type: none"> • Leverage support from the Office of the First Lady, to demonstrate commitment from the public sector and its market potential. • Engage the private sector from an early stage in the multi-stakeholder working group, to build ownership, buy-in and interest. • Consult broadly in the development of regulations and updating of laws, to ensure that the views of affected market players are incorporated (such as internal combustion engine vehicle distributors). 	<p>Executing agency, Office of the First Lady, multi-stakeholder working group</p> <p>Through-out the project, but particularly in the initial stages.</p>
Electric vehicles in the pilot aren't able to serve certain areas, generating public backlash	Social	Moderate	Moderate	<ul style="list-style-type: none"> • Provide adequate information for potential taxi users and drivers on the range of electric vehicles and the zones where these specific taxis can provide services to, as well as locations of electric charging stations in the national network. • Train airport taxi operators on adequate operation of vehicles and range, so that they can explain this to potential clients, and avoid trips beyond the vehicle range. 	<p>Executing agency, airport taxi operators</p> <p>Before and during the pilot.</p>
The bus electrification roadmap is not ready in time to guide the September 2021 concessions, due to a lack of access to data or political engagement.	Political	Moderate	High	<ul style="list-style-type: none"> • Begin procurement process for this consultancy as soon as the project starts and give it highest priority. • Through the existing governance groups and then the multi-stakeholder working group, communicate clear progress on the development of the roadmap, drawing on the support of the group to address data access and engagement issues where needed. 	<p>Executing agency, high-level political group, Costa Rican Committee for Electrification of Public Transport (CETP), and multi-stakeholder governance group.</p> <p>Immediately from the beginning of the project.</p>

In-ineffective disposal of electric vehicle batteries leads to soil or water contamination.	Environmental	Low	Moderate	<ul style="list-style-type: none"> Effective disposal of electric vehicle batteries to be addressed directly through component 4. 	Executing agency (throughout project)
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Climate risk assessment, climate risks and risk mitigation

(i) How will the project’s objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?

Studies rate Costa Rica as a country which faces moderate potential impacts due to climate change. Germanwatch rates Costa Rica as having the 96th highest climate risk index,^[1] while the Notre Dame Global Adaptation Initiative ranks it the 52nd most vulnerable country in the world to climate change impacts, and 68th in terms of climate readiness.^[2]

According to the World Bank, Costa Rica’s key vulnerabilities to climate change are in the following areas:^[3]

- “In recent years (2001-2008), floods and storms have had the highest human and economic impact in Costa Rica – 106,000 people have been affected by floods in 8 flooding events, with the cost of damages reaching US\$106 million.
- Evidence of acceleration in sea level rise (up to 2-3mm/yr.) over the past decade suggests an increase in the vulnerability of low-lying coasts, which are already subjected to increasing storm surges.
- Costa Rica is vulnerable to tropical and subtropical cyclones and their associated storm surges on its Caribbean coast.
- In 2005, landslides caused major damage to agricultural fields and areas covered with primary forest.”^[4]

In this context and in that of the project, the primary risks to the project are due to La Niña, which would cause extremely high rainfall, and due to El Niño, which would cause droughts. Both have a moderate potential to affect the project's objectives and outputs. Heavy rainfalls could cause flooding and landslides, damaging electric vehicle charging infrastructure, power grid infrastructure and general road infrastructure. At the same time, such rainfalls could potentially result in a steady supply of water for the country's multiple hydropower plants, ensuring a steady and potentially reduced price of electricity. Droughts could potentially have the opposite effect, reducing supply for the hydropower plants or increasing competition for water resources (for instance, for agriculture and drinking water). The overall assessment is that Costa Rica would be more susceptible to increase rainfall and flooding than droughts.[5]

These potential impacts have been addressed through project design. The project pilot was chosen to occur at the Juan Santamaria International Airport, with airport taxis primarily travelling between the airport and the Metropolitan Area of San Jose. As a location of national security, the airport counts with a constant and secure supply of electricity. Similarly, charging infrastructure will be supplied by electricity from the airport and through that of the metropolitan area, which, as the country's largest and densest population, as the most stable and multiple sourced electricity supply in the country. As infrastructure of national security, the airport is also situated in an area of geological stability, not affected by floods or landslides. As the pilot will be situated at the airport, it will consequently have reduced probability of being affected by such extreme events. Similarly, key road connections from the airport to the city centre, of most demand by airport taxi clients, are again of national security and consequently have less propensity to impact from such extreme events. Notwithstanding this reduced probability, pilot drivers will be trained as part of the vehicle safety protocol (output 2.1) on responsible and safe usage of the electric pilots during such events. In the event of severe drought, which is considered of low probability for Costa Rica, there is the possibility of increases in the price of electricity, including for vehicle charging. Such cost variations will be factored into total cost of ownership modelling under output 3.1, ensuring that local financial institutions take into account conservative (high) electricity prices when strengthening financial instruments for the uptake of electric taxis.

(ii) Has the sensitivity to climate change, and its impacts, been assessed?

Yes, refer to the answer to the question above.

(iii) Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?

The overall focus of the project is on building resilience by reducing the country's dependence on fossil fuel imports through the uptake of electric vehicles. Such imports are susceptible to severe price fluctuations due to global shocks, including those caused by climate change. Thus, by reducing such imports, the country is directly increasing its overall resilience.

(iv) What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?

The operators of the electric taxi pilots will need to have information on severe weather events and any changes in vehicle operation and routes during this time. Such information will be provided by the executing agency through its participating with government actors in the multi-stakeholder working group (output 1.2). Similarly, such operators will require technical capacity to ensure effective operation, which will be provided through training on safety for vehicle pilot operation (output 2.1).

COVID analysis and risk mitigation

Risk analysis

The COVID-19 pandemic has the potential to affect the project in the following ways:

- Reduced airport operations. Due to the pandemic, in 2020 air travel to Costa Rica has been significantly reduced. The Juan Santamaría international airport, the country's main airport, has limited flights and this has affected the demand for taxis from the international airport. The project proposes to pilot electric taxis which service the international airport.
- Movement restrictions. Costa Rica currently does not have a lock-down, but as of October 2020 has limited nationwide movement through restrictions related to license plate numbers. This affects vehicle movement and circulation of peoples to attend meetings and events.
- Work arrangements. While not a national law or order, currently many offices are closed and staff are working from home.
- Government priorities. With national focus on the addressing the pandemic, a reduced focus is held by the Legislative Assembly on considering non-pandemic related measures.

Mitigation measures:

- Reduced airport operations. The project pilot is proposed to be undertaken in the project's second year of operation, which is estimated to be in 2022 (provided the project begins in 2021). While it is estimated that by 2022 airport operations will be returning to close to full operation, estimates of taxi usage have been reduced to take into account possible reduced airport usage at this time. In the event that further time is required to allow for increased airport taxi demand, the pilots will be rescheduled to take place in the project's third year.
- Movement restrictions. Taxis are exempt from the movement restrictions, so the pilot will not be affected. In the event that the restrictions would affect participation in training workshops and meetings, these events will be rescheduled or held online.
- Work arrangements. In the event that that work arrangements would affect participation in training workshops and meetings, these events will be rescheduled or held online.
- Government priorities. Project activities requiring governmental consideration of laws and decrees is planned primarily for the project's second and third years, when it is estimated that action on the pandemic will be in place and less of a requirement for legislative authorities. In the event that the pandemic continues to requiring the attention of decision-makers, such project activities will be rescheduled for the project's third year.

Opportunity analysis

With initial studies indicating that the effects of COVID-19 are intensified by poor air quality, the pandemic could lead to an increased focus on this situation in Costa Rica. Efforts to improve the air quality could be embraced by civil society and health authorities, leading to increased interest and support by such actors for electric mobility initiatives. As the GEF project directly aims to improve air quality through a reduction in polluting internal combustion engine vehicles, there could be increased interest in scaling up the project's outcomes.

[1] https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_14.pdf

[2] <https://gain.nd.edu/our-work/country-index/rankings/>

[3] <https://climateknowledgeportal.worldbank.org/country/costa-rica/vulnerability>.

[4] Ibid.

[5] <https://climateknowledgeportal.worldbank.org/country/costa-rica/impacts-water>.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

Institutional arrangements:

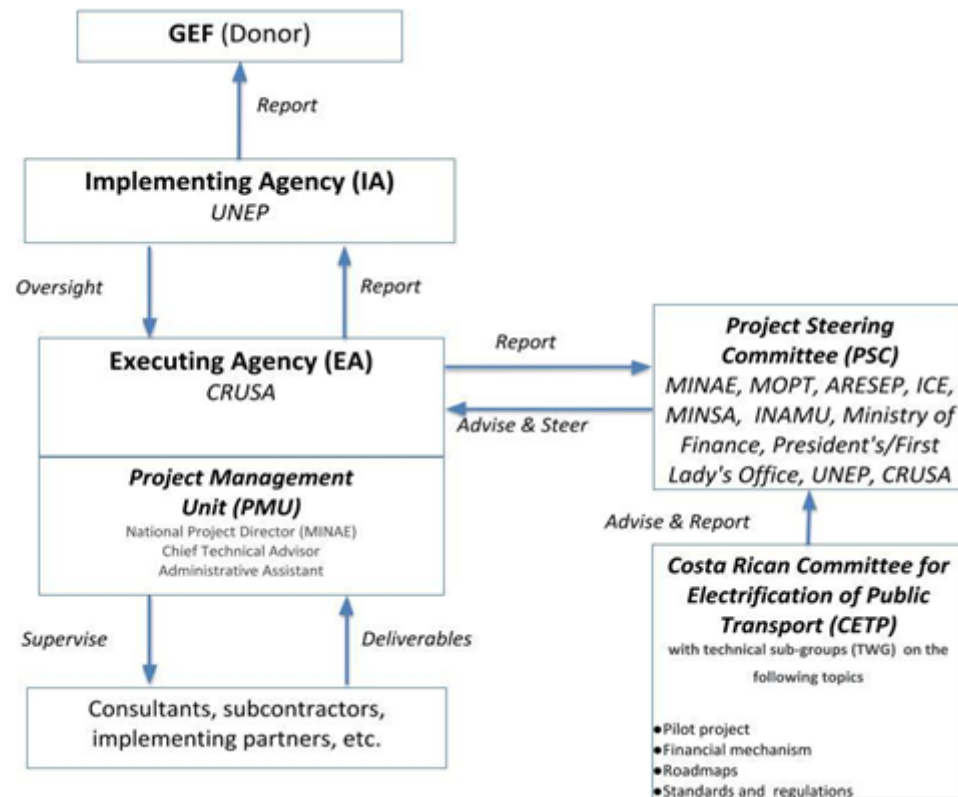


Figure 8. Organogram depicting the governance and coordination structure for the project

UNEP is the proposed GEF Implementing Agency, based on its significant experience in support electric mobility interventions globally and in the region. Globally, it is the implementing agency of the GEF Global Programme on Electric Mobility. It also leads work on, inter alia, the *Partnership for clean fuels and vehicles* and the *Global fuel economy initiative*. In the region, UNEP through its Regional Office for Latin America and the Caribbean (ROLAC) supports coherence and coordination on electric mobility through its platform **MOVE**. Furthermore, it support the regional political agenda on electric mobility through its leadership to organize the annual Forum of Environmental Ministers. Amongst other activities, UNEP ROLAC is leading the implementation of GCF readiness proposal *Advancing a regional approach to e-mobility in Latin America* in Argentina, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay and Uruguay.

The Ministry of Environment and Energy nominated the Costa Rican USA Foundation for Cooperation (CRUSA) as the proposed project Executing Agency. CRUSA will act under the guidance of the Ministry of Environment and Energy, which will nominate a National Project Director. CRUSA has a wealth of experience in support low-carbon mobility initiatives in Costa Rica. It is funding, together with GIZ, the project *Leapfrogging to e-buses in Costa Rica* and is currently the Executing Agency for the project *The road to decarbonization: Promoting the hydrogen economy in Costa Rica*, with funds from the Inter-American Development Bank. The CRUSA Foundation has a 23-year trajectory with financing and execution of programs and projects that include actions designed, implemented and evaluated in Costa Rica. CRUSA participates in a sub-group of CETP consisting of international cooperation agencies.

Refer to Annex K for further details on the roles and responsibilities of the Implementing and Executing Agencies. The main project bodies are the following (refer to Annex K for more details):

A **Project Steering Committee (PSC)** will provide overall guidance and oversee the progress and performance of the project as well as to enhance and optimize the coordination and contribution with various project partners. The PSC will designate a chair and will convene at least once per year. It is envisaged that the existing political group led by the First Lady's Office (see section 2) will undertake this function. It will include the heads of the following public institutions: MINAE, MOPT, ARESEP, Grupo ICE, the Ministry of Health (MINSA) and the National Women's Institute (INAMU) and the Ministry of Finance. It will also include CRUSA as the Executing Agency and UNEP as the Implementing Agency. As there will be a change of government during the project operation, it will be ensured that the PSC continues with the same member institutions until project conclusion. The PSC will be hosted by MINAE as the national authority in electric mobility, but all members of the PSC will elect a chair for the Committee. Representatives of the GEF-7 sustainable cities project in Costa Rica will be invited to participate in meetings of the PSC as observers.

Apart from the Steering Committee, the Costa Rican Committee for Electrification of Public Transport (CETP) will serve as a technical consultation group for the project. As described in section 2, this group consists of technical personnel from each of the institutions involved in the Steering Committee. Within the CETP, ad-hoc **technical working groups** will be formed to facilitate the implementation of the project components. Representatives of the GEF-7 sustainable cities project in Costa Rica will be invited to participate in these groups. These will be ad-hoc sub-groups created through the CETP based on the needs of the project. Topics that the group may work on include:

- Pilot program design, deployment, monitoring and evaluation;
- Strengthening of financial products and services;
- Roadmap for bus electrification;
- Standards for regulation of importation of electric and internal combustion vehicles;
- Gender mainstreaming and inclusion/participation of women.

A **Project Management Unit (PMU)** will be established with the participation of the Costa Rican USA Foundation for Cooperation (CRUSA) and MINAE to manage day-to-day operation of the project. The PMU will be headed by the National Project Director (NPD), pertaining to MINAE, and will include the Chief Technical Advisor (CTA) and an Administrative Assistant, who will both be located at CRUSA.

Coordination with other initiatives:

As described in the baseline scenario, there are currently two main working groups, one political and one technical, which meet monthly to discuss the electrification of public transportation, among other areas of sustainable mobility. These two groups will currently ensure coordination of all activities on electric mobility in the country and will ensure coordination between the GEF-7 project and other on-going initiatives on electric mobility. In addition, the technology group, the Costa Rican Committee for Electrification of Public Transport (CETP), formerly known as IETP-Bus, will be strengthened through the project to become a multi-stakeholder working group incorporating private and civil society actors. This will ensure a broader coordination beyond government led activities.

The project will coordinate with the Global Programme on Electric Mobility by engaging in the LAC regional platform's activities. In particular, country representatives will participate in the regional platform-led community of practice. This will include participating in LAC platform task teams on LDVs, 2&3 wheelers, buses, batteries and charging infrastructure, participating in meetings of the LAC platform and participating in marketplace meetings on technology and finance. The country will coordinate with other child projects in the region, through the help desk and the community of practice, in particular the task teams and platform meetings. Engagement through the platform will ensure effective two-way coordination, with country representatives sharing project updates, raising challenges and sharing good practices with platform representatives. Platform representatives will share good global practices, identify solutions to challenges raised, and ensure regional coordination and alignment.

The aforementioned two working groups will also ensure coordination and the building of synergies between the GCF regional readiness programme on electric mobility. As work on the GCF programme advances in 2021 (it began in mid-2020), these two groups will ensure alignment and complementarity. In particular, as the GEF-7 project starts in 2021, effort will be made to ensure the development of a pipeline of GCF project proposals that builds upon the GEF project, for example, through the scaling up of the electric taxi fleet based on GEF-7 project experiences.

Finally, coordination will be undertaken to ensure complementarities, the building of synergies and the avoidance of duplications with the GEF-7 sustainable cities project: *Transitioning to an urban green economy and delivering global environmental benefits*. As both projects are led by the Ministry of Environment and Energy (MINAE), the ministry will play the lead role in ensuring coordination between the two projects. The project implementing agencies, UNEP (for the GEF-7 e-mobility project) and UNDP (for the GEF-7 sustainable cities project) will also ensure effective coordination and coherence between the two projects. Furthermore, the technical teams will be invited to participate as observers in the project steering committees of each project and to participate actively in technical working groups. In particular, both MINAE and the implementing agencies will ensure coordination between the two project technical teams in the elaboration of outputs, especially 3.1, 3.2 and 3.3. For instance, under outputs 3.1 and 3.2, effort will be made to ensure that reforms under these outputs are aligned with and guided by the roadmap to the transition to a green economy developed under the GEF-7 cities project. Effort will also be made to align output 3.3, which will develop long-term roadmaps for electrification of bus and taxi public transport services in the Metropolitan Area of San Jose (ASMJ), and work under the GEF-7 sustainable cities project to develop sustainable mobility (transport) plans for municipalities of the Greater Metropolitan Area of Costa Rica (GAM). The sustainable mobility plans have a broader technical focus and a more limited geographical scope (municipality) than the electrification roadmaps, which have a more limited technical focus but a broader geographical scope (ASMJ). The technical teams will coordinate to ensure that the plans and roadmaps are aligned and complementary, drawing on inputs of each.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

As mentioned in Section 2 (Baseline Scenario) and Section 3 (Gender Equality and Women's Empowerment), this project is consistent with Costa Rica's national and international commitments to climate goals and policies, including the:

- National Communications (NC) under UNFCCC, since electric mobility is a key part of Costa Rica's climate goals: transportation accounts for the largest emitting sector at the national level and the country has identified electric mobility as one of the mitigation measures.
- Biennial Update Report (BUR) under UNFCCC since electric mobility is a key part of Costa Rica's climate goals. Has projected that emissions could increase considerably under the BAU scenario and decreasing more than half their levels with mitigation measures such as electric mobility.
- Nationally Determined Contributions (NDC), which aims to reduce GHG emissions, as mentioned in the baseline scenario.
- Technology Needs Assessment (TNA), which prioritized the transport sector in its mitigation report and associated technology action plans.
- National Policy for Effective Equality between Men and Women (PIEG): national policy that streamlines the gender perspective throughout all public policies.
- National Decarbonization Plan, since a public transport-based system and electric mobility are key components of Costa Rica's decarbonization goals.
- National Energy Plan: aims to reduce the country's dependence on fossil fuels through the diversification of its consumption (electric mobility being one of those energy sources).
- National Electric Transport Plan: the main policy regarding electric mobility with clear actions to transition towards zero-emission transportation.
- National Commitment for GHG Reductions in the transportation sector (between MINAE and MOPT): sets actions and commitments to reduce greenhouse gas emissions from the largest emitting sector nationally.
- UNDAF: Costa Rica 2018-2022. STRATEGIC PRIORITY AREA 1: Strengthened the capacities of public institutions, private organizations and civil society to facilitate and forge national, innovative, transformative and dialogue-based pacts and agreements, in order to accelerate the fulfillment of the SDGs for a development sustainable with equality.

The transport sector is the biggest contributor to BAU emissions in Costa Rica, and therefore its NDC, Decarbonization Plan, Energy Plan, Electric Transport Plan and Sectoral Agreements are all aligned towards decreasing emissions, with electric transport as one of the key action paths to achieve this goal. The main government policies and commitments for this sector are also mentioned in section 2.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

The project is part of the global GEF Programme on Electric Vehicles. It will actively participate in the global programme's global and regional activities through its component 1, for example by participating and contributing to the knowledge exchange in the regional knowledge and investment platforms and the relevant global working groups, as well as by providing insights and knowledge.

Table 15 describes the type of knowledge generated in different project outputs and how it will be managed. It is important to mention that an existing online public repository with information on different e-mobility initiatives and resources will be strengthened as part of this project. This online repository will collect all the knowledge sources generated through this project. This includes the training materials for public officials and those for taxi operators, data and reports with the lessons learned from the demonstration pilots, the draft regulations generated by the project, and the roadmaps for long term electrification. The objective of this repository is to ensure transparency and consistency with Costa Rica's open government policies, while ensuring also that the knowledge generated by the project is not confined to those benefiting directly by these activities. Through the platform, experiences, good practices and lessons learned will be made readily available for any individual seeking to better inform themselves on electric mobility, how it is advancing in Costa Rica, and what are the lessons being learned in this sector through the different projects and activities being undertaken in the country. With the support of the consultancy on gender (see project budget and terms of reference), all knowledge products will be developed in a gender sensitive way, incorporating gender considerations.

Table 15. Knowledge management for each project component

Component	Output	Knowledge developed/shared and how it will be managed	Budget
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Component 1	Output 1.1	<ul style="list-style-type: none"> ● Report on capacity-building efforts undertaken, lessons learned and recommendations to facilitate sustainable capacity-building efforts beyond the project's conclusion 	<p>Report = \$8,000</p> <p>Online platform = \$15,000</p>
	Output 1.2	<ul style="list-style-type: none"> ● Documentation of meeting minutes, decisions and other documents of the multi-stakeholder. ● All information and documentation from the multi-stakeholder working group, all project activities and different e-mobility initiatives and resources will be published on a strengthened public online platform created as part of this output. 	Online platform (as budgeted above)
Component 2	Output 2.1	<ul style="list-style-type: none"> ● Documentation of demonstration design and results made available in the online platform. 	Online platform (as budgeted above)
	Output 2.2	<ul style="list-style-type: none"> ● Report on the results of the data management pilot, with recommendations for the development of a data acquisition and management system. ● Data management pilot project for the pilot electric and conventional airport taxis ● Pilot data made available in the online platform. 	<p>Report = \$7,500</p> <p>Data management pilot project = \$33,000</p> <p>Online platform (as budgeted above)</p>

Component 3	Output 3.1	<p>Report presented to the National Bank Association (ABC), car distributors and leasing companies:</p> <ul style="list-style-type: none"> ○ Analysing national experiences and global good practices on the financing of electric taxis; ○ Analysing taxi industry total cost of ownership and leasing company options for informing financial products; ○ Providing recommendations for enhancing existing financial products and best practices for Costa Rican local financial institutions, car distributors and leasing companies.. 	Report = \$10,000
	Output 3.2	<p>Report reviewing global good practices on standards for vehicle energy efficiency, developed including by building upon previous GFEI efforts and drawing on the Global Programme's support, and recommendations for updating decree 25584.</p>	Report = \$10,000
	Output 3.3	<p>Roadmaps made available on the online platform.</p>	Online platform (as budgeted above)
Component 4	Output 4.1	<p>Report of regional and global good practices for standards, norms and policy frameworks for regulating the waste management of electric vehicle batteries, and recommendations for such management in the Costa Rican context.</p>	Report = \$7,500
Total			US\$91,000

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Monitoring and Evaluation (M&E) activities and related costs are presented in the cost M & E Plan (Annex J) and are fully integrated in the overall project budget.

The project will comply with UNEP standard monitoring, reporting and evaluation procedures. Reporting requirements and templates are an integral part of the legal instrument to be signed by the Executing Agency and the Implementing Agency

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Annex A includes SMART indicators for each expected outcome as well as end-of-project targets. These indicators along with the key deliverables and benchmarks included in Annex L will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification to track the indicators are summarized in Annex A.

The M&E plan will be reviewed and revised as necessary during the project Inception Workshop (IW) to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. General project monitoring is the responsibility of the Project Management Unit (PMU) but other project partners could have responsibilities in collecting specific information to track the indicators. It is the responsibility of the Chief Technical Advisor to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The project Steering Committee (PSC) will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E Plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility of the UNEP Task Manager. The UNEP Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Project supervision will take an adaptive management approach. The UNEP Task Manager will develop a project Supervision Plan at the inception of the project, which will be communicated to the Project Management Unit and the project partners during the Inception Workshop. The emphasis of the Task Manager's supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring.

Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by the PMU, the project partners and UNEP. Risk assessment and rating is an integral part of the PIR. The PIR will be completed by the Chief Technical Advisor and ratings will be provided by UNEP's Task Manager. The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. UNEP's Task Manager will have the responsibility of verifying the PIR and submitting it to the GEF. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

Since this is a Medium-Size Project (MSP) of less than 3 years of duration, no Mid-Term Evaluation (MTE) will be undertaken

In-line with the with UNEP Evaluation Policy and the GEF Evaluation requirements, the project will be subject to an independent Terminal Evaluation. The Evaluation Office will be responsible for the Terminal Evaluation (TE) and will liaise with the Chief Technical Advisor throughout the process.

The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation will be charged against the project evaluation budget. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office to feed into the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Chief Technical Advisor is required within one month of its delivery to the

project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalization of the Recommendations Implementation Plan.

The GEF Core Indicator Worksheet is attached as Annex F. It will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above, the TE will verify the information of the tracking tool.

The direct costs of reviews and evaluations will be charged against the project evaluation budget. A summary of M&E activities envisaged is provided in Annex J and below. The GEF contribution for this project's M&E activities is US\$ 40,000.

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
Tracking of indicators	Periodic tracking (minimum every six months) of project indicators as per annex A of this document. Undertaking studies, conducting surveys, collecting baseline and project data as required to measure progress on the project indicators.	Execution: CTA Support: PMU	Six-monthly, as part of the PIR	GEF: as part of CTA budget

<p>Inception Workshop (IW)</p>	<p>Report prepared following the IW; which includes:</p> <ul style="list-style-type: none"> - A detailed work-plan and budget for the first year of project implementation, - An overview of the work-plan for subsequent years, divided per component, output and activities. - A detailed description of the roles and responsibilities of all project partners - A detailed description of the PMU and PSC, including an organization chart - Updated Procurement Plan and a M&E Plan, Gender Action Plan - Minutes of the Inception Workshop 	<p>Execution: PM</p> <p>Support: The President's Office</p>	<p>1 report to be prepared following the IW, to be shared with participants 4 weeks after the IW (latest)</p>	<p>GEF: as part of CTA budget</p>
<p>Steering Committee Meeting</p>	<p>Prepare minutes for every Steering Committee Meeting.</p>	<p>Execution: CTA</p> <p>Support: PMU</p>	<p>At least 1 per year</p> <p>Minutes to be submitted 1 week following each PSC meeting</p>	<p>GEF: as part of CTA budget</p>

<p>Half-yearly progress report</p>	<p>Part of UNEP requirements for project monitoring.</p> <ul style="list-style-type: none"> - Narrative of the activities undertaken during the considered semester - Analyzes project implementation progress over the reporting period; - Describes constraints experienced in the progress towards results and the reasons. 	<p>Execution: PMU</p> <p>Support: CTA</p>	<p>Two (2) half-yearly progress reports for any given year, submitted by July 31 and January 31 (latest)</p>	<p>GEF: as part of PMU budget</p>
<p>Quarterly expenditure reports</p>	<p>Detailed expenditure reports (in excel) broken down per project component and budget line, with explanations and justification of any change</p>	<p>Execution: PM and Financial Officer</p> <p>Support: PMU</p>	<p>Four (4) quarterly expenditure reports for any given year, submitted by January 31, April 30, July 31 and October 31 (latest)</p>	<p>GEF: as part of CTA budget</p>

PIR	<p>Analyzes project performance over the reporting period. Describes constraints experienced in the progress towards results and the reasons. Draws lessons and makes clear recommendations for future orientation in addressing the key problems in the lack of progress.</p> <p>The PIRs shall be documented with the evidence of the achievement of end-of-project targets (as appendices).</p>	<p>Execution: CTA and TM</p> <p>Support: PMU</p>	1 report to be prepared on an annual basis, to be submitted by 15 July latest	GEF: as part of CTA budget
Annual Inventory of Non-expendable equipment	Report with the complete and accurate records of non-expendable equipment purchased with GEF project funds	<p>Execution: CTA</p> <p>Support: PMU</p>	1 report per year as at 31 December, to be submitted by 31 January latest	GEF: as part of CTA budget
Co-financing Report	Report on co-financing (cash and/or in-kind) fulfilled contributions from all project partners that provided co-finance letters.	<p>Execution: PM</p> <p>Support: co-finance partners</p>	1 annual report from each co-finance partner, and 1 consolidated report, to be submitted by 31 July latest	GEF: as part of CTA budget.

Final Report	<p>The project team will draft and submit a Project Final Report, with other docs (such as the evidence to document the achievement of end-of-project targets).</p> <p>Comprehensive report summarizing all outputs, achievements, lessons learned, objectives met or not achieved structures and systems implemented, etc. Lays out recommendations for any further steps to be taken to ensure the sustainability and replication of project outcomes.</p>	<p>Execution: CTA</p> <p>Support: PMU</p>	<p>Final report to be submitted no later than three (3) months after the technical completion date</p>	<p>GEF: as part of CTA budget</p>
Terminal Evaluation (TE)	<p>Looks at the impacts and sustainability of the results, including the contribution to capacity development and the achievement of global environmental goals.</p>	<p>Execution: Independent Evaluator / TM</p> <p>Support: PM (or CTA), PMU</p>	<p>Can be initiated within six (6) months prior to the project's technical completion date</p>	<p>GEF: USD 30,000</p>
TOTAL M&E COST			GEF: US\$40,000	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The GEF-7 project will have economic, social and environmental benefits.

Economic Benefits: by effecting a transition to electric mobility, in the medium- to long-term the project will support Costa Rica in reducing its fuel imports, which currently represent almost 3% of its GDP, thus liberating resources to be spent in other priority areas and improving its energy security. In the long-term such savings to the national budget

would allow redistribution to other areas of national development. The use of locally produced electricity will further enhance the economic benefits by allowing revenues generated by its consumption to be reinvested in the country.

Social Benefits: This project fosters the implementation of solutions that close gender gaps in the mobility sector by incorporating more women in training, planning and decision-making processes and by gathering new data and information to incorporate gender into policies and electric mobility planning. Such efforts will support the empowerment of women in the transport sector, leading to increased participation, governance and economic opportunities for women. Furthermore, the project will support a much needed modernization of the public transportation services through improved governance, sound technical evidence and proper environmental instruments to guarantee that the introduction of electric vehicles helps the country achieve its goals established in its national policies. In the long term, through the development of the long-term roadmaps it will support the development of improved public transport services. By improving public transport services, in the long-term the project will lead to an improvement in the quality of life of the low- and middle-classes and women, as the primary users of public transport.

Environmental Benefits: Environmentally, electric vehicles promoted through the project will reduce air pollution, leading to environmental and health benefits for the local population, increasingly important as it has been suggested that such air pollution may also contribute to the severity of the COVID-19 pandemic. As mentioned in other sections, it will also reduce greenhouse gas emissions, leading to global environmental benefits. The GEF-7 project also will provide the country with sound waste management tools to properly reuse, treat and dispose of electric battery waste, leading to reduced potential soil contamination.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF

CEO Endorsement/Approval

MTR

TE

Medium/Moderate

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

An assessment of the environmental, social and economic impact of the project was undertaken by an independent team with the United Nations Environment Programme (UNEP). In its analysis, the team interviewed the project consultants and UNEP Task Manager on the project and reviewed the project against a series of environmental, social and economic indicators (contained in annex P of the CEO endorsement document). The assessment determined that this is a moderate risk project, based on UNEP's Environment, Social and Economic Sustainability (ESES) guidelines. In providing this rating, the UNEP Safeguard Advisor noted that:

- Costa Rica although EVs are likely to improve impact on environment from pollution and GHG, further efficiency--from types of cars, battery sizes, energy source and so on-- can be explored when drafting government's energy and transportation policies. These will be considered as part of the project's output 3.2.
- Financing, subsidies and other incentives should be explored for the policy advice in order to avoid or minimize potential financial burden to local public transportation users, taxi drivers and economically deprived groups. These will be considered as part of outputs 3.1, 3.2, 3.3 and 4.1.
- Policy on battery reuse and recycle should be fully explored for sound circular economy. This will be considered as part of output 4.1.
- Data collection should be on the potential suppliers, demands (market growth potential for the near future), their impacts to diverse socioeconomic groups as well as the GHG reduction, energy saving and air pollution. This data collection will occur through-out the project, as noted in the section on knowledge management of the CEO document.
- Transportation routines, type of users, affordable fees, frequencies, safety and other related issues should be considered in the policy and pilot testing. This will be considered as part of output 2.1.

In conclusion, the Advisor noted that this project can take the “good practice” approach” on safeguards (a separate Environmental and Social Assessment or Management Plan is not necessary). But requested to track the baseline data (mentioned above) and monitor safeguard issues closely during the project implementation.

UNEP Environmental, Social and Economic Review Note (ESERN)

Identification	UN Environment ID: 01716
Project Title	Accelerating the transition to electric public transport in the Greater Metropolitan Area of Costa Rica
Managing Division	Economy Division
Type/Location	National
Region	Latin America and the Caribbean
List Countries	Costa Rica

Project Description	<p>The objective of the project is to facilitate the large-scale deployment of electric public transport vehicles in the Greater Metropolitan Area of Costa Rica</p> <p>Component 1 - Institutionalization of electric mobility: Institutions are strengthened for promoting electric mobility.</p> <p>Component 2 - Electric vehicle demonstration: Demonstrations provide evidence of technical, financial and environmental sustainability to plan for scale-up of electric mobility.</p> <p>Component 3 - Preparation of scale-up and replication of electric mobility: Conditions are created to accelerate the shift towards electric mobility in Costa Rica.</p> <p>Component 4 - Promotion of long-term sustainability of electric mobility: Measures are developed to ensure the long-term sustainability of electric mobility.</p>
Estimated duration of project:	36 months
Estimated cost of the project:	USD 876,712

-

A. Summary of the Safeguard Risks Triggered

Safeguard Standard Triggered by the Project	Impact of Risk ^[1] (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H)
SS 1: Biodiversity, natural habitat and Sustainable Management of Living Resources	1	1	L
SS 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes	3	2	M
SS 3: Safety of Dams of laborers and pedestrians	2	1	L
SS 4: Involuntary resettlement	1	1	L
SS 5: Indigenous peoples	1	1	L
SS 6: Labor and working conditions	2	1	L
SS 7: Cultural Heritage	1	1	L
SS 8: Gender equity	1	1	L
SS 9: Economic Sustainability	2	1	L
Additional Safeguard questions for projects seeking GCF-funding (Section IV)			

B. ESE Screening Decision^[2] (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP's ESES Guidelines.)

D. Recommended further action from the Safeguard Advisor:

This project is likely to be in the moderate risk category around the risks associated with the resource efficiency and waste management. The project described that Costa Rica is vulnerable for fuel cost fluctuation due to the heavy reliance of imported fuels and dilapidating infrastructure problem. Further analysis on the implication of the above issues and the mitigation measures should be sought.

Although EVs are likely to improve impact on environment from pollution and GHG, further efficiency--from types of cars, battery sizes, energy source and so on-- can be explored when drafting government's energy and transportation policies. Financing, subsidies and other incentives should be explored for the policy advice in order to avoid or minimize potential financial burden to local public transportation users, taxi drivers and economically deprived groups. Policy should consider incorporating NMTs and pedestrians' access and their safety associated with the noiseless EVs.

Policy on battery reuse and recycle should be fully explored for sound circular economy.

Data collection should be on the potential suppliers, demands (market growth potential for the near future), their impacts to diverse socioeconomic groups as well as the GHG reduction, energy saving and air pollution. Transportation routines, type of users, affordable fees, frequencies, safety and other related issues should be considered in the policy and pilot testing.

The project will encourage women's employment in the transport sector. We encourage some analysis to understand needs and ideas of local residents and affected transportation users (men and women in different locations and livelihoods) and incorporate them for gender-responsive transportation policy, strategy and EV roll out.

This project can take the “good practice” approach” on safeguards (a separate Environmental and Social Assessment or Management Plan is not necessary). But please track the baseline data (mentioned above) and monitor safeguard issues closely during the project implementation.

(Section III and IV should be retained in UNEP)

I

Precautionary Approach

The project will take precautionary measures even if some cause and effect relationships are not fully established scientifically and there is risk of causing harm to the people or to the environment.

Human Rights Principle

The project will make an effort to include any potentially affected stakeholders, in particular vulnerable and marginalized groups; from the decision making process that may affect them.

The project will respond to any significant concerns or disputes raised during the stakeholder engagement process.

The project will make an effort to avoid inequitable or discriminatory negative impacts on the quality of and access to resources or basic services, on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups.^[3]

Screening checklist

Y/N/

Comment

Maybe

Safeguard Standard 1: Biodiversity, natural habitat and Sustainable Management of Living Resources

Will the proposed project support directly or indirectly any activities that significantly convert or degrade biodiversity and habitat including modified habitat, natural habitat and critical natural habitat?	N	
Will the proposed project likely convert or degrade habitats that are legally protected?	N	
Will the proposed project likely convert or degrade habitats that are officially proposed for protection? (e.g.; National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)	N	
Will the proposed project likely convert or degrade habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	
Will the proposed project likely convert or degrade habitats that are recognized- including by authoritative sources and /or the national and local government entity, as protected and conserved by traditional local communities?	N	
Will the proposed project approach possibly not be legally permitted or inconsistent with any officially recognized management plans for the area?	N	
Will the proposed project activities result in soils deterioration and land degradation?	N	
Will the proposed project interventions cause any changes to the quality or quantity of water in rivers, ponds, lakes or other wetlands?	N	
Will the proposed project possibly introduce or utilize any invasive alien species of flora and fauna, whether accidental or intentional?	N	

Safeguard Standard 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes

Will the proposed project likely result in the significant release of pollutants to air, water or soil?	N	The project supports the demonstration and uptake of electric vehicles. The disposal of electric vehicle batteries, if undertaken incorrectly, can lead to possible water and soil pollution. Through co-financing, the Ministry of Environment and Energy is currently working on measures regarding electric vehicle battery second life and safe disposal. This element is thus not covered in the project.
Will the proposed project likely consume or cause significant consumption of water, energy or other resources through its own footprint or through the boundary of influence of the activity?	N	The project may lead to consumption of electricity, through the uptake of electric vehicles. In counterbalance, it will lead to a reduction in the use of petroleum used for cars.
Will the proposed project likely cause significant generation of Green House Gas (GHG) emissions during and/or after the project?	N	The project aims to reduce GHG emissions by facilitating a transition to electric cars. See above comment.
Will the proposed project likely generate wastes, including hazardous waste that cannot be reused, recycled or disposed in an environmentally sound and safe manner?	N	See comment above on water and soil contamination.
Will the proposed project use, cause the use of, or manage the use of, storage and disposal of hazardous chemicals, including pesticides?	N	See comment above on water and soil contamination.

Will the proposed project involve the manufacturing, trade, release and/or use of hazardous materials subject to international action bans or phase-outs, such as DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol?	N	
Will the proposed project require the procurement of chemical pesticides that is not a component of integrated pest management (IPM)[4] or integrated vector management (IVM)[5] approaches?	N	
Will the proposed project require inclusion of chemical pesticides that are included in IPM or IVM but high in human toxicity?	N	
Will the proposed project have difficulty in abiding to FAO's International Code of Conduct[6] in terms of handling, storage, application and disposal of pesticides?	N	
Will the proposed project potentially expose the public to hazardous materials and substances and pose potentially serious risk to human health and the environment?	N	See comment above on water and soil contamination.
Safeguard Standard 3: Safety of Dams		
Will the proposed project involve constructing a new dam(s)?	N	
Will the proposed project involve rehabilitating an existing dam(s)?	N	
Will the proposed project activities involve dam safety operations?	N	
Safeguard Standard 4: Involuntary resettlement		

Will the proposed project likely involve full or partial physical displacement or relocation of people?	N	
Will the proposed project involve involuntary restrictions on land use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	
Will the proposed project likely cause restrictions on access to land or use of resources that are sources of livelihood?	N	
Will the proposed project likely cause or involve temporary/permanent loss of land?	N	
Will the proposed project likely cause or involve economic displacements affecting their crops, businesses, income generation sources and assets?	N	
Will the proposed project likely cause or involve forced eviction?	N	
Will the proposed project likely affect land tenure arrangements, including communal and/or customary/traditional land tenure patterns negatively?	N	
Safeguard Standard 5: Indigenous peoples[7]		
Will indigenous peoples be present in the proposed project area or area of influence?	N	
Will the proposed project be located on lands and territories claimed by indigenous peoples?	N	
Will the proposed project likely affect livelihoods of indigenous peoples negatively through affecting the rights, lands and territories claimed by them?	N	

Will the proposed project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	
Will the project negatively affect the development priorities of indigenous peoples defined by them?	N	
Will the project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	
Will the project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	
Safeguard Standard 6: Labor and working conditions		
Will the proposed project involve the use of forced labor and child labor?	N	
Will the proposed project cause the increase of local or regional un-employment?	N	
Safeguard Standard 7: Cultural Heritage		
Will the proposed project potentially have negative impact on objects with historical, cultural, artistic, traditional or religious values and archeological sites that are internationally recognized or legally protected?	N	
Will the proposed project rely on or profit from tangible cultural heritage (e.g., tourism)?	N	

Will the proposed project involve land clearing or excavation with the possibility of encountering previously undetected tangible cultural heritage?	N	
Will the proposed project involve in land clearing or excavation?	N	
Safeguard Standard 8: Gender equity		
Will the proposed project likely have inequitable negative impacts on gender equality and/or the situation of women and girls?	N	The project will incorporate gender considerations into all project outcomes and outputs. In addition, a gender action plan will be included in the project.
Will the proposed project potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits?	N	
Will the proposed project have impacts that could negatively affect women's and men's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?	N	
Safeguard Standard 9: Economic Sustainability		
Will the proposed project likely bring immediate or short-term net gain to the local communities or countries at the risk of generating long-term economic burden (e.g., agriculture for food vs. biofuel; mangrove vs. commercial shrimp farm in terms of fishing, forest products and protection, etc.)?	N	
Will the proposed project likely bring unequal economic benefits to a limited subset of the target group?	N	

[1] Refer to UNEP Environment, Social and Economic Sustainability (ESES): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

[2] **Low risk:** Negative impacts negligible: no further study or impact management required.

Moderate risk: Potential negative impacts, but less significant; few if any impacts irreversible; impact amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop a ESEMP. Straightforward application of good practice may be sufficient without additional study.

High risk: Potential for significant negative impacts, possibly irreversible, ESEA including a full impact assessment may be required, followed by an effective safeguard management plan.

[3] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

[4] “Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms <http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/>

[5] "IVM is a rational decision-making process for the optimal use of resources for vector control. The approach seeks to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control. The ultimate goal is to prevent the transmission of vector-borne diseases such as malaria, dengue, Japanese encephalitis, leishmaniasis, schistosomiasis and Chagas disease." (http://www.who.int/neglected_diseases/vector_ecology/ivm_concept/en/)

[6] Find more information from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf

[7] Refer to the Toolkit for the application of the UNEP Indigenous Peoples Policy Guidance for further information.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex P - ESERN_2020-02-06_Costa Rica_AL	CEO Endorsement ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Project Objective	Objective level Indicators	Baseline	Mid-Point Target	End of project target	Means of Verification	Assumptions & Risks	UNEP MTS reference
Facilitate the large-scale deployment of electric public transport vehicles in the Greater Metropolitan Area of Costa Rica.	Greenhouse Gas Emissions Mitigated (metric tons of CO2e)	0	N/A	Total direct (2021-2036): 664,536 tCO2e Total indirect (2021-2036): 1,550,291 tCO2e	Odometer measurements and pilot performance reports	Taxi drivers willing to test the electric taxis.	UNEP MTS 2018-2021 Climate Change Objective: Countries increasingly transition to low-emission economic development and enhance their adaptation and resilience to climate change
	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	0	700	2300 people 675 men 1625 women	Participants lists from trainings and workshops Occupancy records kept by the transport operators during the pilot	Conditions imposed by the COVID-19 pandemic do not inhibit the testing of electric vehicles.	

Project outcomes	Outcome level indicators	Baseline	Mid-Point target	End of project target	Means of verification	Assumptions and risks	MTS Expected Accomplishment
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1. The Government demonstrates enhanced coordination and promotes electric mobility.	Indicator 1.1: Number of new initiatives developed/ undertaken with participation of multiple government agencies and involvement of civil society and private sector	0	2	4	Meeting minutes	Stakeholders are interest in coordinating and the COVID-19 pandemic does not inhibit coordination.	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 1.2: Number of reports on experiences and lessons learned from the Costa Rica project shared with the Global Programme on Electric Mobility	0	0	2	Confirmation by global programme team of receipt of best practice reports	Project effectively produces deliverables 1.1.5 and 2.1.6 and shares it with the global programme	
2. Costa Rican citizens begin to use electric mobility for their public transport needs	Indicator 2: Number of Costa Rican citizens using electric taxis	0	670	2150 people 645 men 1505 women	Occupancy records kept by transport operators	Pilots effectively demonstrate technological viability of electric vehicles for taxi usage, national charging network is installed, local financial institutions implement strengthened financial instruments, effective market offer of electric vehicles, government commits to updating laws and decrees	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies

3. Taxi drivers demonstrate willingness to purchase electric vehicles.	Indicator 3.1: Number of taxi drivers that purchase electric vehicles	0	0	10 people 9 men 1 women	Local financial institution records	Pilots effectively demonstrate technological viability of electric vehicles for taxi usage, national charging network is installed, local financial institutions implement strengthened financial instruments, effective market offer of electric vehicles, government commits to updating laws and decrees	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
Outcome 4. The Costa Rican government takes action towards implementing laws which ensure the environmental sustainability of low-carbon electric mobility	Indicator 4.1: Proposal for an updated law 8839 reviewed by the Ministry of Health and considered by the Legislative Assembly	0	0	Reviewed by the Ministry of Health and considered on at least one occasion by the Legislative Assembly	Legislative Assembly minutes	Commitment of government authorities to revise the law.	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Please refer to the separate pdf files uploaded to the GEF portal:

- Annex B.1 – Responses to GEF secretariat reviews on the PFD;
- Annex B.2 – Responses to GEF secretariat reviews on the PFD addendum;
- Annex B.3 – Responses to STAP comments;
- Annex B.4 – Responses to GEF Council comments.

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: US\$ 40,000			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (US\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent to date</i>	<i>Amount Committed</i>
Consultants (baseline studies, project design and document preparation)	26,000	13,000	13,000
UNEP Regional Office for Latin America and the Caribbean (calculation of GHG emission reductions, review of project design and document)	5,000	5,000	0
Total	31,000	18,000	31,000

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up)

Not applicable

ANNEX E: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

San Jose is the capital city of Costa Rica and is located in the Central Valley (Image 1). The interventions proposed for this project will take place in the Greater Metropolitan Area of Costa Rica, with most of the interventions occurring in or around the Metropolitan Area of San Jose (AMSJ) and the Juan Santamaria International Airport. The Greater Metropolitan Area (GAM) is where most of the Costa Rica population lives (up to 2.5 million people) with 31 municipalities making up for its area. The Metropolitan Area of San Jose is a smaller territory comprised by 14 municipalities inhabited by 1.5 million people.

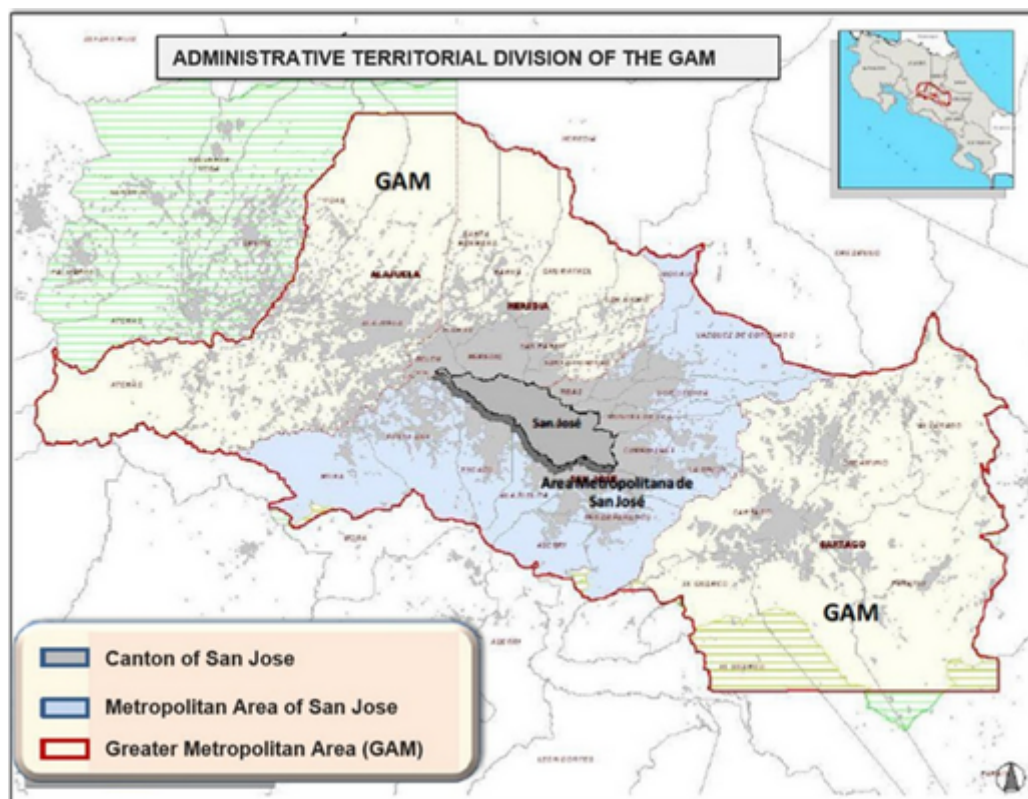


Image 1. Location of the Greater Metropolitan Area of Costa Rica.

Source: Municipality of San Jose, 2011.

Demonstration sites	<i>Latitude</i>	<i>Longitude</i>
San Jose	9°94'N	84°14'W

Juan Santamaria International Airport

9°99'N

84°20'W

ANNEX F: Project Budget Table

Please attach a project budget table.

Expenditure category & detailed description	Component 1	Component 2	Component 3	Component 4	Sub-total	M&E	PMC	Total	Responsible entity
Goods		49,000			49,000		2,000	51,000	
3kW electric vehicle chargers		16,000			16,000			16,000	Costa Rican USA Foundation for Cooperation
Data pilot equipment (IT, GPS Technologies, etc.)		33,000			33,000			33,000	Costa Rican USA Foundation for Cooperation
IT equipment (computer, etc. for chief technical advisor)					0		2,000	2,000	Costa Rican USA Foundation for Cooperation
Contractual Services – Company	7,500	176,000	7,500	2,500	193,500		13,500	207,000	
Independent financial audits					0		13,500	13,500	Costa Rican USA Foundation for Cooperation
Workshop services	7,500	5,000	7,500	2,500	22,500			22,500	Costa Rican USA Foundation for Cooperation
Renting of vehicles (including paint, security devices, taxi meter)		171,000			171,000			171,000	Costa Rican USA Foundation for Cooperation

International Consultants		79,000	181,000	31,612	291,612	30,000		321,612	
Consultancy on electric mobility and transport		79,000	109,500	31,612	220,112			220,112	Costa Rican USA Foundation for Cooperation
Consultancy on financial instruments and incentives			71,500		71,500			71,500	Costa Rican USA Foundation for Cooperation
Terminal Evaluation					0	30,000		30,000	Implementing agency
Local Consultants	34,500	37,500	6,000	2,500	80,500			80,500	
Consultancy for online platform	7,000				7,000			7,000	Costa Rican USA Foundation for Cooperation
Consultancy on capacity-building for electric mobility	24,000				24,000			24,000	Costa Rican USA Foundation for Cooperation
Consultancy on data management		30,000			30,000			30,000	Costa Rican USA Foundation for Cooperation
Consultancy on gender	3,500	7,500	6,000	2,500	19,500			19,500	Costa Rican USA Foundation for Cooperation
Salary and benefits / Staff costs	23,000	20,000	24,000	5,000	72,000	10,001	61,600	143,601	
Administrative Assistant					0		14,000	14,000	Costa Rican USA Foundation for Cooperation
Chief Technical Advisor	23,000	20,000	24,000	5,000	72,000	10,001	47,600	129,601	Costa Rican USA Foundation for Cooperation
Travel	20,000				20,000			20,000	
Travel to attend activities of the global e-mob programme	20,000				20,000			20,000	Costa Rican USA Foundation for Cooperation
Office supplies	2,000				2,000			2,000	
Capacity-building and workshop supplies	2,000				2,000			2,000	Costa Rican USA Foundation for Cooperation
Other operating costs	15,000	36,000			51,000			51,000	
Hardware, software and maintenance of the online platform	15,000				15,000			15,000	Costa Rican USA Foundation for Cooperation

Vehicle maintenance		36,000			36,000			36,000	Costa Rican USA Foundation for Cooperation
Grand Total	102,000	397,500	218,500	41,612	759,611	40,001	77,100	876,712	