



GEF-7 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEFTF

PART I: PROJECT INFORMATION

Project Title: Supporting the Shift to Electric Mobility in Saint Lucia			
Country(ies):	Saint Lucia	GEF Project ID:	10283
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01722
Project Executing Entity(s):	Department of Sustainable Development, Ministry of Education, Innovation, Gender Relations and Sustainable Development	Submission Date:	10 April 2021
GEF Focal Area (s):	Climate Change Mitigation	Expected Implementation Start:	1 July 2021
		Expected Completion Date:	30 June 2024
Name of Parent Program	Global Programme to Support Countries with the Shift to Electric Mobility	Parent Program ID:	10114

A. FOCAL/NON-FOCAL AREA ELEMENTS

Programming Directions	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Confirmed Co-financing
CCM 1-2	Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technology and electric mobility	GEF TF	785,688	4,196,863
Total project costs			785,688	4,196,863

B. PROJECT DESCRIPTION SUMMARY

Project Objective: Accelerate the introduction of electric mobility in Saint Lucia through capacity-building and electric vehicle demonstration and prepare it for scaling-up and replication through the development of electric mobility policies, business models and finance schemes.

Project Components/ Programs	Component Type	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
Component 1. Institutionalization of low-carbon electric mobility	TA	1. The Saint Lucian government enhances coordination, planning and capacity for promoting electric mobility	1.1: An inter-sectorial coordination body is established within the government 1.2: Sustainable Passenger Mobility Policy delivered for governmental approval 1.3: National low-carbon e-mobility strategy delivered for governmental approval 1.4: Key public and private stakeholders trained on e-mobility technologies, including through the global programme on e-mobility	GEF TF	173,600	500,000

Component 2. Short term barrier removal through low-carbon e-mobility demonstrations	INV	2. The Saint Lucia government gains confidence in using electric vehicles	2.1: Monitoring, reporting and verification (MRV) system to track demonstration performance is implemented 2.2: Demonstration of at least 15 electric vehicles in public and private fleets conducted and new charging infrastructures installed 2.3: Professional training delivered (electric vehicle safety, driving, and maintenance) and demonstration results communicated to national and local decision makers and other stakeholders in Saint Lucia	GEF TF	297,112	2,564,778
Component 3. Preparing for scale-up and replication of low-carbon electric mobility	TA	3. The Saint Lucian government takes action towards implementing an enabling environment and business models for promoting low-carbon electric mobility	3.1: Regulatory and tax reforms for the uptake of electric vehicles in Saint Lucia delivered to the government for approval 3.2: Business models, financial schemes and procurement guidelines for electric vehicle fleets and charging stations delivered to government and car dealers	GEF TF	107,650	400,000
Component 4. Long-term environmental sustainability of low-carbon electric mobility	TA	4. The Saint Lucian government takes action towards implementing policy frameworks for ensuring the long-term sustainability of low-carbon electric mobility	4.1: Analysis of current management of vehicles at their end-of-life undertaken and recommendations based on international best practice delivered to government for approval 4.2: Updated legislation on end-of-life vehicle management, including electric vehicles and second-life use of their batteries, delivered to the government for adoption 4.3: New business models, including the responsibility of vehicle distributors, delivered to the government and ELV management companies 4.4: Awareness and capacity of public, private and civil society	GEF TF	96,500	400,000

			stakeholders on management of electric vehicles at their end of life enhanced			
			Monitoring and evaluation	GEF TF	39,400	-
			Subtotal	GEF TF	714,262	3,864,778
			Project Management Cost (PMC)	GEF TF	71,426	332,085
			Total project costs		785,688	4,196,863

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: **Not applicable.**

C. CONFIRMED SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include evidence for co-financing for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Investment Mobilized	Amount (\$)
Recipient Country Gov.	Ministry of Education, Innovation, Gender Relations and Sustainable Development. Department of Sustainable Development	Public Investment	Investment mobilized	1,400,000
Recipient Country Gov.	Ministry of Education, Innovation, Gender Relations and Sustainable Development Department of Sustainable Development	In-kind	Recurrent expenditures	300,000
Recipient Country Gov.	Ministry of Infrastructure, Ports, Energy and Labour. Department of Infrastructure, Ports and Energy.	Public Investment	Investment mobilized	2,124,500
Recipient Country Gov.	Ministry of Infrastructure, Ports, Energy and Labour. Department of Infrastructure, Ports and Energy.	In-kind	Recurrent expenditures	32,085
Recipient Country Gov.	Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service	Public Investment	Investment mobilized	340,278
Total Co-financing				4,196,863

The “investment mobilized” was identified through bilateral meetings with the potential co-financiers within the government:

- The Ministry of Education, Innovation, Gender Relations and Sustainable Development (MEIGRSD), through its Department of Sustainable Development, will mobilize new investment of US\$1,400,000 through the project “Implementation of transport & energy contributions in the Caribbean (ITECC) - transforming the energy and transport sectors towards a low-carbon and climate-resilient future”, funded by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU). The investment, to begin late 2020, will support Saint Lucia in accelerating the implementation and raising the ambition of its NDCs in the energy and transport sectors, including through demonstrations in renewable energy and transport.
- The Ministry of Infrastructure, Ports, Energy and Labour (MIPEL), through its Energy Division, will undertake new investment for the deployment of public charging stations, notably the new solar carport at Hewanorra International airport. This 750 kW facility, US\$2,124,500, is financed with the support of the United Arab Emirates (UAE)-Caribbean Renewable Energy Fund, providing rapid charging to electric vehicles.
- The Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service, through its Department of Finance, will make a direct co-financing commitment to the project, through the purchasing of 10 sedan vehicles for the government fleet over the years 2022-2024. Through component 2, the GEF project will cover the incremental costs between a conventional internal combustion engine vehicle and an electric one, ensuring that these 10 government vehicles are all electric vehicles as part of the project’s demonstrations.

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, COUNTRY, FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=(a)+(b)
UNEP	GEF TF	Saint Lucia	Climate Change	CC STAR allocation	785,688	70,712	856,400
Total GEF Resources					785,688	70,712	856,400

E. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? YES NO

If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund.

F. PROJECT’S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

The relevant project’s target contributions are presented in Annex F and aggregated in the table below. Explanations on the methodologies used are provided in section 6 and Annex M. Progress in programming against these targets is updated at mid-term evaluation and at terminal evaluation. Achieved targets will be aggregated and reported any time during the replenishment period.

Project Core Indicators		Expected at CEO Endorsement
6	Greenhouse Gas Emissions Mitigated (metric tons of CO _{2e})	Direct: 206,322 tCO _{2e} Indirect: 480,023 tCO _{2e}
11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	Women: 663 Men: 658 Total: 1,321

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.

Refer to Annex M for description of calculations of indicators 6 and 11.

G. PROJECT TAXONOMY

Please update the table below for the taxonomic information provided at PIF stage. Use the GEF Taxonomy Worksheet provided in Annex G to find the most relevant keywords/topics/themes that best describe the project.

Level 1	Level 2	Level 3	Level 4
Influencing models	Transform policy and regulatory environments		
	Strengthen institutional capacity and decision-making		
	Demonstrate innovative approaches		
Stakeholders	Private Sector	Capital providers	
		Financial intermediaries and market facilitators	
		Large corporations	
		SMEs	
	Civil Society	Individuals/Entrepreneurs	
		Trade Unions and Workers Unions	
		Community Based Organization	
		Non-Governmental Organization	
	Academia		

Level 1	Level 2	Level 3	Level 4	
	Type of Engagement	Information Dissemination		
		Consultation		
		Participation		
	Communications	Awareness Raising		
		Education		
		Public Campaigns		
Capacity, Knowledge and Research	Capacity Development			
	Knowledge Generation and Exchange			
	Innovation			
	Knowledge and Learning	Knowledge Management		
		Innovation		
		Capacity Development		
		Learning		
Gender Equality	Gender Mainstreaming	Beneficiaries		
		Women groups		
	Gender results areas	Access to benefits and services		
Focal Areas/Theme	Climate Change	Climate Change Mitigation	Sustainable Urban Systems and Transport	
Rio Markers	Climate Change Mitigation 2			

PART II: PROJECT JUSTIFICATION

1a. Changes in project design

The following changes have been made to the project design as contained in this document as compared to the child project concept note included in the programme framework document:

- The overall components remain the same, however the title of component 2 has changed from “Electric vehicle demonstration” to “Short term barrier removal through low-carbon e-mobility demonstrations” and the title of component 4 from “Promotion of long-term sustainability of electric mobility” to “Long-term environmental sustainability of low-carbon electric mobility”. The other two components had minor editorial changes to the titles.
- The budget has been redistributed in accordance with the scope of the final project outputs, resulting in a decrease in the demonstration in component 2 from \$380,000 to \$297,112 (from 48% to 38% of the total GEF budget) and an increase in the other components. This is due to the change in the scope of the project demonstration, as 30-seater electric buses will not be included, due to the difficulties in introducing them in the current public transport system and their limited availability globally and especially in the Caribbean.
- The expected GHG emissions mitigated (direct and indirect) and beneficiaries disaggregated by gender have been estimated with more detail, based on the final scope of the demonstration and other project activities. There has been an increase in the estimated indirect GHG emission savings compared to the concept note.

Total co-financing has increased in all components compared to the child project concept note, almost doubling, from USD \$2,450,000 to USD \$4,196,863.

Co-finance partner	Estimated co-finance contribution as per the programme framework document (USD\$)	Committed co-finance at CEO endorsement (USD\$)	Explanation for the changes
Ministry of Infrastructure, Ports, Energy and Labour. Department of Infrastructure, Ports and Energy (investment mobilized, United Arab Emirates Caribbean Renewable Energy Fund 500kW solar carport/charging facility at the airport for Saint Lucia)	\$2,420,000	\$2,124,500	Amount revised down due, following further investigation during full project development. For description of co-financing see table C.

Ministry of Infrastructure, Ports, Energy and Labour. Department of Infrastructure, Ports and Energy (in-kind)	\$275,000	\$32,085	Amount revised down due to budget restraints, including due to COVID. For description of co-financing see table C.
Ministry of Education, Innovation, Gender Relations and Sustainable Development. Department of Sustainable Development (investment mobilized)	\$0	\$1,400,000	Additional co-financing identified during project development. For description of co-financing see table C.
Ministry of Education, Innovation, Gender Relations and Sustainable Development Department of Sustainable Development (in-kind)	\$0	\$300,000	Additional co-financing identified during project development. For description of co-financing see table C.
Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service	\$0	\$340,278	Additional co-financing identified during project development. For description of co-financing see table C.

1b. Project Description

1) 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.

In 2018, greenhouse gas (GHG) emissions in Saint Lucia reached 509 Gg CO_{2e} including LULUCF,³ an increase of 64% compared to 2000 levels. Saint Lucia contributes about 0.002% of global GHG emissions, but per capita emissions are relatively high (2.7 tons CO_{2e} per capita in 2018) compared to other countries with similar GDP per capita. Furthermore, the island state is disproportionately vulnerable to global climate change.⁴ Saint Lucia is also highly exposed to global oil price changes, since 98% of the country’s energy demand is covered through oil imports: power generation in Saint Lucia depends on the operation of ten prime movers (diesel generators), resulting in expensive and high carbon footprint electricity. The Government of Saint Lucia (GoSL) and the Saint Lucia Electricity Services Limited (LUCELEC), the sole electricity utility, aim to reduce price volatility and diversify the country’s energy mix by integrating renewable energy sources into the grid, through solar, geothermal and wind energy projects (see baseline section below).

The share of the transport sector in GHG emissions has been slightly increasing over time: from 30.5% in 2000 to 31.6% in 2010. More than 98% of the sector’s emissions are due to road transportation, with the rest from maritime modes. In accordance with its third national communication, the Government of Saint Lucia expects transport emissions to steadily grow in the absence of mitigation measures (see Figure 1 below) at a similar average rate to its total GHG emissions, by 1.5% per year.

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

² IEA Mobility Model, 2017.

³ Saint Lucia National Inventory Report, 21st August 2020. AETHER consulting.

⁴ International Monetary Fund (2018). St. Lucia Climate Change Policy Assessment.

As 63% of total fuel consumption is due to transport, mobility growth constitutes a major strategic challenge in terms of energy security and import dependence. Although direct and indirect taxes provide for more than 80% of total tax revenue, vehicle and fuel excises still constitute a relevant source of revenue for the GoSL and will have to be adapted to the new context of electrification, as in other countries. There is no data available on air quality in Saint Lucia, but there is significant space for quick improvements, as fuel standards still allow the use of high-sulphur fuels (500 ppm) and vehicle approval regulations did not impose minimum emission standards until 2015.⁵

Road safety remains an issue in Saint Lucia, in accordance with the last global World Health Organization (WHO) report,⁶ with an estimated rate of road traffic fatalities of 35.4 in 2016; national statistics are incomplete, reporting just a fraction of road fatalities (e.g. 7 reported in 2016).

Root causes and barriers to the adoption of electric vehicles:

There are four main barriers to the deployment of electric mobility (e-mobility) solutions in Saint Lucia, preventing their contribution to curb GHG emissions from passenger road transport. They are described below together with their respective root causes:

1. *Fragmented institutions, with insufficient coordination, planning and technical capacities.* The key root causes for this barrier are the following:

- a) Governmental action on e-mobility is not fully coordinated, and the distribution of competencies among departments remains unclear;
- b) Existing transport plans do not provide a sustainable mobility vision, and do not consider the potential of e-mobility;
- c) Electricity production remains highly dependent on fossil fuels and the strategies to increase the share of renewables are not being implemented consistent with rates required to achieve national goals and are not coordinated with a sound deployment strategy of charging infrastructure for electric vehicles;
- d) Technical know-how and capacities within the public and private sectors are insufficient to undertake the transition effort towards sound transport electrification within a sustainable mobility perspective.

2. *Insufficient knowledge of the potential of e-mobility in passenger transport.* The general public and also key stakeholders in the transport and energy sectors have a lack of knowledge on e-mobility. Stakeholders remain attached to business as usual practices and have a lack of knowledge to implement new concepts and technologies, particularly on electric vehicles, due to the following root causes:

- a) Most car fleet owners and managers are unaware of the potential of electric vehicles.
- b) Weak public transport and taxi operators, with limited technical capacities to undertake the necessary reforms to make public transport more attractive to users and to make use of the opportunities provided by electrification.
- c) The transport sector at large is not aware of the quick progress electric vehicles (EV) are making globally and remain skeptical about its actual performance and viability in Saint Lucia.

3. *Policies and regulations are unsuited to e-mobility, leading to a mobility market dominated by high-carbon solutions.*

The introduction and consolidation of e-mobility is jeopardized by the following root causes:

- a) The transport regulatory framework (technical approval of vehicles, public transport and taxi services) does not incentivize the use of the most efficient internal combustion engine (ICE) vehicles and electric vehicles; the same applies to the fiscal framework which, while introducing recent incentives for EVs, does not yet fully incentivize the transformation to electric vehicles, and disincentivize the purchase and use of high fuel-consuming vehicles.
- b) Business models and financial schemes applied in other countries (e.g. leasing options or public incentives) are not adequate to the specific national circumstances of Saint Lucia.
- c) Due to the small size of the market and population of the country, global EV manufacturers are not considering Saint Lucia in their short- to medium-term marketing plans, and electric vehicles are not yet available in the

⁵ Motor Vehicles and Road Traffic Act– Section 193

⁶ World Health Organization (WHO) (2018) Global Status Report on Road Safety.

national market. Essential market actors (e.g. importers, dealers, repairs) do not plan to be active in e-mobility under the current context and EVs are difficult if not impossible to be procured in Saint Lucia for the few innovative “early adopters” that would be interested.

4. Insufficient development of end-of-life vehicle (ELV) management systems, to which EV would put additional pressure to deal with batteries and other potentially hazardous components. This is a key barrier as it creates reluctance for policymakers to facilitate the introduction of electric vehicles when they are uncertain of the end-of-life costs of EVs and consequences for the island on soil contamination due to inappropriate disposal of vehicles and batteries at their end of life. This is due to the following root causes:

- a) Understanding of impacts is limited. The end-of-life challenges of electric vehicles for Caribbean island countries are insufficiently analyzed, introducing an additional source of uncertainty to an already weak sector;
- b) Understanding of how to treat end-of-life of electric vehicles is limited, including on related costs. The government, vehicle distributors (dealers and importers) and ELV stakeholders need to develop a sound approach for end-of-life management of batteries and other EV components in small countries like Saint Lucia. As a prerequisite, ELV management of conventional vehicles has to be significantly improved by waste management authorities.

2) Baseline scenario and any associated baseline projects

Baseline scenario for the energy sector

Saint Lucia relies almost entirely on fossil fuel imports to cover its energy demands. Electricity is supplied by diesel generation by St. Lucia Electricity Services Limited (LUCELEC), which is majority privately owned and currently has the exclusive right to generate from fossil fuels, transmit and distribute electricity in Saint Lucia.⁷ The main generating facility is LUCELEC’s computerized Cul-de-Sac Power Station, which houses 10 generators and has an available capacity of 86.2 MW. There is a 2.2 MW generating facility in Soufriere and 3 MW solar in the south of the island. Saint Lucia has a fully integrated electricity system and access to electricity is guaranteed in the whole island. Maximum demand in 2018 was 61.7 MW or 70% of a total available generation power of 88.4 MW.

The National Utilities Regulatory Commission (NURC) Act and the Amendment to the Electricity Supply Act of 2016 allow an independent regulatory for the electricity sector. The current draft electricity bill consists of LUCELEC generation of electricity through fossil fuels, but it also opens opportunities for independent power producers (IPPs) for renewable energy generation.

Dependency on diesel-generated electricity results in high GHG emissions from the electricity generation sub-sector, with it being responsible for close to 39% of total national GHG emissions. The country’s energy matrix is dependent on diesel fuel used for electricity generation in LUCELEC’s power plant, which in 2018 provided 97% of the total installed power generation capacity, with the remaining 3% being solar photovoltaic (PV) generation. The latter includes 1 MW of distributed generation and LUCELEC’s 3 MW solar farm in Vieux Fort, commissioned in April 2018.⁸

LUCELEC operates an efficient grid with 6.87% in system losses in 2018. The transmission grid operates at 66 kV voltage across 73.32 miles of transmission lines. Distribution voltage is 11kV across 2,566 miles of distribution lines. LUCELEC is engaged in the modernization of the grid to improve remote control capabilities, efficiency, reliability and resilience, including the completion of a fiber optic network on LUCELEC’s distribution poles.⁹ The expansion of the Distribution Automation programme with the deployment of auto reclosers and remotely controlled switches has allowed LUCELEC to remotely reconfigure the system when faults occur, significantly reducing the length of outages, fault finding and response times (<https://www.lucelec.com/content/lucelecs-operations>). These improvements also facilitate the subsequent installation and connection to the grid of RE distributed generation systems and electric vehicle charging stations. It is estimated that the electricity grid would be able to host the 20 MW of renewable generation plants foreseen

⁷ World Bank (2018). Renewable Energy Sector Development Project. (Report Number PAD2362)

⁸ LUCELEC (2019). 2018 Annual Report

⁹ LUCELEC (2019). 2018 Annual Report

by the 2018 National Energy Transition Strategy (NETS) within the next eight years, without violating established reliability criteria or the need for major system upgrades. All these developments have significantly increased the resilience of the electricity generation and distribution system in the event of extreme weather events. The Climate Change Adaptation Policy,¹⁰ developed in 2015, considered the vulnerability of the electricity grid within its analysis, but concluded not including it as a priority sector for adaptation (see the risks section for further details).

Electricity costs in Saint Lucia are volatile due to the country's dependence on imported diesel fuel and as a result of the pass-through of diesel oil costs to the consumer, with a historic peak of USD 0.33/kWh and moving down to USD 0.25/kWh in 2016¹¹, and USD 0.27/kWh in 2020.¹² This scenario is in addition to a carbon intensive energy system, with an emission intensity of around 780 kg of CO₂/MWh consumed.¹³ Electricity demand is almost stable, growing at less than 1% per year in average in the last years and by 0.5% in 2018.

Based on current consumption and growth rates, and the old age and condition of the Cul-de-Sac diesel plant, Saint Lucia has identified the need to expand capacity to allow for the disconnection of older diesel generators as their service life is completed. Accordingly, the country has identified more than 20 MW of additional renewable power generation capacity that could be deployed. Besides the already operational 3 MW solar farm in Vieux Fort, this includes a 12 MW wind farm project¹⁴ and a 10 MW Troumasse solar power station with 7 MW battery storage project,¹⁵ which has just received an ADFD loan of US\$15 million (approved in January 2020). The Troumasse project is consistent with the need of implementing electricity storage systems in parallel with the expansion of renewables, as the generation system becomes less flexible and older diesel plants are disconnected in the future. Considering that Saint Lucia's energy demand is almost stable, this increase in renewable energy capacity due to the wind farm and Troumasse solar projects has the potential to increase the percentage of renewable energy in the grid from 3% to up to almost 30% in the next 5 to 10 years.

These efforts at increasing the percentage of renewable energies in power generation are in direct correlation with the country's NDC conditional mitigation targets.¹⁶ This states that by 2025 its energy matrix should include a share of renewables of 35%, and is consistent with projections presented in the draft First Biennial Update Report currently under preparation by the Government of Saint Lucia. As the efficiency of the distribution and transmission grid is improved and higher penetration of renewable power generation is deployed, vehicle fleet electrification becomes more beneficial in terms of GHG emission mitigation.

Baseline scenario for the transport sector

The GoSL (2017) provides transport emission forecasts in its Third National Communication (Figure 1). In the absence of mitigation measures, transport emissions are driven by mobility demand growth (as currently individual mobility is low, around 3,000 km per capita and year), fleet growth (by 1.5% to 2% per year) and population growth (below 1% per year). The current modal split (30% share for public transport buses, 70% for private cars and taxis) is expected to remain stable.

¹⁰ Ministry of Sustainable Development, Energy, Science and Technology (2015). The Saint Lucia Climate Change Adaptation Policy

¹¹ World Bank (2018). Renewable Energy Sector Development Project (Report Number PAD2362)

¹² Average of domestic and commercial fares; the fuel adjustment factor is currently slightly negative, due to low international fuel prices: <https://www.lucelec.com/content/rates-service-standards>

¹³ Based on OLADE (2014), Saint Lucia Energy Balances 2010-2014. Accessed at <http://biblioteca.olade.org/opac-tmpl/Documentos/old0332.pdf>

¹⁴ The estimated cost of the wind farm is USD 37 million. LUCELEC, the national energy utility, is leading the development of the project, with a new developer not yet identified. This project will be the first of its kind in the country and can be scaled up in the future thanks to the favorable wind regime. The initial data from the 18-month wind study showed a Net Capacity Factor of 36%. The project will also reduce fuel usage by approximately 1.88 million imperial gallons per annum. Although the effective implementation is subject to the selection of a partner, the government's expectations are to complete the windfarm by 2025, in order to meet the country's NDC. A town hall meeting was effective in informing the communities about the wind farm and its benefits to them and the country.

¹⁵ LUCELEC (2019). 2018 Annual Report

¹⁶ GoSL (2015). Intended Nationally Determined Contribution under the UNFCCC.

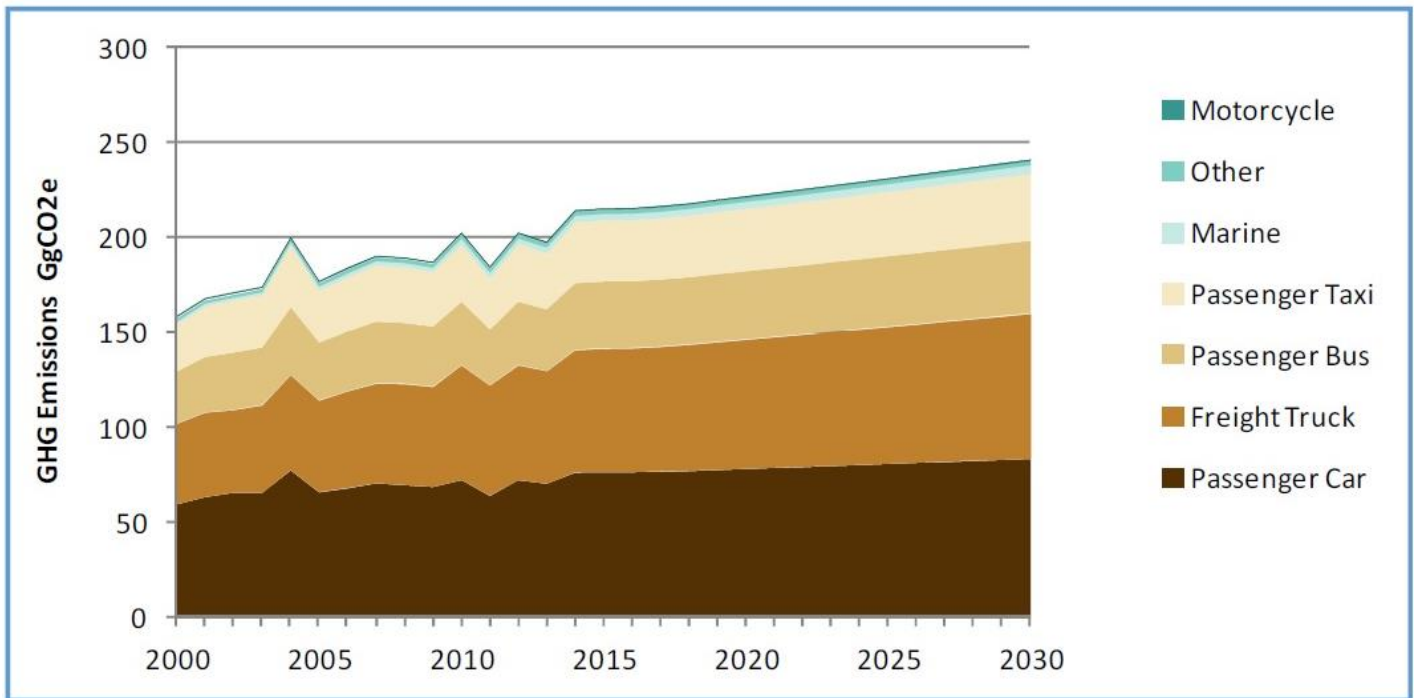


FIGURE 1: EMISSION BASELINE PROJECTION FOR TRANSPORT (GG CO₂E)

Therefore, the transport sector will remain as the second major source of GHG emissions in Saint Lucia, growing at the same path as total emissions (1.5% annually), as motorization continues to rise.¹⁷ Although there are no reliable statistics (vehicles are not systematically deregistered, so that there is no information on the fleet size on the road), it is generally agreed that the average age of Saint Lucia’s fleet is high, as cheap second-hand vehicles are imported on a massive scale, and regular vehicle technical inspections are not compulsory. The country’s fleet is dominated by gasoline-powered private vehicles followed by goods vehicles, taxis and passenger vans. The need to replace a significant share of Saint Lucia’s fleet in the coming years presents an opportunity for the country to shift to low emission vehicles.

The government established a National Climate Change Committee in 1998, in which the main relevant government units participate, with the exception of the departments in charge of transportation. There is no formal coordination among the different bodies relevant for the promotion e-mobility, including the Department of Transport (vehicle approval, public transport policy), the Renewable Energy Division (energy efficiency), the National Utility Regulatory Commission (electricity market), the Department of Sustainable Development (climate change) and Saint Lucia Solid Waste Management Authority (SLSWMA, waste management).

The public transport network in the island consists of 33 routes, structured in 5 corridors. The service is provided by a total of 1294 vehicles (most of them combi or crew vans with 12-16 seats). Vehicles are authorized individually to provide service on a specific route, and take on the full demand risk as there are no public subsidies. Some of them are driven by their owners, others are rented by the owner. Tariffs are fixed and set by the government. As the service has low regulations, it results in low quality: vehicles in the peak hour reach full capacity at the terminals, and passengers at intermediate stops have to wait until one vehicle with an empty seat comes. This also results in uncertain schedules, as drivers wait until the vehicle is full to start the route, there is an uncertain service after the afternoon peak hour, and there may be long stopping times for boarding and alighting. In this context, those who have access to a car or are able to afford taxi services generally do not use public transport. In spite of its insufficient quality, the public transport share of demand is 29.6%, and is expected to remain stable in government’s forecasts until 2030. Electrifying the existing public transport system is not an option for two main reasons: (1) the electrification of this vehicle segment is still in its infancy,

¹⁷ Government of Saint Lucia (2017). Third National Communication on Climate Change for Saint Lucia.

with manufacturers offering very few models and at high prices (as much as 5 times more compared to conventional ones) for the types of vans used through-out the island; (2) the basic problems of unreliability, low comfort and poor working conditions would remain unchanged, leaving public transport unattractive compared to car use. Therefore, it is necessary to reform the public transport system as a preliminary step, including the use of bigger vehicles and scheduled services. Under this reformed framework, the aim is to ensure the use of electric buses - rather than conventional ones - be an attractive option in those lines with higher demand.

The quality of taxi services is also low and prices are high. There are 997 authorized taxis on the island, with no metering. Consequently, tariffs are negotiated before taking the ride, although locals benefit from preferential tariffs. Taxi drivers (and also public transport drivers) owning their vehicle make use of it also as a family vehicle; this results in a preference for large vehicles and crew vans, usually circulating with low occupancy.

Passenger cars (up to 9 seats) account for 88% of the vehicle fleet; most of them (62.2%) are cars for private or corporate use, but they also include a large fleet of sport utility vehicles (SUVs) (16.5%) and cars for hire (7.4% of the total fleet). The annual fleet growth rate is substantially higher for SUVs (6.5%) and for-hire vehicles (7.4%) than for the private cars (2.0%) and the total fleet (2.5%). The increase in annual mileage travelled can be estimated by the trends in gasoline imports, which have grown at an average annual rate of 3.4% in the last years (2012-2017); the government's forecast is that annual growth will be lower in the future, between 2.2% and 2.5%.

Emission trends in the three subsectors initially targeted by the project (public transport vehicles, taxis and private cars) are forecasted by the government as growing at an average annual rate, respectively of 0.6%, 0.0% and 0.5% under the baseline scenario.

There are no fuel subsidies for electricity or transport in Saint Lucia (although under the recent COVID-19 crisis, some discussions have been started on this topic), and fuel prices are similar to other countries in the region, with an excise tax of ECD 4 per gallon. Provision for the establishment of emission standards and maximum levels of air contaminants from motor vehicles is made under the Motor Vehicles and Road Traffic Act (2005) in Section 193; however, there are no regulations on fuel efficiency for new or used vehicles that can be imported to Saint Lucia. Import taxes are generally high: they include an import duty, an excise tax, service charge and VAT and in total can more than double the original invoice vehicle price. Since 2014 the import duty for electric and hybrid vehicles have been reduced to the range of 5% to 10% (it is 35% for conventional vehicles). As for the excise duty (which ranges from ECD 4,000 to ECD 6,000 plus 56% of the actual price for conventional vehicles depending on age, engine size and fuel type), for electric and hybrid vehicles it ranges from ECD 1,000 to ECD 6,000 plus 10% of the actual price, depending on the vehicle age and, in the case of hybrid vehicles, engine capacity. It is estimated that the incremental additional up-front cost of a sedan electric car is approximately USD 10,000. These tax incentives have not had much impact on consumers' choices, i.e. due to the fact that cheap imported second-hand vehicles get the lion's share of the car market and the lack of availability on the island for most electric and even hybrid models. Furthermore, consumers do not yet have awareness on the total cost of ownership of electric vehicles versus internal combustion engines, as local studies have not been undertaken. The aforementioned regulations will be reformed through the project, to further incentivize the uptake of electric vehicles and disincentivize the purchasing of internal combustion vehicles.

Vehicles are imported in Saint Lucia by official car dealers and by other importers who are generally based in Barbados, as a sub-regional hub. Official car dealers agree on selling targets with their providers (vehicle manufacturers or, more often, intermediary companies in charge of the whole Caribbean region).¹⁸ Other vehicle importers usually negotiate the vehicle purchase with dealers in countries with a larger market (e.g. Japan or the United Kingdom), with some uncertainty for the consumer about the ability of such distributors to provide spare parts and technical assistance when needed. Therefore, there is a mix of local actors and regional actors, with the latter offering an opportunity for a regional-wide

¹⁸ Interviews with the main car dealers in the country showed minimum interest of their providers to introduce EV in Saint Lucia. Nissan is prioritizing Barbados and Jamaica, Toyota is prioritizing Jamaica (as it owns the local dealer in that country); however, one of the local dealers (representing several brands: Suzuki, Mercedes, Audi, Chevrolet) was following EV progress carefully and well aware of the opportunities ahead. The first EVs introduced in the country by Italian cooperation had to be procured through an independent importer (Gearing Up, Ltd), which obtained them from a UK dealer.

effort to introduce EVs. CARICOM¹⁹ is actively engaged in this, implementing the Technical Assistance Programme for Sustainable Energy in the Caribbean (TAPSEC) Project, and now preparing a Regional Electric Vehicle Strategy (REVS) through a Regional Electric Vehicle Working Group and in partnership with its Caribbean Center for Renewable Energy and Energy Efficiency (CCREEE). Within these regional initiatives, it has been stated that the higher upfront costs of EVs are compensated by lower maintenance costs and fuel savings, considering the relatively high fuel prices in the region. Saint Lucia is fully aligned with these regional initiatives. However, the experience (including the 2014 tax rebate for EVs) shows that most consumers in the region cannot afford such higher upfront payment costs and those that can afford it prefer to purchase a bigger conventional car. Thus the current offer of EVs is not well aligned with the Caribbean consumers' financial capacities and preferences. Furthermore, consumers are likely to be concerned about the ability of car dealers and importers to provide adequate EV maintenance. The project in Saint Lucia will address these questions, working with all the stakeholders, liaising with regional initiatives and developing adequate arrangements for maintenance and warranty at the procurement stage.

The 2004 Saint Lucia Solid Waste Management Authority Act (Cap. 6.10) established the Saint Lucia Solid Waste Management Authority (SLSWMA), and provides for waste management planning, licensing of facilities including waste haulers, regulation of operations, and for powers of authorized officers. Under article 38 of this Act, the owner of a derelict vehicle is expected to take it to an approved landfill site or to other site approved for its management. However, SLSWMA stated in its latest published annual report (Annual Report, 2014) its lack of capacity to enforce regulations on derelict vehicles, and the situation has not improved since then, in accordance with the information gathered during project design interviews and a recent assessment of the World Bank²⁰ (see description of output 4.1 for further details). In 2016, a Waste Management Strategy was prepared with UNEP support, but this strategy has not been implemented. There are no regulations regarding EV or EV-batteries. For e-waste management,²¹ the management system is of a basic level. As of 2017 there were four e-waste recyclers in St. Lucia, collecting and exporting e-waste without recycling it, (i.e., mostly packing e-waste as received for exporting to overseas refineries, mainly in China and Canada). Thus, the e-waste value chain in St. Lucia is basically limited to collection, storage and exportation. To some extent, this makes sense, as the volumes of e-waste are small and do not justify further treatment in such a small market.

Baseline scenario – policies and strategies

Saint Lucia completed its Third National Communication on Climate Change in 2017, which informed on mitigation measures on electricity generation and transportation, such as taxation and subsidies to encourage efficient vehicles, improvement and expansion of public transit and mandatory efficiency standards, improved traffic management, vehicle maintenance programs, road charges, and ferry transport as an alternative to intercity road travel. This document follows the previous Second National Communication and the Nationally Determined Contributions (NDC) communicated in 2015, in which the government set the ambitious goal to reduce GHG emissions by 16% (121 Gg CO₂e) by 2025 and 23% (188 Gg CO₂e) by 2030 against business as usual projections. Actions similar to those included in the Third National Communication regarding renewable energy (with a 35% target by 2030 and 50% by 2050), and transportation (vehicle efficiency and improved and expanded public transport) were included in the NDC.

In this context, the country has made efforts in recent years to adopt strategies to reduce GHG emissions in its energy sector, particular on transport and electricity generation. Its 2008 Saint Lucia National Vision Plan²² focused on large scale tourism development and the corresponding route network upgrading to cope with high traffic volumes. It has been recently revised in what refers to Castries by a new approach integrating sustainability concerns: Castries Vision 2030.²³ Similarly, the lack of a transport plan or policy will be addressed through the formulation of an *Integrated, Sustainable*

¹⁹ Julliard, Y (2015), GIZ REETA – CARICOM: Electric Mobility Solutions in the Caribbean.

²⁰ World Bank (2019). Saint Lucia Solid Waste Management Sector Assessment.

²¹ CTMG, 2017, E-waste management policy and regulatory framework for Saint Lucia, <https://www.itu.int/en/ITU-D/Climate-Change/Documents/E-waste%20Management%20Policy%20and%20Regulatory%20Framework%20for%20Saint%20Lucia.pdf>

²² Provided by the consultant IDEA in 2008.

²³ D'Hondt, F & Wells, H (2019). BEYOND THE PLAN: Building In-House Capacity to Plan, Design and Implement Urban and Territorial Transformations, Case of 'Castries Vision 2030'. 55th ISOCARP Congress.

Road Transport Policy and Strategic Roadmap for Implementation, focusing on infrastructural aspects.²⁴ In the energy sector, a roadmap (*Developing the Saint Lucia Energy Roadmap*) was completed in 2016,²⁵ and was followed by the *Saint Lucia National Energy Transition Strategy and Integrated Resource Plan*²⁶ (NETS), completed in 2017, and the subsequent opening in 2018 of the first utility-scale solar power plant in the country (3 MW). The NETS presents a five-year plan of cost-effective energy efficiency programs, renewable energy integration and energy storage investments to set Saint Lucia on a pathway to meet its energy transition goals. Several projects in the expansion of renewable energy have been implemented or are in the pipeline – particularly on geothermal and solar energy.

Baseline projects

Plans and projects regarding e-mobility have also been drafted in recent years. In 2015, Siemens supported the Government in preparing an inception report for a project on “*Electric Mobility Solutions in the Caribbean*”, but the project did not materialize. The Rocky Mountain Institute (RMI), within the Islands Energy Program and with United Nations Development Programme (UNDP) and GEF support, completed in 2017 the *Saint Lucia Government Electric Vehicle Study*, identifying 131 vehicles within the government’s fleet as suitable to be replaced by electric vehicles, on the grounds that the fuel saving costs they would provide would compensate their higher capital cost. This was complemented by three electric cars donated by the Government of Italy, which are currently being used by the Government of Saint Lucia. Additionally, the Caribbean Community (CARICOM) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), with other partners, have undertaken the preparation of a project to support the implementation of the NDC measures in several Caribbean countries, including Saint Lucia. The project is called: “*Implementation of transport & energy contributions in the Caribbean (ITECC) - transforming the energy and transport sectors towards a low-carbon and climate-resilient future.*” The CARICOM/GIZ pilot in Saint Lucia foresees to build upon the previous studies of the government’s fleet to support its electrification; it would focus on the deployment of charging stations, providing complementarity with the World Bank’s activities in Saint Lucia through the Energy Sector Management Assistance Programme (ESMAP). The proposal has been submitted to the German International Climate Initiative (IKI) and is estimated to commence in 2021.

These initiatives have consolidated a long-term commitment of the Government of Saint Lucia with low-carbon energy and mobility, and provide excellent complementarity with this project in two key dimensions: first, the transition of the country’s electricity generation system towards renewables, without which the GHG mitigation potential of e-mobility would be significantly reduced. Second, the sustained commitment of the government of Saint Lucia in the electrification of its fleet, beyond the niche vehicle category and service requirements addressed by the project.

The St. Lucia Electricity Services Limited (LUCELEC) is operating the first solar farm in Saint Lucia, with an installed power of 3 MW. The GoSL in partnership with LUCELEC also envisages to build a 10 MW solar power station in Troumasse, for which it has received a USD 15 million loan from the IRENA/ADFD²⁷ Project Facility in January 2020. The UAE-Caribbean Renewable Energy Fund also envisages to fund a 750 kW carport, close to Hewanorra International Airport, providing rapid charging to EVs (included as project co-financing). Furthermore, there is also a 12 MW wind farm project in Anse Cannot, Dennery, which is in the pipeline. These initiatives are expected to reduce the grid emission factor, estimated in 2014 at 0.78 kg CO₂/kWh²⁸.

LUCELEC has received approval from the Development Control Authority of the Ministry of Planning for the installation of 5 additional electric vehicle charging points across the island. These will be fast-charging 7.4 kW single

²⁴ Initially intended to be undertaken in 2020, the process to initiate the work has been put on hold due to the COVID-19 pandemic. It is intended that this work will be re-initiated in 2021. This document is expected to focus on road improvements, new roads, and other additional infrastructure (bike parks, car pool lots, bus terminals) with a multimodal focus. It will also cover freight transport and logistics, but it will not address the reform of the reorganization and delivery of public transport services.

²⁵ Torbert, Roy, Kaitlyn Bunker, Stephen Doig, Justin Locke, Stephen Mushegan, Siana Teelucksingh. *Developing the Saint Lucia Energy Roadmap*, Rocky Mountain Institute, 2016.

²⁶ With the support of the Rocky Mountain Institute (RMI), the RM-CWR Islands Energy Program, the Clinton Foundation, LUCELEC and DNV-GL.

²⁷ International Renewable Energy Funding (IRENA) and Abu Dhabi Fund for Development (ADFD).

²⁸ OLADE (2014). Saint Lucia Energy Balances 2010-2012: <http://biblioteca.olade.org/opac-tmpl/Documentos/old0332.pdf>

phase points (240 V, 2 x 32 A sockets). Four of them have already been installed, although are not operational yet (at Groo Centre –Dennerly, Old Trafford Bus terminal –Soufriere, Vieux Library – Vieux Fort and JQ Mall – Rodney Bay – Gros Islet). The other two will be installed in Castries, at Massy Mega (Choc) and Massy Stores (Cul de sac). All these charging ports will be grid connected, including those installed together with solar carports; therefore, the energy use will be reduced by the installed renewable energy supply. Through the NETS and the NDCs the Government is also working to increase renewable energy penetration in the grid (as noted previously).

It is worth noting that Saint Lucia's local context also provides unique conditions well-suited to the use of EVs, as the size and geographical characteristics of the island make range constraints and charging infrastructure more manageable than in most countries. This proposed GEF project, with the support of the global program, will build upon the assessment on electrifying government vehicles previously carried out by the RMI and will review and enhance supportive policies, implement demonstration projects and prepare for upscaling and replication to accelerate the introduction of electric mobility in Saint Lucia, thus reducing air pollution and GHG emissions.

3) Proposed alternative scenario with a description of project components, outcomes, outputs and deliverables

The project's objective is to accelerate the introduction of electric mobility through capacity-building and electric vehicle demonstration and to prepare the country for scaling-up and replication through the development of electric mobility policies, business models and finance schemes. It aims at creating the enabling conditions for the deployment of EVs in Saint Lucia's public and private fleets.

This project aims at the integration of electric mobility within a wider effort to work towards a sustainable, low carbon and resilient energy system in St. Lucia. It aims at working together with renewable power projects, since electric mobility is a key enabler for the integration of high shares of variable renewable power in Small Island Developing States. Deployed at scale, EVs can serve for load shifting or for electricity storage, both necessary for the decarbonization of the power sector in small islands with limited ability to use geographical variance of renewable power sources and no connection to regional power grids. The project aims at achieving an understanding that e-mobility in combination with decentralized renewable power supply will be key to improve resiliency of St. Lucia against extreme weather events and to reduce energy use and emissions from fossil fueled back-up power.

The project envisions the deployment of e-mobility in Saint Lucia as an opportunity to accelerate the transition towards both, sustainable mobility and a resilient, low-carbon energy system. In this sense, the project is well aligned with Castries Vision 2030, a spatial planning document for the capital approved in 2019 and aiming at revitalizing the city with a sustainability focus; transport plays a prominent role in this Vision, promoting sustainable mobility through projects such as sidewalk rehabilitation, pedestrianization of William Peter Boulevard, the construction of a road bypass to divert through traffic and the relocation of public transport terminals. The National Energy Transition Strategy is also well aligned with the project, as it calls for the sustained growth in the share of renewable energy and improved efficiency. In particular, the acceleration of the introduction of EV opens additional opportunities for the country to transition to a low carbon energy sector, coupling transport with the power sector in a variety of ways; once EVs become ubiquitous on the island, they can increase the resilience of the electricity system, moving towards a more decentralized renewable-based power generation, offering additional back-up storage capacity (reducing the need for diesel back-up power), and providing economic and GHG savings.

Component 1 strengthens institutions and coordination for facilitating the transformation to electric mobility, producing (1) a public transport policy and (2) an e-mobility strategy; the former will make it possible to create a framework in which EVs can play a role in increasing the quality and affordability of the public transport and taxi services in Saint Lucia, a necessary pre-requisite for e-mobility to be able to improve current service conditions; the latter will provide a consistent framework for stakeholders (car dealers, electricity providers, fleet managers and consumers at large) to take decisions within a well-defined environment in terms of charging infrastructure availability, guaranteed support services and regulations.

Component 2 will serve to demonstrate the feasibility of EV operations on the island, through the inclusion of at least 15 electric cars in the government's fleet and electric vehicles in interested private fleets, and the monitoring and subsequent dissemination of results among other public and private fleet managers, as well as public transport operators and taxi owners. It is expected that these activities will increase the interest and support among these stakeholders to electrify their fleets, and address myths and technical and management uncertainties still associated with EVs which are held by national stakeholders. The demonstration will provide evidence to better integrate the deployment of e-mobility with the expansion of renewables, and to evaluate the potential impact of vehicle-to-grid (V2G) concepts on the resilience of the system, and on the reduction of diesel back-up power needs in private and public buildings.

Component 3 will move one step forward, in order to mainstream EVs as a feasible option for a larger variety of potential users, by creating the appropriate financial schemes and business models to stimulate the availability of EVs in the national market, and an adequate array of incentives and support for early adopters. The project will work with EV manufacturers and dealers to allow for the selling of EVs in Saint Lucia.

Component 4 will complement the efforts of Component 3 by providing the necessary arrangements for adequate management of EVs at their end of life. It will start by strengthening the current framework for ELV management, as current regulation is insufficient to provide an adequate treatment and disposal of vehicles. It is foreseen that the introduction of a sound ELV management approach, putting the responsibility of ELV management on vehicle importers, will provide a stronger and more reliable framework in which the additional environmental challenges raised by EVs compared to conventional vehicles can be adequately addressed.

Capacity-building activities are foreseen in components 1, 2 and 4. In all cases, the project follows a "train the trainers" approach, in order to attain wide coverage with the limited resources available and undertakes an affirmative action policy to give priority to women in accessing these activities.

Component 1: Institutionalization of low-carbon electric mobility

Component 1 addresses the existing institutional barriers that restrict the introduction of EVs in Saint Lucia, with a focus on private and public fleets, public transport and taxis. The project intends to create an institutional body within the National Climate Change Committee (NCCC) in order to coordinate the relevant actions currently dispersed among the departments in charge of transportation policy, vehicle approval, energy efficiency, electricity market, climate change and waste management so that a consistent e-mobility strategy can be prepared, agreed and implemented by relevant stakeholders.

The strategy will also be consistent with a policy effort in the transportation sector to improve passenger mobility, prioritizing sustainable options, as a pre-requisite to electrification. The collection of reliable data of passenger transport demand and supply, to be updated periodically, is a key project contribution for the development of the strategy and the future development of sound transport policies and adequate monitoring of GHG emissions from transport.

Outcome 1: The Saint Lucian government enhances coordination, planning and capacity for promoting electric mobility.

Outputs:

Output 1.1: An inter-sectorial coordination body is established within the government.

The new coordination body will serve to develop the e-mobility strategy, and to coordinate the strategy's actions to be implemented by the different stakeholders; in particular, it will seek for consistency among the government's policies on transportation, energy, and climate change. This output engages all the governmental departments with competences in e-mobility. Additionally, it will engage private stakeholders in different ways, facilitating networking and knowledge-sharing among those interested in e-mobility. The coordination body's activities will facilitate awareness-raising in the country, and the implementation of the e-mobility strategy; the knowledge produced during the project (studies, workshop conclusions, data collection and analysis, training materials, interaction with the global project) will be disseminated through a national website platform under the responsibility of the coordination body. Key non-governmental stakeholders to be involved include car dealers

and importers, transport operators, large fleet managers, academia and civil society (including as related to gender). The following deliverables will be provided:

- D.1.1.1: Draft terms of reference and work plan for the body, with identification of all participating ministries and public institutions.
- D.1.1.2: Quarterly body meetings and reports from date of inception.
- D.1.1.3: Stakeholder consultation strategy presented for approval.
- D.1.1.4: Knowledge management and dissemination platform operational (information platform and website containing products including quarterly online workshops and quarterly position papers).
- D.1.1.5: Report with recommendations on the body's workplan and its sustainable operation (including the platform) after project completion.

Output 1.2: Sustainable Passenger Mobility Policy delivered for governmental approval.

The absence of a comprehensive mobility policy in Saint Lucia has led to the mass adoption of unsustainable options: the quality of public transport services is not attractive for those that can afford a private car, no matter how old or inefficient; most fleets include suboptimal vehicles in terms of size and performance (too big in the case of taxis and fleet cars, too small in the case of public transport), and large social groups have constrained mobility conditions. The Ministry of Infrastructure, Ports, Energy and Labour leads the development of transport infrastructure in the country, and is currently undertaking a series of investments to improve road quality and other supporting infrastructure. It also plans to initiate a process in 2021 for the formulation of an *Integrated, Sustainable Road Transport Policy and Strategic Roadmap for Implementation*. This policy will focus on infrastructure, continuing the Ministry's focus to date. The policy will focus on the identification of infrastructure needs to develop a multi-modal, integrated, sustainable transport policy, which makes provision for future road transport demands for Saint Lucia. It will focus on three main areas:

1. Establishment of a multi-modal transportation system that reduces reliance on any single mode of transport and encourages walking and cycling and promotes energy efficiency;
2. Movement of persons and goods efficiently and safely, and;
3. Promotion of public/private partnerships.

The policy will not focus on non-infrastructure actions and reforms necessary to make public transport services more convenient and desirable for citizens, and better aligned with the GoSL's energy-efficiency and climate-mitigation objectives. To address this gap, the GEF project will complement this policy by providing a detailed policy for reforming the public transport and taxi sectors. Through such efforts, it will create the pre-conditions in which EVs can become attractive for public transport service operators in a market that will stop shrinking and will regain users from private cars. The proposed policy will also provide non-infrastructure measures for the promotion of alternative sustainable transport modes (such as car-sharing). The development of the *Integrated, Sustainable Road Transport Policy and Strategic Roadmap for Implementation* was intended to occur in 2021 prior to the commencement of the GEF project. Due to the COVID pandemic, work to develop this policy has slowed. Consequently, the two policies will be developed in parallel, with the inter-sectorial coordination body (output 1.1) ensuring cohesion, complementarity and the building of synergies between the two policies. Both policies will support the reforming of incentives and the development of business models under component 3.

Output 1.2 will also support efforts to strengthen the availability of statistics and data on passenger mobility and its environmental footprint. Saint Lucia lacks mechanisms for data collection and monitoring of demand and supply in the passenger transport sector, which jeopardizes the design, implementation and monitoring of effective policies and regulations to promote sustainable mobility, including the use of electric vehicles. The lack of data also complicates the ability to monitor GHG emissions from transport and the impact of mitigation measures. Under this output, a review of the contents and organization of information and data management of public entities for the transport sector will be undertaken. Critical gaps will be identified and recommendations will be provided to address gaps. The information collected will provide the necessary foundation for the design of the *Sustainable Passenger Mobility Policy*. Besides the relevant governmental departments, this output will mobilize public transport and taxi associations and unions, as well as consumers' associations and other non-governmental organizations (NGOs). It will provide the following deliverables:

- D.1.2.1: Gender-sensitive data collection and analysis of passenger mobility demand.
- D.1.2.2: Study on sustainable alternatives for the public transport system and road safety, including gender analysis. The activity includes the collection of available passenger mobility data, with a focus on public transport (for example: km travelled, seats offered, fleet characteristics, passengers and passengers-km served, travel time variability and reliability), as a basis for the development of sustainable alternatives, as well as an assessment of the current and future necessities in terms of data management for transport institutions.
- D.1.2.3: Sustainable and safe passenger mobility policy including gender action plan. To be developed by the coordination body (output 1.1) in cooperation and under the supervision of the relevant transportation authorities. It will include quality improvement of public transport and taxis, and road safety challenges for sustainable transport modes.
- D.1.2.4: Recommendations for the improvement of passenger transport statistics and GHG monitoring to support, inter alia, the implementation of the mobility policy. Based on data collection and needs analysis undertaken in D.1.2.2, this activity will review international practices, and will provide recommendations regarding the regular collection of transport information and the implementation of adequate data collection protocols and systems, with a focus on public transport, as well as recommendations for the adaptation of existing data management systems available in the relevant institutions to integrate the additional information.

Output 1.3: National low-carbon e-mobility strategy delivered for governmental approval.

The strategy will provide the much-needed strategic framework for the action of the government, the public and the private sector and the individuals until 2030, so that all stakeholders can take their decisions concerning e-mobility with a reasonable confidence about the future environment. It will also serve as a key input into the development of the national long-term low greenhouse gas emission development strategy to be developed and submitted to the UNFCCC secretariat²⁹ and other long-term development and transport plans. The activities will build upon the sustainable passenger mobility policy in output 1.2 to develop the contribution that e-mobility could provide to sustainable passenger mobility. To produce this strategy, the project will build upon the different documents already prepared for the government in recent years, such as the Saint Lucia Energy Roadmap (RMI, 2016), the 2017 NETS and various e-mobility studies, so that the introduction of EV is consistent with the expansion of renewables. Furthermore, the National e-mobility strategy will provide a vision on the long-term role of EVs in a low carbon energy sector, their contribution to gain resiliency in combination with decentralized renewable energy generation and their potential to reduce dependency on diesel back-up power. Besides the relevant governmental departments, this output will mobilize a wide variety of public and private stakeholders (electricity providers and professionals, car-dealers and maintenance professionals, fleet managers, financial sector), as well as political stakeholders, civil society associations and the public within a collaborative policy design approach. The e-mobility strategy will follow an approval process similar to NETS, with three ministries (MEIGRSD, MIPEL, MEDHURTCA) preparing the final document with the project's support and submitting it to the Cabinet of Ministers for adoption.³⁰ LUCELEC is expected to play a key role in this output, as it has started to deploy charging stations in the country and is likely to become one key provider of these services in the future. This output will provide the following deliverables:

- D.1.3.1: Gender-sensitive fleet electrification feasibility analysis: public and private fleets, public transport.
- D.1.3.2: Study on the integration of renewable power and e-mobility in the energy system. It includes good practice recommendations to benefit from the synergies between RE expansion and e-mobility deployment; these recommendations may include contingency plans for RE plants and design recommendations for ensuring resilience.

²⁹ Saint Lucia is at a preliminary stage of consideration of the development of the long-term strategy. Timing and proposed delivery date are still to be confirmed.

³⁰ The NETS approval process included the review of the document delivered by the consultants and the preparation of a Cabinet memo by the relevant Government Agency. The Cabinet reviews and can request a presentation by the Government Agency before approving the document.

- D.1.3.3: National charging network analysis: Impact analysis on the electricity sector and deployment of charging points. This analysis includes the consideration of the vulnerability to extreme weather events and the adoption of the necessary adaptation measures to ensure a resilient charging network.
- D.1.3.4: Draft national e-mobility strategy (including gender action plan) circulated for stakeholder consultation and validated.
- D.1.3.5: Final national e-mobility strategy (Vision 2030) submitted for government adoption. This includes technical assistance to support the ministerial units in submitting a final version for adoption by the Cabinet of Ministers.

Output 1.4: Key public and private stakeholders trained on e-mobility technologies, including through the global program on e-mobility.

The project will cover under this output the initial capacity-building needs on e-mobility to make sure that key governmental officials and actors in the public and private sectors receive sufficient technical and legal training on e-mobility to be able to undertake the activities in the other project components and to assure the sustainability of the e-mobility strategy beyond project completion. This output will target public and private decision-makers with a *train the trainers* approach to maximize impact, and will address human resource development as well as organizational and institutional aspects. Professional technical e-mobility training targeting job-seekers and employees in the transport sector is provided for in component 2 (see output 2.3). This output will draw upon the capacity-building activities organized within the Global Program, in which Saint Lucia will participate, particularly in the Light Duty Vehicles (LDV) Working Group. Saint Lucia will join the regional platform established by the Global Program for Latin America and make use of the services provided, especially the *E-mobility workplace*, through which contacts with global technology providers and original equipment manufacturers will be facilitated. Furthermore, the regional platform will gather GEF-7 participating countries, like Antigua and Barbuda, Grenada, Jamaica and Saint Lucia and with common needs and manage them through customized activities. Where needed, trainings and workshops will be developed at sub-regional level for the Caribbean SIDS. Saint Lucia representatives who participate in the global programme will channel global and regional experiences, good practices and lessons-learned to the training activities at the national level, which will be provided to a larger and broader group of local stakeholders. For further information, see section 1.D. Child Project. This output will mobilize, besides the stakeholders involved in the preparation of the e-mobility strategy, local educational institutions with the ambition to establish a permanent component on e-mobility within technical curricula offered by higher education institutions in Saint Lucia. It will provide the following deliverables:

- D.1.4.1: E-mobility communication plan completed and implemented (the website referred to in 1.1.5 will serve as the key channel for the communication plan). It will address educational centers and the public to foster the use of EVs, and will identify capacity building needs.
- D.1.4.2: Capacity-building materials targeting decision-makers and other government officials.
- D.1.4.3: Training activities on sustainable transport and e-mobility policies, standards and regulations, addressing civil servants, and public and private decision-makers, including activities and lesson-sharing exchanges within the global e-mob programme.
- D.1.4.4: Knowledge management guidelines and training materials addressing electricity and transport specialists.

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

The project demonstration intends to provide first-hand evidence to fleet managers, government officials, key transport stakeholders and the general public about the performance of EVs in the particular context of Saint Lucia. EVs are already used in a variety of sectors around the world, including public and private fleets, public transport services, taxis, and by individuals. These experiences show the need to properly identify those mobility needs where the characteristics of EVs can be put to work to the advantage of their users. In the case of Saint Lucia, the project is building upon the assessment undertaken in 2018 by RMI and other partners to shift 131 vehicles of the governmental fleet to electric. The study found that electrifying selectively the fleet would reduce not only operational costs but also fleet emissions by 82% (RMI, 2018). Under the project, the electrification of a fraction (at least 15) of these vehicles will be financed by the project, on an incremental basis (i.e. the project will cover the extra cost of the EV compared to a similar internal combustion engine (ICE) vehicle). This will serve to mobilize the governmental services and the private sector to establish the appropriate

procurement documents, to undertake the necessary staff training and to implement the necessary charging infrastructure. Additionally, the MRV system will serve to improve the fleet management practices within the government and to raise awareness, reaching out to the private sector, and to vehicle dealers and importers. The project will ensure that the government fleet EVs will be highly visible and that the required additional charging infrastructure is publicly accessible. It will align with and be complementary to co-financed initiatives under the project “*Implementation of transport & energy contributions in the Caribbean (ITECC) - transforming the energy and transport sectors towards a low-carbon and climate-resilient future*” financed by the German government.

Outcome 2: The Saint Lucia government gains confidence in using electric vehicles.

Outputs:

Output 2.1: MRV system to track demonstration performance is implemented.

This output includes the general design of the demonstration and the subsequent preparation of a monitoring, reporting and verification (MRV) plan. It will mainstream gender considerations, based on output 1.2. The engagement of car-dealers during the design stage is expected to facilitate the subsequent procurement of the vehicles to be included in the demonstration, as well as the scaling-up of the project. The evaluation of the demonstration and the subsequent recommendations provided by this output feed into outputs 1.3, 3.1 and 3.2, which creates the conditions for the long-term scaling up of EVs in Saint Lucia (e.g. making use of tracking and energy consumption tools implemented in the pilot). This output will engage the providers of the EVs, the car fleet managers in which the pilots are conducted and the local academia; the analysis of the information, collected through GPS tracking, will also serve to improve the performance of the fleet managers involved. This output will provide the following deliverables:

- D.2.1.1: Demonstration design, including its monitoring, reporting and verification (MRV) plan.
- D.2.1.2: Evaluation report and knowledge management of demonstration (to be included in the website referred to in 1.1.5). Monitoring data will be recorded by the beneficiaries on a weekly basis, as part of their commitments to receive the project’s contribution to the procurement of the EVs, and reported every month to the project CTA. Monitoring data will include energy consumption, GHG emissions and energy savings as well as savings in the emissions of air pollutants, and will monitor some ICE cars in the same fleet for comparison.

Output 2.2: Demonstration of at least 15 electric vehicles in public and private fleets conducted and new charging infrastructures installed.

The demonstration will include electric cars replacing conventional ones in the governmental fleet, as well as EVs from private fleets (such as those from major retailers and couriers, see box 1). All participating partners will benefit from the project MRV system and communication campaigns, and will receive financial support to cover the incremental EV costs. It is estimated that the cost of an electric sedan car will be USD 40,000, of which approximately USD 30,000 per car will be provided by the beneficiary (this is the cost of a similar ICE sedan car) and the remaining approximately USD 10,000 (i.e., the incremental cost) by the project. The Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service, which is responsible for public procurement, has committed direct co-financing of USD \$ 340,278 for the purchasing of at least 10 sedan vehicles for output 2.2, with the project to cover the incremental cost to ensure all 10 vehicles are electric.³¹ Private sector actors, such as the Massy Group Ltd., have expressed interest to also participate in the project, ensuring that at least 15 vehicles are demonstrated in public and private fleets as part of the output. Private sector commitment will be confirmed during project execution, as the first public purchases through the Ministry will play an important role in building local momentum and taking initial steps to establish a local supply chain. Incorporating the Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service’s co-financing commitment of USD 340,278 and private sector commitments to be mobilized during the project, it is expected that the total investment mobilized for the project will be at least USD 430,000.³² This will be mobilized over the three years of the project.

³¹ Based on approximate costs of conventional sedan and electric vehicles, it is estimated that the Ministry’s contribution will cover at least 12 vehicles.

³² This will be monitored through the project M&E system and also through the MRV system of output 2.1.

The Department of Finance of the Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service will be the primary implementing partner for the procurement of the electric vehicles. It will directly procure the electric vehicles to be included in the government's fleet, and will launch an open request for proposals to provide the incremental funding to those companies (such as the Massy Group and FedEx) willing to add electric vehicles to their fleets, under the commitment to run them for a minimum mileage and to include them in the project's monitoring scheme. The vehicles will be purchased by the beneficiaries and will remain in their fleets as an asset after the end of the project.

During the project, participating partners will be supported by the project in order to mainstream gender and to attain the project's targets regarding female participation in the demonstration. In the case of the government's fleet, the EV procurement process will provide information to support the development of business models and financial schemes under output 3.2, so that the reduced operating costs of EVs can be capitalized to purchase additional EVs in the future (i.e. the units receiving EVs will also see their annual assignments for fuel and maintenance reduced, so that these resources can be channeled to the purchase of additional EVs for other administrative units; similar schemes will be analyzed with the participating private fleets). The use of the EVs (mileage) will be maximized by introducing a modern fleet management concept, and exploring the possibility that each vehicle is not assigned to a single driver, while respecting COVID-19 restrictions. Finally, besides the charging points installed at the governmental fleets' depots, LUCELEC and other project partners will install public charging points in the country at their own expense (additional investment mobilized, which will also be tracked), providing alternative charging to the project's fleet and increasing the visibility of the project. These charging stations will be connected to the grid, with the renewable energy projected to provide up to 30% of total electricity in the next five to ten years (see section 2 for further information). This output will include the following deliverables:

- D.2.2.1: Demonstration plan, including selection of car fleets participating in the pilot demonstration, technical characteristics of electric vehicles and charging stations, locations of charging stations, and workplan for successful implementation of the demonstrations. The plan includes a vulnerability study of the locations selected to install the charging stations. If necessary, the installation of grid-interactive renewable energy systems at the pilot's vehicle charging locations will be assessed.
- D.2.2.2: Procurement of pilot vehicles including technical support. Resources will be transferred to the Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service to cover the incremental cost³³ of EVs included in the demonstration compared to a conventional vehicle of similar performance, and the cost of low-charging infrastructure, if needed. The procurement process will also include the minimum technical requirements to the suppliers in order to cover maintenance needs and costs during the demonstration.
- D.2.2.3: Procurement and installation of charging points for the government fleet. In accordance with the government's strategy on renewable energy, charging points will be connected to the grid.

³³ It is estimated that the final cost of a sedan electric car will be some USD 40,000, of which USD 30,000 per car will be provided by the beneficiary (this is the cost of a similar ICE sedan car) and the remaining USD 10,000 (i.e., the incremental cost) by the project.

Output 2.3 Professional training delivered (EV safety, driving and maintenance) and pilot results communicated to national and local decision makers and other stakeholders in Saint Lucia.

This output will provide professional training on EV driving and maintenance to ensure the successful demonstration as per output 2.2, targeting women and socially disadvantaged groups, as a way to empower them to access the new jobs that the deployment of e-mobility is expected to offer; it will build upon the training workshops already provided by the Energy Division (in the context of the current small pilot with 3 electric cars donated to GoSL) and will also train first-response/emergency services on the specificities of EVs. Where possible, the project will follow a *train-the-trainers* approach to maximize impact. It will also serve to disseminate the demonstration's progress and results, better informing decision makers and the society at large in order to encourage them to select the most sustainable options when choosing their vehicles. This output is expected to engage the local automotive sector, as well as the corporate fleet management community. It will be completed

Box 1. Description of demonstration of e-vehicles

The demonstration of e-vehicles will consist of the following elements:

- At least 15 electric light duty vehicles (LDV) in total.
- Government of Saint Lucia: replacing conventional cars in government fleets. Cars will be chosen to ensure frequent usage and visibility. Up to 10 slow level 2 charging points installed at the vehicle depots. Attempts will be made to ensure these are publicly accessible, where possible. The project will cover the cost differential of a conventional car of similar performance. The GoSL is prepared to obtain at least 10 vehicles, which cost estimates indicating that its co-financing contribution and the project support together will be able to cover at least 12.
- Private sector: the Massy Group will consider replacing LDVs it provides to charities by EVs. Slow charging points would be installed at the vehicle depots. LUCELEC will install fast charging stations at Massy Group store locations. Other private sector actors, such as the hotel sector, will also be mobilized during project execution, once the first public procurements have occurred (needed to build confidence and momentum for the private sector).
- Fast-charging stations. LUCELEC has already installed 4 fast charging points on the island, and will install at least 2 more fast charging stations in Castries area at Massy Group store locations.
- The UAE-Caribbean Renewable Energy Fund also envisages to fund the provision of a 750 kW solar carport, close to Hewanorra International Airport, providing rapid charging to EVs.

The Department of Finance will be the primary implementing partner for the procurement of the electric vehicles. It will directly procure the electric vehicles to be included in the government's fleet, and will launch an open request for proposals to provide the incremental funding to those companies (such as the Massy Group or FedEx) willing to add electric vehicles to their fleets, under the commitment to run them for a minimum mileage and to include them in the project's monitoring scheme. The vehicles will be purchased by the beneficiaries and will remain in their fleets as an asset after the end of the project.

The demonstration will be monitored for at least 18 months with GPS tracking and energy consumption recording. It is intended that savings in operating costs will be reassigned by the participating organizations and companies to the replacement of additional conventional vans and cars with EVs after project completion, so that a business model can be provided to support scale-up after project completion. After demonstration completion, the EVs in the government fleets will remain part of the government fleets.

through the following deliverables:

- D.2.3.1: Communication plan for the project demonstrations, including awareness raising actions addressed to the public.
- D.2.3.2: Communication materials on the project demonstrations, including materials for the general public, focused on raising awareness about the advantages of e-mobility as shown in the pilots.
- D.2.3.3: Training materials on EV and charging infrastructure technology and maintenance.
- D.2.3.4: Professional training activities on EV safety (emergency services), driving and maintenance.

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

This project component seeks to provide the enabling conditions for the broad and long-term deployment of EVs, by building upon the favorable institutional framework developed under component 1 and the evidence provided by component 2. It aims to establish the financial, regulatory and operational conditions for new and imported used EVs to be introduced in public and private fleets, public transport, taxis, and purchased by individuals. The regulatory and tax reforms, business models and financial schemes to be made available through the component will build and be aligned with the *Integrated, Sustainable Road Transport Policy and Strategic Roadmap for Implementation* developed by GoSL and the *Sustainable Passenger Mobility Policy* developed through output 1.2 and strategy developed under 1.3. These will also be informed by the monitoring and evaluation of the demonstrations (output 2.1).

This component provides direct support to scaling-up the project demonstration (Component 2) within and outside the government's fleet, providing the necessary support to other public and private early adopters. The incentives and business models developed within this component will provide a level playing field to EV car dealers and to fleet managers willing to benefit from the lower operating costs and higher reliability of EVs. The experience gained by the government, in combination with other project outputs, will empower governmental departments to engage with private and public fleet managers to discuss electrification options and will facilitate the design by early adopters of fleet renewal plans including EVs. Building upon the policies and strategies developed under component 1, public transport operators will obtain the necessary guidance and incentives to make use of EVs, instead of regular diesel buses. Furthermore, as governmental fleets test electric vehicles through a direct governmental co-financing in component 2, they will gather an understanding of the lower operational and maintenance costs. Incentives and business models developed under component 3 will support governmental agencies to replicate this experience and scale up the adoption of electric vehicles firstly in government fleets. With the positive experiences in the government sector, component 3 will also target car rental companies and the tourism sector, as a key secondary group of agents for change. Thirdly, through the development of the sustainable passenger mobility policy (component 1), component 3 will target the public transport sector and general consumers.

Through output 3.1 the project will support the Government of Saint Lucia in enhancing existing incentives and creating new ones for incentivizing the uptake of electric vehicles by private entities. Output 3.2 will consist of business models that are made available to the Government and key private actors, to support them in maximizing the benefits of the incentives, taking into consideration the different nature of financing an electric vehicle (e.g. through a consideration of the total cost of ownership). Focus will be on those user segments with higher potential to become early adopters in Saint Lucia, such as hotels and resorts, car rental companies, and the government and public transport and taxi operators. The development of both outputs 3.1 and 3.2 will take into account the experiences, good practices and lessons learned of other countries including through participation in activities and drawing upon services of the global programme (see section 1.D. Child project for more information).

Outcome 3: The Saint Lucian government takes action towards implementing an enabling environment and business models for promoting low-carbon electric mobility.

Outputs:

Output 3.1: Regulatory and tax reforms for the uptake of EV in Saint Lucia delivered to the government for approval.

In 2015, Saint Lucia implemented the Motor Vehicles and Road Traffic Act– Section 193, which makes provisions for establishing emission standards and maximum levels of air contaminants from motor vehicles. Based on this legislation, the project will propose comprehensive legislation on vehicle authorization and technical inspection establishing (1) future emission standards for motor vehicles (in collaboration with the Saint Lucia Bureau of Standards, including CO₂, as well as pollutants), converging with global practice; (2) inclusion of EV vehicles in the motor vehicle legislation; (3) periodic technical inspection. This legislative proposal will be complemented by one on vehicles taxes in order to link them to CO₂ emissions, to discourage the importation

of large, energy-inefficient and polluting vehicles (particularly second-hand) and encourage the purchase of EVs, with an assessment of the impact of electrification on fiscal revenues. Together, these regulatory and tax reform proposals consist of a key series of legislative measures to level the playing field for electric vehicles and incentivize their uptake, at the same time as disincentivizing the continued adoption of internal combustion engine vehicles. These will be aligned with and build upon the policy and strategy developed under outputs 1.2 and 1.3. The legislative proposals will also take into account the social impact of such legislation, with a particular focus on women and socially disadvantaged groups. Key stakeholders include the governmental services as well as car dealers and importers, financial and insurance institutions, regulators, and civil society. This output will be completed through the following deliverables:

- D.3.1.1: Regulatory proposal on vehicle approval and periodic technical inspection, including electric vehicles. Based on international standards, this deliverable will propose changes in current standards and regulations on the technical conditions for importing new and used vehicles in Saint Lucia, so that inefficient and high-polluting vehicles will be phased-out.
- D.3.1.2: Regulatory proposal on technical approval and installation of public and private charging stations.
- D.3.1.3: Regulatory proposal on public transport authorizations and concession contracts to improve quality and stimulate electrification.
- D.3.1.4: Tax reform proposal to facilitate fiscal stability while Saint Lucia transitions towards e-mobility.
- D.3.1.5: Stakeholder consultations on regulatory reforms.

Output 3.2: Business models, financial schemes and procurement guidelines for electric vehicle fleets and charging stations delivered to government and car dealers.

The dissemination of the factual evidence provided by the demonstrations will create more favorable conditions for EV adoption, and the project will undertake an assessment of the new opportunities for electrification, building on the aforementioned RMI study, with a focus on governmental fleets, rental car companies, the tourism sector and taxis. Without the financial support of the project, the procurement of EVs in these sectors will need to be based on alternative financial schemes (balancing the operational savings with the increased capital costs, developing alternative lending or leasing schemes adapted to the higher residual value of the vehicle, etc.) and car dealers' (and users') business models (e.g. to look for car dealers' alternatives to the loss of revenue from now less-frequent and cheaper maintenance operations). Car dealers and importers, as well as users, will be supported in the development of alternative business models for these vehicles. They, and the financial sector, will be the key stakeholders in this output, and the project will support their cooperation with the public sector through partnerships, to be defined within the coordination body (output 1.1). The development of these financial instruments will be aligned with and build upon the policy and strategy developed under outputs 1.2 and 1.3. The following deliverables will be provided:

- D.3.2.1: Scenarios on the potential of the electric vehicle market in Saint Lucia. Aligned with the market studies made in other countries participating in the global programme. A first scenario will be provided in year 1, as an input to outputs 1.2 (sustainable passenger mobility policy) and 1.3 (draft e-mobility strategy), and revised in year 2, taking into consideration the experience on the design of the demonstration. It will also provide guidance to rationalize the government's fleet in terms of size and technologies.
- D.3.2.2: Development of business models for electrification of public and private fleets in Saint Lucia. For the development of business models, car dealers and fleet managers will benefit from coaching and technical support from the project.
- D.3.2.3: Development of financial schemes to support fleet electrification.
- D.3.2.4: E-mobility recommendations and procurement guidelines to fleet managers published and disseminated. These recommendations will be published and disseminated through the platform established in component 1.

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

The environmental sustainability of e-mobility strongly relies on extending the lifespan of the batteries through second-life use, and assuring proper management of them, as well as of the other vehicle components at their end-of-life. Whereas

at the global level these challenges are being addressed by establishing alternative battery use and creating large recycling plants for adequate recycling of battery components, there are a few key challenges in Saint Lucia: first, the weak management system in the country for vehicles at their end of life, which implies that, in the absence of specific project action, the deployment of EVs could increase the current environmental hazards; second, the difficulties to effectively integrate Saint Lucia (due inter alia to the challenge of engaging not only car-dealers, but also importers), as well as the rest of the Caribbean region, within the global chains being established for recycling; and third, the difficulties to develop battery re-use options (and notably reuse as energy storage systems) in the country due to the limited integration of the electricity grid. This component addresses these challenges so that the ELV management system in the island is strengthened, the necessary burden is fairly shared by car-dealers and importers, and batteries and other EV components are managed following international best practice.

Outcome 4: The Saint Lucian government takes action towards implementing policy frameworks for ensuring the long-term sustainability of low-carbon electric mobility.

Outputs:

Output 4.1: Detailed analysis of current management of vehicles at their end-of-life undertaken and recommendations based on international best practice delivered to government for approval.

These project activities are a preliminary step to provide the necessary information for subsequently undertaking regulatory changes and sector reform. Derelict vehicles are ubiquitous in the island, in spite of the Saint Lucia Solid Waste Management Authority's (SLSWMA) efforts³⁴ and the regulations established in the 2004 Waste Management Act. In cooperation with SLSWMA and drawing on the on-going World Bank's study, the project will provide recommendations to improve ELV management and the recycling of vehicle components, with the involvement of the local recycling industry. The following deliverables will be provided:

- D.4.1.1: Assessment of local conditions and characteristics of ELV management.
- D.4.1.2: Forecast of ELV components generation, considering internal combustion and electric vehicles.
- D.4.1.3: Recommendations on ELV management in Saint Lucia, based on international best practice, submitted to the government for adoption. Including vulnerability assessment and guidance to ensure that extreme weather events and sea-level rises do not lead to increased contamination.

Output 4.2: Updated legislation on end-of-life vehicle management, including electric vehicles and second-life use of their batteries, delivered to the government for adoption.

As a follow-up to output 4.1, and in close cooperation with SLSWMA, car dealers and importers and the local recycling industry, the project will provide recommendations on end-of-life management of all vehicles, including EVs and their lithium batteries. Based on international best practice provided by D.4.1.3, the project will explore the feasibility of strengthening the responsibility of distributors in the ELV management system, so that EV car-dealers and importers will become responsible for end-of-life battery management. In cooperation with LUCELEC and the electricity regulator, the project will provide proposals for establishing a second-life program for EV batteries based on their use for flexible storage of energy. The following deliverables will be provided:

- D.4.2.1: Report summarizing international and regional regulations on ELV management, including EV components and second-life use of their batteries.
- D.4.2.2: Comprehensive review of existing and planned international regulations on second-life battery use and recommendations for the Saint Lucia context.
- D.4.2.3: Proposal for ELV regulation submitted to the government for adoption. This proposal, to be submitted to the government for adoption, will be aligned with national waste management priorities and will be developed in close coordination with the identified relevant private stakeholders.

Output 4.3: New business models, including the responsibility of vehicle distributors, delivered to the government and ELV management companies.

Building upon the regulatory recommendations provided in the previous output, the project will support SLSWMA, car dealers and importers, as well as the local recycling industry and LUCELEC in establishing

³⁴ World Bank (2019). Saint Lucia Solid Waste Management Sector Assessment.

financial schemes (to assure funding of ELV management operations) and business models (to help the sector to transition to the new framework) to consolidate sustainable ELV management. The project will provide a roadmap to the government to support its central role in the ELV management transition process, through the implementation and enforcement of the regulatory changes. The following deliverables will be provided:

- D.4.3.1: Screening and systematization of successful financial and business models on ELV components and second-life battery use.
- D.4.3.2: Development of commercially viable business models for ELV components and EV batteries, including cost benefit analysis estimating investment needs and financing schemes.
- D.4.3.3: Development of a roadmap on sustainable and commercially viable ELV and battery management submitted to government for adoption.

Output 4.4: Awareness and capacity of public, private and civil society stakeholders on management of electric vehicles at their end of life enhanced.

The activities to achieve this output aim at providing the necessary capacity building to all the stakeholders involved in the end-of-life management of batteries and other EV components, essential for the successful implementation of the roadmap delivered within output 4.3. Besides the involvement of all the stakeholders already identified in other outputs within this component (government, SLSWMA, LUCELEC, car dealers and importers), it will be necessary to mobilize the local academia, so that they can be able to provide ELV management training in the future. Surveys will be undertaken to check knowledge before and after training. The following deliverables will be provided within this output:

- D.4.4.1: Design and delivery of a training programme for policymakers and local academia, and available for wider dissemination. The programme will follow a *train-the-trainers* approach to maximize impact.
- D.4.4.2: Provision of technical and managerial support to producers and importers, with a focus on the local industry.
- D.4.4.3: Design and implementation of a national campaign to raise awareness among consumers.

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

This program is aligned with Objective 1 of the Climate Change Focal Area to “Promote innovation and technology transfer for sustainable energy break-throughs”, 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 GEFTF, LDCF, SCCF, and co-financing

The project is covering the incremental costs of barrier removal activities with the contributions of the GEF Trust Fund (GEFTF), which add to the activities and investments envisaged by the project partners (various Departments of the GoSL, in charge of Climate Change and Sustainable Development, Energy, Transportation, Finance, and Solid Waste Management, LUCELEC, UAE, car dealers and importers, couriers and retailers). GEFTF funds will serve to overcome the policy barriers by providing technical assistance and enabling participation and networking of the country in the global e-mob programme, as well as training and capacity building. GEFTF will also cover the incremental costs of the EVs to be used in the demonstration compared to conventional vehicles (although EV costs are decreasing, these vehicles are not readily available in Saint Lucia, making their procurement more expensive and cumbersome than in other countries). Furthermore, GEFTF will provide the technical assistance necessary to introduce the reforms required for the public transport sector to be enabled to make use of EVs, and to establish adequate financial and business models that will allow operators and users to access EV at reasonable costs once the demonstration and policy reforms improve the perception of local and international financial institutions towards the risks associated with the use of EV in Saint Lucia.

In addition, the support from the global e-mobility programme (including networking with the other projects in the Caribbean region, Antigua and Barbuda, Grenada and Jamaica, and with the rest of the Latin America and Caribbean region through a regional platform) is expected to serve to maximize the impact of the incremental financing provided by GEFTF, through the optimization of capacity building and knowledge management activities, bundling of EV procurement, provision of generic tools for business and financial modelling, etc.

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

GHG emission mitigation has been estimated by the UNEP Air Quality and Mobility (AQM) Unit using its GHG emission reduction calculation model. Full details are provided in Annex M. Based on official gross domestic product (GDP) and population statistics (available until 2017 and 2018 respectively), an approximate hypothesis has been established for future annual GDP and population growth.

The model 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 afterwards. In the baseline model, alternative technologies to ICE are not considered to enter the country before 2036. The electric mobility scenario considers that the introduction of electric vehicles (EVs) will start with the 15 electric LDV provided by the project in 2022. Direct GHG emission reductions are considered only for the lifespan (12 years) of these vehicles provided by the project.

An average LDV consumption of 0.14 kWh/km has been considered. As electricity in Saint Lucia is mostly generated from diesel plants, an average emission factor for electricity generation of 0.78 kg CO₂/kWh has been included.³⁵ This factor is expected to decrease by 20% in 2030 and by 30% in 2040, as a result of the implementation of the renewable energy strategy. Even under the initial unfavorable circumstances, EVs are able to provide specific CO₂ emissions (109 g/km) significantly lower than those measured in the government’s fleet.

As an influence of the project policies, it is considered that a progressive introduction of additional electric LDV will start in 2025 with a 5% share of the LDV sales in 2025, increasing by 2 percentage points per year afterwards (26% in 2036). The emissions avoided by these vehicles are used for computing the indirect benefits of the project. Other indirect emission reductions are due to the public transport policies developed by the project, which are expected to induce modal change from car use to public transport after project completion. These indirect emission reductions are estimated for a 15-year period after the beginning of the project. A causality factor of 80% 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.

GHG reductions and energy savings estimation for Saint Lucia	
Project information	
<ul style="list-style-type: none"> • Project duration: 3 years. Starting in 7/2021 and ending in 6/2024. • Time frame for indirect effects: 15 years. Starting in 2021 and ending in 2036. (Effects produced by policy developed during the project and coming scale-up projects). • Causality factor: 80 % 	
Total project emissions reductions, t CO₂	686,345
Total direct emission mitigation from demonstration projects, t CO₂	206,322

³⁵ Based on OLADE (2014), Saint Lucia Energy Balances 2010-2014. Accessed at <http://biblioteca.olade.org/opac-tmpl/Documentos/old0332.pdf>.

Primary direct emission mitigation (LDV passenger and commercial, considering end of life of vehicle as 12 years)	1,102 205,220
Secondary direct emission mitigation (policy measures)	
Total indirect emission mitigation, t CO₂	480,023
Total project energy savings, MJ	7,935,874,327
Total direct energy savings from demonstration projects, MJ	2,385,605,159
Primary direct emission mitigation (LDV passenger and commercial, considering end of life of vehicle as 12 years)	12,744,370
Secondary direct emission mitigation (policy measures)	2,372,860,789
Total indirect energy savings, MJ	5,550,269,168

7) Innovativeness, sustainability and potential for scaling up

Innovativeness:

The project deliverables provide technical, financial-management and social innovations:

- **Technical:** E-mobility is still incipient in Saint Lucia, with only a handful of vehicles and limited knowledge and awareness among stakeholders and users. The project will introduce in the country the EV and charging technologies at a wider scale, and will explore the use of EV in different services.
- **Business innovativeness.** The project will provide demonstration-based financial and business models to facilitate the transition of car dealers and users towards a global market increasingly dominated by EVs. In this new context, higher capital costs are expected to be balanced by lower operational costs, opening new opportunities (e.g. leasing could be a more interesting option than ownership for public and private fleets, the business model for car dealers would be less dependent on maintenance services and will consider the inclusion of new services, such as car-sharing based mobility services, fleet management services or battery leasing). The small size of Saint Lucia and the particular profile of its financial sector (including the expansion of credit unions and microfinance companies) requires the development of tailored solutions, to be provided by the project, such as the expansion of the car leasing market.
- **Environmental.** The introduction of an environmentally-friendly and commercially sustainable approach to ELV management is challenging in the current local context, as most of the manufactured products consumed in Saint Lucia are imported; the project provides a unique opportunity to modernize the waste management sector, to be eventually expanded to other products, such as electronic appliances. If successful, it will provide guidance to other countries heavily dependent on imports of manufactured products and to integrate small island countries in the global re-use and recycling chains associated to the expansion of e-mobility.
- **Social:** The project will provide regulatory reforms in the public transport and taxi subsector in Saint Lucia, necessary to improve its quality and coverage, and the mobility conditions of vulnerable groups and women, as well as to foster electrification in this subsector.
- **Governance:** The project will require strong cooperation from the government's departments in charge of transportation, energy, climate change, and waste management, formalized through a coordination body and opened to the participation of private stakeholders and the civil society. This is innovative in the Saint Lucian context, particularly in what refers to the transportation sector, and will provide an opportunity to strengthen synergies within the government.

Environmental Sustainability:

From an emission-mitigation perspective, the environmental sustainability of the project is strongly related to the ability of Saint Lucia to increase its share of renewables in energy generation, together with its ability to create a growing market for EV and to promote sustainable passenger mobility options. Since 2014, the GoSL has set ambitious targets for the share of renewables, subsequently confirmed in its Third National Communication, its Intended National Determined Contribution and its National Energy Transition Strategy. Although Saint Lucia is not on track to achieve the foreseen 35% share for renewables by 2025, it is working in the right direction with the active involvement of LUCELEC (which

is expected to continue playing a leading role in the national e-mobility strategy, the provision of public charging stations and the promotion of e-mobility after project completion) and the support of international institutions³⁶ in order to transition towards a sustainable electricity generation system. In that framework, the expansion of EV, fueled by the expected growth in EV manufacturing and decrease in battery prices, will pay off, resulting in more substantial GHG emission reductions. Global and regional trends on sustainable mobility and public transport improvement are expected to facilitate the GoSL's implementation of the Sustainable Passenger Mobility Policy provided by the project.

The project also supports the GoSL in establishing more sustainable passenger mobility policies, and more specifically to strengthen the public transport sector, so that it can provide higher quality services and entice citizens to use it rather than private cars. This would reduce the number of cars on the road and their associated GHG emissions.

From a solid waste management perspective, the project actively contributes to the correction of the currently unsustainable patterns in ELV management, so that the expansion of EV is undertaken within a context in which they do not become the source of additional environmental hazards. The project undertakes an integrated approach, targeting all vehicles and not only EV, as otherwise this would create an additional barrier to the latter compared to conventional vehicles. Accordingly, the project activities within component 4 are also effective in addressing these environmental risks, as discussed in the risk management section.

Sustainability of market development after the project:

Several project deliverables are expected to ensure the sustainability of market development:

- LUCELEC is expected to respond and consolidate the new market opportunities opened by the project, such as infrastructure charging or EV leasing concepts based on energy provision.
- Networking of private and public stakeholders will be continued after project conclusion with the provision of a work plan and a legal framework to facilitate the continuation of the cooperation of all project partners.
- Demonstrations and the development of business models will empower the more dynamic car dealers and importers in the island to include a growing number of EVs in their commercial offer, facilitating access to electric technology to those users better positioned to get advantage of the EV performance (high annual mileage, foreseeable daily mobility needs, or medium-to-large size fleets).

Furthermore, subject to its adoption by the government, the following project deliverables are expected to ensure the sustainability of market development:

- Investment in e-mobility will be facilitated by tax incentives and regulatory reforms, technology de-risking through capacity building and demonstrations as well as by the new financial models developed by the project.
- The e-mobility coordination body established by the project within the government's Climate Change Committee will steer the implementation of the e-mobility strategy, including expansion of EV in different submarkets.
- Policy reforms in the public transport and taxis subsectors will create the conditions to expand local demand at the expense of private car use, to facilitate the emergence of financially-stronger operators and to prioritize the use of EVs in the best suited service niches.

Potential for scaling-up:

The potential for scaling up of e-mobility after project completion is different from the various subsectors:

- Managers of public and private fleets can be expected to become keenly interested in including EVs in their fleets, due to barrier removal provided by the project (EVs more easily available on the island, incentives, technological de-risking, capacity building) and the availability of financing tools competitive with those of conventional cars. Considering the experience in other countries, the government exemplary role in the electrification of its fleet and the project activities, this potential is very high.
- The community of taxi operators is identified as a priority for the project. The project focuses on creating the enabling conditions for electrification in this sector (which implies a regulatory framework aware of the environmental performance of taxis, the use of smaller and newer vehicles and the provision of more affordable

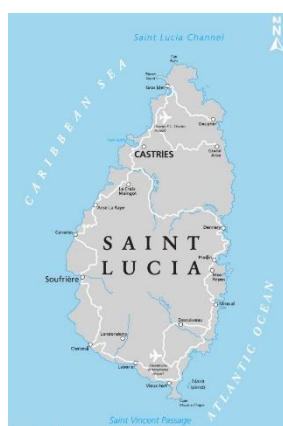
³⁶ RMI (2017). Saint Lucia National Energy Transition Strategy and Integrated Resource Plan, Rocky Mountain Institute, 2017. This Strategy considers it feasible to achieve the 35% target in the share of renewables by 2022.

services (e.g. para-transit, at least for locals). The prospects for the project to succeed in establishing these enabling conditions are high, considering the general dissatisfaction with current services and the government’s commitment.

- Similarly, the project’s approach to public transport focuses on creating the enabling conditions that will make it more attractive to users (increasing demand at the expense of private car use). To become technologically attractive, e-mobility requires that services in at least some public transport routes to be provided by full-size buses instead of the current crew or combi vans. This is also a prerequisite to improve the quality of service, as experienced in many countries, but has a strong impact on the companies and workers in the subsector. The project will provide support to the government in order to undertake the required public transport reform, but this effort will need to be followed by governmental decisions after project completion in order to open the public transport subsector to electrification.
- Although small passenger cars (under 2800 lbs.) still dominate the markets, small SUVs (up to 2800 lbs.) are becoming popular on the island among consumers. The project will support reforms in vehicle authorization legislation in order to avoid the importation of inefficient vehicles, particularly second-hand cars and SUVs. This will increasingly reduce the cost-differential between ICE vehicles and EVs. Furthermore, the motorization rate in Saint Lucia (260 vehicles/1000 inhabitants in 2018³⁷) has a strong potential to grow, and future governmental project campaigns will follow the project’s communication experience, encouraging consumers to choose energy-efficient vehicles, and those car dealers and importers more engaged with EVs will outreach to individual consumers, in order to expand their potential market.
- The financial schemes developed by the project will increase the interest of the local financial sector in financing the procurement of EVs, and will facilitate the implementation of sound financial incentives to targeted consumers, including less affluent ones.
- The business models developed by the project will support existing companies (car dealers, maintenance workshops, ELV management companies, public transport and taxi operators) and new entrepreneurs to competitively operate in this emerging market and benefit from its associated business opportunities.

As a consequence of the global e-mobility program and its regional platform, Caribbean countries may also strengthen their cooperation on sustainable mobility and EVs, eventually implementing market integration initiatives in the CARICOM framework to provide a more attractive market to global EV manufacturers.

1c. Project Map and Geo-Coordinates



Project activities will be undertaken at the island level and through-out the island. The location of charging stations will be determined during project implementation. Additional charging points will be provided within the UAE’s project on solar energy at the airport. LUCELEC is expected to provide additional charging points in other parts of the island.

Demonstration sites	<i>Latitude</i>	<i>Longitude</i>
Saint Lucia	13.9	-61.0

FIGURE 2: PROJECT LOCATION

1d. Child Project



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

³⁷ Own estimate, based on national fleet statistics

The Global Programme is based on the following four 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

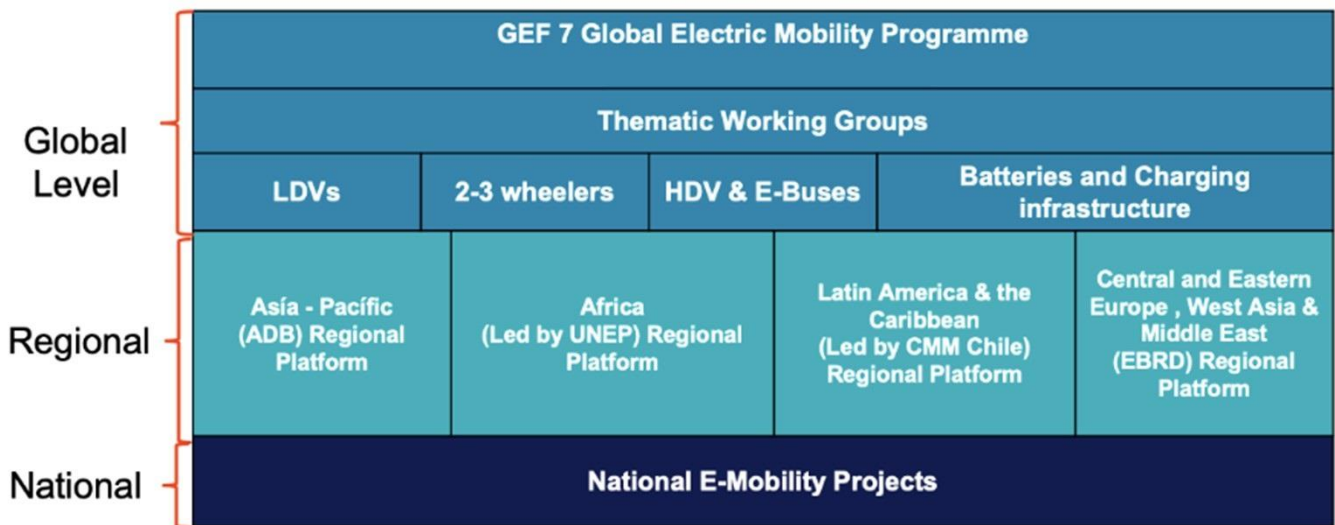
The Global Programme has put in place the monitoring framework below to track progress both globally and at the level of the country child projects. 12 indicators have been designed for this purpose: 6 relying on global level information (highlighted in blue) and 6 relying on country level information (highlighted in green).

Global E-mobility Programme Monitoring Framework			
 Global level monitoring		 Country level monitoring	
Objective level indicators			
Indicator A: Direct and Indirect Greenhouse Gas Emissions Mitigated (metric tons of CO2) mitigated			
Indicator B: Direct and Indirect energy savings (MJ)			
Indicator C: Number of direct beneficiaries (disaggregated by Gender)			
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 uptake 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.
Indicator 1.1 # of knowledge products developed by the four thematic working groups and used by the Support and Investment platforms in their training and outreach activities	Indicator 2.1 % of countries using services and knowledge products offered by the Support and Investment Platform	Indicator 3.1 % of countries with an improved institutional framework and a strategy to promote the uptake of low-carbon electric mobility	Indicator 4.1 % of countries generating and sharing best practices and other lessons learned on low-carbon electric mobility with the global programme
	Indicator 2.2 # of e-mobility scale-up and / or replication concepts facilitated as a result of the match-making	Indicator 3.2 % of countries with nationally generated evidence of the technical, financial and/or environmental benefits of low-carbon electric mobility	Indicator 4.2 # of e-mobility knowledge products refined based on evidence coming from the country projects
	Indicator 2.3 # of financial institutions / development banks (national/regional) that have been engaged through the Global Programme and are actively supporting e-mobility projects	Indicator 3.3 % of countries that have improved preparedness to accelerate market transformation towards low-carbon electric mobility	Indicator 4.3 # of non-e-mobility programme countries committing to actively promote the uptake of low-carbon e-mobility
	Indicator 2.4 # of US\$ leveraged to scale-up low-carbon electric mobility through the support and investment platforms	Indicator 3.4 % 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, CRUSA, the executing agency, will be requested to report against the indicators of the country Project Results Framework (Annex A) on an annual basis, during the PIR process, in addition to the usual GEF Core Indicators (mentioned at the top of the table above).

At the global level, a steering committee led by 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.



Governance structure between the global programme, the national e-mobility projects, and the regional Support and Investment Platform:

The coordination between the global program, the steering committee, the thematic working groups, and the national projects will be facilitated by the regional Support and Investment 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 4 Support and Investment 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 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 Support and Investment 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.

The project in St. Lucia will benefit the Regional Support and Investment Platform and the Global Programme through its five key elements:

1. Platform. Information on the St Lucia project’s experiences, good practices and lessons learned will be stored on an online toolbox that will act as repository of knowledge products, as key information for the consideration of other countries and actors in the region and beyond. Such information will be publicly available on the platform

and also diffused through reports, flyers, presentations, webinars and social media content developed by the regional and international programme teams.

2. Community of practice and task teams. Tasks teams on LDVs, batteries, and charging infrastructure will draw on the experiences, good practices and lessons learned from St Lucia, supporting them in developing recommendations for other countries in the region and beyond.
3. E-mobility marketplace. St Lucia's experiences in engaging with electric vehicle suppliers and financial institutions will support regional marketplace activities by encouraging such actors to participate in marketplace activities. Furthermore, such private sector experiences will be shared with other private sector actors in the Caribbean as a way of encouraging them to also participate in the scale up of electric mobility through learning from the experiences of others.
4. Regional e-mobility training. The development of training curriculum will draw upon and be updated based on the experiences, good practices and lessons learned from the St Lucia national project.
5. Help desk and onsite / virtual meetings. Similarly, the help desk will draw upon and continue to improve its support services based on a dynamic consideration of the experiences, good practices and lessons learned from the St Lucia national project.

St Lucia will concretely benefit from the global thematic and regional support and investment platforms in the following way:

1. Platform. The platform will serve a function for St Lucia in two ways. On the one hand, it will support the country to access international best practice knowledge products, developed by the Global Thematic Working Groups, that it can draw upon in designing and executing project interventions. On the other hand, it will support St Lucia to disseminate to a broad Caribbean regional and international audience its ambitious advances on electric mobility, creating a positive political feedback loop that will encourage it to further advance and accelerate efforts.
2. Community of practice and task teams. The community of practice will bring to the forefront the main barriers being faced to develop and scale-up e-mobility projects in the region as well as the main lessons learned for successful execution of these initiatives. The community of practice will create task teams on LDVs and batteries that will support St Lucia to identify good practices in the undertaking the detailed pilot design (component 2) and enhancement of business models for scaling up electric vehicles (output 3.2). They will also support in providing input on effective design of updated legislation on end-of-life vehicle management under component 4.
3. E-mobility marketplace. The marketplace will play a key role in supporting St Lucia to scale-up its interventions on public procurement of electric vehicles. These events will serve as opportunities for the country to share information on its interventions and connect with private sector actors interested in building upon the project pilot's to take it to the next level, including developing business models under output 3.1.
4. Regional E-mobility Training. The platform will support St Lucia to develop capacity and strategies to plan the pilot project and the large-scale market introduction of electric vehicles. In the first training, experts from the electric light duty vehicle working group will be invited to train the country stakeholders on the requirements and considerations of developing demonstration projects, including as related to accompanying policies and standards. The second training will focus on the challenges and issues to be considered when operating and maintaining EV fleets including grid integration, state of health of batteries and their second-life use, disposal and or recycling, especially important for component 4.

Help desk and onsite / virtual meetings. At St Lucia's request, a help desk will support the country to develop any aspects of the project. This may include pilot design, policy analysis, identification of techniques on stakeholder consultation, and enhancement of financial instruments. Moreover, at the country project team's request, the platform staff will plan onsite

or virtual meetings with the country teams to take stock of progress, help with initiating and planning the pilots and providing technical support as required by local stakeholders.

2. Stakeholders

The Stakeholder Engagement Plan (SEP) is designed to ensure effective engagement of all relevant stakeholders throughout the project lifecycle in Saint Lucia. This plan builds upon the interviews and workshops conducted during project preparation. The project will aim at maintaining fluid and two-way dialogue with the relevant national and local government institutions and agencies, the private sector, and civil society for national activities, as well as with local and international NGOs, the international community and other participating countries at the global programme level.

Legal requirements for public consultation in Saint Lucia

For this project, public consultation will follow any relevant national guidelines and the GEF Guidelines,³⁸ which require that all GEF-funded projects meet best international practice and specifically the requirements for stakeholder engagement and public consultations. The project stakeholder engagement activities will be robust, and disclosure of information will be made in order to promote better awareness and understanding of its strategies, policies and operations. During disclosure, the project will: (1) identify people or communities that are or could be affected by the project as well as other interested parties; (2) ensure that such stakeholders are appropriately engaged on environmental and social issues that could potentially affect them, through a process of information disclosure and meaningful consultation; and (3) maintain a constructive relationship with stakeholders on an on-going basis through meaningful engagement during project implementation. The stakeholder consultations will be an on-going process taking place during the project life and will ensure that stakeholders are informed about environmental and social consequences of the project implementation and ensure the opportunity for feedback.

Identification of stakeholders for engagement and methods of communication

In order to ensure inclusive participation and consultation, the following stakeholders have been identified for consultation. The list includes the identified social groups that are associated with the project in different ways: those directly or indirectly engaged in the outcomes of project implementation; those directly or indirectly participating in the project, and those with a capacity to influence and decide on project implementation and outcomes.

- National government. The Department of Sustainable Development (DSD), the Ministry of Infrastructure, Ports, Energy and Labour, through its Renewable Energy, Public Utilities Division and Electrical Departments, and the Department of Economic Development, Civil Aviation and Transport through its Transport Division have prioritized e-mobility within their policies to reduce climate change emissions and increase energy efficiency in the transport sector. Other ministries identify some opportunities, such as urban development regulations (Ministry for Economic Development, Housing, Urban Renewal, Transport and Civil Aviation). The National Utilities Regulatory Commission (NURC) is in charge of the regulation of electricity supply services in Saint Lucia pursuant to the National Utilities Regulatory Commission Act of No.3 of 2016.
- The local government of Castries is engaged in implementing, in partnership with the national government, its strategic plan “Vision 2030”, which includes actions for the improvement of the public space, including public transport stops, and the mobility conditions of non-motorized transport modes.
- Public Transport Route Associations and National Council on Public Transport (NCPT). These are the key partners in the project effort to improve public transport quality and to introduce larger buses, where EVs can be a feasible alternative. These partners are expected to be interested in improving public transport quality to attract more customers, and in knowing EV as an emerging technology, with lower operating costs and higher reliability.
- The financial sector is a key project partner to facilitate the access of operators to EVs. The Saint Lucia Development Bank, re-established by Parliament Act No. 12 of 2008, provides finance for the expansion and strengthening of the economic development of Saint Lucia. The Bank of Saint Lucia, a subsidiary of East Caribbean Financial Holding Company (ECFH), provides development banking services on the island, which could include financial support to the electrification of public and private fleets. As EV provide a substantial reduction in operating costs in exchange of higher upfront capital costs, it offers a significant business opportunity

³⁸ GEF (2014). Guidelines for the Implementation of the Public Involvement Policy. Accessed at http://www.thegef.org/sites/default/files/council-meeting-documents/39_EN_GEF.C.47.Inf_06_Guidelines_for_the_Implementation_of_the_Public_Involvement_Policy_4.pdf in December 2019.

to the financial sector to develop appropriate loans and leasing schemes. The Saint Lucia Development Bank and the Bank of Saint Lucia will be invited to participate in the project, and the Bankers Association and Credit Union Associations, as well as private banks, will be invited to project activities.

- EV dealers and importers are essential for the deployment of EV in Saint Lucia. The project includes as partners the official national dealers and importers of global EV producers. For them, the project provides an opportunity to enter a fast-growing market, in accordance with public and private fleet renewal forecasts.
- LUCELEC is the sole electricity utility in Saint Lucia. Its main shareholders are Emera (Saint Lucia) Limited, First Citizens' Bank Ltd, National Insurance Corporation (20% each), Castries Constituencies Council (15.5%) and the Government of Saint Lucia (10.05%); the remaining shares are distributed among a large number of minority shareholders. The project provides an opportunity to increase electricity demand at a time in which the country is implementing its National Energy Transition Strategy (NETS), increasing the share of renewables (a 3MW solar farm already operational and a 10 MW solar farm and a 12 MW wind farm projects in the pipeline). LUCELEC is expected to play a key role in the development and implementation of the national e-mobility strategy, the provision of public charging stations and the promotion of e-mobility. LUCELEC will benefit from the project's support to consolidate new market opportunities, such as infrastructure charging or EV leasing concepts based on energy provision.
- Public and private managers of large car fleets are the key stakeholders targeted by the project for its demonstration and upscaling activities. They include the GoSL's procurement services, the police, MASSY, LUCELEC and the participating delivery companies.
- The higher education system in Saint Lucia includes the Sir Arthur Lewis Community College and the regional University of the West Indies, which operates in St Lucia through the University of the West Indies Open Campus. These academic institutions are keen in participating in the project, providing their knowledge and looking for upcoming challenges to accommodate e-mobility technologies within their curricula and their research agendas.
- The Civil Society Organizations Coalition for Sustainable Development in Saint Lucia or Coalition of Civil Society Organizations (CCSO) is a network of associations involved in diverse areas of interest throughout Saint Lucia. The coalition was established as a platform for engaging civil society as equal partners with the public and private sectors in the sustainable development of Saint Lucia and will facilitate the project's contact with grassroots associations and civil society stakeholders active in urban mobility from different sensitivities: the environment, gender, urban living conditions, social equity, safety and security.

During its planning stage, the project has organized one design workshop in October 2019 and a final validation workshop in February 2020. Interviews with all the stakeholders identified above have taken place in order to identify their concerns and priorities and to integrate their know-how. As a result, the project is taking appropriate responsive measures throughout its lifespan to consolidate and maintain the wide current support built up during the planning stage. As a result of the project design activities, the interests and concerns of the key stakeholder groups have been identified and are presented in the table below.

Stakeholder group	Key expectations	Key concerns	Recommendations for project implementation
National government	Project supports policies on climate change mitigation, energy efficiency and sustainable transport. National e-mobility strategy delivered by the project Quicker deployment of EV in Saint Lucia	Fiscal costs of policies incentivizing EV. Impacts on the electricity sector (infrastructure, tariffs).	An institutional coordination body is needed for the various activities developed by different governmental services on e-mobility
Local governments	Improvement in quality of service of public transport and taxis. Improved air quality. Guidance on installation of charging points.	Public's acceptance of EVs Compatibility of EVs with urban development strategy (Castries Vision 2030)	Involvement of local governments in PSC. Regular coordination of project activities at local level.
Vulnerable social groups	Affordable mobility services, better tailored to the particular needs and priorities of women and vulnerable social groups.	E-mobility increases public transport fares, primarily affecting women and disadvantaged social groups – the major users of public transport- or focuses on affluent users.	Involvement of women and vulnerable groups in key project deliverables.

Stakeholder group	Key expectations	Key concerns	Recommendations for project implementation
	Women benefit from new jobs associated to e-mobility.		Project's training activities tailored to women and vulnerable groups, when relevant.
Public and private car fleet managers	Support to access EV technologies at reasonable costs, in order to benefit from lower fuel consumption and maintenance. Capacity building on EV technology, its potential and limitations, as well as on fleet management.	Higher upfront costs of EV. EV availability and maintenance support. Range reliability. Charging options.	Request for proposal for selection of EV providers, including maintenance during vehicle life span.
National Council on Public Transport (NCPT) and public transport route associations	Improvement of public transport service quality and support to access EV technologies at reasonable costs, in order to benefit from lower fuel consumption and maintenance. Capacity building on public transport operations and EV technologies.	Impacts of public transport reforms on revenues and employment. Affordability of EVs and impact on operational costs. Professional training needs. Additional investment needs.	Deliverable on public transport policy produced through a co-creation process actively involving operators and NGOs, and based on international best practice.
Taxi associations	Support to access EV technologies at reasonable costs, in order to benefit from lower fuel consumption and maintenance. Capacity building on EV technology, its potential and limitations.	Uncertainty on the commercial feasibility of EVs compared to current large crew vans and cars in taxi services. Affordability of EVs and training needs. Availability of charging infrastructure	Deliverable on taxi policy produced through a co-creation process based on international best practice.
Financial sector	New financial schemes and business opportunities associated to e-mobility	EVs more expensive, with uncertainties and limited experience in key issues such as reliability or lifespan. Limited experience in and knowledge on financing EV acquisitions.	New business models developed. Technological-risk reduced through demonstrations
EV dealers and importers	Clear EV regulations established	Anarchic market competition of ICE vehicles and EV due to lack of or inappropriate regulations.	Stakeholders' involvement in the development of the project's regulatory proposals.
Electricity utility (LUCELEC)	Increased electricity consumption outside peak demand period. New business opportunities linked to charging infrastructure and services.	EV market developing without clear regulations, and imposing additional burdens on LUCELEC	Charging infrastructure and actions in the electricity sector included in the national e-mobility strategy.
Academia	New research and educational opportunities linked to EV	Insufficient research resources and limited ability of the project to influence on this	Networking with other projects and research partners within the e-mob programme.
NGOs and civil society organizations	Implementation of sustainable mobility practices in Saint Lucia. Improvement of urban mobility conditions of vulnerable groups and women.	EV focus could compete for scarce resources and efforts with other priorities in sustainable mobility needs (pedestrians, car restrictions...).	The project approach intends to mobilize additional resources and efforts from private stakeholders

Additionally, the expectations and concerns of transport sector workers and vulnerable groups have been identified during the project preparation and validation workshops:

- Poor working conditions in the public transport sector, including road safety (high accident risk on Saint Lucia's roads), security concerns (cashless tickets would reduce this to some extent, but have not been introduced due to structural issues), and uncertainty linked to the eventual transition to larger EV buses (as drivers get their income partially from the fares collected from users, and this system would need to change if large buses are introduced).
- Vulnerable groups tend to live farther away from bus stops, with difficult and at times unsecured access to them; the affordability of public transport is also an issue for vulnerable groups, as subsidies are not generally available, as well as to the accessibility to the vans and small buses currently used, in the case of disabled people.

The existing activities already undertaken or envisaged by key stakeholders are identified in the table below. Based on this information, their potential contributions to the project components are also identified.

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
National government	Department of Sustainable Development (DSD)	Implementation of NDC	Component 1: e-mobility strategy, coordination body, training activities.
	Renewable Energy and Public Utilities Division	Implementation of NETS	Component 1: e-mobility strategy, coordination body, training activities.
	National Utilities Regulatory Commission (NURC)	Implementation of NETS	Component 1: e-mobility strategy, coordination body, training activities.
	Transport Division	Formulation and implementation of an Integrated, Sustainable Road Transport Policy and Strategic Roadmap for Implementation	Component 1: public transport strategy, e-mobility strategy, coordination body, training activities. Component 2: MRV system Component 3: regulatory and tax reforms
	Ministry for Economic Development, Housing, Urban Renewal, Transport and Civil Aviation	Implementation of Castries Vision 2030 Revision and implementation of the National Vision Plan	Component 1: e-mobility strategy
	SLSWMA	Solid waste management sector assessment and reform	Component 4: analysis and reform of ELV management; regulations on management of batteries and EV components
Local governments	Local government of Castries	Implementation of its strategic plan “Castries Vision 2030”. Regulation of permits for the installation of public charging stations.	Component 2: demonstrations (charging stations) Component 3: regulatory reforms.
Public and private car fleet managers	Ministry of Finance. Financial Administration Unit	Annual fleet procurement plans. Fleet management improvement	Component 2: demonstration of e-cars in the government’s fleet. Component 3: financial model for the electrification of the government’s fleet
	MASSY	Procurement of commercial vans for distribution	Component 2: e-vans included in the demonstration
	FedEx	Procurement of commercial vans for courier and delivery services	Component 2: e-vans included in the demonstration
	Hotel Association	Procurement of cars and other vehicles for customers’ services	Component 3: Development of business and financial models.
NCPT and public transport route associations	NCPT	Improvement of working conditions and service quality. Public transport regulatory reform	Component 1: Public transport policy Component 3: Financial and business models
	Route Association 1A	Optimization of services	Component 1: Public transport policy Component 3: Financial and business models
	Route Association 1B	Optimization of services	Component 1: Public transport policy Component 3: Financial and business models
	Route Association 2H	Optimization of services	Component 1: Public transport policy Component 3: Financial and business models
Taxi associations		Awareness on EV technologies	Component 1: Public transport policy Component 3: Financial and business models
Financial sector	Bank of Saint Lucia	Vehicle loans to companies and transport operators. Vehicle leasing?	Component 3: Financial and business models Component 4: Financial and business models
EV dealers and importers	Nissan	Awareness on EV technologies and manufacturers’ deployment strategies	Component 1: Regulations on technical approval and taxes Component 2: Procurement of EV for demonstration. MRV Component 2: EV driving and maintenance training. Component 3: Financial and business models; promotion of national e-mobility network Component 4: Implementation of sustainable ELV management
	Beachcomber	Awareness on EV technologies and manufacturers’ deployment strategies	Component 1: Regulations on technical approval and taxes Component 2: Procurement of EV for demonstration. MRV Component 2: EV driving and maintenance training. Component 3: Financial and business models; promotion of national e-mobility network

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
			Component 4: Implementation of sustainable ELV management
	JQ Motors	Awareness on EV technologies and manufacturers' deployment strategies	Component 1: Regulations on technical approval and taxes Component 2: Procurement of EV for demonstration. MRV Component 2: EV driving and maintenance training. Component 3: Financial and business models; promotion of national e-mobility network Component 4: Implementation of sustainable ELV management
	Car importers	Importing e-cars in Saint Lucia	Component 1: Regulations on technical approval and taxes Component 2: Procurement of EV for demonstration. MRV Component 2: EV driving and maintenance training. Component 3: Financial and business models; promotion of national e-mobility network Component 4: Implementation of sustainable ELV management
Electricity utility	LUCELEC	Investment in renewable electricity generation Deployment of public charging stations Expansion and management of its own EV fleet	Component 1: e-mobility strategy Component 2: public charging stations as part of the demonstration Component 3: Development of business and financial models. Component 4: Regulations for re-use of car batteries for energy storage.
Academia	Sir Arthur Lewis Community College	Professional training on e-mobility	Component 1: E-mobility training to stakeholders Component 2: EV driving and maintenance training. Component 2: MRV and evaluation of demonstrations Component 3: Promotion of national e-mobility network Component 4: ELV management training
	University of the West Indies	Professional training on e-mobility	Component 3: Promotion of national e-mobility network
NGOs and civil society organizations	CCSO	Social equity and gender issues in mobility	Component 1: e-mobility strategy; PT policy. Component 3: Regulatory and tax reforms
International Donors	UAE- IRENA-Caribbean Renewable Energy Fund	Deployment of a solar farm in the vicinity of the airport	Component 1: e-mobility strategy Component 2: demonstration (charging stations)

Stakeholders will be consulted in project execution through different channels, in accordance with their profile:

- Stakeholders from the national government will participate as full members of the Project Steering Committee (PSC) (meetings foreseen at least once per year). A representative from the Coalition of Civil Society Organizations (CCSO) will also participate in the PSC as observer.
- The other stakeholders (including non-governmental participants and observers in the coordination body established by Component 1) will be invited to participate as full members in the project working groups (meetings foreseen at least quarterly), in accordance with their area of interest, and as observers at the PSC meetings. Further information on the steering committee is available in section 6 and annex K.

Project information will be available to stakeholders through the project website envisaged in D.1.4.1. The project will endeavor to make information available to stakeholders and to the public, so that they can know the environmental and social risks and impacts associated with the project, as well as the opportunities it provides. Project data will enable them to take better-informed decisions on e-mobility. The project will provide disclosure and consultation on the project's environmental and socio-economic performance to all stakeholders through project briefs and annual reporting, available in the project website. The project will also provide:

- An update on the project achievements and its contributions to enhancing transparency.
- An overview of the stakeholder engagement process and how affected parties can participate and provide feedback through meetings or other channels.

- Project impacts and how the government is using the project data to enhance the mobility of Saint Lucia residents and to reduce national GHG emissions.

Finally, select what role civil society will play in the project:

- Consulted only;
- Member of Advisory Body; contractor;
- Co-financier;
- Member of project steering committee or equivalent decision-making body;
- Executor or co-executor;
- Other (Please explain)

See separate report on stakeholders consulted during the project preparation grant phase.

3. Gender Equality and Women's Empowerment

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

- Yes
- No

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

- closing gender gaps in access to and control over natural resources;
- improving women's participation and decision making; and or
- generating socio-economic benefits or services for women.

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

- Yes
- No

Gender analysis

The Government has ratified a number of international conventions related to the rights of women, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (accession 8 October 1982), and the Inter-American Convention on the Prevention, Punishment and Eradication of Violence Against Women ("Convention of Belem de Para", ratified 8 March 1995). It has not signed nor ratified the 1999 Optional Protocol to the Convention. Saint Lucia has also ratified the following fundamental International Labour Organization (ILO) conventions such as the Equal Remuneration Convention, 1951 (No. 100, ratified 18 August 1983) and the Discrimination (Employment and Occupation) Convention, 1958 (No. 111, ratified 18 August 1983). The country also has been involved and upholds key international and regional instruments related to the advancement of women, including the Nairobi Forward-looking Strategies for the Advancement of Women (1985); the Beijing Declaration and Platform for Action (1995); the Millennium Development Goals (2000); and the Strategic Plan 2016–2021 of the Inter-American Commission of Women (CIM 2011).

While the country's constitution provides for protection before the law regardless of sex, the definition of discrimination against women as defined in Article 1 of CEDAW is not explicitly stated. The UN CEDAW Committee has urged constitutional reform so as to include the definition in the Constitution or other national legislation. Relevant legislation includes the Domestic Violence (Summary Proceedings) Act Chapter 4.04 "2005 Rev", and the Criminal Code (Chapter 3.01 "2005 Rev") in what refers to sexual offences. Sexual harassment is also not adequately addressed, as it is only considered as an offence in the workplace (Equality of Opportunity & Treatment in Employment & Occupation Act of 2001).

The Gender analysis has taken into considered the general context sketched above, and is based on the information provided at the stakeholder workshops held in October 2019 and February 2020, as well as the feedback received during stakeholder consultations. It also makes use of the information provided by the following country gender reviews:

- Ranjitsingh, Aleah N. (2015). Country Gender Assessment St. Lucia. Presented to Caribbean Development Bank.
- Ministry of Education, Innovation, Gender Relations and Sustainable Development (2019). Voluntary National Review (VNR) on the implementation of the 2030 Agenda for Sustainable Development at the High-level Political Forum on Sustainable Development (HLPF).
- Government of Saint Lucia (2019). Report on the Comprehensive National Level Review of the Status of Implementation of the Beijing Declaration and Platform for Action.
- Government of Saint Lucia (2016). Thirteenth Session of the Regional Conference on Women in Latin America and the Caribbean. Country Report of Saint Lucia.

Furthermore, the Gender Relations Division within the Ministry of Education, Innovation, Gender Relations and Sustainable Development is presently implementing the Caribbean Development Bank (CDB) supported project “Mainstreaming Gender Equality in Saint Lucia’s National Sustainable Development Plan. The aim of the project is to enhance the capacity of the Government of Saint Lucia to systematically address gender equality priorities in its planning and programming processes. The project outcomes provide a good basis for mainstreaming gender within the project institutional and policy-related actions, particularly the National e-mobility Strategy and the Sustainable and Safe Passenger Mobility Policy (component 1).

The multiple roles, including the disproportionate responsibility for caregiving, often assumed early in life, has contributed to limited access to various opportunities for women to pursue education and skills training and participation in the job market. A pervasive gap in the unemployment rate of women and men has remained in the last decade (in 2018, 22.1 % of women unemployed compared to 18.5 % of men). Some economic sectors including “transportation and storage” remain relatively closed to women: whereas 45.0% of all jobs in the country are occupied by women, this percentage falls to only 12.8% in the transportation and storage sector.

In accordance with ECLAC’s Gender Equality Observatory for Latin America and the Caribbean³⁹, women occupy 20% of ministerial positions the Saint Lucia’s Cabinet, 16.7% of the seats in the national legislative bodies. The percentage of women in governmental bodies varies widely among ministries: 34% in average, with more than 70% in some Departments like Justice or Finance and less than 30% in Home Affairs.⁴⁰

The educational attainment is higher for women than for men in Saint Lucia (Ranjitsingh, 2015). In particular, for tertiary education, women account for 64% of all the students enrolled in Sir Arthur Lewis Community College; however, this percentage decreases to 48% for technical education and management studies. However, this does not translate in terms of women reaching decision-making positions in the public and private sectors.

The project undertakes an affirmative action policy to give priority to women in accessing to capacity building and training activities and establishes gendered targets in this area.

Sexual harassment and violence remain a pervasive challenge in Saint Lucia. In accordance with the GoSL report,⁴¹ there is a high incidence of reported cases of violence against women and children in Saint Lucia; of particular concern is the alarming number of reported cases of rape of females of various ages in communities around the country. However, after peaking in 2017 (435 offenses reported or detected), sexual offenses have decreased in 2018 (334 offenses reported or detected).

³⁹ <https://oig.cepal.org/en>

⁴⁰ Data for 2011 as reported at Ranjitsingh, Aleah N. (2015). Country Gender Assessment St. Lucia. Presented to Caribbean Development Bank.

⁴¹ GoSL (2016). Thirteenth Session of the Regional Conference on Women in Latin America and the Caribbean. Country Report of Saint Lucia.

The availability of gender-sensitive information in the transport sector is low. During the project design, it was possible to obtain the number of women driving minibuses in the public transport system (just 5 of a total of 1294), and for the number of driving licenses issued to women in the last six months (just 33% of the total), but not for other key indicators such as the number of taxi licenses held by women, or the number of cars and other vehicles owned and registered by women. There was no information on the percentage of women making use of public transport services or the number of women involved in traffic accidents for the different categories (and particularly for the more vulnerable ones, like pedestrians). During the gender workshop, participants agreed that women working in the tourism industry have difficulties to safely get home, if they do not have access to a car or employers do not provide them with transport shuttles, as public transport is unreliable and even non-existent after 5-6 pm in many routes. There was also agreement in the fact that for many average women it takes longer to get a loan to buy a car than it is for men of a similar economic profile.

The qualitative information provided during bilateral meetings and workshops was consistent in highlighting the following traits:

- Women's mobility in Saint Lucia is characterized, as in many other countries, with a higher percentage of chained trips and accompanying trips than in the case of men; women's mobility is jeopardized with lower car ownership compared to men, and with the poor quality of public transport.
- The low participation of women in jobs provided by the transportation sector can be linked to working conditions, and a hostile environment for women (e.g. security issues and cash-handling in public transportation). EV features (for drivers) can be more appealing to women than the vehicles currently used in the public transport sector, as they provide advanced driving assistance and require less physical effort while driving on the hilly roads of the island.
- Adequate accessibility to working places is a critical issue in the service (including tourism) sector; many women work in these sectors, many times in low-wage jobs, with no access to a private car. The project could provide some recommendation to improve women's access to these jobs, for example through legal obligations to employers to provide better transportation to their staff.
- Access to financing is also harder (and longer) for women, which makes it more difficult for women to get a car loan, for private use or for business.

There is no information available in Saint Lucia on transport demand and therefore there is no data on gender differences in mobility. Considering the prevailing patterns in other countries in the region⁴² and the limited evidence collected on employment, it can be reasonable to assume that the project will need to face both a "mobility gap" and a "job gap" concerning gender mobility challenges in Saint Lucia:

- The mobility gap is related to the low quality of public transport services compared to car use. Circulation and parking restrictions to car use are rare. Minibuses do not have reserved lanes and do not follow a reliable schedule. This gap in the quality of mobility conditions between cars and public transport is likely to be disproportionately suffered by women and other social groups without access to private car use. The gender gap in mobility conditions implies that many women will face long travel times to reach jobs and social services. The gender mobility gap is sustained by widespread acceptance of the privileges of car users, in spite of their social and environmental consequences.
- Violence against women is likely to be favored by poor public transport services; for instance, physical contact in minibuses, waiting at stops poorly lighted and protected, and lack of services outside peak hours (long waiting times in poor lit stops). All these conditions are likely to increase the perception of insecurity by women travelling in public transport in Saint Lucia.
- The job gap can be linked to a conservative management culture in the transport sector, including service operators in the taxi and public transport sector. On the one side this conservative culture has been unable to attract additional passengers, even in a context of population growth; on the other hand, the resistance to change can also explain the low share of employed women in the sector.

The current operational conditions of the public transport system are also poorly suited to cope with many women's needs. Operations have been designed historically to cope with the needs of daily home-to-work trips at peak hours. As such

⁴² E.g. ECLAC (2019). Gender determinants in urban mobility policies in Latin America.

they perhaps do not adequately address mobility needs in Saint Lucia related to social reproduction (household shopping, socializing children or providing support to dependent adults); there is wide evidence⁴³ that these trips are frequently chained by users, and are poorly served by the existing public transport system.

Primary potential risks of the project

The information collected allows to conclude that the transportation sector remains strongly male-dominated at the decision making and labor levels, and that the particular mobility needs and expectations of women compared to men are not sufficiently considered. Without effective consultation and inclusion of women in project activities, the introduction of EV could serve to:

- Consolidate the current gender imbalance, as the new technology would be implemented in a male-dominated context in which it is likely to be used to serve primarily the mobility needs of those already enjoying better mobility conditions.
- Facilitate the development and implementation of policies and strategies on public transport that are not gender-sensitive, locking-in the existing male-dominated hegemony and approach on public transport systems.
- Facilitate the development of an EV charging station network that does not consider the modal use of women in using private vehicles.
- Continue to promote unsafe conditions for women in public transport systems, if a gender-inclusive and gender-sensitive approach is not adopted in both design and implementation of the policies and strategies.
- Introduce ineffective business models and financial mechanisms which do not take into consideration how women access financial products and instruments, particularly in the Caribbean.
- Introduce negative health impacts on women and children, due to soil contamination by the inappropriate disposal of vehicles and batteries at their end of life, if women are not involved effectively in design and implementation of policies and strategies on end-of-life vehicle management, including EVs.

Opportunities

However, the introduction of EV technologies can also be transformative, serving as an opportunity to implement changes, so that EVs improve the mobility conditions of women (implementing vehicles in mobility services used by women), and to facilitate a more balanced access to transportation jobs (targeting driving, maintenance and fleet management training on women during project activities). By involving women effectively in project design and implementation, and ensuring that interventions are gender sensitive, the project may support the introduction of increased economic opportunities for women in the transport and electricity sectors and support a just-transition of the workforce from existing high-emission technologies. The project MRV system can also serve to introduce gender-sensitive indicators within national transport statistics.

Gender Action Plan:

Implementation of the gender action plan has been embedded within the project structure as follows:

- The integration of gender issues within public policies addressing e-mobility will be developed through component 1, output 1.2 and output 1.3, and a consultancy on gender analysis and action plan has been budgeted to support this. The Sustainable Passenger Mobility Policy will provide the factual evidence and the appropriate actions to mainstream gender issues in transport policy. The discussion above suggests that women may be more concerned about safety and personal security; furthermore, women tend to have less access to different transport options, and tend to have multiple purposes in their trips, many times during off-peak hours, to accommodate the conflicting needs of work, household and childcare. Transport quality- related topics of high relevance for women probably include off-peak service quality, convenient transfers, and good coverage of key destinations by the network. The project intends to explore these challenges in order to define future public transport quality priorities from a gender perspective. The e-mobility strategy provides the adequate framework for a comprehensive consideration of the opportunities and challenges associated with the deployment of EVs to advance equality between women and men and to improve the mobility conditions, employment opportunities and empowerment of women.

⁴³ ECLAC (2019). Gender determinants in urban mobility policies in Latin America. FAL Bulletin 371.

- The alignment of the characteristics of EVs with women’s priorities and needs is addressed within component 2, output 2.1. The guidelines prepared for the project demonstrations are expected to facilitate the involvement of women within the demonstrations as EV fleet managers, drivers or in maintenance provision.
- Access to jobs in the transport sector is addressed within component 2, output 2.3, supporting the involvement of women in EV operations, and in component 3, output 3.2, in which the guidelines for transport operators are expected to include considerations on the need of a corporate strategy to facilitate women’s access to jobs in the future. Current barriers to jobs in the transport sector for women have been discussed during project design, although few conclusions can be advanced at this stage: these barriers are probably associated to tradition, to conservative management and to unfriendly working environments, as in many other countries. A pro-active strategy has been agreed, so that the introduction of electric vehicles (EVs) is taken as an opportunity to foster women participation in jobs by giving priority to women for accessing the new jobs linked to EV (driving, maintenance and management) in the companies associated with the project pilots. The project should facilitate further streamlining of policies to facilitate the access of women to jobs in the transport sector based on these pilots and replication activities. At the upscaling stage after project completion, the public transport sector should benefit from providing a working environment more attractive for women, as their communicative and people-oriented skills can be of great value to improve the quality of the service.

Gender-oriented actions will be conducted by the Chief Technical Advisor (CTA) with the following partners:

- Government of Saint Lucia, particularly the units exploiting the new EV during the demonstration.
- The Ministries in other governmental institutions responsible for the design of public policies in the areas of passenger transport, energy efficiency and sustainable development.

The following activities addressing gender issues have been included in the project:

- Project Component 1:
 - Output 1.2. The preparation of the Sustainable Passenger Mobility Policy will include a gender analysis and action plan in order to mainstream gender since the first preparatory stages of this policy document.
 - Output 1.3. The preparation of the e-mobility strategy will include a gender analysis and action plan in order to mainstream gender since the first preparatory stages of this policy document.
 - Output 1.4. Training of civil servants on e-mobility and the regulatory and fiscal incentives will prioritize female civil servants.
- Project component 2:
 - Output 2.1 and 2.2. The preparation of the guidelines for the design of the e-mobility pilots will address considerations on the potential contribution of EVs to improve the mobility and working conditions of women.
 - Output 2.3 provides professional training. These training activities will target in priority women, as a way to facilitate their access to the new jobs generated from the deployment of electric vehicles.
- Project component 3:
 - Output 3.2. EV procurement guidelines will target transport operators and fleet managers and will include considerations on mainstreaming gender issues within their recruitment strategy, training plans and companies’ business models for future expansion.

In terms of budget, besides budget line 1203 (Consultancy on Gender Analysis and Action Plan), 15% of the budget lines 1202 and 1205 is now dedicated (as mentioned in the ToR) to gender issues. As an effect of the affirmative action on training, it can be expected that at least 25% of budget lines 1201 and 1208 will benefit women. This amounts to USD 57,162.

This approach is expected to be sustained after project termination through the inclusion of the project’s recommendations within the practice of the national government and urban public transport authorities, as well as within the private sector.

The proposed project monitoring approach includes some gender-sensitive indicators within the Project Results Framework (PRF), which will provide the necessary information for monitoring the Gender Action Plan:

- Indicators 1.2 (delivery of national sustainable passenger mobility policy) and 1.3 (delivery of national e-mobility strategy) include as a mid-point target the completion of a gender analysis and action plan for the draft strategy.
- Indicator 1.4 will provide the number of women and men working for the government as civil servants and receiving training on the legal and fiscal dimensions of the promotion of e-mobility.
- Indicator 2.1 will provide the number of female drivers on EV vehicles.
-
- Indicator 3.2 (government's EV procurement guidelines) includes a mid-point target on the inclusion of women's quality priorities within the draft document.
- Indicator 4.3 (number of women and men professionally trained on end-of-life EV management) include gendered mid-term and final targets.

4. Private Sector Engagement

The project is engaging the private sector in a variety of ways:

- As project beneficiary: project's activities are expected to increase demand for EV in Saint Lucia, to the benefit of car-dealers and importers interested in trading and providing maintenance services to EV. Furthermore, these stakeholders will benefit from additional supporting actions from the project, such as the development of business and financial schemes, which should be instrumental for developing their own market strategies.
- Owners of private fleets will benefit from the project's demonstration and other supporting actions to transition towards the progressive introduction of EVs in their own fleets. Initially, the project is engaging a few of these companies as project partners (Massy, FedEx and other companies in the Courier & Delivery sectors). Companies and individuals in the public transport and taxi sector will also benefit from project activities in order to gain access to the benefits provided by EVs within a more favorable legal and financial framework.

Some private stakeholders will be particularly active as project partners providing co-financing to some project-related activities:

- The UAE Caribbean Renewable Energy Fund is contributing through its renewable power project to build and operate a 750 kW solar carport close to the Hewanorra International airport. There are other renewable energy projects under development in the island, but it is uncertain that they can reach the operational stage during the project life span.
- Some private companies (e.g. Massy) have confirmed their interest to include some EV in their fleets during the project lifetime, and to have them monitored and evaluated within the project's MRV effort.

The private sector is also targeted by most of the capacity-building activities included in the project:

- Capacity building activities within component 1 are targeting decision makers and professionals in the public and private sector, and will focus on the technical advantages of EVs, and their growth prospects.
- Capacity building activities within component 2 will serve to increase the number of drivers and maintenance specialists in the country familiar with EV technologies. This will serve as a strong support for those private companies interested in using EVs.
- Capacity building activities within component 4 will facilitate the involvement of private companies in the management of EVs at their end of life, opening up new business opportunities in this sector.

Finally, the involvement of the private sector in EV policy decision making will be supported by the project:

- The private sector is expected to participate in the new E-mobility subcommittee as well as in the design of the e-mobility strategy and the Sustainable Passenger Mobility Policy.
- The project will support and encourage active private sector stakeholders to network in order to foster the deployment of e-mobility.

5. Risks

Risk table

The potential risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, are presented in the table below, with the proposed mitigation measures to address them at the time of project implementation.

Risk description	Main categories	Risk level rating	Probability and impact	Risk Mitigation Strategy and Safeguards	By Whom / When?
Leadership change: change in leadership and priorities in the government	Political / Institutional	Low	Probability: very low, as there is high political consensus on energy policy and transport electrification. Impact: high, as government's involvement and support are critical for the project	E-mobility is not a controversial political issue, and is expected to gain bipartisan support. E-mobility strategy is developed to formalize such political consensus. However, national elections are foreseen in 2021 and could or could not result in changes in institutional arrangements	Project team to provide E-mob strategy by end Year 1
Higher upfront cost of electric vehicles may pose a barrier to implementation and scale up of activities	Economic	Medium	Probability: low, as the price of EVs is consistently going down. Impact: high, as final users are highly sensitive to high upfront costs compared to low operational costs or environmental advantages of EVs	Study on market scenarios will provide evidence and assess expected decrease of batteries and EVs at the global level. Financial schemes, and regulatory and fiscal incentives developed by the project will include these facts to persuade decision-makers and early adopters.	Project team and GoSL by end Y3
Objection or low commitment from industry (car dealers and corporate end-users) to technology changes.	Political / Economic	Medium	Probability: High, as most car dealers and corporate end-users in Saint Lucia are strongly attached to business as usual practices. Impact: Medium, as new players (e.g. new importers) can seize the opportunity to enter an emerging EV market.	The project will work with those car dealers more open to innovations; project procurement for demonstrations offer a good business opportunity to them, and demonstration results will raise EV demand from early adopters on the Island.	Project team by end of Y1
Time lag of results: Major legislation, policies, regulations developed through the project may not be approved by GoSL before the end of the project period.	Political	Medium	Probability: Medium; even if the GoSL is fully aligned with the project and there is wide political consensus, other emerging priorities (such as post-COVID recovery) could slow-down the decision-making process. Impact: high, as the project's sustainability and legacy would be compromised.	The project develops its proposals on regulations, taxes, strategies and policies collaboratively with key stakeholders and delivers them early enough to facilitate legislative or governmental approval. Additional support provided to government to help with adoption of some legislation. Awareness-raising campaigns to gain public support.	Project team. All proposals needing GoSL's approval delivered by 1 st quarter Y3.
Inadequacy of the exit strategy and lack of ownership of the program after the end of the GEF funded activities and inability to source resources to continue the program's activities in the medium/long term (including thematic working groups and support and investment platforms).	Political / Financial	Medium	Probability: Low, as there is a global trend towards electrification, and a number of converging projects in Saint Lucia (renewables, energy efficiency, etc.). Impact: Medium, as an inadequate exit strategy and lack of ownership would jeopardize EV deployment and result in a negative image for consumers with delays in the deployment of EVs.	The project provides an e-mobility strategy and subcommittee as the key instruments for project ownership and sustainability. The project encourages the development of revolving-fund schemes in the participating fleets, based on the operating costs saved by EVs. The project provides financial schemes and business models, as well as projections on cost reduction of EVs and when they will become competitive or least cost, to facilitate the sustainability of the fleet electrification effort. The project provides a policy for public transport and taxi sector reforms, that will subsequently facilitate the electrification of these fleets.	Project team and GoSL: Subcommittee established by 2 nd quarter Y1. Project team delivers financial models by end Y2. Project team establishes national e-mobility network by 2 nd quarter Y3

Materials from EVs (e.g. from batteries) generate environmental pollution.	Environmental	Low	Probability: Low; even if waste management in Saint Lucia is facing severe challenges, the salvage value of EV batteries is attractive for recyclers, and demand for second-life batteries is likely to raise associated to the energy transition to renewables. Impact: Low, as the number of EVs mobilized by the project is not high, and ownership is focusing on institutions and corporations.	Recycling and tracking of these materials are integrated into the approach, through component 4, including the prior improvement of ELV management in Saint Lucia. Awareness campaign of ELV management, including batteries	Project team delivering proposals to be adopted by GoSL by end of project
Traditional gender barriers in the transport sector remain, and women are marginalized in accessing new e-mobility jobs.	Social	High	Probability: Medium, as current women participation in the transport sector is very low. Impact: High, as gender-related project objectives would not be achieved.	Specific professional training activities are envisaged within the project, targeting women in priority.	Project team by end Y1.
Higher public transport fares due to additional costs of higher quality services, jeopardizing mobility of low-income groups.	Social	Low	Probability: Low, as the new mobility policy envisages to fully integrate equity issues and recommend a strategy based on increasing PT use and decreasing operational costs. Impact: Low; the implementation of the mobility policy will occur after project termination and any pressure in transport fares can be anticipated and properly managed by the GoSL without creating social stress.	The project will include affordability as a key element within its sustainable passenger mobility policy. In fact, use of higher capacity, electric buses should result in lower operating costs.	Project team and GoSL by end Y1.

Climate risk assessment, climate risks and risk mitigation

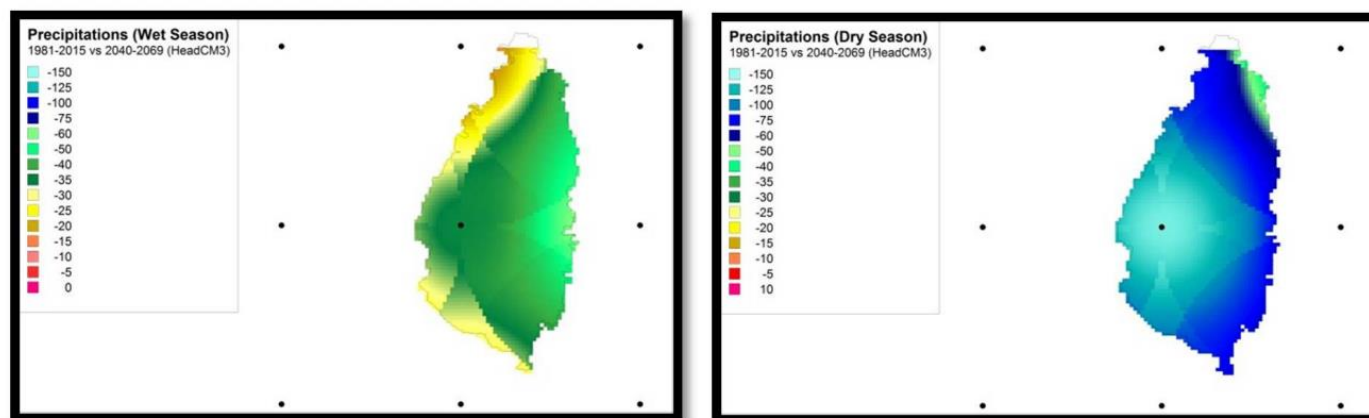
(i) How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?

Studies rate St. Lucia as a country which faces moderate potential impacts due to climate change. The Notre Dame Global Adaptation Initiative ranks it the 38th least vulnerable country in the world to climate change impacts, and 73rd in terms of climate readiness.⁴⁴ The climate risk assessment for St. Lucia in the context of the electric mobility project is as follows:

1. Hazards

The World Bank notes that key hazards for St. Lucia are tropical storms, such as cyclones (or hurricanes), which frequently affect the Caribbean region and cause both direct coastal impacts, as well as indirect impacts through floods, landslides, etc. The country is also susceptible to earthquakes, which are common since the country's islands are situated over a seismically active zone.⁴⁵ "Although many of the tremors pass unnoticed, Saint Lucia experienced its strongest earthquake on March 19, 1953, measuring around 7.5 on the Richter scale."⁴⁶ The World Bank further noted that landslide potential is particularly great in Saint Lucia and they occur primarily as a secondary effect of heavy storms, floods or seismic activity. Saint Lucia has experienced a number of wildfires during the dry season (January-June), most commonly within the northern coastal regions, which have dense populations.⁴⁷ Finally, in its third national communication to the UNFCCC Saint Lucia notes that a further hazard is related to sea level rise.

Precipitation anomalies (1981-2015 vs 2040-2069) during the wet season and dry season for Saint Lucia according to the PRECIS downscaled HadCM3 global climate model⁴⁸



Future Sea Level Scenarios for 2040-2069 (a: 0.47 m) and 2081-2100 (b: 0.91m) combined with a Category 5 Hurricane (5.87 m: 2040-2069) and (6.31 m: 2081-2100) combined with a Category 5 Hurricane showing the coastal zones of Saint Lucia that will be inundated⁴⁹

⁴⁴ <https://gain.nd.edu/our-work/country-index/rankings/>

⁴⁵ <https://climateknowledgeportal.worldbank.org/country/st-lucia/vulnerability>

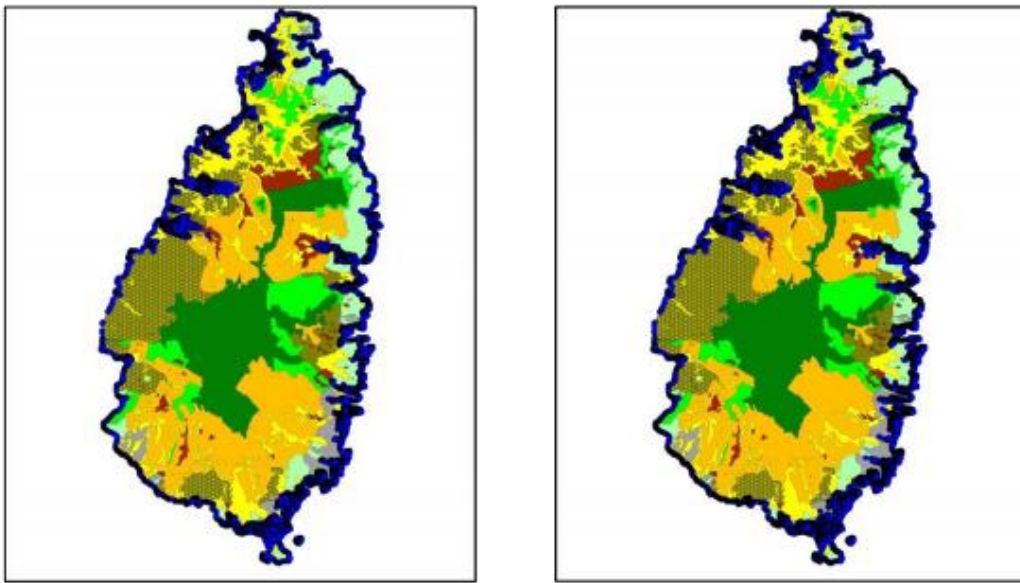
⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Third national communication to the UNFCCC (2017).

https://unfccc.int/sites/default/files/resource/THIRD%20NATIONAL%20COMMUNICATION%20_%20SAINT%20LUCIA%202017.pdf

⁴⁹ Ibid.



2. Vulnerability and exposure

Saint Lucia notes in its 2018 national adaptation plan that the country is vulnerable to climate change due to three main conditions:

- a. “Its small geographical area, which accounts for the fact that disasters take on country-wide proportions;
- b. “Its location in one of the highest-risk areas of the planet. These risks include, high volcanic and seismic activity, being situated in the tropical cyclone belts, and direct exposure to the forces of the oceans; and
- c. “Its dependence on few sources of income (the agriculture and tourism sectors) for a substantial part of its GDP. These sources of income have been severely reduced for months on end by single climate-related disasters.”

“Another critical indicator of Saint Lucia’s vulnerability, is its limited capacity to reactivate the development process after a devastating weather event. There are other non-climatic factors that may contribute to the country’s vulnerability and exacerbate the adverse effects of climate change, including, inter alia, issues pertaining to building codes, agriculture practices, chemicals and waste management, public awareness and sensitization, planning and development and unemployment and poverty.”

As a small island nation that relies on natural systems to provide services and livelihoods, almost all sectors will be impacted by climate change in Saint Lucia. In accordance with IPCC reports, it is estimated that with global warming these extreme events will increase in frequency and severity between 2020 and 2050. As a small island nation that relies on natural systems to provide services and livelihoods, almost all sectors will be impacted by climate change in Saint Lucia, but the priority areas for action are water, agriculture and fisheries, as well as tourism, ecosystems, infrastructure, education and health. These are Saint Lucia’s primary economic sectors, and are especially at risk due to increases in temperature, sea level rise, increased intensity of storms, and changes in precipitation patterns. The current National Adaptation Plan (NAP, 2018) includes actions for sectors including the infrastructure and spatial planning sector. Major power supply networks are generally further inland, but the distributions centers are located in populated areas, along the coast. In the NAP, St. Lucia notes:

“The 58,891 households of the island are concentrated within 10 km of the sea, along the coast or inland along ridge lines, spurs and plateaus and approximately half of the population lives in and around the low-lying city of Castries.... The island’s size, location and topography leave critical infrastructure, local housing and livelihoods highly exposed to climate change impacts, that is, those associated with SLR, floods, landslides, stronger storm surges and high winds from more intense hurricanes and beach and shoreline instability (as beaches erode and shorelines retreat).”

The NAP accordingly calls for phased relocation of vital infrastructure to less vulnerable areas. The World Bank also notes that building construction over hillside areas and loss of natural vegetation have exacerbated the country's vulnerability to landslides.⁵⁰

3. Risks

Climate risks in Saint Lucia were first systematically identified and assessed in the National Climate Change Policy in Adaptation Plan (NCCPAP) in 2002. In 2011, this Plan was revised, leading to the current Climate Change Adaptation Policy (2015) and the Climate Change Baseline Assessment Report (2016). Based on both documents, a more detailed National Adaptation Plan (NAP) includes actions and plans, including for the infrastructure and spatial planning sector. With Saint Lucia identifying its infrastructure sector as a key sector at risk due to the impacts of climate change, through its 2018 National Adaptation Plan it identifies risks related to this sector, which is essentially the sector within which the electric mobility project operates:

“Many settlements are already at risk of landslides and flooding during extreme weather events. Hurricane Tomas in 2010, caused extensive landslides, severe flooding and damage to housing and critical infrastructure to an estimated cost of > USD 350 million (43.4% of GDP). Ninety-two percent of this cost was due to housing damages, while communities with limited road access were particularly vulnerable, such as Soufriere, which was cut off and isolated. Such storm events may also pose the greatest risk to critical infrastructure, as recent hurricanes have been particularly disastrous, causing significant long-term impacts on the island's infrastructure, resulting in tremendous economic setbacks and constituting major recovery costs.”

The infrastructure sector, including energy, can also be negatively affected by extreme weather events: In 2010, Hurricane Thomas disrupted energy production and distributions, including generating facilities, transmissions lines, and pipelines, and roads disrupted by landslides; coastal area infrastructure proved to be vulnerable to sea level rise, storm surge, and flooding. The 2010 events served to develop recovery strategies and to update the National Disaster Management Plan.

4. Measures to manage risks

The 2018 NAP has a series of actions for supporting risk mitigation for the infrastructure and spatial planning sector. For instance, the NAP calls for phased relocation of vital infrastructure to less vulnerable areas away from the coast. On top of the adaptation measures envisaged within this plan, this GEF project aims at mitigating these risks through building resilience into the design of all project activities and outputs, to achieve low-carbon and climate resilient electric mobility. In this sense, the key climate risk faced by the project is the eventual disruption of electricity supply due to extreme weather events. The project undertakes the following additional actions to build resilience:

- a. Within output 1.3, deliverable 1.3.2, by including good practice recommendations to benefit from the synergies between RE expansion and e-mobility deployment; these recommendations may include contingency plans for RE plants (e.g. removing the panels before a category 4 or 5 hurricane alarm), and design recommendations to ensure resilience (e.g. to promote the installation of charging stations close to RE plants, with a direct connection, so that they can remain operational even in case of disruptions in the grid).
- b. Within output 1.3, deliverable 1.3.3 by including a vulnerability and resilience analysis within the study of the future national charging network.
- c. Within output 2.2, deliverable 2.2.1, by undertaking a vulnerability study of the locations selected to install the charging stations. As the project demonstration is focusing on public car fleets (mainly police cars), it can be anticipated that the vulnerability of the site (the police depot) will be low, as the site is a critical infrastructure, with low probability of suffering disruption in electricity supply. If necessary, the installation of grid-interactive renewable energy systems at the pilot's vehicle charging locations will be assessed. These grid-interactive systems located at the charging locations would ensure that in the event of a grid blackout, electric vehicles would

⁵⁰ <https://climateknowledgeportal.worldbank.org/country/st-lucia/vulnerability>.

still be able to be charged. In addition, the grid-interactive systems would ensure resilience of the installed solar panels and charging stations (e.g. protecting them from grid instability).

- d. Recommendations for regulating the disposal of vehicles (output 4.1, deliverable 4.1.3) will be designed to ensure that extreme weather events and sea-level rises do not lead to increased contamination. It is not perceived that an increase in the sea level will impact the project beyond this output.

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

The project's sensitivity to climate change at different IPCC representative concentration pathways and its impacts has been assessed, based on existing assessments undertaken by GoSL for its third national communication to the UNFCCC (2017) and its national adaptation plan (2018). It can be concluded that Saint Lucia already has an appropriate framework for climate change adaptation and building resilience. The deployment of electric mobility raises additional challenges that will be appropriately addressed within the current framework. Accordingly, the project focuses on providing adequate contingency plans and resilience options to the potential vulnerabilities created by the new technology, which mainly refers to the adequate resilience of the charging network.

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

As noted in the response to (i), risks, the project has a central focus on building resiliency in the future charging network.

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

The technical design of the vehicle charging stations will need to be in accordance with the latest building codes, to ensure resilience to extreme weather events. Information on extreme weather events and wind speeds is currently available and will not need to be obtained through the project. Operators and institutions operating the solar panel and vehicle charging installations will need capacity to understand how to operate the grid interactive systems during and after extreme weather events, especially in the event of grid blackouts.

COVID risk and opportunity analysis

As of 28 March 2021, Saint Lucia has had 4,191 total cases, with 58 deaths, according to the Coronavirus Resource Centre of the Johns Hopkins University.⁵¹ 20,247 vaccines were administered as of that date. The country has a COVID-19 dashboard <https://www.covid19response.lc/>, which provides statistics, information and education to inform and support citizens with addressing the pandemic's effects in the country.

⁵¹ <https://coronavirus.jhu.edu/region/saint-lucia>.



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

The University of Oxford has identified the pandemic’s impact on Saint Lucia as following:

1. The high dependence of Saint Lucia on international tourism has made it particularly vulnerable to the COVID-19 crisis.
2. The ability of migrants to send remittances back to Saint Lucia has been severely impaired
3. The decline in remittance inflows and the collapse of tourism have disproportionately affected the poor in Saint Lucia
4. Disproportionate impacts of COVID-19 on the poor may accelerate the growth of income inequality in Saint Lucia

In this context, the pandemic may affect the project in the following ways:

- Reduced tourism, leading to negative economic impacts. The University of Oxford noted that, Saint Lucia’s position as the 6th most tourism-dependent country in the world, as of 2019, has made it exceptionally vulnerable to external shocks. The remoteness of Saint Lucia may extend its recovery time as tourists (the majority from the U.S., and the U.K.) favoured domestic getaways, which were far cheaper, over long-haul flights. Due to the pandemic, in 2020 and up to March 2021 air travel to the country has been significantly reduced. Nationally, 28% of Saint Lucian’s have lost their jobs, mostly due to business closures associated with the tourism industry. This impact may reduce the appetite of the private sector to commit to funds for supporting the project demonstrations (component 2).
- Movement restrictions. Saint Lucia currently does not have a lock-down, but if restriction movements were imposed, this could impact of on the project demonstrations and efforts to advance development of project activities. However, if government officials continue to work from home the use of government fleets would be reduced. Currently, the government does not permit mass crowd activities and open socialization.⁵²
- Work arrangements. While not a national law or order, currently many offices are closed and staff are working from home. This may affect the undertaking of stakeholder consultations.
- Government priorities. With national focus on addressing the pandemic, the government may allocate less attention to promoting the uptake of electric mobility.

⁵² <http://www.govt.lc/news/non-approval-of-public-mass-crowd-activities>.

Mitigation measures:

- Reduced tourism, leading to negative economic impacts. 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). It is estimated that by 2022 airport operations will be returning to close to full operation, and that cruise ships also return, ensuring that tourism and thus the economy recuperates during that year. As the project's focus on incentives will take place in its second and third years, the project can draw on the experiences in 2021 and 2022 to ensure that designed incentives and business models take into account social needs and pressures.
- Movement restrictions. The pilot actions do not require the mobilization of large groups and can be undertaken while respecting social distancing. They are also scheduled (as per the workplan) to take place in the project's second and third years. However, if government officials continue to work from home the use of government fleets would be reduced. In this instance, effort would be made to reschedule the pilot activities for later in the project implementation period, to maximize vehicle usage. Furthermore, physical meetings will be replaced by virtual meetings. Online tools (such as clouds for document preparation) will be used to facilitate the development of draft policies and regulations. Travel to activities of the global programme will be held through means of 'virtual missions' if travel restrictions.
- 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 policies, strategies and incentives 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.
- Availability of vehicles. It is not projected that the supply and procurement of electric vehicles will be impacted due to the COVID-19 pandemic.

Opportunity analysis

- As executing agency and in committing direct co-financing to the project, the Government of Saint Lucia is fully committed to promoting the uptake of electric mobility. As the economy rebounds in 2021 and 2022, the Department of Finance will begin purchasing of vehicles for public fleets; this project will ensure that the first 10-12 vehicles purchased are electric vehicles, directly supporting Saint Lucia to instigate a green recovery to the pandemic. The Government has launched a website, <https://www.covid19response.lc/> and a "Framework to Reopen Saint Lucia".⁵³ The key focus is on restimulating the tourist sector, including through a dedicated website <https://www.stlucia.org/en/covid-19/>. Furthermore, on the government website, the government has informed of economic measures to support economic recovery.⁵⁴ While the government has not introduced new measures directly related to electric vehicles, efforts to stimulate employment and economic activities are directly relevant. Thus, the project's focus on creating new market opportunities for public transport operators and electric mobility distributors is aligned with governmental priorities.
- Furthermore, 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 Saint Lucia. 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.

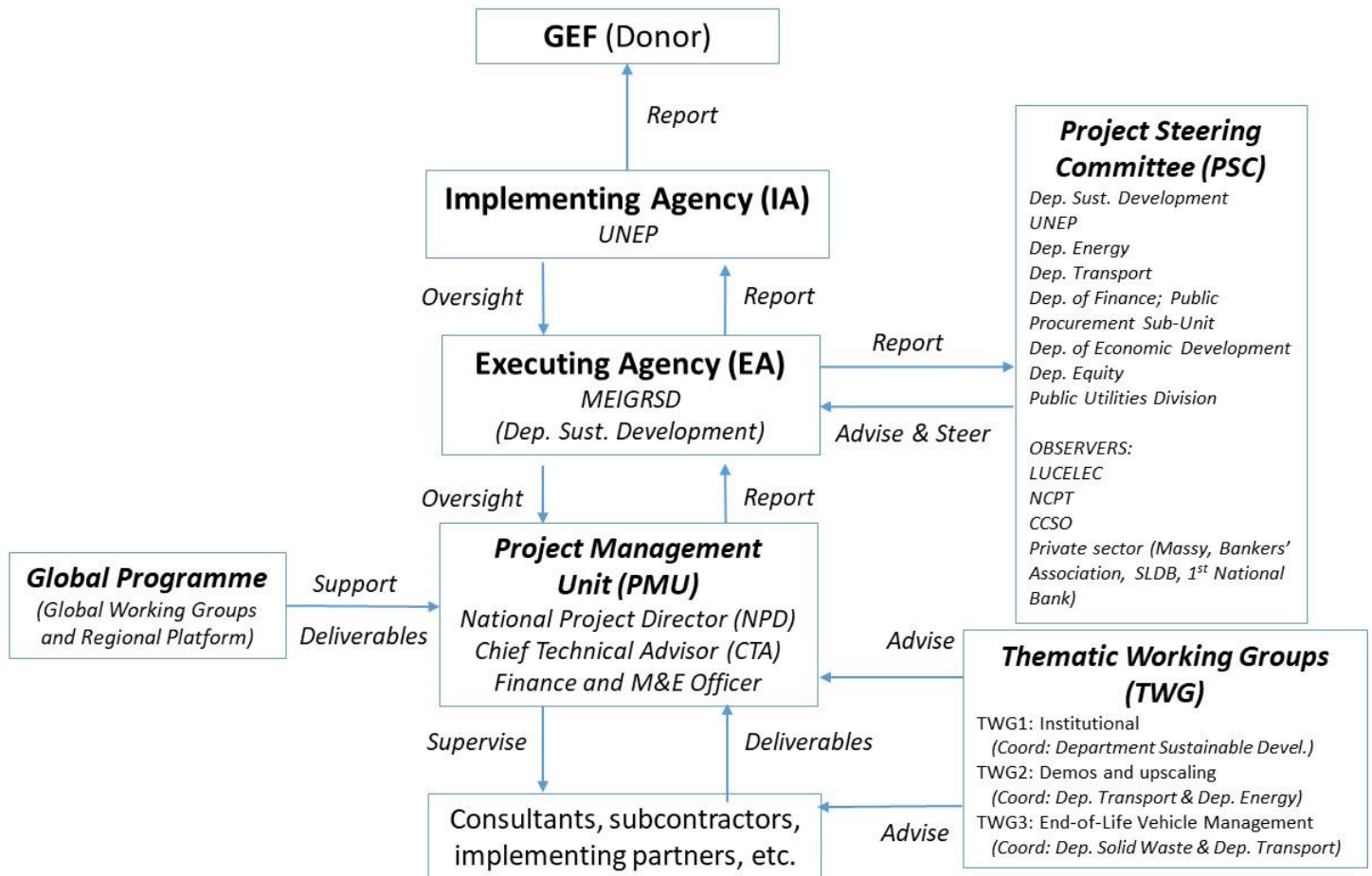
⁵³ <https://www.covid19response.lc/p/reopening-saint-lucia>.

⁵⁴ <http://www.govt.lc/page/income-support-programme>.

6. Institutional Arrangement and Coordination

- Institutional arrangements:

The institutional arrangement for project implementation is presented in the figure below.



CCSO: Coalition of Civil Society Organizations of Saint Lucia
DSD: Department of Sustainable Development
LUCELEC: Saint Lucia Electricity Services Limited
MASSY: Massy Stores

MEIGRSD: Ministry of Education, Innovation, Gender Relations and Sustainable Development
NCPT: National Council of Public Transport
SLDB: Saint Lucia Development Bank

FIGURE 3: INSTITUTIONAL ARRANGEMENT CHART

UNEP will be the GEF Implementing Agency and the Ministry for Education, Innovation, Gender Relations and Sustainable Development (MEIGRSD) through its Department of Sustainable Development (DSD) will be the project's Executing Agency. 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 be established to 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 be chaired by the National Project Director (NPD) and will convene at least once per year.

A **Project Management Unit (PMU)** will also be established within DSD to manage day-to-day operation of the project. The PMU will be headed by the National Project Director (NPD) and will include a full-time Chief Technical Advisor (CTA) and a part-time project Finance and Monitoring and Evaluation (M&E) Officer.

Ad-hoc **Technical Working Groups (TWG)** will be formed to facilitate the involvement of interested partners in the implementation of the project components. Participation will be opened to any interested stakeholder upon request addressed to the NPD. The TWGs are expected to provide technical advice and to liaise with the relevant working groups of the global program, as well as to facilitate networking at the national and international level. The TWGs will meet quarterly during project implementation, under the leadership of one governmental department and with secretarial support from the PMU, and will address the following topics:

- Technical Working Group on the institutional dimensions of e-mobility (TWG1). TWG1 will facilitate the engagement of stakeholders in the preparation of the e-mobility strategy and the sustainable passenger transport policy. It will support the coordination body to be established within this component, providing the necessary preparatory arrangements until its formal constitution and involving stakeholders and individual experts not formally included in the coordination body.
- Technical Working Group on demonstrations and upscaling of e-mobility (TWG2). TWG2 will provide technical, organizational and regulatory advice related to the design and implementation of the demonstration, and its subsequent upscaling to introduce EVs in other public and private fleets, public transport and taxis.
- Technical Working Group on ELV management (TWG3). TWG3 will provide support to the implementation of project component #4, facilitating the engagement of authorities and companies active in ELV management, as well as importers and dealers, in strengthening current practice and providing a satisfactory framework for future management of batteries and other EV components.

Executing partner. The Department of Finance (DF) will act as implementing partner for the procurement of the EVs to be included in the demonstration. The Department of Finance will be responsible for the purchase of the EVs to be included in the government's fleet and will co-finance these vehicles up to the cost of ICE vehicles with the same characteristics (the incremental cost will be financed by the project). As for the private companies participating in the demonstration, the Department of Finance will launch a Request for Proposals, offering to cover the additional cost of the electric vehicles to be purchased (compared to ICE vehicles of the same characteristics), in exchange of the beneficiaries' commitment to operate them a minimum of 20,000 km per year and to get them included in the project's monitoring scheme.

- Coordination with other initiatives:

The following GEF-financed projects and other initiatives are expected to be developed during the project lifespan. The project will liaise with them through the PMU and its TWGs:

- GEF- financed project for the preparation of the 2018 GHG Inventory and Fourth National Communication on Climate Change.
- IDB/GCF- Sustainable Energy Facility for the Eastern Caribbean: Financing commercial Geothermal Energy (GE) projects while strengthening legal and regulatory frameworks.
- UAE-Caribbean Renewable Energy Fund Solar carport PV Installation (included in this project as co-financing).
- World Bank-Renewable Energy Sector Development Project: Involves the execution of exploration (slim hole) drilling to seek to identify a commercially viable geothermal resource.
- Islands Energy Program- Rocky Mountain Institute (RMI). Saint Lucia Government Electric Vehicle Study. Study completed in 2019. This study provides an excellent basis for the design of the project demonstration.
- Implementation of transport and energy contributions in the Caribbean (ITECC) - transforming the energy and transport sectors towards a low-carbon and climate-resilient future. Financed by the German International Climate Initiative (IKI). This CARICOM/GIZ 6-year project will start in 2021, and includes a pilot in Saint Lucia.

The project will coordinate with the global programme 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, and in particular with the Caribbean sub-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. Furthermore, the regional platform will gather countries, like Saint Lucia, Jamaica, and Antigua and Barbuda with common needs and manage them through customized activities. Where needed, trainings and workshops will be developed at sub-regional level for the Caribbean SIDS. Saint Lucia representatives who participate in the global programme will channel global and regional experiences, good practices and lessons-learned to the training activities at the national level, which will be provided to a larger and broader group of local stakeholders

7. Consistency with National Priorities

The project is consistent with the following national strategies and plans:

- National Communications (NC) under UNFCCC. Saint Lucia submitted its third NC (NC3) in August 2017 (providing 2012 emission data) and has currently started activities to prepare a 2018 GHG emission inventory. NC3 includes two mitigation measures to be prioritized in the transport sector: the introduction of a new levy to control importation of used vehicles, and exemptions of excise tax and duty for importers of fuel efficient vehicles. Building upon these measures, the project is expected to provide new regulations on vehicle approval and taxes in order to facilitate the transition towards EVs.
- Biennial Update Report (BUR) under UNFCCC. As a small island developing State, Saint Lucia may submit BURs at its own discretion. In fact, Saint Lucia has undertaken preparations to submit its first BUR.
- The 2012-2016 United Nations Development Assistance Framework (UNDAF) for Saint Lucia and other Caribbean countries has been succeeded by the 2017-2021 Multi Country Sustainable Development Framework in the Caribbean (MSDF). The multi-state approach of UN agencies in the Caribbean region aims at allowing for a sharper focus on common priorities, enhance regional initiatives and collaboration, and enable knowledge sharing and cross-collaboration within the region. MSDF provides a multi-sectoral, human-centered approach to development that focuses on the most vulnerable populations in an equitable manner. The project is aligned within priority area 4 of the MSDF (a sustainable and resilient Caribbean), as it fosters the development of green technologies (e-mobility) in association with the deployment of renewables, and promotes the economic development of women (MSDF priority area 1) through capacity building in these technologies.
- Sustainable Development Goals (SDGs). In 2015, along with the rest of the Global Community Saint Lucia made a commitment to the 2030 Agenda for Sustainable Development. In early 2017 the Government of Saint Lucia established its National Coordination Mechanism for the 2030 Agenda which comprises an SDG-Cabinet Sub-Committee of Ministers (CSC) who provide policy guidance to the Sustainable Development Goals National Coordinating Committee (SDGNCC) - the governing committee tasked to guide the implementation and monitoring of the SDGs in Saint Lucia. The SDGNCC is a multi-sectoral committee co-chaired by the Ministries responsible for Sustainable Development and Economic Development. In April 2018, the Government of Saint Lucia embarked on an inclusive and strategic process to develop the country's Medium-Term Development Strategy (MTDS) 2019-2022. In 2019, Saint Lucia completed its Voluntary National Review (VNR) highlighting the progress made and the challenges faced in implementing the goals under review at the 2019 High Level Political Forum on Sustainable Development. In relation with SDG13 (take urgent action to combat climate change and its impacts), the VNR states that "with respect to mitigation, for Saint Lucia, actions are focused on electricity generation, energy efficiency, renewable energy and transport", so that this project is fully aligned with the country's action. It is also worth mentioning actions related to SDG-7 (Ensure access to affordable, reliable, sustainable and modern energy for all) in the field of renewables, such as the adoption of NETS in 2017 and the subsequent update of Saint Lucia Electricity Supply Act as a starting action.
- Saint Lucia submitted its Nationally Determined Contributions (NDC) in 2015. The country's voluntary efforts foresee emissions reductions from the Energy, Electricity Generation and Transportation sectors, with two mitigation actions in transport: "efficient vehicles" and "improved and expanded public transit". The document states that "external support is a pre-requisite to achieving the emissions reduction targets set". It also points out the main policy and legal framework instruments supporting mitigation: "a new levy to control importation of used vehicles; reduction of excise tax and duty for importers of fuel efficient vehicles and alternative energy

vehicles; escalating taxes on higher engine capacity vehicles”; and a “proposed Transport Policy and Strategy”. The latter is expected to be addressed through the preparation of an *Integrated, Sustainable Road Transport Policy and Strategic Roadmap for Implementation* (see below).

- Technical Assistance for the Development of Frameworks aimed at Enhancing Environmental Management - development of legislative frameworks towards improved environmental management specifically, an Environmental Management Act and Climate Change Acts.
- Technical assistance for the formulation of an *Integrated, Sustainable Road Transport Policy and Strategic Roadmap for Implementation*. The ToR for the consultancy services necessary to prepare this document have been prepared, but the request for proposals has not been launched yet. This document is focusing on the identification of the infrastructure needs to develop a multi-modal, integrated, sustainable transport policy, as well as a strategic roadmap, which makes provision for future road transport demands for Saint Lucia. It will focus on three main areas: establishment of a multi-modal transportation system that reduces reliance on any single mode of transport and encourages walking and cycling and promotes energy efficiency; movement of persons and goods efficiently and safely, and promotion of public/private partnerships. The ToR do not include the non-infrastructure actions and reforms necessary to make public transport (and eventually taxi) services more convenient for citizens, and better aligned with the GoSL’s energy-efficiency and climate-mitigation objectives; these additional dimensions will be covered by the project.

8. Knowledge Management

Knowledge management will address two key project activities: training and capacity-building materials and activities, and mobility and emission-related data collection for planning and MRV:

- Training and capacity-building materials. They are included in component 1 (D.1.4.2: Capacity-building materials targeting decision-makers, D.1.4.3: Training activities on sustainable transport and e-mobility policies, addressing civil servants and public and private decision-makers, and D.1.4.4: Knowledge management guidelines and training materials addressing electricity and transport specialists), component 2 (D.2.3.3: Training materials on EV and charging infrastructure technology and maintenance; D.2.3.4: Professional training activities on EV safety (emergency services), driving and maintenance), and component 4 (D.4.4.1: Design and delivery of a training program for policymakers, to be implemented by local academia, and available for wider dissemination).
- Data collection, analysis and recommendations. They are included in component 1 (D.1.2.1: Data collection and analysis of passenger mobility demand; D.1.2.2: Sustainable alternatives for the public transport system, D.1.2.4: Recommendations for the improvement of passenger transport statistics and GHG monitoring to support, inter alia, the implementation of the mobility policy, D.1.3.1: Gendered fleet electrification feasibility analysis: public and private fleets, public transport, and D.1.3.3: National charging network analysis: Impact analysis on the electricity sector and deployment of charging points), component 3 (D.3.3.3: E-mobility recommendations to fleet managers published and disseminated through the network), and component 4 (D.4.1.2: Forecast of ELVs components generation, considering internal combustion and electric vehicles; D.4.2.1: Report summarizing international and regional regulations on ELV management; D.4.2.2: Comprehensive review of existing and planned international regulations on second-life battery use and recommendations for the Saint Lucia context).

Knowledge management is undertaken by the PMU through two supporting actions:

- The project website, as established by D.1.4.1 (as a part of the project communication plan) and D.1.1.4 (as a knowledge management platform providing wide access to project deliverables through a variety of channels such as an information platform and website, quarterly workshops, or quarterly position papers).
- The knowledge management guidelines developed by D.1.4.4.

The knowledge management capacities of the Department of Sustainable Development will be mobilized for this project. In 2018 Saint Lucia launched the National Environmental Information System (NEIS) which is a game-changing platform to enhancing environmental monitoring to aid in compliance with Multilateral Environmental Agreements (MEA); these

in turn contribute to national development and sustainable development. The NEIS includes a Common Data Storage Facility (CDSF), which serves seventeen (17) public and private agencies who have agreed, through the signing of a Memorandum of Understanding, to collaborate and co-ordinate institutional agreements for sharing environmental information and data in Saint Lucia. The CDSF serves as a supporting and foundational tool for reporting on MEAs and the translation of data into useful and actionable information. This information will then be available for use in policy and decision-making. The NEIS was specifically developed for Saint Lucia and is designed to provide MEA Focal Point Ministries and other users with data and information for reporting on the state of the environment under the United Nations Convention on Biological Diversity (UNCBD), United Nations Framework Convention on Climate Change (UNFCCC) and United Nations Convention to Combat Desertification (UNCCD). The achievement of the goals and objectives related to the MEAs' indicators is based upon data and information managed through the NEIS. This includes the monitoring of greenhouse gas emissions from the transport sector, thus the data gathered during this project will be placed on the CDSF and then can be accessed by the general public through the NEIS interface. Both public and private sector Data Collectors, Information Officers, Technical and Research officers have been trained during the project to utilize the NEIS.

The project is part of the global GEF-UNEP 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. A budget is reserved within component 1 for travel associated with the participation in these international activities.

9. Monitoring and Evaluation

Monitoring and Evaluation (M&E) activities and related costs are presented in the costed 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 throughout the project 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 executing agency 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 project's UNEP Task Managers. The UNEP Task Managers 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 UN Environment Programme 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 executing agency 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 Managers. The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. UNEP's Task Managers 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.

In-line with UNEP's Evaluation Policy and the GEF's Monitoring and Evaluation Policy, the project will be subject to a Terminal Evaluation (TE) commissioned by the UNEP Evaluation Office (EOU) at the end of project implementation. The EOU will be responsible for the Terminal Evaluation and will liaise with the Task Managers and Executing Agency's Project Management Unit 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. 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, the GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget (as have been allocated, see annex I-1). The terminal evaluation 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 terminal evaluation 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 terminal evaluation 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. The GEF contribution for this project's M&E activities is US\$ 39,400.

10. Benefits

The number of direct project beneficiaries is estimated at 663 women and 658 men. This includes the drivers and passengers of the cars involved in the demonstrations and the trainees and future trainers attending the capacity-building activities of the national project and the global programme. Indirect project beneficiaries are estimated at 3600 women and 2400 men, based on (1) the impact the project is expected to achieve in the improvement of public transport services (which could reach at least 5000 or 10% of current PT users, estimated at 50,000 users, to be consistent with the 30% share of public transport) and 1000 persons gaining knowledge on EV and sustainable mobility through the project's dissemination activities.

In terms of benefits for the local population, through the introduction and scale-up of electric vehicles over the medium- to long-term, the project will support EVs to replace ICE in the country, reducing air contamination due to transport related emissions and thus improving air quality for the country's citizens. This has the co-benefit of improving the health of the citizens and reducing associated health care costs and possibly mortality rates, which has become even more relevant with the COVID-19 pandemic. Although there is no regular information on air quality in Saint Lucia, WHO

data⁵⁵ shows that the annual concentration of PM2.5 in Castries in 2016 was 21 µg/m³; some studies⁵⁶ report growing mortality levels due to air pollutants: from 71 in 2010 to 80 in 2017; furthermore, participants at the validation workshops highlighted air quality as an issue, particularly in Castries. The project will provide an estimate of the pollutant emissions saved by the demonstration (see D.2.1.2). Furthermore, the introduction of electric vehicles will reduce noise pollution. Facilitating the introduction of EVs into the public transport system may improve the quality of the service in terms of comfort by reducing noise and vibrations. It may consequently promote a modal shift from the use of private transport to the public transport system, which would in turn result in an improvement of traffic conditions throughout the island.

In terms of economic benefits, Saint Lucia is heavily dependent on fuel imports, with a significant part of its GDP dedicated to such costs. Although the incorporation of low carbon electric mobility will also require the importation, thus capital expenditures, on renewable energy assets, electric vehicles and charging infrastructure, once enabled, the transition will make the country less dependent of global oil prices. This should reduce investment uncertainties, which should in turn result in a more favorable investment environment reducing interest rates and short term expected returns, making long term investments more attractive.

⁵⁵ https://www.who.int/gho/phe/outdoor_air_pollution/exposure/en/

⁵⁶ <https://www.statista.com>

PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)

GEF Agency(ies) certification

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO endorsement under GEF-7.

Agency Coordinator, Agency Name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Kelly West, Senior Programme Manager & Global Environment Facility Coordinator Corporate Services Division UNEP			Asher Lessels, Task Manager, UNEP	+55 61 99152 9864	asher.lessels@un.org

PART IV: ANNEXES

The CEO Endorsement Document annexes may be found in the following pages.

ANNEX A: PROJECT RESULTS FRAMEWORK

Project Objective	Objective level Indicators	Baseline	Mid-Point Target (if applicable)	End of project Target	Means of Verification	Assumptions & Risks	UN Environment MTS reference
Accelerate the introduction of electric mobility through capacity-building and electric vehicle demonstration, and prepare the country for scaling-up and replication through the development of electric mobility policies, business models and finance schemes	Indicator A: tonnes of GHG emissions avoided	0	48 tonnes CO2	194 tonnes CO2	Monitoring of mileage and energy consumption of project vehicles.	All EVs are operational in M-13.	UNEP MTS 2018-2021 Climate Change Objective: Countries increasingly transition to low-emission economic development and enhance their adaptation and resilience to climate change
	Indicator B: Number of direct project beneficiaries (women and men using or trained in EVs)	0	20 women and 20 men	183 women and 178 men	Attendance to training activities. Staff trained and engaged in EV operations and maintenance	Priority is given to women's enrollment in project training activities and EV operations and maintenance.	
	Indicator C: Number of indirect project beneficiaries (women and men living in the area served by improved public transport or accessing project dissemination materials)	0	100 women and 100 men	3600 women and 2400 men	Beneficiaries of improved public transport and users of project dissemination materials	Project's recommendations on public transport reform are implemented. Dissemination materials widely distributed through website.	

Project Outcome	Outcome level Indicators	Baseline	Mid-Point Target(if applicable)	End of project Target	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment
Outcome 1	Indicator 1.1: An inter-sectorial coordination body is established within the government	No body exists	N/A	2 meetings in project year 3	Meeting reports.	Sustained political support to the subcommittee's activities.	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 1.2: Draft Sustainable Passenger Mobility Policy and national low-carbon e-mobility strategy are delivered to the government for adoption	No policy and strategy exists	Study on sustainable alternatives for the public transport system and road safety; Study on the integration of renewable power and e-mobility in	Draft policy and strategy delivered to the government for adoption	Government records	Political support of government to advance work on in this area	

			the energy system				
Outcome 2	Indicator 2: Government kilometers target for use of electric fleet is met	30,000 km per year	200,000 km	660,000 km	Vehicle mileage as reported by participating stakeholders	Electric vehicles are assigned to services with high annual mileage	
Outcome 3	Indicator 3.1: Regulatory and tax reforms for the uptake of electric vehicles in Saint Lucia delivered to the government for adoption	Existing regulations and taxes on vehicles, including electric vehicles	N/A	Draft regulatory and tax reforms delivered to the government for adoption	Government and private sector documents (meeting minutes, news articles, etc.)	Political support of government to advance work on in this area	
	Indicator 3.2: Number of business models and financial schemes for electrification of public and private fleets developed	0	1 financial scheme developed	1 financial scheme and 4 business models developed	Government documents (meeting minutes, news articles, etc.)	Political support and private sector interest to advance work in this area	
Outcome 4	Indicator 4: Draft policy framework for ensuring the long-term environmental sustainability of electric mobility delivered to the Ministry of Education, Innovation, Gender Relations and Sustainable Development for adoption	0	Comprehensive review of existing and planned international regulations on second-life battery use and recommendations for the Saint Lucia context	Draft policy framework delivered to the government for adoption	Government records	Political support of government to advance work on in this area	

ANNEX B: RESPONSE TO PROJECT REVIEWS

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:

PPG Grant Approved at PIF: US\$			
<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>
Project consultant (baseline analysis, project design, preparation of the document)	29,500	29,500	0
UNEP Air Quality and Mobility Unit (developing methodology for calculating GHG emission reductions, calculation of GHG emission reductions, technical review of document)	5,000	5,000	0
Centro Mario Molina (technical assistance)	3,000	3,000	0
Travel	2,500	0	0
Total	40,000	37,500	0

If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake exclusively preparation activities up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date. Agencies should report closing of PPG to Trustee in its Quarterly Report.

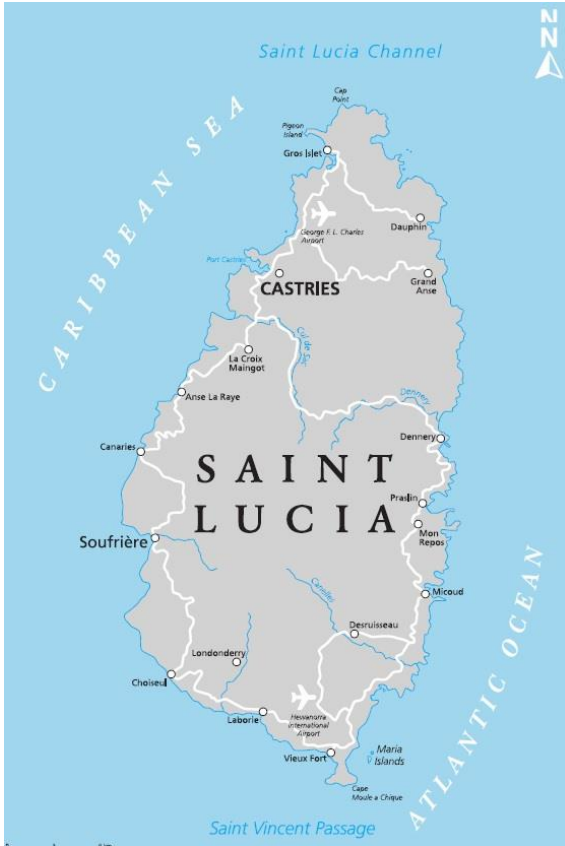
ANNEX D: CALENDAR OF EXPECTED REFLOWS (IF NON-GRANT INSTRUMENT IS USED)

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

Not applicable.

ANNEX E: PROJECT MAP(S) AND COORDINATES

Project activities will be undertaken at the island level and through-out the island. The government’s vehicle fleet participating in the demonstration will be based in Castries. The location of charging stations will be determined during project implementation, with some expected to be in Castries. Additional charging points will be provided within the UAE’s project on solar energy at the airport. LUCELEC is expected to provide additional charging points in other parts of the island, and the companies participating in the demonstration with their own fleets have still to decide where the EVs will be deployed.



Demonstration sites	<i>Latitude</i>	<i>Longitude</i>
Saint Lucia	13.9	-61.0

ANNEX F: GEF 7 CORE INDICATOR WORKSHEET

Core Indicator 6	Greenhouse gas emission mitigated				
	Tons (6.2) (6.1 emissions from AFOLU do not apply)				
	Entered		Entered		
	PIF stage	Endorsement	MTR	TE	
	Expected CO2e (direct)	9,256	206,322		
	Expected CO2e (indirect)	50,196	480,023		
Indicator 6.2	Emissions avoided				
		Tons			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	9,256	206,322		
	Expected CO2e (indirect)	50,196	480,023		
	Anticipated Year	2026 (direct) / 2032 (indirect)	2023 (direct) / 2036 (indirect)		
Indicator 6.3	Energy saved				
		MJ			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Expected direct	107,021,221	2.385.605.159		
	Expected indirect	580,388,320	5.550.269.168		
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment				
		Number			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Female	N/A	663		
	Male	N/A	658		
	<i>Total</i>	N/A	1321		

ANNEX G: GEF PROJECT TAXONOMY WORKSHEET

Include the GEF 7 Taxonomy Worksheet to list down the taxonomic information required under Part I, item G by ticking the most relevant keywords/topics/themes that best describe this project.

Level 1	Level 2	Level 3	Level 4
<input checked="" type="checkbox"/> Influencing models			
	<input checked="" type="checkbox"/> Transform policy and regulatory environments		
	<input checked="" type="checkbox"/> Strengthen institutional capacity and decision-making		
	<input type="checkbox"/> Convene multi-stakeholder alliances		
	<input checked="" type="checkbox"/> Demonstrate innovative approaches		
	<input type="checkbox"/> Deploy innovative financial instruments		
<input checked="" type="checkbox"/> Stakeholders			
	<input type="checkbox"/> Indigenous Peoples		
	<input checked="" type="checkbox"/> Private Sector		
		<input checked="" type="checkbox"/> Capital providers	
		<input checked="" type="checkbox"/> Financial intermediaries and market facilitators	
		<input checked="" type="checkbox"/> Large corporations	
		<input checked="" type="checkbox"/> SMEs	
		<input checked="" type="checkbox"/> Individuals/Entrepreneurs	
		<input type="checkbox"/> Non-Grant Pilot	
		<input type="checkbox"/> Project Reflow	
	<input type="checkbox"/> Beneficiaries		
	<input type="checkbox"/> Local Communities		
	<input checked="" type="checkbox"/> Civil Society		
		<input checked="" type="checkbox"/> Community Based Organization	
		<input checked="" type="checkbox"/> Non-Governmental Organization	
		<input checked="" type="checkbox"/> Academia	
		<input checked="" type="checkbox"/> Trade Unions and Workers Unions	
	<input checked="" type="checkbox"/> Type of Engagement		
		<input checked="" type="checkbox"/> Information Dissemination	
		<input type="checkbox"/> Partnership	
		<input checked="" type="checkbox"/> Consultation	
		<input checked="" type="checkbox"/> Participation	
	<input checked="" type="checkbox"/> Communications		
		<input checked="" type="checkbox"/> Awareness Raising	
		<input checked="" type="checkbox"/> Education	
		<input checked="" type="checkbox"/> Public Campaigns	
		<input checked="" type="checkbox"/> Behavior Change	
<input checked="" type="checkbox"/> Capacity, Knowledge and Research			
	<input type="checkbox"/> Enabling Activities		
	<input checked="" type="checkbox"/> Capacity Development		
	<input checked="" type="checkbox"/> Knowledge Generation and Exchange		
	<input type="checkbox"/> Targeted Research		
	<input type="checkbox"/> Learning		
		<input type="checkbox"/> Theory of Change	
		<input type="checkbox"/> Adaptive Management	
		<input type="checkbox"/> Indicators to Measure Change	
	<input checked="" type="checkbox"/> Innovation		
	<input checked="" type="checkbox"/> Knowledge and Learning		
		<input checked="" type="checkbox"/> Knowledge Management	
		<input checked="" type="checkbox"/> Innovation	
		<input checked="" type="checkbox"/> Capacity Development	
		<input checked="" type="checkbox"/> Learning	
	<input type="checkbox"/> Stakeholder Engagement Plan		

Level 1	Level 2	Level 3	Level 4
<input checked="" type="checkbox"/> Gender Equality			
	<input checked="" type="checkbox"/> Gender Mainstreaming		
		<input checked="" type="checkbox"/> Beneficiaries	
		<input checked="" type="checkbox"/> Women groups	
		<input type="checkbox"/> Sex-disaggregated indicators	
		<input type="checkbox"/> Gender-sensitive indicators	
	<input checked="" type="checkbox"/> Gender results areas		
		<input type="checkbox"/> Access and control over natural resources	
		<input type="checkbox"/> Participation and leadership	
		<input checked="" type="checkbox"/> Access to benefits and services	
		<input type="checkbox"/> Capacity development	
		<input type="checkbox"/> Awareness raising	
		<input type="checkbox"/> Knowledge generation	
<input checked="" type="checkbox"/> Focal Areas/Theme			
	<input type="checkbox"/> Integrated Programs		
		<input type="checkbox"/> Commodity Supply Chains (Good Growth Partnership)	
			<input type="checkbox"/> Sustainable Commodities Production
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Financial Screening Tools
			<input type="checkbox"/> High Conservation Value Forests
			<input type="checkbox"/> High Carbon Stocks Forests
			<input type="checkbox"/> Soybean Supply Chain
			<input type="checkbox"/> Oil Palm Supply Chain
			<input type="checkbox"/> Beef Supply Chain
			<input type="checkbox"/> Smallholder Farmers
			<input type="checkbox"/> Adaptive Management
		<input type="checkbox"/> Food Security in Sub-Saharan Africa	
			<input type="checkbox"/> Resilience (climate and shocks)
			<input type="checkbox"/> Sustainable Production Systems
			<input type="checkbox"/> Agroecosystems
			<input type="checkbox"/> Land and Soil Health
			<input type="checkbox"/> Diversified Farming
			<input type="checkbox"/> Integrated Land and Water Management
			<input type="checkbox"/> Smallholder Farming
			<input type="checkbox"/> Small and Medium Enterprises
			<input type="checkbox"/> Crop Genetic Diversity
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Gender Dimensions
			<input type="checkbox"/> Multi-stakeholder Platforms
		<input type="checkbox"/> Food Systems, Land Use and Restoration	
			<input type="checkbox"/> Sustainable Food Systems
			<input type="checkbox"/> Landscape Restoration
			<input type="checkbox"/> Sustainable Commodity Production
			<input type="checkbox"/> Comprehensive Land Use Planning
			<input type="checkbox"/> Integrated Landscapes
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Smallholder Farmers
		<input type="checkbox"/> Sustainable Cities	
			<input type="checkbox"/> Integrated urban planning
			<input type="checkbox"/> Urban sustainability framework
			<input type="checkbox"/> Transport and Mobility
			<input type="checkbox"/> Buildings
			<input type="checkbox"/> Municipal waste management
			<input type="checkbox"/> Green space
			<input type="checkbox"/> Urban Biodiversity
			<input type="checkbox"/> Urban Food Systems
			<input type="checkbox"/> Energy efficiency
			<input type="checkbox"/> Municipal Financing
			<input type="checkbox"/> Global Platform for Sustainable Cities
			<input type="checkbox"/> Urban Resilience
	<input type="checkbox"/> Biodiversity		
		<input type="checkbox"/> Protected Areas and Landscapes	
			<input type="checkbox"/> Terrestrial Protected Areas
			<input type="checkbox"/> Coastal and Marine Protected Areas
			<input type="checkbox"/> Productive Landscapes

Level 1	Level 2	Level 3	Level 4
			<input type="checkbox"/> Productive Seascapes
			<input type="checkbox"/> Community Based Natural Resource Management
		<input type="checkbox"/> Mainstreaming	
			<input type="checkbox"/> Extractive Industries (oil, gas, mining)
			<input type="checkbox"/> Forestry (Including HCVF and REDD+)
			<input type="checkbox"/> Tourism
			<input type="checkbox"/> Agriculture & agrobiodiversity
			<input type="checkbox"/> Fisheries
			<input type="checkbox"/> Infrastructure
			<input type="checkbox"/> Certification (National Standards)
			<input type="checkbox"/> Certification (International Standards)
		<input type="checkbox"/> Species	
			<input type="checkbox"/> Illegal Wildlife Trade
			<input type="checkbox"/> Threatened Species
			<input type="checkbox"/> Wildlife for Sustainable Development
			<input type="checkbox"/> Crop Wild Relatives
			<input type="checkbox"/> Plant Genetic Resources
			<input type="checkbox"/> Animal Genetic Resources
			<input type="checkbox"/> Livestock Wild Relatives
			<input type="checkbox"/> Invasive Alien Species (IAS)
		<input type="checkbox"/> Biomes	
			<input type="checkbox"/> Mangroves
			<input type="checkbox"/> Coral Reefs
			<input type="checkbox"/> Sea Grasses
			<input type="checkbox"/> Wetlands
			<input type="checkbox"/> Rivers
			<input type="checkbox"/> Lakes
			<input type="checkbox"/> Tropical Rain Forests
			<input type="checkbox"/> Tropical Dry Forests
			<input type="checkbox"/> Temperate Forests
			<input type="checkbox"/> Grasslands
			<input type="checkbox"/> Paramo
			<input type="checkbox"/> Desert
		<input type="checkbox"/> Financial and Accounting	
			<input type="checkbox"/> Payment for Ecosystem Services
			<input type="checkbox"/> Natural Capital Assessment and Accounting
			<input type="checkbox"/> Conservation Trust Funds
			<input type="checkbox"/> Conservation Finance
		<input type="checkbox"/> Supplementary Protocol to the CBD	
			<input type="checkbox"/> Biosafety
			<input type="checkbox"/> Access to Genetic Resources Benefit Sharing
	<input type="checkbox"/> Forests		
		<input type="checkbox"/> Forest and Landscape Restoration	
			<input type="checkbox"/> REDD/REDD+
		<input type="checkbox"/> Forest	
			<input type="checkbox"/> Amazon
			<input type="checkbox"/> Congo
			<input type="checkbox"/> Drylands
	<input type="checkbox"/> Land Degradation		
		<input type="checkbox"/> Sustainable Land Management	
			<input type="checkbox"/> Restoration and Rehabilitation of Degraded Lands
			<input type="checkbox"/> Ecosystem Approach
			<input type="checkbox"/> Integrated and Cross-sectoral approach
			<input type="checkbox"/> Community-Based NRM
			<input type="checkbox"/> Sustainable Livelihoods
			<input type="checkbox"/> Income Generating Activities
			<input type="checkbox"/> Sustainable Agriculture
			<input type="checkbox"/> Sustainable Pasture Management
			<input type="checkbox"/> Sustainable Forest/Woodland Management
			<input type="checkbox"/> Improved Soil and Water Management Techniques

Level 1	Level 2	Level 3	Level 4
			<input type="checkbox"/> Sustainable Fire Management
			<input type="checkbox"/> Drought Mitigation/Early Warning
		<input type="checkbox"/> Land Degradation Neutrality	
			<input type="checkbox"/> Land Productivity
			<input type="checkbox"/> Land Cover and Land cover change
			<input type="checkbox"/> Carbon stocks above or below ground
		<input type="checkbox"/> Food Security	
	<input type="checkbox"/> International Waters		
		<input type="checkbox"/> Ship	
		<input type="checkbox"/> Coastal	
		<input type="checkbox"/> Freshwater	
			<input type="checkbox"/> Aquifer
			<input type="checkbox"/> River Basin
			<input type="checkbox"/> Lake Basin
		<input type="checkbox"/> Learning	
		<input type="checkbox"/> Fisheries	
		<input type="checkbox"/> Persistent toxic substances	
		<input type="checkbox"/> SIDS : Small Island Dev States	
		<input type="checkbox"/> Targeted Research	
		<input type="checkbox"/> Pollution	
			<input type="checkbox"/> Persistent toxic substances
			<input type="checkbox"/> Plastics
			<input type="checkbox"/> Nutrient pollution from all sectors except wastewater
			<input type="checkbox"/> Nutrient pollution from Wastewater
		<input type="checkbox"/> Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		<input type="checkbox"/> Strategic Action Plan Implementation	
		<input type="checkbox"/> Areas Beyond National Jurisdiction	
		<input type="checkbox"/> Large Marine Ecosystems	
		<input type="checkbox"/> Private Sector	
		<input type="checkbox"/> Aquaculture	
		<input type="checkbox"/> Marine Protected Area	
		<input type="checkbox"/> Biomes	
			<input type="checkbox"/> Mangrove
			<input type="checkbox"/> Coral Reefs
			<input type="checkbox"/> Seagrasses
			<input type="checkbox"/> Polar Ecosystems
			<input type="checkbox"/> Constructed Wetlands
	<input type="checkbox"/> Chemicals and Waste		
		<input type="checkbox"/> Mercury	
		<input type="checkbox"/> Artisanal and Scale Gold Mining	
		<input type="checkbox"/> Coal Fired Power Plants	
		<input type="checkbox"/> Coal Fired Industrial Boilers	
		<input type="checkbox"/> Cement	
		<input type="checkbox"/> Non-Ferrous Metals Production	
		<input type="checkbox"/> Ozone	
		<input type="checkbox"/> Persistent Organic Pollutants	
		<input type="checkbox"/> Unintentional Persistent Organic Pollutants	
		<input type="checkbox"/> Sound Management of chemicals and Waste	
		<input type="checkbox"/> Waste Management	
			<input type="checkbox"/> Hazardous Waste Management
			<input type="checkbox"/> Industrial Waste
			<input type="checkbox"/> e-Waste
		<input type="checkbox"/> Emissions	
		<input type="checkbox"/> Disposal	
		<input type="checkbox"/> New Persistent Organic Pollutants	
		<input type="checkbox"/> Polychlorinated Biphenyls	
		<input type="checkbox"/> Plastics	
		<input type="checkbox"/> Eco-Efficiency	
		<input type="checkbox"/> Pesticides	
		<input type="checkbox"/> DDT - Vector Management	
		<input type="checkbox"/> DDT - Other	
		<input type="checkbox"/> Industrial Emissions	
		<input type="checkbox"/> Open Burning	

Level 1	Level 2	Level 3	Level 4
		<input type="checkbox"/> Best Available Technology / Best Environmental Practices	
		<input type="checkbox"/> Green Chemistry	
	<input checked="" type="checkbox"/> Climate Change		
		<input type="checkbox"/> Climate Change Adaptation	
			<input type="checkbox"/> Climate Finance
			<input type="checkbox"/> Least Developed Countries
			<input type="checkbox"/> Small Island Developing States
			<input type="checkbox"/> Disaster Risk Management
			<input type="checkbox"/> Sea-level rise
			<input type="checkbox"/> Climate Resilience
			<input type="checkbox"/> Climate information
			<input type="checkbox"/> Ecosystem-based Adaptation
			<input type="checkbox"/> Adaptation Tech Transfer
			<input type="checkbox"/> National Adaptation Programme of Action
			<input type="checkbox"/> National Adaptation Plan
			<input type="checkbox"/> Mainstreaming Adaptation
			<input type="checkbox"/> Private Sector
			<input type="checkbox"/> Innovation
			<input type="checkbox"/> Complementarity
			<input type="checkbox"/> Community-based Adaptation
			<input type="checkbox"/> Livelihoods
		<input checked="" type="checkbox"/> Climate Change Mitigation	
			<input type="checkbox"/> Agriculture, Forestry, and other Land Use
			<input type="checkbox"/> Energy Efficiency
			<input checked="" type="checkbox"/> Sustainable Urban Systems and Transport
			<input type="checkbox"/> Technology Transfer
			<input type="checkbox"/> Renewable Energy
			<input type="checkbox"/> Financing
			<input type="checkbox"/> Enabling Activities
		<input type="checkbox"/> Technology Transfer	
			<input type="checkbox"/> Poznan Strategic Programme on Technology Transfer
			<input type="checkbox"/> Climate Technology Centre & Network (CTCN)
			<input type="checkbox"/> Endogenous technology
			<input type="checkbox"/> Technology Needs Assessment
			<input type="checkbox"/> Adaptation Tech Transfer
		<input type="checkbox"/> United Nations Framework on Climate Change	
			<input type="checkbox"/> Nationally Determined Contribution
			<input type="checkbox"/> Paris Agreement
			<input type="checkbox"/> Sustainable Development Goals
		<input checked="" type="checkbox"/> Climate Finance (Rio Markers)	
			<input type="checkbox"/> Climate Change Mitigation 1
			<input checked="" type="checkbox"/> Climate Change Mitigation 2
			<input type="checkbox"/> Climate Change Adaptation 1
			<input type="checkbox"/> Climate Change Adaptation 2
			<input checked="" type="checkbox"/> Climate Change Adaptation 0
			<input type="checkbox"/> Climate Change Mitigation 0

ANNEX H: INDICATIVE TERMS OF REFERENCE FOR PROJECT PERSONNEL, CONSULTANTS AND SUBCONTRACTS

010 - Staff & Personnel (Including Consultants)

Position title:	Chief Technical Advisor
Budget line number:	0101
Duration:	36 months
Date required:	M-1
Duty station:	Castries, Saint Lucia
Reporting structure:	The Chief Technical Advisor will report to the National Project Director and to the Task Manager of the Lead Implementing Agency [UNEP].
Description of duties:	<p>Main project management duties:</p> <ul style="list-style-type: none"> - Ensure that project implementation is carried out according to the project design and the outputs are delivered and outcomes achieved to the required standard of quality within the approved timeframe and budget. - Regular communication with relevant ministries, governmental agencies, co-finance partners, PSC members, members of ad-hoc technical working groups and all other key stakeholders. - Organize and facilitate the inception workshop, project steering committee meetings and other project meetings. - Undertake timely reporting to the NPD and the IA as per the M&E Plan and the project cooperation agreement requirements. - Prepare annual workplan and budget revisions and update the project Procurement Plan, as required. - Supervision of the staff, experts, subcontractors, and implementing partners working on the project. - Identification of risks, preparing of mitigation strategies and implementation of mitigations measures. - Track project achievements against the Results Framework, Core Indicator worksheet and Gender Action Plan. <p>Main general technical duties:</p> <ul style="list-style-type: none"> - Capture lessons learned during project implementation. - Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR. - Assess major and minor amendments to the project within the parameters set by UNEP-GEF; - Support the Terminal Evaluation process. - Acts as secretary of the PSC and Thematic Working Groups. - Prepares and submits to the government proposals on regulatory reforms. - Annual monitoring of the gender action plan. - Prepares training materials and organizes capacity building activities. - Manages project knowledge, including dissemination of materials through project website and other channels. <p>Main specific technical duties: To oversee and direct the technical contents in all project outputs, and specifically to contribute to the following ones:</p> <ul style="list-style-type: none"> - Component 1: scope and mandate of the coordination body; drafting of the passenger mobility policy and national mobility strategy. - Component 2: evaluation report of the demonstrations; contribution to the technical specifications for the demonstrations. - Component 3: support to the stakeholder consultation on regulatory reforms; development of business models for fleet electrification. - Component 4: development of general recommendations on ELV management; drafting of regulations and roadmap on ELV management. - Technical contributions to training materials and training activities for components 1, 2 and 4.
Expected deliverables:	<p>The CTO contributes to all project deliverables, and particularly to the following ones:</p> <ul style="list-style-type: none"> 1.1.1 Draft Terms of Reference and Workplan for the body, with identification of all participating ministries and public institutions 1.1.5 Report with recommendations on the body's workplan and its sustainable operation (including the platform) after project completion 1.1.3 Stakeholder consultation strategy presented for approval 1.2.3 Sustainable and safe passenger mobility policy including gender action plan 1.2.4 Recommendations for the improvement of passenger transport statistics and GHG monitoring to support, inter alia, the implementation of the mobility policy 1.3.5 Final e-mobility strategy (Vision 2030) submitted for government adoption 1.4.2 Capacity-building materials targeting decision-makers and other government officials 2.2.1 Demonstration plan, including selection of car fleets participating in the pilot demonstration, technical characteristics of electric vehicles and charging stations, locations of charging stations, and workplan for successful implementation of the demonstrations 2.2.3 Procurement and installation of charging points for the government fleet 3.1.5 Stakeholder consultations of regulatory reforms 3.2.2 Development of business models for electrification of public and private fleets in Saint Lucia 3.2.4 E-mobility recommendations and procurement guidelines to fleet managers published and disseminated 4.3.3 Development of a roadmap on sustainable and commercially viable ELV and battery management submitted to government for adoption
Qualifications:	<ul style="list-style-type: none"> - A university degree (MSc or PhD) in a subject related to transport, civil or energy engineering. - At least 5 years of demonstrable project/programme management experience, including experience in the implementation of gender action plans. - At least 5 years of experience working with ministries, national or provincial institutions that are concerned with natural resource and/or environmental management. - At least 5 years professional work experience in the area of transport or electric mobility is desirable.
Languages:	English

Position title:	Project finance and M&E Officer
Budget line number:	0102
Duration:	24 months
Date required:	M-6
Duty station:	Castries, Saint Lucia
Reporting structure:	The Project Finance and M&E Officer will report to the CTA
Description of duties:	<ul style="list-style-type: none"> • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the CTA; • Review project expenditures and ensure that project funds are used in compliance with the Project Documents and financial rules and procedures; • Validate and certify forms before submission to UNEP; • Provide necessary financial information as and when required for project management decisions; • Provide necessary financial information during project audit(s); • Review annual budgets and project expenditure reports, and notify the CTA if there are any discrepancies or issues; • Consolidate financial progress reports submitted by the responsible parties for implementation of project activities; • Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports: • Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards; • Ensure project's M&E meets the requirements of the Government and UNWP-GEF; develop project-specific M&E tools as necessary; • Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results; • Develop and coordinate the implementation of the stakeholder engagement plan; • Oversee and coordinate the monitoring and evaluation of the project demonstrations; • Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results; • Facilitate terminal evaluation of the project; • Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products; • Support project site M&E and learning missions; • Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.
Expected deliverables:	#N/A
Qualifications:	<ul style="list-style-type: none"> • A Bachelor degree in economics or in accounting/ financial management; • At least five years of relevant work experience preferably in a project management setting involving multi-lateral/ international funding agency. Previous experience with UNEP or UN project will be a definite asset; • Significant experience in collating, analyzing and writing up results for reporting purposes; • Very good knowledge of results-based management and project cycle management, particularly with regards to M&E approach and methods. Formal training in RBM/ PCM will be a definite asset; • Knowledge and working experience of the application of gender mainstreaming in international projects; • Proficiency in the use of computer software applications particularly MS Excel;
Languages:	English

120 - Contract Services

Subcontract title:	Services to support meetings and events	
Budget line number:	1201	
Duration:	29	months
Date required:	M-6	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Sustainable Development (Executing Agency)	
Description of duties:	<ul style="list-style-type: none"> - Services for supporting meetings of the coordination space (Output 1.1). - Technical assistance for the design of the e-mobility training programme (Output 1.4) - Capacity-building activities (workshops) for civil servants (Output 1.4). - Capacity-building activities (workshops) for energy and transport professionals (Output 1.4). - Professional training on PT jobs (EV safety, drivers and maintenance) (Output 2.3). - Technical assistance for the ELV training programme for policymakers (Output 4.4). - Training workshops for policymakers and local academia on end-of-life vehicle management (Output 4.4). 	
Expected deliverables:	1.1.2	Quarterly body meetings from date of inception
	1.4.3	Training activities on sustainable transport and e-mobility policies, standards and regulations, addressing civil servants, and public and private decision-makers
	1.4.4	Knowledge management guidelines and training materials addressing electricity and transport specialists
	2.3.4	Professional training activities on EV safety (emergency services), driving and maintenance
	4.4.1	Design and delivery of a training programme for policymakers and local academia, and available for wider dissemination
	4.4.3	National campaign to raise awareness among consumers
Qualifications:	<p>At least 5 year expertise in the organization of meetings, workshops and training activities, and proven ability to identify adequate trainers in the required technical fields.</p> <p>The team leader should hold a bachelor degree in related to professional training, pedagogy or other related field. The team leader should be supported by at least 1 team member with 5-year experience in the organization of training events, publication of training materials, and 1 team member with a bachelor degree in a transport or energy-related discipline. The contractor will submit candidate trainers to the Executing Agency for approval, and establish the adequate individual contracts with them.</p>	
Languages:	English	

Subcontract title: **Consultancy on passenger mobility policy and impacts of electrification**

Budget line number: 1202

Duration: 10 months

Date required: M-3

Location: Castries, Saint Lucia

Reporting structure: Department of Sustainable Development (Executing Agency)

Description of duties:

- Consultancy services on mobility data collection and policy proposals (Output 1.2), including:
 - * Mobility data (including safety and security issues) will be disaggregated by gender, in order to provide a basis for gendered analysis of mobility trends in Saint Lucia.
 - * The study of alternatives will include the inputs provided by the consultancy on gender analysis and action plan.
 - * The Sustainable and safe passenger mobility policy will integrate the results provided by the consultancy on gender analysis and action plan.
- Consultancy services on economic, social and territorial impacts of e-mobility (Output 1.3), including:
 - * Gendered feasibility analysis of the electrification of public and private fleets and public transport in Saint Lucia.
 - * Study of the capacity of the energy generation system to address EV demand through renewables.
 - * Role of EVs in a low carbon energy system and coupling of e-mob with energy sector, including renewables.
 - Role of EVs for resiliency in combination with decentralized RE power generation
 - Role of EVs to reduce dependency on diesel back-up power, and associated economic and GHG savings.

At least 15% of the consultancy resources will be applied to the integration of gender-related dimensions.

Expected deliverables: 1.2.1 Gendered data collection and analysis of passenger mobility demand

1.2.2 Study on sustainable alternatives for the public transport system and road safety, including gender analysis

1.2.3 Sustainable and safe passenger mobility policy including gender action plan

1.3.1 Gendered fleet electrification feasibility analysis covering public and private fleets and public transport

1.3.2 Study on the integration of renewable power and e-mobility in the energy system

1.3.3 National charging network analysis: Impact analysis on the electricity sector and deployment of charging points

Qualifications:

Consultancy firm with verified experience in previous project on passenger transport planning and energy efficiency policies at the national level.

Team leader: Master degree in transport engineering, with at least 10 years of experience in urban passenger transport planning, policies and management.

Key expert 1: Bachelor in mechanical engineering or energy engineering, with at least 5 years of experience in electric vehicles, EV charging installations, and electricity distribution grids.

Key expert 2: Bachelor degree in geography, environmental science, economics or other related field with at least 5 years of experience in impact studies of public policies

Languages: English

Subcontract title:	Consultancy on gender analysis and action plan	
Budget line number:	1203	
Duration:	13	months
Date required:	M-6	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Sustainable Development (Executing Agency)	
Description of duties:	<ul style="list-style-type: none"> - Consultancy services on gender analysis and action plan of the policy (Output 1.2). - Consultancy services on gender analysis and action plan of the strategy (Output 1.3). 	
Expected deliverables:	1.2.3	Sustainable and safe passenger mobility policy
	1.3.4	Draft national e-mobility strategy circulated for stakeholder consultation and validated
		#N/A
		#N/A
		#N/A
Qualifications:	<p>Consultant company with at least 5 years of experience in gender analysis of public policies. Previous experience in projects in Saint Lucia or other Caribbean states will be necessary. Experience in transport or energy policies will be an advantage.</p> <p>Team leader: Master degree in sociology, planning or other related field, with experience in conducting gender analysis and action plans in at least two previous projects</p>	
Languages:	English	

Subcontract title: **Technical support to demonstrations and EV potential market assessment**

Budget line number: 1205

Duration: 19 months

Date required: M-26

Location: Castries, Saint Lucia

Reporting structure: Department of Sustainable Development (Executing Agency)

Description of duties:

- Technical assistance for the design of demonstration and MRV system (Output 2.1).
- Gender considerations from the sustainable and save passenger mobility strategy (output 1.2) integrated in the design of demonstration and MRV system.
- Technical assistance for pilot design, implementation, monitoring and evaluation (support for the procurement of pilot vehicles and installation of charging points and support to partners in mainstreaming gender in order to attain the project's targets regarding female participation in the demonstration. (Output 2.2).
- Technical assistance on the potential of EV in Saint Lucia (Output 3.2).
- Training materials on EVs (Output 2.3).

Gender-related issues will receive at least 15% of the contract resources.

Expected deliverables: 2.1.1 Demonstration design, including its monitoring, reporting and verification (MRV) plan

2.1.2 Evaluation report and knowledge management of demonstration

2.2.1 Demonstration plan, including selection of car fleets participating in the pilot demonstration, technical characteristics of electric vehicles and charging stations, locations of charging stations,

2.2.2 Procurement of pilot vehicles, including technical support

2.2.3 Procurement and installation of charging points for the government fleet

2.3.2 Communication materials on the project demonstrations

2.3.3 Training materials on EV and charging infrastructure technology and maintenance

3.2.1 Scenarios on the potential of the electric vehicle market in Saint Lucia

Qualifications:

Consultancy firm with at least 2 years of experience in the operation and maintenance of electric vehicles, at least 5 years of experience in fleet management and at least 2 years of experience in MRV systems. Proven capacity to provide immediate support, vehicle repair and vehicle replacement, if necessary.

Team leader: Bachelor degree in mechanical engineering or a related field.

Key expert 1: Bachelor degree with 2-year experience in professional training

Key expert 2: Bachelor degree in economics, business administration or other related field with 2-year experience in market studies in Saint Lucia or other country in the Caribbean region.

Languages: English

Subcontract title:	Business models and financial schemes for EV expansion	
Budget line number:	1206	
Duration:	19	months
Date required:	M-26	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Sustainable Development (Executing Agency)	
Description of duties:	<ul style="list-style-type: none"> - Consultancy services on technical and legal aspects, including development of standards (based on British Standards and other international best practice) (Output 3.1). - Consultancy services on fiscal aspects (Output 3.1). - TA on business models and financial schemes for electrification of PT and taxis (Output 3.2). - TA for business models and financial schemes of public and private fleets, including the deployment of private chargers (Output 3.2). 	
Expected deliverables:	3.1.1	Regulatory proposal on vehicle approval and periodic technical inspection, including electric vehicles
	3.1.2	Regulatory proposal on technical approval and installation of public and private charging stations
	3.1.3	Regulatory proposal on public transport authorizations and concession contracts to improve quality and stimulate electrification
	3.1.4	Tax reform proposal to facilitate fiscal stability while Saint Lucia transitions towards e-mobility
	3.2.2	Development of business models for electrification of public and private fleets in Saint Lucia
	3.2.3	Development of financial schemes to support fleet electrification
Qualifications:	Key expert 1: Master degree in law, economics or other related field, with at least 4-year experience in the transport sector. Previous experience in the Caribbean region, and specifically in Saint Lucia, will be a strong advantage.	
Languages:	English	

Subcontract title:	Consultancy on future ELV management regulations	
Budget line number:	1207	
Duration:	21	months
Date required:	M-33	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Sustainable Development (Executing Agency)	
Description of duties:	<ul style="list-style-type: none"> - Technical assistance for diagnostic of ELV management in Saint Lucia (Output 4.1). - Technical assistance on ELV management needs in Saint Lucia and EV impact (Output 4.1). - TA: review of international best practice and regulation on ELV management for EV (Output 4.2). - TA: Draft regulations on ELV management for EV (Output 4.2). - T.A. to review business models on ELV management and second-life battery use (Output 4.3). - T.A. to develop commercially viable EPR business models (Output 4.3). - Technical and managerial support to producers and importers (Output 4.4). 	
Expected deliverables:	4.1.1	Assessment of local conditions and characteristics of ELV management
	4.1.2	Forecast of ELV components generation, considering internal combustion and electric vehicles
	4.1.3	Recommendations on ELV management in Saint Lucia, based on international practice
	4.2.1	Report summarizing international and regional regulations on EPR-based ELV management, including EV components and battery
	4.2.2	Comprehensive review of existing and planned international regulations on second-life battery use and recommendations for the Saint Lucia context
	4.2.3	Proposal for ELV regulation
	4.3.1	Screening and systematization of successful financial and business models on ELV components and second-life battery use, based on the EPR concept
	4.3.2	Development of commercially viable EPR business models for ELV components and EV batteries, including cost benefit analysis estimating investment needs and financing schemes
	4.4.2	Provision of technical and managerial support to producers and importers, with a focus on the local industry
Qualifications:	<p>Consultancy firm with at least 4 years of experience in environmental studies (waste management). Specific experience in ELV management will be a strong advantage. Previous experience in Saint Lucia or other Caribbean country will be an advantage.</p> <p>Team leader: Bachelor degree in environmental science, economics, engineering or other related field, with at least 2 years of experience in ELV management.</p> <p>Key expert 1: Bachelor degree in energy engineering. At least one year of experience in Lithium battery technology or electric vehicles.</p>	
Languages:	English	

Subcontract title:	Technical support on communication plans and activities (including website)	
Budget line number:	1208	
Duration:	29	months
Date required:	34	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Sustainable Development (Executing Agency)	
Description of duties:	<ul style="list-style-type: none"> - Preparation and publication of communication plan (D.1.4.1) (Output 1.4). - Preparation and publication of knowledge management guidelines (Output 1.4). - Technical assistance for design, implementation and operation of website (D.1.1.4) (Output 1.1). - Communication plan and materials on demonstrations (D.2.3.1) (Output 2.3). - TA to support the design of a national awareness-raising campaign (D.4.4.3) (Output 4.4). 	
Expected deliverables:	1.1.4	Knowledge management and dissemination platform operational (information platform and website containing products including quarterly online workshops and quarterly position papers)
	1.4.1	E-mobility communication plan completed and implemented
	1.4.4	Knowledge management guidelines and training materials addressing electricity and transport specialists
	2.3.1	Communication plan for the project demonstrations
	4.4.3	National campaign to raise awareness among consumers
Qualifications:	Consultancy firm specialised in public communication, and campaigning with at least 2 years of experience in the field of public policies, ideally in the environmental sector. Previous experience in Saint Lucia or in other Caribbean country necessary.	
Languages:	English	

Subcontract title:	Provision and installation of charging points	
Budget line number:	1209	
Duration:	9	months
Date required:	M-12	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Sustainable Development (Executing Agency)	
Description of duties:	- Provision and installation of charging points (Output 2.2).	
Expected deliverables:	2.2.3	Procurement and installation of charging points for the government fleet
	2.2.4	Procurement and installation of additional public charging stations
		#N/A
		#N/A
		#N/A
Qualifications:	Consultancy firm officially authorized/certified for importing and installing EV charging facilities in Saint Lucia. Previous experience in the installation of Level 2 chargers will be an asset.	
Languages:	English	

140 - Implementing Partners

Subcontract title:	Grants to EV beneficiaries transferred to Department of Finance	
Budget line number:	1401	
Duration:	10	months
Date required:	M-13	
Location:	Castries, Saint Lucia	
Reporting structure:	Department of Finance (Implementing Partner) reports to Department of Sustainable Development (Executing Agency)	
Description of duties:	<p>- Provision of EVs for fleet demonstration (Output 2.2).:</p> <p>(1) The implementing partner (Department of Finance) will procure the EVs to be included in the government's fleet.</p> <p>(2) Concerning the selection of private beneficiaries, the implementing partner (Department of Finance) will launch a Request for Proposals, requesting the contractor to provide a minimum number of vehicle-km travelled with electric vehicles during at least 24 months.</p> <p>(3) The contractor also has to provide services of vehicle maintenance</p>	
Expected deliverables:	2.2.2	Procurement of pilot vehicles, including technical support
		#N/A
		#N/A
		#N/A
		#N/A
Qualifications:	The selected final beneficiary should have proven experience in management of its own large fleet, with a focus on cars and vans/ small trucks. Additional commitments in terms of female employment (i.e. number of women within the staff in relevant positions (driver, vehicle maintenance, fleet management...))	
Languages:	English	

ANNEX I-1 DETAILED GEF BUDGET

Budget in UNEP format

Project Component	Project	Umoja budget class	Budget line number	Budget line description	Year 1	Year 2	Year 3	Total
Outcome 1	Output 1.1	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	5,750	5,250	7,500	18,500
Outcome 1	Output 1.1	120 - Contract Services	1201	Services to support meetings and events	4,000	6,000	6,000	16,000
Outcome 1	Output 1.1	120 - Contract Services	1208	Technical assistance for design, implementation and operation of website	5,000	10,000	5,000	20,000
Outcome 1	Output 1.2:	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	3,150	4,250	-	7,400
Outcome 1	Output 1.2:	120 - Contract Services	1202	Consultancy on passenger mobility policy and impacts of electrification	20,000	-	-	20,000
Outcome 1	Output 1.2:	120 - Contract Services	1203	Consultancy on gender analysis and action plan	-	10,000	-	10,000
Outcome 1	Output 1.2:	120 - Contract Services	1208	Technical support on communication plans and activities (including website)	5,000	-	-	5,000
Outcome 1	Output 1.3	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	2,800	4,600	-	7,400
Outcome 1	Output 1.3	120 - Contract Services	1202	Consultancy on passenger mobility policy and impacts of electrification	20,000	-	-	20,000
Outcome 1	Output 1.3	120 - Contract Services	1203	Consultancy on gender analysis and action plan	-	10,000	-	10,000
Outcome 1	Output 1.3	120 - Contract Services	1208	Technical support on communication plans and activities (including website)	5,000	-	-	5,000
Outcome 1	Output 1.4	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	2,800	3,500	-	6,300
Outcome 1	Output 1.4	160 - Travel	1601	Travel to attend working groups and workshops of the global e-mob programme	6,000	6,000	6,000	18,000
Outcome 1	Output 1.4	120 - Contract Services	1201	Services to support meetings and events	2,000	8,000	-	10,000
Outcome 2	Output 2.1	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,750	1,750	1,750	5,250
Outcome 2	Output 2.1	120 - Contract Services	1205	Technical support to demonstrations and EV potential market assessment	10,000	-	-	10,000
Outcome 2	Output 2.2	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,750	1,750	1,750	5,250
Outcome 2	Output 2.2	120 - Contract Services	1205	Technical support to demonstrations and EV potential market assessment	5,000	5,000	-	10,000
Outcome 2	Output 2.2	140 - Transfers & Grants to Implementing Partners	1401	Grants to EV beneficiaries transferred to Department of Finance	200,000	-	-	200,000
Outcome 2	Output 2.2	120 - Contract Services	1209	Provision and installation of charging points	-	15,000	-	15,000
Outcome 2	Output 2.3	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,750	1,750	4,200	7,700
Outcome 2	Output 2.3	120 - Contract Services	1208	Technical support on communication plans and activities (including website)	5,000	5,000	-	10,000
Outcome 2	Output 2.3	120 - Contract Services	1205	Technical support to demonstrations and EV potential market assessment	9,912	-	-	9,912
Outcome 2	Output 2.3	120 - Contract Services	1201	Services to support meetings and events	8,000	8,000	8,000	24,000
Outcome 3	Output 3.1	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	7,700	-	-	7,700
Outcome 3	Output 3.1	120 - Contract Services	1206	Business models and financial schemes for EV expansion	35,000	-	-	35,000
Outcome 3	Output 3.2	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	7,700	12,250	19,950
Outcome 3	Output 3.2	120 - Contract Services	1205	Technical support to demonstrations and EV potential market assessment	5,000	5,000	-	10,000
Outcome 3	Output 3.2	120 - Contract Services	1206	Business models and financial schemes for EV expansion	-	10,000	25,000	35,000
Outcome 4	Output 4.1	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	3,500	-	3,500
Outcome 4	Output 4.1	120 - Contract Services	1207	Consultancy on future ELV management regulations	10,000	10,000	-	20,000
Outcome 4	Output 4.2	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	3,500	-	3,500
Outcome 4	Output 4.2	120 - Contract Services	1207	Consultancy on future ELV management regulations	-	5,000	10,000	15,000
Outcome 4	Output 4.3	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	-	7,000	7,000
Outcome 4	Output 4.3	120 - Contract Services	1207	Consultancy on future ELV management regulations	-	10,000	10,000	20,000
Outcome 4	Output 4.4	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	-	3,500	3,500
Outcome 4	Output 4.4	120 - Contract Services	1201	Services to support meetings and events	-	-	4,000	4,000
Outcome 4	Output 4.4	120 - Contract Services	1207	Consultancy on future ELV management regulations	-	-	10,000	10,000
Outcome 4	Output 4.4	120 - Contract Services	1208	Technical support on communication plans and activities (including website)	-	-	10,000	10,000
M&E	M&E	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	3,000	3,000	3,400	9,400
M&E	M&E	120 - Contract Services	1292	Terminal Evaluation	-	-	30,000	30,000
PMC	PMC	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,050	1,050	1,050	3,150
PMC	PMC	010 - Staff & Personnel (Including Consultants)	0102	Project finance and M&E Officer	7,200	14,400	14,400	36,000
PMC	PMC	120 - Contract Services	1280	Independent financial audits	3,592	3,592	3,592	10,776
PMC	PMC	125 - Operating & Other Costs	1251	Office operations	3,000	3,000	3,000	9,000
PMC	PMC	130 - Supplies, Commodities & Materials	1301	Office supplies	2,000	2,000	2,000	6,000
PMC	PMC	135 - Equipment, Vehicles & Furniture	1351	Furniture and computers	3,000	2,000	1,500	6,500
Project Grand Total					405,204	189,592	190,892	785,688

Budget summary by Umoja Class	Year 1	Year 2	Year 3	Total
010 - Staff & Personnel (Including Consultants)	38,700	56,000	56,800	151,500
120 - Contract Services	152,504	120,592	121,592	394,688
125 - Operating & Other Costs	3,000	3,000	3,000	9,000
130 - Supplies, Commodities & Materials	2,000	2,000	2,000	6,000
135 - Equipment, Vehicles & Furniture	3,000	2,000	1,500	6,500
140 - Transfers & Grants to Implementing Partners	200,000	-	-	200,000
160 - Travel	6,000	6,000	6,000	18,000
Total	405,204	189,592	190,892	785,688
Budget summary by Project Component	Year 1	Year 2	Year 3	Total
Component 1: Institutionalization of low-carbon electric mobility	81,500	67,600	24,500	173,600
Component 2: Short term barrier removal through low-carbon e-mobility demonstrations	243,162	38,250	15,700	297,112
Component 3: Preparing for scale-up and replication of low-carbon electric mobility	47,700	22,700	37,250	107,650
Component 4: Long-term environmental sustainability of low-carbon electric mobility	10,000	32,000	54,500	96,500
M&E	3,000	3,000	33,400	39,400
Project Management Costs (PMC)	19,842	26,042	25,542	71,426
Total	405,204	189,592	190,892	785,688

Budget in GEF format

Expenditure category & detailed description	Output 1 (A)	Output 2 (B)	Output 3 (C)	Output 4 (D)	Sub-total (E) = (A)+(B)+(C)+(D)	M&E (F)	PMC (G)	Total (H)	Responsible entity (I)
02. Goods					-		6,500	6,500	
Furniture and computers					-		6,500	6,500	Department of Sustainable Development
04. Grants/Subgrants		200,000			200,000			200,000	
Grants to EV beneficiaries transferred to Department of Finance		200,000			200,000			200,000	Department of Sustainable Development
07. Contractual services company	20,000				20,000		10,776	30,776	
Independant financial audits					-		10,776	10,776	Department of Sustainable Development
Technical assistance for design, implementation and operation of w	20,000				20,000			20,000	Department of Sustainable Development
08. International Consultants	60,000	44,912	80,000	75,000	259,912	30,000		289,912	
Business models and financial schemes for EV expansion			70,000		70,000			70,000	Department of Sustainable Development
Consultancy on future ELV management regulations				65,000	65,000			65,000	Department of Sustainable Development
Consultancy on gender analysis and action plan	20,000				20,000			20,000	Department of Sustainable Development
Consultancy on passenger mobility policy and impacts of electrificatio	40,000				40,000			40,000	Department of Sustainable Development
Provision and installation of charging points		15,000			15,000			15,000	Department of Sustainable Development
Technical support on communication plans and activities (including website)				10,000	10,000			10,000	Department of Sustainable Development
Technical support to demonstrations and EV potential market assessment		29,912	10,000		39,912			39,912	Department of Sustainable Development
Terminal Evaluation					-	30,000		30,000	UNEP Evaluation Office
09. Local Consultants	10,000	10,000			20,000			20,000	
Technical support on communication plans and activities (including w	10,000	10,000			20,000			20,000	Department of Sustainable Development
10. Salary and benefits/Staff Costs	39,600	18,200	27,650	17,500	102,950	9,400	39,150	151,500	
Chief Technical Advisor	39,600	18,200	27,650	17,500	102,950	9,400	3,150	115,500	Department of Sustainable Development
Project finance and M&E Officer					-		36,000	36,000	Department of Sustainable Development
11. Training, Workshops, Meetings	26,000	24,000		4,000	54,000			54,000	
Services to support meetings and events	26,000	24,000		4,000	54,000			54,000	Department of Sustainable Development
12. Travel	18,000				18,000			18,000	
Travel to attend working groups and workshops of the global e-mob pr	18,000				18,000			18,000	Department of Sustainable Development
13. Office supplies					-		6,000	6,000	
Office supplies					-		6,000	6,000	Department of Sustainable Development
14. Other operating costs					-		9,000	9,000	
Office operations					-		9,000	9,000	Department of Sustainable Development
Total general	173,600	297,112	107,650	96,500	674,862	39,400	71,426	785,688	

ANNEX I-2 DETAILED CO-FINANCE BUDGET

No.	Co-finance partner		Nature of co-finance		Co-finance contribution per project Component in US\$					Total in US\$	Description of co-finance contributions <i>(in line with co-finance letters received from partners)</i>	
	Name	Source	Type	Investment Mobilized	C1	C2	C3	C4	PMC			
1	Ministry of Education, Innovation, Gender Relations and Sustainable Development. Dep. Sustainable Development	Recipient Country Government	Public Investment	Investment mobilized	500,000	100,000	400,000	400,000			1,400,000	Implementation of project "Readiness for the Infrastructure Sectoral Adaptation Strategy and Action Plan" until end of 2021 (valued at 50,000). Development of a low-carbon strategy for the city of Castries starting in 2021.
2	Ministry of Education, Innovation, Gender Relations and Sustainable Development. Dep. Sustainable Development	Recipient Country Government	In-Kind	Recurrent expenditures					300,000		300,000	Support to the project through office space, personnel time, and other administrative functions. It includes Activities of the new e-mobility subcommittee, support to market deployment and implementation of vehicle end-of-life management reforms
3	Ministry of Infrastructure, Ports, Energy and Labour. Energy Division	Recipient Country Government	Public Investment	Investment mobilized		2,124,500					2,124,500	New solar carport in Hewanorra airport (UAE funded project)
4	Ministry of Infrastructure, Ports, Energy and Labour. Energy Division	Recipient Country Government	In-Kind	Recurrent expenditures					32,085		32,085	Support to the project through office space, personnel time, and other administrative functions. It includes Activities of the new e-mobility subcommittee, support to market deployment and implementation of vehicle end-of-life management reforms
5	Ministry of Finance, Economic Growth, Job Creation, External Affairs and Public Service	Recipient Country Government	Public Investment	Investment mobilized		340,278					340,278	Procurement of 10 vehicles for participation in the project demonstrations of component 2 (with incremental cost to buy electric vehicles covered by the GEF project).
Total					500,000	2,564,778	400,000	400,000	332,085		4,196,863	

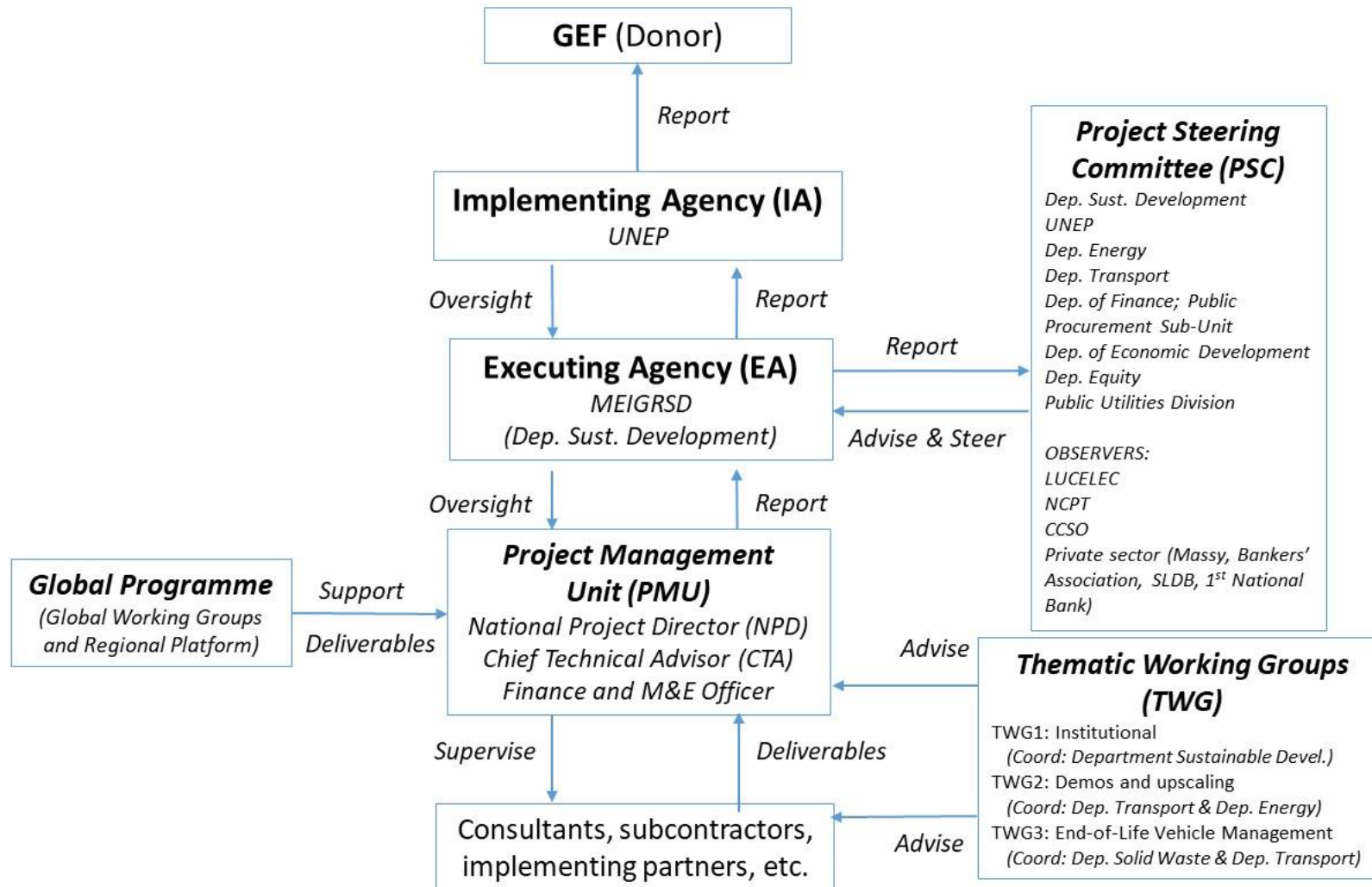
ANNEX J: M&E BUDGET AND WORKPLAN

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
Inception Workshop (IW)	Report prepared following the IW; which includes: <ul style="list-style-type: none"> - A detailed workplan and budget for the first year of project implementation, - An overview of the workplan 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 	Execution: CTA	1 report to be prepared following the IW, to be shared with participants 4 weeks after the IW (latest)	GEF: as part of CTA budget USD 2,000
Steering Committee Meeting	Prepare minutes for every Steering Committee Meeting.	Execution: CTA Support: PMU	At least 1 per year Minutes to be submitted 1 week following each PSC meeting	GEF: as part of CTA budget USD 1,500
Half-yearly progress report	Part of UNEP requirements for project monitoring. <ul style="list-style-type: none"> - Narrative of the activities undertaken during the considered semester - Analyzes project implementation progress over the reporting period, and progress towards targets; - collect and store online deliverables as evidence of progress;- Describes constraints experienced in the progress towards results and the reasons. 	Execution: CTA Support: PMU	Two (2) half-yearly progress reports for any given year, submitted by July 31 and January 31 (latest)	GEF: as part of CTA budget USD 1,200
Quarterly expenditure reports	Detailed expenditure reports (in excel) broken down per project component and budget line, with explanations and justification of any change	Execution: CTA Support: PMU	Four (4) quarterly expenditure reports for any given year, submitted by January 31, April 30, July 31 and October 31 (latest)	GEF: as part of CTA budget USD 1,200
Project Implementation Review (PIR)	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.	Execution: CTA Support: PMU	1 report to be prepared on an annual basis, to be submitted by 15 July latest	GEF: as part of CTA budget USD 600

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
	The PIRs shall be documented with the evidence of the achievement of end-of-project targets (as appendices).			
Annual Inventory of Non-expendable equipment	Report with the complete and accurate records of non-expendable equipment purchased with GEF project funds	Execution: CTA Support: PMU	1 report per year as at 31 December, to be submitted by 31 January latest	GEF: as part of CTA budget USD 300
Co-financing Report	Report on co-financing (cash and/or in-kind) fulfilled contributions from all project partners that provided co-finance letters.	Execution: CTA Support: co-finance partners	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 USD 600
Final Report	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). 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.	Execution: CTA Support: PMU	Final report to be submitted no later than three (3) months after the technical completion date	GEF: as part of CTA budget USD 2,000
Terminal Evaluation (TE)	Further review the topics covered in the mid-term evaluation. Looks at the impacts and sustainability of the results, including the contribution to capacity development and the achievement of global environmental goals.	Execution: Independent Evaluator / TM Support: CTA, PMU	Can be initiated within six (6) months prior to the project's technical completion date	GEF: USD 30,000
TOTAL M&E COST				GEF: US\$ 39,400

ANNEX K: PROJECT IMPLEMENTATION ARRANGEMENTS

The project is funded by the Global Environment Facility (GEF) with UNEP acting as the GEF Implementing Agency and the Department of Sustainable Development of the Government of Saint Lucia as the Executing Agency. The implementation structure is illustrated in the organogram below:



CCSO: Coalition of Civil Society Organizations of Saint Lucia
 DSD: Department of Sustainable Development
 LUCELEC: Saint Lucia Electricity Services Limited
 MASSY: Massy Stores

MEIGRSD: Ministry of Education, Innovation, Gender
 Relations and Sustainable Development
 NCPT: National Council of Public Transport
 SLDB: Saint Lucia Development Bank

Roles and responsibilities of each body are detailed in the following table:

Body	Composition	Role and description	Frequency of meetings
Project Steering Committee (PSC)	<ul style="list-style-type: none"> - Department of Sustainable Development (EA) - UNEP (IA) - Department of Energy - Department of Transport - Department of Finance. Public Procurement Sub-Unit - Department of Economic Development - Department of Equity - Public Utilities Division Observers: <ul style="list-style-type: none"> - LUCELEC - NCPT - CCSO - Private sector: MASSY, Bankers' Association, SLD, 1st National Bank) 	<ul style="list-style-type: none"> • Oversight of the project progress and implementation of Outputs; • Approve work plans and budget revisions; • Approve management decisions to ensure timely delivery of quality outputs; • Provide overall guidance and strategic direction; • Enhance and optimize the contributions of various partner organizations through coordination of all activities and inputs • The Department of Sustainable Development will appoint a National Project Director (NPD) that will act as the PSC Chairperson • The Chief Technical Advisor (CTA) will act as the PSC Secretary 	Once a year

<p>Implementing GEF Agency (IA)</p>	<p>UNEP</p>	<ul style="list-style-type: none"> • Ensure timely disbursement/sub-allotment to executing agency based on agreed legal document and in accordance with UNEP and GEF fiduciary standards; • Follow-up with Executing agency for progress, equipment, financial and audit reports; • Provide consistent and regular oversight on project execution and conduct project supervisory missions as per Supervision Plans and in doing so ensures that all UNEP and GEF criteria, rules and regulations are adhered to by project partners; • Technically assess and oversee quality of project outputs, products and deliverables – including formal publications; • Provide no-objection to main TORs and subcontracts issued by the project, including selection of the Chief Technical Advisor; • Attend and facilitate inception workshops, field visits where relevant, and selected steering committee meetings; • Asses project risks, and monitor and enforce a risk management plan; • Regularly monitor project progress and performance and rate progress towards meeting project objectives, project execution progress, quality of project monitoring and evaluation, and risk; • Monitor reporting by project executing partners and provide prompt feedback on the contents of the report; • Promptly inform the management of any significant risks or project problems and take action and follow up on decisions made; • Apply adaptive management principles to the supervision of the project; • Review of reporting, checking for consistency between execution activities and expenditures, ensuring that it respects GEF rules; • Clear cash requests, and authorization of disbursements once reporting found to be complete; • Approve budget revision, certify fund availability and transfer funds; • Ensure that GEF and UNEP quality standards are applied consistently to all projects, including branding and safeguards; • Certify project operational completion; • Link the project partners to any events organized by GEF and UNEP to disseminate information on project results and lessons; • Manage relations with GEF. 	<p>Periodic meetings (calls) with the EA's Project Management Unit (PMU), at least once per month</p>
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Executing Agency (EA)	Department of Sustainable Development	<ul style="list-style-type: none"> • Ensure that the project meets its objectives and achieves expected outcomes; • Ensure technical execution according to the execution plan laid out in the project document; • Ensure technical quality of products, outputs and deliverables; • Ensure compilation and submission of progress, financial and audit reporting to IA; • Submit budget revisions to IA for approval; • Address and propose solutions to any problem or inconsistency raised by the IA; • Bring issues raised by or associated with clients to the IA for resolution; • Facilitate meetings of Steering Committees and other oversight bodies of the project; • Day to day oversight of project execution; • Submit all technical reports and completion reports to IA (realized outputs, inventories, verification of co-finance, terminal reporting, etc.); • Monitoring and evaluation of the project outputs and outcomes; • Effective use of both international and national resources • Timely availability of financing to support project execution; • Proper coordination among all project stakeholders; in particular national parties; • Timely submission of all project reports, including work plans and financial reports, • Follow-up with, or progress, procurement, financial and audit reports. 	Periodic meetings (calls) with the IA's Task Manager, at least once per month
Project Management Unit (PMU)	National Project Director (NPD)	<ul style="list-style-type: none"> • Will be a national/governmental officer appointed by the Department of Sustainable Development; • Act as the PSC's Chairperson; • Report to and receive advice from the PSC; • Identify and secure partner support for the implementation of project activities; • Advise on hiring process. • Act as the project's entry point within the government of Saint Lucia 	Regular meetings with the CTA at least twice per month

	Chief Technical Advisor (CTA)	<p>The CTA will be recruited externally, paid with GEF funds, hosted within the Sustainable Development Department premises and have the following duties:</p> <ul style="list-style-type: none"> • Take responsibility for day-to-day project operations; • Take responsibility for the execution of the project in accordance with the project objectives, activities and budget; • Deliver the outputs and demonstrate its best efforts in achieving the project outcomes; • Coordinate project execution and liaison with national counterparts (relevant ministries, national agencies, private sector, NGOs etc.); • Manage financial resources and processing all financial transaction relating to sub-allotments; • Prepare all annual/year-end project revisions; • Attend and facilitate inception workshops and national project steering committee meetings; • Assess project risks in the field, monitor risk management plan; • Ensure technical quality of products, outputs and deliverables; • Coordinate the project team of consultants and subcontractors; • Coordinate with strategic taskforces (i.e. thematic or technical working groups); • Act as Secretary of the PSC; • Act as secretary of the TWGs and e-mobility subcommittee; • Plan and organize the PSC annual meetings; • Periodic reporting to UNEP and the PSC for allocation of the GEF grant according to the approved workplan and budget, in coordination with UNEP and NPD; • Notify UNEP and the PSC in writing if there is need for modification to the agreed implementation plan and budget, and to seek approval; • Address and rectify any issues or inconsistencies raised by the Implementing Agency; • Support compilation and submission of progress, financial and audit reporting to the Implementing Agency; • Prepare, at the end of the project, the project Final Report. 	<p>Regular meetings with the NPD, at least twice per month</p> <p>Weekly meetings with the project's Finance and M&E Officer</p> <p>Ad-hoc meetings with project team members (consultants, subcontractors, etc.)</p>
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	Finance and M&E Officer	<p>Under the guidance and supervision of the CTA, the Project Finance and M&E Officer will have the following specific responsibilities:</p> <ul style="list-style-type: none"> • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the CTA. • Review project expenditures and ensure that project funds are used in compliance with the Project Documents and financial rules and procedures. • Validate and certify relevant forms before submission to UNEP. • Provide necessary financial information as and when required for project management decisions. • Provide necessary financial information during project audit(s). • Review annual budgets and project expenditure reports, and notify the CTA if there are any discrepancies or issues. • Consolidate financial progress reports submitted by the responsible parties for implementation of project activities. • Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports. • Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards; • Ensure project’s M&E meets the requirements of the Government and UNWP-GEF; develop project-specific M&E tools as necessary; • Oversee and ensure the implementation of the project’s M&E plan, including periodic appraisal of the Project’s Theory of Change and Results Framework with reference to actual and potential project progress and results; • Oversee/develop/coordinate the implementation of the stakeholder engagement plan; • Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results; • Facilitate terminal evaluation of the project; • Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products; • Support project site M&E and learning missions; • Visit project sites as and when required to appraise project progress on the ground and validate written progress reports. 	Regular meetings with the CTA, at least once per week
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<p>Thematic Working Groups (TWG)</p>	<p>Local stakeholders, upon request to NPD</p> <ul style="list-style-type: none"> - TWG1 (Institutional, coordinated by Department of Energy) - TWG2 (Demonstrations and upscaling, coordinated by Department of Transport) - TWG3 (ELV management, coordinated by Department of Sustainable Development) 	<ul style="list-style-type: none"> • Engagement and networking of interested local stakeholders. • Liaise with thematic working groups of the global program. • Technical Working Group on the institutional dimensions of e-mobility (TWG1). TWG1 will facilitate the engagement of stakeholders in the preparation of the e-mobility strategy and the sustainable passenger transport policy; it will be subsequently established as a working group under the E-mobility Subcommittee of the Climate Change Committee. • Technical Working Group on demonstrations and upscaling of e-mobility (TWG2). TWG2 will provide technical, organizational and regulatory advice related to the design and implementation of the demonstration, and its subsequent upscaling to introduce EVs in other public and private fleets, public transport and taxis. • Technical Working Group on ELV management (TWG3). TWG3 will provide support to the implementation of project component #4, facilitating the engagement of authorities and companies active in ELV management, as well as car-dealers and importers, in strengthening current practice and providing a satisfactory framework for future management of batteries and other EV components. 	<p>Quarterly</p>
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Component 3: Preparing for scale-up and replication of low-carbon electric mobility																			
Output 3.1	3.1.1	Regulatory proposal on vehicle approval and periodic technical inspection, including electric vehicles																Project management unit	DED, consultant budget line 1206
	3.1.2	Regulatory proposal on technical approval and installation of public and private charging stations																Project management unit	DIPE, NURC, consultant budget line 1206
	3.1.3	Regulatory proposal on public transport authorizations and concession contracts to improve quality and stimulate electrification																Project management unit	DED, NCPT, consultant budget line 1206
	3.1.4	Tax reform proposal to facilitate fiscal stability while Saint Lucia transitions towards e-mobility																Project management unit	Department of Finance, consultant budget line 1206
	3.1.5	Stakeholder consultations of regulatory reforms																DED	DSD, DIPE, DF, Project management unit
Output 3.2	3.2.1	Scenarios on the potential of the electric vehicle market in Saint Lucia																Consultant budget line 1205	Project management unit
	3.2.2	Development of business models for electrification of public and private fleets in Saint Lucia																Consultant budget line 1206	DIPE, DED, Project management unit
	3.2.3	Development of financial schemes to support fleet electrification																Consultant budget line 1206	Department of Finance, Credit Union League and financial sector, Project Management Unit
	3.2.4	E-mobility recommendations and procurement guidelines to fleet managers published and disseminated																DSD	DIPE, DED, Project management unit
Component 4: Long-term environmental sustainability of low-carbon electric mobility																			
Output 4.1	4.1.1	Assessment of local conditions and characteristics of ELV management																Consultant budget line 1207	SLSWMA, Project Management Unit
	4.1.2	Forecast of ELV components generation, considering internal combustion and electric vehicles																Consultant budget line 1207	DED, SLSWMA, Project Management Unit
	4.1.3	Recommendations on ELV management in Saint Lucia, based on international practice, submitted to the government for adoption																SLSWMA	Project Management Unit, consultant budget line 1207
Output 4.2	4.2.1	Report summarizing international and regional regulations on ELV management, including EV components and second-life use of their batteries																Consultant budget line 1207	Project Management Unit
	4.2.2	Comprehensive review of existing and planned international regulations on second-life battery use and recommendations for the Saint Lucia context																Consultant budget line 1207	Project Management Unit
	4.2.3	Proposal for ELV regulation submitted to the government for adoption																Project Management Unit	SLSWMA, consultant budget line 1207
Output 4.3	4.3.1	Screening and systematization of successful financial and business models on ELV components and second-life battery use																Consultant budget line 1207	Project Management Unit
	4.3.2	Development of commercially viable business models for ELV components and EV batteries, including cost benefit analysis estimating investment needs and financing schemes																Consultant budget line 1207	Project Management Unit
	4.3.3	Development of a roadmap on sustainable and commercially viable ELV and battery management submitted to government for adoption																SLSWMA	Project Management Unit
Output 4.4	4.4.1	Design and delivery of a training programme for policymakers and local academia, and available for wider dissemination																Consultant budget line 1201	SLSWMA, Project Management Unit
	4.4.2	Provision of technical and managerial support to producers and importers, with a focus on the local industry																Project Management Unit	SLSWMA, consultant budget line 1207
	4.4.3	National campaign to raise awareness among consumers																Project Management Unit	SLSWMA, consultant budget line 1208

ANNEX M: ESTIMATES OF DIRECT AND CONSEQUENTIAL GREENHOUSE GAS EMISSION REDUCTIONS

GHG reductions and energy savings estimation for Saint Lucia	
Project information	
<ul style="list-style-type: none"> • Project duration: 3 years. Starting in 11/2020 and ending in 10/2023 • Time frame for indirect effects: 15 years. Starting in 2021 and ending in 2036. (Effects produced by policy developed during the project and coming scale-up projects) • Causality factor: 80 % 	
Total project emissions reductions, t CO₂	686,345
Total direct emission mitigation from demonstration projects, t CO₂	206,322
Primary direct emission mitigation (LDV passenger and commercial, considering end of life of vehicle as 12 years)	1,102
Secondary direct emission mitigation (policy measures)	205,220
Total indirect emission mitigation, t CO₂	480,023
Total project energy savings, MJ	7,935,874,327
Total direct energy savings from demonstration projects, MJ	2,385,605,159
Primary direct emission mitigation (LDV passenger and commercial, considering end of life of vehicle as 12 years)	12,744,370
Secondary direct emission mitigation (policy measures)	2,372,860,789
Total indirect energy savings, MJ	5,550,269,168

Methodology for the estimation of GHG reductions and energy savings benefits

A uniform methodology was applied in all GEF Global E-Mobility Child Projects for assessing the short, medium and long-term benefits in terms of GHG emission reductions and energy savings. The methodology compares two scenarios, the “benchmark scenario” and the “e-mobility scenario”. In the benchmark scenario, the transport sector evolves assuming a “business as usual” behavior with regards to vehicle fleet growth, vehicle use, technology and fuel use. It is based on the current policy framework with no or limited incentives to buy and use clean and efficient electric vehicles. The e-mobility scenario uses the same projections with regards to vehicle fleet growth but assumes a high penetration of electric vehicles within the new vehicle market, as a consequence of the project interventions including the adoption of EV policies, the use of business models and the existence of financial mechanisms. The scenarios are use a “top-down approach” targeting the national vehicle market. The Child Projects tackle the introduction of electric vehicles for one or multiple modes. In the latter case, calculations are performed for several modes (e.g. passenger cars, public transport buses).

Projections of fleet growth, energy use and GHG emissions are based on country specific data, and region-specific parameters. Projection of the vehicle fleet growth is based on the elastic relationship between per capita income and vehicle acquisition. Therefore, country specific scenarios for population growth (based on the UNDESA medium scenario) and projections for gross domestic product (GDP PPP) from the World Economic Outlook of the International Monetary Fund (IMF) are used. Vehicle fleet projections are based on vehicle sales and assumptions on technical life-time of vehicles. A comprehensive set of parameters describing the technologic and economic parameters of various vehicle technologies are used. Country specific grid emission factors for the carbon footprint of electricity are used. For petroleum-based fuels, well-to-wheel emission factors are used. Historic development of the vehicle fleet is based on country specific vehicle stock and sales data. Emission reductions which accrued during and after the project timeframe are taken into account. GHG emission benefits are classified as direct and indirect GHG emission reductions. This categorization follows the methodology suggested by the GEF.

Direct benefits correspond to the GHG emission reductions and energy savings obtained from 1.) The investments that are planned and executed during the project lifetime, i.e. the emission and energy use savings stemming from the demonstration of electric vehicles and EV supply equipment such as chargers purchased as part of the project .; and 2.) emission reductions and energy savings as a result of investment in replication and upscaling (secondary direct benefits).

Indirect benefits correspond to the GHG reductions and energy savings obtained during and beyond the project as the result of outputs and outcomes of the project. This includes in particular the adoption of policies, business models and financial mechanisms, which incentivize the uptake of electric mobility. Total emission reductions attributable to the project are based on the cumulative sum of annual emission reductions compared to the baseline scenario over a time frame equivalent to the lifetime of the demonstration assets purchased as part of the project or for a period of ten years after the end of the project

Quantification of secondary direct and indirect benefits is based on an e-mobility scenario considering the maximum realizable electric mobility market (both in terms of size and pace of technology introduction). Causality factors are used to estimate the contribution of the GEF funded project to the projected large-scale and nation-wide introduction of electric vehicles. Guidelines issued by the GEF for the selection of the causality factor level are as following:

Level 5 = “The project contribution is critical, and nothing would have happened in the benchmark scenario,” causality factor = 100%

Level 4 = “The project contribution is dominant, but some of this reduction can be attributed to the benchmark scenario,” causality factor = 80%

Level 3 = “The project contribution is substantial, but modest indirect emission reductions can be attributed to the benchmark scenario,” causality factor = 60%

Level 2 = “The project contribution is modest, and substantial indirect emission reductions can be attributed to the benchmark,” causality factor = 40%

Level 1 = “The project contribution is weak, and most indirect emission reductions can be attributed to the benchmark scenario,” GEF causality = 20%

In the case of Saint Lucia, Level 4 has been applied, as under the benchmark scenario is only some of the reduction can be attributed to other measures undertaken in Saint Lucia to promote e-mobility (mainly the already implemented- and insufficient- reduction in certain taxes and the slow deployment of some charging stations). Secondary direct and indirect emission reduction are based on a 30:70 split of the top-down emission reductions attributable to the project via the application of the causality factor.

Required input data for calculating the GHG reductions and energy savings.

A comparison in terms of GHG and energy between the projections under the benchmark scenario and the electromobility scenario is performed. To do this, demographic, economic and technology data were obtained. Where local data was not available, default values were used based on expert experience or similar projects. The vehicle fleet data, vehicle operating data and scenarios correspond to the transportation mode affected by the project at national or city level. The required data used was:

	Variable	Unit
Socio – economic data	GDP PPP (2000-2018)	Billion USD

	Population	Million habitants
	Annual growth of GDP	% of 2023-2030, and % 2031-2050
Vehicle fleet data	Vehicles stock (2000-2015)	Thousand vehicles
	Vehicles sales (2000-2015)	Thousand vehicles
	Technology share of stock	% of gasoline, diesel, hybrid, PHEV, BEV
Vehicle operating information	Annual Mileage	km
	Load factor	Passenger in a vehicle
	Technical lifetime	years
	Share of electric driving for PHEV	%
	Fuel economy (FE) by technology	Lge / 100 km, kWh / 100 km
	Annual FE improvement by technology	%
	FE gap (Real vs Type Approval)	%

Variable	Benchmark scenario	E-mobility scenario
Technology share of vehicle sales	%	%
Well to tank CO2 footprint	kg CO2/ Lge	kg CO2/ Lge
Tank to wheel CO2 footprint	kgCO2 / kWh	kgCO2 / kWh
Vehicle fleet emission standards	Euro 1 to Euro 6	Euro 1 to Euro 6
Fuel quality standards	Euro 1 to Euro 6	Euro 1 to Euro 6
Vehicle price, maintenance and fuel price	USD	USD

GHG and energy evaluation model for electromobility projects (Emob calculator)

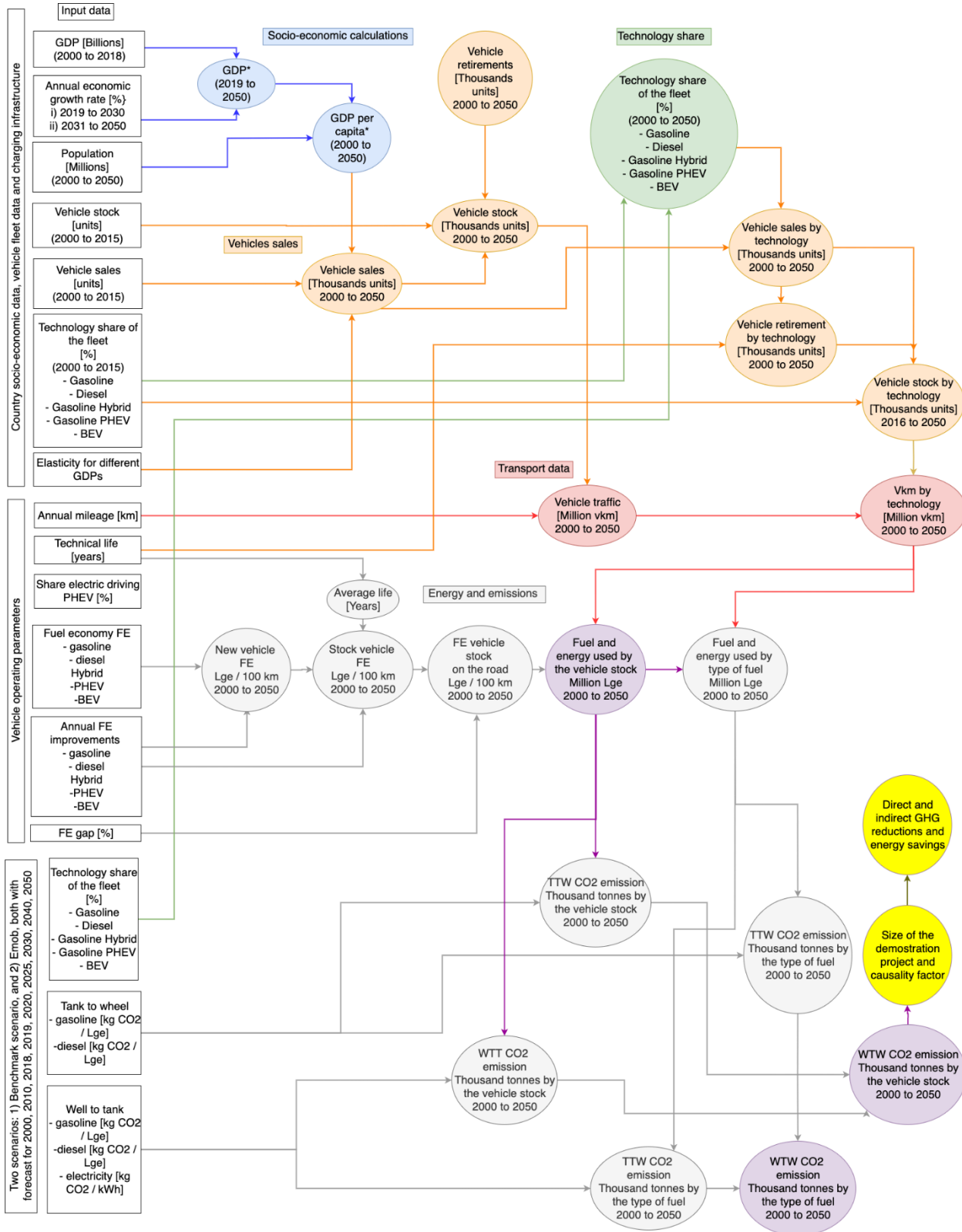
GEF 7 CEO Endorsement Saint Lucia, March 2020

The country information provided as input data is used to model and forecast the behavior of the vehicle fleet until year 2050. The forecast must assume that size of the vehicle fleet and the vehicle technology would not remain constant in short, medium and long term. The following projections are established in the calculation process according to the specific scenario:

- Projection of vehicle sales and stock from 2000 to 2050
- Vehicles sales, retirements and stock by technology from 2000 to 2050
- Vehicle traffic activity by technology
- Projection of energy use by vehicle technology from 2000 to 2050
- Projection of GHG produced from 2000 to 2050

The last two projections are used to compute GHG reductions and energy savings produced by electromobility scenario respect to the benchmark scenario. The size of the demonstration project and the causality factor must be provided, for calculating the direct and indirect benefits, respectively. The formulas used to calculate the GHG reductions and the energy saving are programed in a Microsoft Excel file developed by the Air Quality and Mobility Unit of the United Nations Environment Programme.

The obtained GHG reductions and energy savings results are compared with the UNFCCC National Communications in which countries report the amount of GHG produced by different sectors, including transport. Then, a refinement of the calculation is performed if it is necessary. The following flow map presents the procedure to compute the direct and indirect GHG reductions and the energy saving obtained by the project.



Saint Lucia benchmark scenario

The model has used the GDP and population growth statistics from the government of Saint Lucia until 2017. Until 2023, the GDP growth is estimated based on the average of the previous 4 years; from 2023 on, it is estimated at 4% annually. The population is considered to grow at a decreasing rate, from 0.73% per year in 2018 to 0.26% in 2036. The impact of the global COVID pandemic on Saint Lucia's economy is not taken into account, due to lack of reliable data at the time of preparation of this document. The IMF has foreseen an 8.5% contraction of GDP in 2020, with no figures for subsequent years. A contraction in the economy would probably result in lower growth of the vehicle fleet in the country and higher public transport demand.

The registration of new cars is estimated based on an elasticity to GDP per capita of 0.7 (until GDP per capita exceeds USD 20,000 in 2030), and an elasticity of 0.5 afterwards.

Considering that the project is targeting LDV, only registrations of private cars, rental cars and commercial vehicles under 5 tons have been included in the estimates. The estimate of the stock has considered a vehicle lifespan of 10 years.

The average fuel consumption is estimated at 14 liters/100 km, the average value reported by the Government of Saint Lucia for its LDV fleet. The average annual mileage is estimated at 23,000 km, aligned with the value reported by the government. A fuel efficiency improvement of 1% per year is assumed by the model.

An average consumption of 0.14 kWh/km has been considered for the electric LDV included in the demonstration. As electricity in Saint Lucia is mostly generated from diesel plants, an average emission factor for electricity generation of 0.78 kg CO₂/kWh has been included. This factor is expected to decrease by 20% in 2030 and by 30% in 2040, as a result of the implementation of the renewable energy strategy. Even under the initial unfavorable circumstances, EVs are able to provide specific CO₂ emissions (109 g/km) significantly lower than those measured in the government's fleet.

Saint Lucia electromobility scenario

After the project starts with 15 vehicles (2022), the number of electric vehicles introduced in the country is estimated as a growing percentage of the total vehicles registered per year, starting with 5% of the LDV sales in 2025 and increasing by 2 percentage points per year afterwards (26% in 2036).

Additionally, it is considered that as a result of the project, the public transport fleet will change, as since the end of the project, operators would start introducing higher-capacity buses to replace current vans (with a rate of 1 bus replacing 3 vans) on the lines with higher demand. This will result in energy and GHG emission savings. Additionally, the improved quality of public transport services associated to the new full-size buses and the implementation of the project's proposals on passenger mobility policy are expected to be able to attract some former car users and remove an equivalent of approximately 10 cars per new bus implemented in the system.

It is expected that as a result of the project, full-size public transport buses will start being electrified in 2030, once the public transport system has consolidated their use on the main lines.

The estimate of direct project beneficiaries is based on the following assumptions:

Project action	Women	Men	Total	Comments
20 vehicles in government fleet (lifetime 10 years)	600	600	1200	Car drivers and passengers can be considered as beneficiaries due to the lack of noise provided by e-cars. We assume 20 vehicles, 4 trips/day, 1.5 persons/car, 300 days/year, 10 year lifetime, 300 trips per beneficiary
20 vehicles in government fleet (end of project)	120	120	240	Operating in Y2 and Y3
Training at Support and Investment Platform events	14	13	27	9 events, 3 participants from Saint Lucia
Training of civil servants and decision-makers	12	8	20	
Training of electricity and transport specialists	10	10	20	
Training on charging infrastructure	5	5	10	
Training on EV driving and maintenance	15	15	30	
Training of ELV management	7	7	14	
TOTAL DIRECT BENEFICIARIES	663	658	1321	
Of which, direct beneficiaries at end of project	183	178	361	

The estimates of direct beneficiaries make a distinction between the beneficiaries until the end of the project (Year 3) and the additional direct beneficiaries that will be using the demonstration vehicles until the end of their lifespan (10 years), well beyond the end of the project.

The estimate of indirect project beneficiaries is based on the assumption of the implementation of the project policies on public transport, which would improve the mobility experience of some public transport users, and the dissemination of technical project materials, in the framework of the knowledge management undertaken by the Department of Sustainable Development:

Project action	Beneficiaries			Comments
	Women	Men	Total	
Sustainable passenger mobility policy	3000	2000	5000	Estimate: based on pkm provided in NCCC: PT share is 30% of trips; applied to population, some 50,000 are using PT; 10% of them can benefit from PT improvements
Dissemination (Knowledge management)	600	400	1000	Estimate: education level (and access to KM) is higher for women than for men
Total indirect	3600	2400	6000	

ANNEX N: OFP ENDORSEMENT LETTER



MINISTRY OF EDUCATION, INNOVATION, GENDER RELATIONS AND SUSTAINABLE DEVELOPMENT
Department of Sustainable Development

*Communication on this subject
should be addressed to:
The Permanent Secretary*

*Norman Francis Building
Balata, Castries,
SAINT LUCIA, W.I.
Tel No: (758) 468-5833
Fax No: (758) 456-0490*

3rd April 2019

Mr. Kelly West
Senior Programme Manager &
Global Environment Facility Coordinator
Corporate Services Division
UN Environment
P.O Box 30552
Nairobi 00100
Kenya

Dear Mr. West:

Endorsement for "Supporting the Shift to Electric Mobility in Saint Lucia"

In my capacity as GEF Operational Focal Point for Saint Lucia, I confirm that the above project proposal (a) is in accordance with my government's national priorities this includes the National Energy Policy (2010) National Energy Transition Strategy (2018) and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency listed below. If approved, the proposal will be prepared and implemented by Division Energy, Science and Technology of the Ministry of Infrastructure, Ports and Energy. I request the GEF Agency to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing (from GEFTF) being requested for this project is US\$ 900,000, inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Saint Lucia is detailed in the table below.

.../2
Source of Funds

* Sustainable Development & Environment Division * Protected Areas Management * Policy, Planning and Administrative Services *

.../2

3rd April 2019

Endorsement for "Supporting the Shift to Electric Mobility in Saint Lucia"

Source of Funds	GEF Agency	Focal Area	Amount (in US\$)			
			Project Preparation	Project	Fee	Total
GEFTF	UNEP	Climate Change	40,000	785,688	74,312	900,000
Total GEF Resources			40,000	785,688	74,312	900,000

I consent to the utilization of Saint Lucia's allocations in GEF-7 as defined in the System for Transparent Allocation of Resources (STAR).

Sincerely,



Caroline Eugene (Ms.)
Permanent Secretary (Ag.)
GEF Operational Focal Point

cc: Mrs. Annette Rattigan-Leo, Chief Sustainable Development and Environment Officer
Mr. Ivor Daniel, Permanent Secretary, Department of Infrastructure, Ports and Energy

ANNEX O: CO-FINANCING COMMITMENT LETTERS FROM PROJECT PARTNERS



MINISTRY OF EDUCATION, INNOVATION, GENDER RELATIONS AND SUSTAINABLE DEVELOPMENT
Department of Sustainable Development

*Communication on this subject
should be addressed to:
The Permanent Secretary*

*Georgiana Court Building
John Compton Highway
Castries, SAINT LUCIA, W.I
Tel No: (758) 468-5833
Fax No: (758) 456-0490*

Ms. Kelly West
Senior Programme Manager &
Global Environment Facility Coordinator
Corporate Services Division
UN Environment

Co-financing for Saint Lucia Electric Mobility Project

Dear Ms. West:

On behalf of the **Department of Sustainable Development** I am pleased to confirm support for the GEF Project "Supporting the Shift to Electric Mobility in Saint Lucia" which is aimed at creating the enabling environment and demonstrating the utilization of electric vehicles in order to reduce greenhouse gas emissions, and create sustainable transportation options for Saint Lucia.

We anticipate that our support to the project over the next 4 years will amount to **US\$1,400,000** in cash, and **US\$300,000** in kind.

Yours sincerely


PERMANENT SECRETARY

Copy to:
Samanthia Justin, St. Lucia GEF Operational Focal Point, sajustin@gosl.gov.lc
Asher Lessels, UNEP/GEF Task Manager, asher.lessels@unep.org

* Sustainable Development & Environment Division * Protected Areas Management * Policy, Planning and Administrative Services *



GOVERNMENT OF SAINT LUCIA
MINISTRY OF INFRASTRUCTURE, PORTS, ENERGY AND LABOUR

Department of Infrastructure, Ports and Energy

Communication on this subject
Should be addressed to:

Permanent Secretary

Union Office Complex
Union, Castries
Saint Lucia, West Indies
Telephone Number: 1-758-468-4300
Fax Number: 1-758-453-2769
Email: ps@infrastructure.gov.lc

19th March, 2020

Ms. Kelly West
Senior Programme Manager &
Global Environment Facility Coordinator
Corporate Services Division
UN Environment

Dear Ms. West,

SUBJECT: Co-financing for Saint Lucia Electric Mobility Project

On behalf of the **Ministry of Infrastructure, Ports, Energy and Labour**, I am pleased to confirm support for the GEF Project "Supporting the Shift to Electric Mobility in Saint Lucia" which is aimed at creating the enabling environment and demonstrating the utilization of electric vehicles in order to reduce greenhouse gas emissions, and create sustainable transportation options for Saint Lucia.

We anticipate providing support over the next four (4) years. We expect to provide support represented by the completion and installation of a 750 kW solar carport with two level 3 charging stations, with an overall project cost of **US\$2,124,500.00** as our "in cash" contribution and **US\$32,085.10** "in kind" through participation of staff in project activities.

Yours sincerely,

Ivor Daniel (Mr.)
PERMANENT SECRETARY

cc: Chief Energy, Science and Technology Officer
Permanent Secretary, Department of Sustainable Development

OUR VISION:

To be a flagship Ministry, critical to achieving infrastructural and national development



GOVERNMENT OF SAINT LUCIA
Ministry of Finance, Economic Growth, Job Creation
External Affairs and Public Service

Department of Finance

*Correspondence on this matter
should be addressed to:*
The Permanent Secretary

Finance Administrative Centre
Pointe Seraphine
Castries
Saint Lucia, W. I.

March 9, 2021

Mr. Asher Lessels
Task Manager
United Nations Environment Programme

Dear Mr. Lessels:

**Indication of support for the Saint Lucia Electric Mobility Project, supported
by the Global Environment Facility (GEF) and the United Nations
Environment Programme**

The Department of Finance is responsible for providing financing through the annual Budget for the procurement of government vehicles in Saint Lucia.

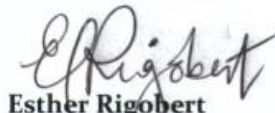
Based on its annual expenditure for government vehicles in previous years, the Department of Finance estimates that during the following years, 2022-2023 and 2023-2024, at least ten (10) sedan vehicles will be procured as per the government fleet's business-as-usual projections at a proximate cost of US\$340,278.00

Corporate Office 4th Floor Finance Administrative Centre Pointe Seraphine Tel: (758) 468-5501 Fax: (758) 452-6700 ps.finance@govt.lc	Administration & Accounts 4th Floor Finance Administrative Centre Pointe Seraphine Tel: (758) 468-5511 Fax: (758) 451-9231	Director of Finance 4th Floor Finance Administrative Centre Pointe Seraphine Tel: (758) 468-5503 Fax: (758) 452-6700 director.finance@govt.lc	Office of the Budget 3rd Floor Finance Administrative Centre Pointe Seraphine Tel: (758) 468-3909 Fax: (758) 453-6960 budgetoffice@govt.lc
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The Department confirms that if the Global Environment Facility (GEF) Project covers the cost difference between a conventional sedan vehicle and an electric vehicle, it would be possible for the aforementioned government fleet vehicles to be electric.

Also note that the Government expenditure is also subject to any changes that may arise due to the challenges imposed by the COVID-19 pandemic.

The Department of Finance notes that this letter of co-finance is not a legal commitment.


Esther Rigobert
Permanent Secretary

ANNEX P: ENVIRONMENTAL, SOCIAL AND ECONOMIC REVIEW NOTE (ESERN)

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:

- This project is likely to be in the moderate risk category around the risks associated with the resource efficiency, waste management and climate change.
- The energy source for the EV is mainly from diesel in Saint Lucia. 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 consumers, taxi drivers (as they are target groups of the project) and economically deprived groups. Policy should consider incorporating non-motorized vehicles and pedestrians' access and their safety associated with the noiseless EVs.
- GHG and cost efficiency of battery reuse, 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.
- The project will encourage women's employment in the transport sector. We encourage some analysis to understand needs and ideas of local residents (men and women in different locations and livelihoods) and incorporate them for gender-responsive transportation policy, strategy and EV roll out.

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.

I. Project Overview

Identification	UNEP ID: 01722
Project Title	Supporting the Shift to Electric Mobility in Saint Lucia
Managing Division	Economy Division
Type/Location	National
Region	Latin America and the Caribbean
List Countries	Saint Lucia
Project Description	The objective of the project is to promote an integrated, sustainable and low-emissions transport system and reduce fossil fuel consumption, GHG emissions and air pollution from the transport sector in Saint Lucia. It is structured across four components, which are necessary to address the barriers and facilitate the successful implementation of baseline efforts to

	achieve an integrated, sustainable, and low-emissions transport system.
Estimated duration of project:	36 months
Estimated cost of the project:	USD 785,688

II. Environmental Social and Economic Screening Determination

A. Summary of the Safeguard Risks Triggered

Safeguard Standard Triggered by the Project	Impact of Risk ⁵⁷ (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 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 Decision⁵⁸ (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP's ESES Guidelines.)

Low risk Moderate risk High risk Additional information required

C. Development of ESE Review Note and Screening Decision:

Prepared by: Name: Asher Lessels. Date: 5 December 2019.

Safeguard Advisor: Name: Yunae Yi. Date: 11 December 2019.

⁵⁷ 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).

⁵⁸ **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.

Project Manager: Name: Asher Lessels. Date: 11 December 2019.

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, waste management and climate change.

The energy source for the EV is mainly from diesel in Saint Lucia. 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 consumers, taxi drivers (as they are target groups of the project) and economically deprived groups. Policy should consider incorporating non-motorized vehicles and pedestrians' access and their safety associated with the noiseless EVs.

GHG and cost efficiency of battery reuse, 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.

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

III. ESES Principle and Safeguard checklist

(Section III and IV should be retained in UNEP)

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. ⁵⁹

Screening checklist	Y/N/ Maybe	Comment
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	

⁵⁹ 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.

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	<p>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. To address this, this project will have a specific component on the long-term environmental sustainability of low-carbon electric mobility. The desired outcome is that measures are developed to ensure the long-term environmental sustainability of low-carbon electric mobility.</p> <p>In addition, component 4 focuses on the long-term environmental sustainability of low-carbon electric mobility.</p>
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) ⁶⁰ or integrated vector management (IVM) ⁶¹ 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 ⁶² 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 peoples⁶³		
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	

⁶⁰ "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/>

⁶¹ "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/)

⁶² Find more information from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf

⁶³ Refer to the Toolkit for the application of the UNEP Indigenous Peoples Policy Guidance for further information.

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	

ANNEX Q: ACRONYMS AND ABBREVIATIONS

ADFD	Abu Dhabi Fund for Development
CARICOM	Caribbean Community
CCI	Clinton Climate Initiative
CCSO	Coalition of Civil Society Organizations of Saint Lucia
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CO _{2e}	CO ₂ equivalent
CTA	Chief Technical Advisor
DSD	Department of Sustainable Development
DIPE	Department of Infrastructure, Ports and Energy
DED	Department of Economic Development
DF	Department of Finance
ELV	End-of-Life Vehicle
ESTU	Energy, Science and Technology Unit
EV	Electric Vehicles
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEFTF	GEF Trust Fund
GHG	Greenhouse gas
GoSL	Government of Saint Lucia
ICE	Internal Combustion Engine
IEA	International Energy Agency
IKI	Internationale Klimaschutzinitiative (German Government's International Climate Initiative)
ILO	International Labour Organization
IPP	Independent Power Producer
NDC	Nationally Determined Contributions
IRENA	International Renewable Energy Funding
LDV	Light Duty Vehicle
LUCELEC	Saint Lucia Electricity Services Limited
M&E	Monitoring and Evaluation
MASSY	Massy Stores
MEDHURTC	Ministry of Economic Development, Housing, Urban Renewal, Transport and Civil Aviation
MEIGRSD	Ministry of Education, Innovation, Gender Relations and Sustainable Development
MIPEL	Ministry of Infrastructure, Ports, Energy and Labour
MRV	Monitoring, Reporting and Verification
NCCC	National Climate Change Committee
NCPT	National Council of Public Transport
NETS	Saint Lucia National Energy Transition Strategy and Integrated Resource Plan
NPD	National Project Director
NURC	National Utilities Regulatory Commission
PMC	Project Management Costs
PMU	Project Management Unit
PSC	Project Steering Committee
RMI	Rocky Mountain Institute
SLSWMA	Saint Lucia Solid Waste Management Authority
SUV	Sport Utility Vehicle
TWG	Technical Working Group
UAE	United Arab Emirates
UITP	Union Internationale des Transport Publics
UNDP	United Nations Development Programme

UNEP	United Nations Environment Programme
USD	USA Dollar
WHO	World Health Organization

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