

# GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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## General Project Information

### Project Title

Promoting transition to electric mobility for low carbon development in the Kyrgyz Republic: Enhancing charging infrastructure and catalysing active private sector participation

Region	GEF Project ID
Kyrgyz Republic	11829
Country(ies)	Type of Project
Kyrgyz Republic	MSP
GEF Agency(ies):	GEF Agency ID
UNDP	9719
Executing Partner	Executing Partner Type
Ministry of Natural Resources, Ecology and Technical Supervision	Government
GEF Focal Area (s)	Submission Date
Climate Change	11/5/2024

### Project Sector (CCM Only)

Transport/Urban

### Taxonomy

Focal Areas, Climate Change, Climate Change Mitigation, Sustainable Urban Systems and Transport, Influencing models, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Deploy innovative financial instruments, Stakeholders, Beneficiaries, Civil Society, Academia, Non-Governmental Organization, Private Sector, Large corporations, SMEs, Financial intermediaries and market facilitators, Gender Equality, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Capacity, Knowledge and Research, Capacity Development, Enabling Activities

Type of Trust Fund	Project Duration (Months)
GET	48
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
1,968,265.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
186,985.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
2,155,250.00	13,835,000.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
50,000.00	4,750.00

PPG total amount: (e+f)

54,750.00

Total GEF Resources: (a+b+c+d+e+f)

2,210,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No

## Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”. (max. 250 words, approximately 1/2 page)

Passenger mobility demand in Kyrgyzstan is significantly growing, driven by economic development and population growth, especially in cities. Mobility demand has mainly been met by individual car use through the import of cheap second-hand internal combustion engine (ICE) vehicles. This is associated with several negative environmental impacts, including air pollution, greenhouse gas (GHG) emissions and poor urban liveability due to congested streets. It also results in a growing gap in mobility conditions between social groups and women and men, due to the lower accessibility of women, children and low-income population to private car use and the low quality of public transport services. The project seeks to strengthen the government’s efforts to improve public transportation and accelerate the transition to electric mobility in the Kyrgyz Republic, with a focus on reducing GHG emissions and energy use, improving air quality, increasing inclusivity and the efficiency of the passenger transport sector.

The project's primary focus is national, but it includes targeted actions in Bishkek and along key inter-urban highways. These actions aim to support the electrification of private corporate fleets in public transport and other sectors. Additionally, the project will disseminate its results at the regional level to promote the deployment of electric vehicles within the Eurasian Economic Union. To achieve this, the project will strengthen the institutional environment, provide technical evidence on the feasibility of electric mobility (through demonstrations of interurban fast-charging stations and electrification of passenger transport fleets), carry out upscaling activities (design, approval and implementation of financial instruments, fiscal incentives and technical standards supporting electric vehicles), to facilitate replication and build up the technical and regulatory capacities necessary to cope with the environmental sustainability challenges associated to road transport electrification. The project is expected to lead to a direct GHG emission reduction of 163,800 tons CO<sub>2</sub>e (of which 9,100 primary direct) and an indirect GHG emission reduction of 382,200 tons CO<sub>2</sub>e. It will also directly benefit 1,745 people (of which 873 women) through participation in capacity building activities and access to improved mobility and electric vehicle charging services. Additionally, the project will contribute to the improvement of air quality in Bishkek which is a key public health issue especially in winter season and other urban areas in the country.

## Indicative Project Overview

### Project Objective

The project aims to accelerate the uptake of electric mobility in the Kyrgyz Republic, with a focus on reducing GHG emissions and energy use, improving air quality, and increasing inclusivity and the efficiency of the passenger transport sector.

## Project Components

### Component 1: Strengthened institutional foundation for sustainable electric mobility.

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
150,000.00	75,000.00

Outcome:

**Outcome 1:** An inclusive and coordinated national framework for electric mobility is established through a government-supported, gender-responsive strategy, strengthened technical capacities, and an informed stakeholder network to drive sustainable e-mobility initiatives

Output:

1.1. A national intersectoral coordination platform on electric mobility is established, stakeholders meet on a regular basis, and the platform is formally institutionalized by project completion.

1.2. A national gender-responsive low-carbon electric mobility strategy is developed and submitted to the government for approval.

1.3. Gender-responsive awareness-raising and participation campaigns, and training activities are completed, and an e-mobility knowledge platform is established and transferred to local stakeholders.

1.4. Trainings, webinars and workshops are organized to enhance the technical and coordination capacities of national stakeholders, including through participation in activities of the Global E-Mobility Programme.

### Component 2. Short-term barrier removal through demonstrations supporting the deployment of fast EV charging systems and fleet electrification by early adopters.

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
950,000.00	10,500,000.00

Outcome:

**Outcome 2:** Enhanced readiness and capacity for large-scale electric vehicle (EV) adoption in interurban transport corridors and fleet operations, demonstrated through established charging infrastructure, electrified public and government fleet operations, and data-driven insights on EV performance and commercial feasibility.

Output:

- 2.1. A technical study for the installation of on-grid and off-grid charging stations in interurban roads is completed, private partners are selected, and installation, operation and maintenance of fast chargers are monitored.
- 2.2. A study on the identification of large fleets suitable for electrification in the governmental and private (with a focus on public transport) sectors is completed.
- 2.3. The government's fleet for demonstration is selected and incremental funding is provided for the replacement of at least 4 ICE vehicles by electric ones.
- 2.4. At least two private fleets are selected through a competitive process and funding is provided through performance-based payments for the operation of at least 3 new electric vehicles in each fleet.
- 2.5. Business models for private operators of public transport services and fleet management plans are developed for the selected fleets, and staff receive gender-responsive professional training on fleet management and EV use and maintenance.
- 2.6. Fleet management systems are procured and transferred to the selected fleet managers and electric vehicles are operated and monitored.
- 2.7. Evaluations of technical performance and commercial feasibility of electric vehicle (EV) fast charging services, and electric vehicles are completed after 18 months of operation and results are presented to local stakeholders.
- 2.8. A Deployment Plan for the national EV charging network is developed and submitted to the government for approval.

### Component 3. Scale-up and replication of e-mobility.

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
300,000.00	1,050,000.00

#### Outcome:

Outcome 3: Supportive policies, financial tools, and operational guidelines for electric mobility are established, promoting EV adoption through updated standards, inclusive procurement practices, optimized fiscal incentives, and expanded financing options for low-carbon mobility

#### Output:

- 3.1. Update of technical regulations and standards on vehicle efficiency and emissions, minimum quality requirements for imported used vehicles, vehicle authorization and periodic technical inspection are delivered to the government for adoption.
- 3.2. Draft technical regulations and standards on electric vehicles (authorization and technical inspection) and charging infrastructure (including interoperability and safety) are submitted to the government for adoption.
- 3.3. Guidelines to fleet managers (with a focus on fleets providing public services) for integrating social inclusion and gender criteria in EV procurement and operations are drafted, published and disseminated.

3.4. The national **gender-responsive** low-carbon e-mobility strategy is updated to include an investment plan, based on the lessons learned from demonstrations.

3.5. **Gender-responsive financial instruments facilitating e-mobility investments by the private sector are developed and presented to national stakeholders.**

3.6. The impact of existing fiscal incentives is assessed, and recommendations are made to the government for their update.

3.7. A regional workshop is organized to share lessons learnt on electric mobility regulations and EV waste management within the region.

#### Component 4. Long-term environmental sustainability of electric mobility through electricity availability and management of EV batteries at their end-of-life.

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
340,000.00	600,000.00

Outcome:

Outcome 4: Enhanced capacity for sustainable electrification in transport is achieved, with assessments on renewable energy needs, e-waste management initiatives, and regulatory reforms for EV battery lifecycle management, fostering a circular economy

Output:

4.1. A study to estimate the additional renewable power demand resulting from transport electrification, the potential of vehicle-to-grid (V2G) and off-grid applications, and the interventions needed in the national power system is completed and presented to local stakeholders.

4.2. The design of an e-waste demonstration with a focus on EV batteries is completed, based on best e-waste international practice and assessment of the Kyrgyz e-waste sector.

4.3. Technical training on e-waste management (with a focus on EV batteries) is provided, and one e-waste management company implements the e-waste demonstration.

4.4. A roadmap on Extended Producer Responsibility (EPR)-based regulatory reforms for the adequate collection and management of EV batteries for reuse, recycling and re-integration into global value chains is delivered to the government for approval.

4.5. Based on the demonstration results, **gender-responsive** circular business models including proposals on financial instruments are prepared, and an e-waste circular economy platform is launched (with focus on EV batteries).

#### M&E

Component Type	Trust Fund
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Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
49,332.00	350,000.00

Outcome:

5. The project is effectively monitored and evaluated.

Output:

5.1 Gender-responsive monitoring and evaluation products are delivered.

## Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1: Strengthened institutional foundation for sustainable electric mobility.	150,000.00	75,000.00
Component 2. Short-term barrier removal through demonstrations supporting the deployment of fast EV charging systems and fleet electrification by early adopters.	950,000.00	10,500,000.00
Component 3. Scale-up and replication of e-mobility.	300,000.00	1,050,000.00
Component 4. Long-term environmental sustainability of electric mobility through electricity availability and management of EV batteries at their end-of-life.	340,000.00	600,000.00
M&E	49,332.00	350,000.00
<b>Subtotal</b>	<b>1,789,332.00</b>	<b>12,575,000.00</b>
Project Management Cost	178,933.00	1,260,000.00
<b>Total Project Cost (\$)</b>	<b>1,968,265.00</b>	<b>13,835,000.00</b>

Please provide justification

## PROJECT OUTLINE

### A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as

population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

### ***The global environmental significance and regional context***

A global transition to low-emission mobility is essential to meet international climate commitments, such as the Paris Agreement. The transport sector is currently responsible for approximately one quarter of energy-related carbon dioxide (CO<sub>2</sub>) emissions, and this is expected to grow to one-third by 2050<sup>[1]</sup>. In addition, the transport sector is a leading contributor to air pollution, including that caused by nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and particulate matter (PM) and will be a major source of electronic waste such as electric vehicle (EV) batteries if no measures to reuse and recycle are undertaken.

The transition to low-emission mobility is gaining momentum in Central Asia. The Nationally Determined Contributions in the region generally include mitigation measures in the transport sector, and some countries<sup>[2]</sup>, besides the Kyrgyz Republic, have started to incentivize the adoption of electric vehicles and to expand their charging infrastructure networks. This project could serve to position the Kyrgyz Republic in a leading role within the region to accelerate such transition.

GHG emissions growth from transport globally as well as in Central Asia are conditioned by these main drivers: (1) economic growth tends to be coupled to increased mobility demand for passengers and goods, (2) technological innovations in the transport sector, which may lead to lower (e.g. through electrification coupled with electricity generation from renewables) but also to higher emissions (e.g. through the use of bigger and heavier vehicles, such as the increasing popularity of the additional features provided by sport utility vehicles (SUVs)), (3) lifestyle trends, which are usually associated with different personal modal choice and level of mobility, and (4) the global organization of production and distribution chains and their associated logistics, which continue prioritizing reliability and resilience over the reduction of their environmental footprint.

Depending on how societies and governments interact with these drivers, different futures may unfold at the country, regional and global level:

- Futures Scenario 1 (slow transition): Growing transport demand may continue to be met with fossil-fuel-based transport solutions, especially in low-and middle-income countries facing quick demographic and economic growth, on the basis of their easy availability and relatively low costs; such growth is likely to be partially compensated by electrification in some niche segments like high-end cars, public transport and high-mileage fleets, where lower operating costs justify electrification from a purely economic perspective.
- Futures Scenario 2 (curbing demand management): Growing transport demand may be curbed or slowed down through mobility management measures in the case of personal mobility and the integration of the environmental footprint within logistics optimization as well as within the organization of production and distribution chains.
- Futures Scenario 3 (speeding up electrification): The implementation of low-carbon technological innovations in transport can be accelerated, through a combination of conventional vehicle phasing out measures and expanded manufacturing and adoption of low carbon vehicles.

[1] International Council on Clean Transportation, 2020. Vision 2050. Available at: [https://theicct.org/sites/default/files/publications/ICCT\\_Vision2050\\_sept2020.pdf](https://theicct.org/sites/default/files/publications/ICCT_Vision2050_sept2020.pdf)

[2] The number of electric vehicles surged ninefold in Kazakhstan from January 2023 to January 2024, largely due to incentives like duty-free imports of EVs until 2025. Kazakhstan is also focusing on expanding its charging infrastructure. Uzbekistan has made significant strides with its joint venture between BYD Auto and Uzavtosanoat JSC to produce electric and hybrid vehicles. This includes the establishment of an assembly plant in the Jizzakh Region, with plans to produce up to 300,000 vehicles annually. The European Bank for Reconstruction and Development (EBRD) is actively involved in both countries through investments in sustainable transport infrastructure and public-private partnerships aimed at reducing fossil fuel dependency. In Tajikistan, EBRD is financing the introduction of electric vehicles in the taxi sector, and the municipality of Dushanbe is planning to replace 500 buses by electric ones by 2028, within its plans to upgrade public transport in the capital.

### ***The baseline in the absence of the project and the outcomes the project needs to achieve.***

Kyrgyzstan is a low-density populated country, with 35.2 inhabitants per km<sup>2</sup>. 16.3% of its 7.038 million population lives in Bishkek, or 31.5% of the total population, if Bishkek region (Chui oblast) is included. The annual average population growth between 2012 and 2023 was 2.2% at the country level and slightly higher (2.5% and 2.4% respectively) for Bishkek city and region, with a sustained migration trend from rural to urban areas.

Kyrgyzstan is a lower-middle-income country, with significant economic growth: GDP has increased with the compound annual growth rate of 3.8% between 2013 and 2023, in constant USD<sub>2015</sub>, and GDP per capita has grown by 1.6%, reaching USD<sub>2015</sub> 1,264 (or USD 1,970 in current value) in 2023. Being small open economy, the country heavily relies on external trade which constitutes 105.7% as a percentage of GDP. Roads are used extensively for transportation, since the development of alternative networks, e.g., railroads, is constrained by the country's topography[1]. Thus, roads are used for 98 per cent of passenger and 96 per cent of cargo transportation[2].

The transport sector contributed to GHG emissions with 4,990 Gg of CO<sub>2</sub>e in 2018, up from 4,798 Gg in 2013, with an average annual growth of 0.79%. The energy sector accounts to 61.2% of total GHG emissions, and 45.7% of energy emissions are due to transport (up from 40.9% in 2012[3]).

The transport sector in Kyrgyzstan faces challenges such as low quality of urban public transport services in Bishkek and other cities, increasing private car use with growing occupation of the public space and traffic congestion, low road safety levels, poor accessibility to rural areas and strong dependence on fuel imports[4]. Car traffic is one of the main sources of air pollution, leading to poor air quality in Bishkek, especially during the winter season when it is coupled with emissions from low-efficiency household heating systems[5].

The privately-owned car fleet in the country has steadily grown in the last 10 years, from 749,419 in 2013 to 1,173,314 in 2023 (i.e., 4.6% annual average growth), moving from 132 to 167 cars per 1,000 inhabitants. Most of these cars are registered in Bishkek city and neighboring Chui region, although the share has slightly decreased, from 36.4% and 24.4% respectively in the city and the region in 2013 to 27.2% and 21.9% in 2023.

The road vehicle fleet is old. In Bishkek, 81.8% of cars, 88.2% of buses and 85.9% of vans[6] are more than

15 years old, and the consumers' preference for affordable second-hand vehicles makes fleet rejuvenation slow. The number of registered buses and vans in the capital is high (12,237 buses and 42,684 vans), reflecting the dominance of small buses and vans in the provision of urban transport services.

The combination of public transport systems with low quality of service and the import of affordable second-hand vehicles leads to a quick expansion of individual car ownership with rapidly growing GHG emissions and substantial air pollution.

To curb such trends and reduce their significant contributions to GHG emissions, air pollution and other environmental impacts, the government of the Kyrgyz Republic (GoKG) has put in place different public policy actions outlined at the end of this section. Such actions are consistent with the government's long-term vision, as articulated in the National Development Strategy (NDS, 2018-2040) and developed in its medium-term National Development Programme (NDP, 2021-2026) and its Green Economy Development Plan (GEDP, 2019-2023). Based on them, the Ministry of Transport and Communications (MTC) approved in 2020 *a Concept for the development of road transport of the Kyrgyz Republic for 2020-2024*. Besides stating the reasons for the low quality of public transport services (low profitability of transport services, unequal competition between regulated bus services and unregulated taxi services, or the need for bus fleet renewal<sup>[7]</sup>), and the environmental challenges generated by the importation of polluting second-hand cars, the MTC calls for improving environmental conditions in cities through the development of urban public transport, and the introduction of cleaner vehicles.

Such measures are also envisaged in the climate change policy. Its legal framework is established by the *Law on government regulation and policy in the field of emissions and absorption of greenhouse gases*, enacted in 2007 and amended in 2016. Kyrgyzstan ratified its accession to the Paris Agreement in February 2020 and submitted its updated Nationally Determined Contributions (NDC) in October 2021. The country commits itself to unconditional emissions reduction targets of 16.63% by 2025 and by 15.97% by 2030, and to conditional emissions reduction targets of 36.61% by 2025 and 43.62% by 2030, in all cases compared to the business-as-usual baseline. For the transport sector, the measures envisaged focus on sustainable mobility and fleet renewal with partial electrification, with the latter providing savings for some 453 kt in 2025 and 446 kt in 2030. However, the path towards electrification has been slow until 2021 (180 registered EVs), and although it started to grow more significantly in 2022 (1,090 registered EVs), it is lagging below the NDC expectations<sup>[8]</sup>.

The interest of the GoKG in the promotion of e-mobility has increased in the last years, mainly in the form of tax incentives and streamlining administrative procedures for the installation of charging facilities. However, results have been modest in terms of both electric vehicle (EV) registrations and deployment of public chargers. Governmental actions have been relatively disconnected and at times difficult to implement. Since late 2018, electric vehicles (EV) have enjoyed zero rate of customs duties and taxes, and since 2019, they are also exempt from registration fees (whereas re-registration was halved for second-hand EVs). VAT exemptions for EVs and charging equipment and, for the latter, property tax exemption were also approved in 2020-2021, and a promotional electricity rate for EVs was included in the medium-term tariff policy on electric energy for 2021-2025. In March 2023, the government launched a public acceleration programme for the deployment of charging infrastructure, so that permits for charging equipment installation should be issued within 100 days.

The government's interest in fleet electrification is consistent with the strong contribution of renewables to electricity generation in Kyrgyzstan: 86% in 2021<sup>[9]</sup>, virtually all of it from hydroelectric plants, so that the emission factor from electricity and heat generation is just 127 kg CO<sub>2</sub>/MWh. A *Law on renewable energy sources* was enacted in 2008, but the expansion of other renewable sources, such as solar and wind, was hampered by regulations establishing a high threshold (at least 30 MW) for such plants, in order to give priority to the development of small hydro plants, concentrating generation expansion on a technology already well known in the country. The government has now revised such policy and announced the construction of several large solar and wind plants, which could be operational by 2026<sup>[10]</sup>. Therefore, the additional demand from the electrification of the road fleet will be met from renewable sources.

The government is engaged in improving air quality in Bishkek and other cities. The Law on the protection of atmospheric air was enacted in 1999, and amended several times since then, most recently in 2016. It established air quality thresholds for several pollutants and requirements for the production and importation of vehicles but fell short of establishing obligations for the preparation and implementation of air quality plans when legal thresholds are not respected, which has been the case in Bishkek for many years. In 2021, the national government approved a Plan of comprehensive measures to improve the environmental situation in the city of Bishkek and Sokuluk and Alamudun districts of Chui region for 2021-2023, with specific sections for the transport and building heating sectors (the core contributors to urban air pollution). The transport section recommended the Bishkek City Hall to take measures to transfer the public transport fleets of private and public operators to compressed natural gas (CNG) or EVs. Public transport fleet renewal has taken place, although at a very slow pace and limited to public operators, so that air quality conditions in Bishkek and its surroundings remain poor.

The government has also supported the installation of EV charging points by private investors, although generally requiring long charging times and limited mainly to Bishkek. Until now these short-term measures have proved insufficient to modify the trends towards higher ICE vehicle use, and the need to accelerate the electrification of the road transport sector, while accommodating to the socioeconomic and environmental conditions and development objectives of the Kyrgyz Republic. Further action to address the key drivers identified at the beginning of this section would be expected to provide the following outcomes: (1) a bolder and formalized institutional framework enabling more strategic governmental intervention in the transition towards electric mobility, with wider social support, (2) precise identification of the market segments where electrification can deliver more environmental benefits, and validation of electrification of transport modalities through demonstrations, (3) phasing out high-carbon (especially imported second hand) vehicles while offering targeted incentives to early EV adopters in the sectors with higher mitigation impact and providing convenient public transport alternatives to reduce the appetite for cheap and polluting old second hand cars, and (4) avoidance of the environmental externalities that could be associated with electric mobility, such as additional pressure and unreliability in the electricity system, GHG emissions associated to additional electricity generation or hazards associated to inadequate management and disposal of EV batteries at their end of life.

A project providing the presented outcomes is robust/agile to the different scenarios: (1) under a slow transition scenario, the project provides technical evidence and regulations to reassure those users for

which electric vehicles provide lower total cost of ownership (TCO), guiding some of these early adopters in the sectors best suited to make informed decisions on their fleet composition and to have a wider impact on the public in terms of service improvement and emission reduction, while supporting the government and private investors in the deployment of the necessary charging infrastructure; (2) under a curbing demand management scenario, the project increases awareness on the environmental footprint of mobility (a necessary condition to strengthen public support to policies that would otherwise be seen as restricting individual mobility) and the alternatives at hand to users, including sustainable fleet management practices, and facilitates the design and assessment of governmental incentives and disincentives to curb high-carbon mobility demand; (3) under the speeding up electrification scenario, the project is able to provide policy roadmaps to accelerate such transition and, most importantly, environmental regulations and know-how to manage EV batteries at their end of life. Under all the scenarios, the project envisages to strengthen institutional coordination, necessary to cope with any changes in the framework conditions and to design financial instruments adopted to the targeted users and electrification path in case policies to further accelerate the electrification process are adopted.

There are several barriers to the achievement of the project's expected outcomes (see Figure 1 for a full description of barriers):

Institutional barriers: (1) the institutional coordination at the ministerial levels is not always translating into effective action in sectoral policies (e.g. for the expansion of electricity generation and grid upgrading to adequately cope with the additional electricity demand generated by EVs), (2) the government's policy on e-mobility focuses on short-term action plans, without providing a strategic, medium- to long-term vision to promote sustainable transport and integrated e-mobility systems in a coherent way; **this hampers the action of stakeholders supporting e-mobility in different niches, including international partners.**

Capacity / knowledge barriers: insufficient awareness raising facilitate the prevalence of myths and misunderstanding on e-mobility among key stakeholders and consumers at large, due inter alia to the limited availability of professionals for maintenance and after sale services of EVs and EV charging stations (EVCS) and the lack of readily / centrally available knowledge products. **Capacity building has been identified as a critical need by stakeholders interested in e-mobility, including international partners:** In this regard, the Korean International Cooperation Agency (KOICA) is providing capacity building on e-mobility to the Ministry of Economy and Commerce through its E-Mobility Academy project, **but wider action is strongly needed.**

Market barriers: (1) fleet managers and transport professionals, including public transport operators, are not aware of the viability of EVs for public transport fleets and their advantageous total cost of ownership (TCO) **(even Bishkek Municipal Bus Company (BPATP), although already operating several electric buses, is unable to provide reliable figures on TCO for the different bus technologies it operates)**, (2) limited availability of EV and poor charging infrastructure supply in the Kyrgyz market; (3) higher upfront costs (capital expenditure) of EVs, in particular for public transport services, even if they are compensated by much lower operating expenditure and tax incentives, cannot be covered by potential users due to the insufficiency of existing financial instruments; (4) lack of technical regulations and standards for EVs and charging infrastructure; (5) lack of availability of targeted financial products or schemes to support investments in EVs and related infrastructure, (6) lack of creditworthiness of key target groups, such as public transport operators in Bishkek to access debt financing; (7) the continuation of current incentives, especially those concerning customs duties, are subject to approval from the supranational authorities of the Eurasian Economic Union, which creates uncertainty among investors. **In consequence, the sustainability and scaling up of the fleet electrification projects supported by international partners (such as EBRD, ADB or KOICA) is uncertain.**

**Environmental barriers:** (1) unclear plans to address the expected electricity demand growth and to integrate electric mobility within the electricity system, and (2) absence of legislation, protocols, and technical know-how for the proper management of end-of-life EVs and batteries, and (3) lack of incentives and business models for battery reuse and end-of-life management. **Whereas various stakeholders (including BPATP, EBRD, ADB, KOICA and WB) are supporting the electrification of various fleets, the long-term environmental challenges of such electrification have seldom been discussed with the GoKG yet.**

The key project's enablers include (1) the commitment of the government to support the electrification of the road fleet in the Kyrgyz Republic — as stated in key policy documents — and the modernization of public transport services, starting with Bishkek, (2) the synergies that can be created with other projects under implementation by different international institutions **(in particular, with EBRD, ADB and KOICA, as initially screened during the scoping mission, through the complementarity among their electrification efforts in certain vehicle categories and a policy-focused contribution from the future GEF project),** (3) the low specific emissions of electricity generation and the government's plans to further expand electricity generation from renewables, (4) the engagement of key public and private stakeholders in the expansion of electric mobility in the country.

[1] Rovenskaya, E., Sedighi, E., Komendantova, N., Strelkovskii, N., Karabashov, N., Atakanov, N., ... & Rodriguez, F. S. (2018). Industrial Development of Kyrgyzstan: Background.

[2] Enikeeva Z. (2024). Freight transportation for landlocked countries: challenges and opportunities in Kyrgyzstan. Institute of Public Policy and Administration University of Central Asia. Available: <https://www.unescap.org/sites/default/d8files/event-documents/1Kyrgyzstan.pdf>

[3] In accordance with IEA: <https://www.iea.org/reports/kyrgyzstan-energy-profile/sustainable-development>

[4] Ministry of Transport and Communications (2016). National Strategy for Road Sector Development until 2025.

[5] UNDP, UNEP (2022). Air Quality in Bishkek: Assessment of emission sources and roadmap for supporting air quality management. <https://www.undp.org/kyrgyzstan/publications/air-quality-bishkek-assessment-emission-sources-and-roadmap-supporting-air-quality-management>.

[6] Including vans used for public transport services, known as marshrutkas.

[7] Regarding these challenges the approach of UNDP and other donors has consistently been that adequate financial instruments such as leasing should be provided, and transport companies should be consolidated into large ones with stronger financial capacities.

[8] In the absence of access to the detailed calculations made in the NDC, it can be estimated that to reach savings for 453 kt from the electrification of the car fleet in 2025 would require some 54,000 vehicles replaced by electric ones, which is virtually 100% of the car sales (assuming that one ICE vehicle with an annual mileage of 20,000 km emits around 8.4 tons CO<sub>2</sub>e).

[9] IRENA. [https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical\\_Profiles/Asia/Kyrgyzstan\\_Asia\\_RE\\_SP.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Asia/Kyrgyzstan_Asia_RE_SP.pdf)

[10] <https://en.kabar.kg/news/6-wind-and-9-solar-power-plants-to-be-built-in-kyrgyzstan/>

### ***How the project addresses the drivers of transport GHG emission growth in the Kyrgyz Republic***

Driver 1: Economic growth coupled to increased mobility demand for passengers and goods. The project fosters the adoption of low-carbon mobility solutions (with a focus on electric mobility) to mitigate the impact of the growing population and economy in the Kyrgyz Republic. Formalizing an institutional coordination framework and a long-term strategy will facilitate the alignment of the decisions made by public and private stakeholders with transport decarbonization.

Driver 2: Technological innovations in the transport sector, which may lead to lower (e.g. through electrification) but also to higher (e.g. through the use of bigger and heavier vehicles, such as the increasing popularity of the additional features provided by SUVs) emissions. The project intends to develop technical

regulations and standards, as well as an array of incentives and disincentives to support clean mobility options and phase out or at least discourage high carbon technologies. It will also explore the economic and job creation opportunities associated to these policies.

Driver 3: Emerging lifestyle trends with higher mobility and a preference for privacy. The project will address this driver through awareness-raising campaigns and through cooperation with other projects (e.g. from ADB and EBRD) that are making public transport safer and more attractive, as well as promoting public transport, soft modes and building support to the preservation of the environment and other community values.

Driver 4: The organization of the production chain and its associated logistics. The project will directly work with some private corporations in the public transport sector and other commercial sectors to support the electrification of their fleets and the introduction of fleet management practices focusing on reducing their environmental footprint; these demonstrations will subsequently translate into business plans for further deployment and expansion within the participating companies and will be subsequently disseminated to engage a larger number of companies and replicated with the support of the regulations, incentives and financial instruments they project intends to set up in component 3. Furthermore, the initially targeted corporations are expected to provide high visibility and translate the advantages of electrification to their customers in the form of higher quality of service.

### ***Relevant stakeholders, private sector, and local actors and their roles in the system***

Consultations have been completed during a scoping mission to Bishkek from 23 to 27 October 2023 and subsequent follow up discussions, which included bilateral meetings, one multistakeholder consultative workshop with associations and individual experts active in the advocacy of gender and social equity to empower multiple perspectives (October 26, 2023) and one design workshop to which all the relevant stakeholders were invited (October 27, 2023). A virtual validation workshop was held on 29 April 2024 to review the content of this PIF. During these activities, stakeholders were provided with information on transport electrification policies in other countries, the scope and approach of the current GEF-7 Global Electric Mobility Programme (GEMP) and examples on the social, environmental and gender challenges generally associated with transport electrification. Furthermore, the potential contribution of transport electrification to the various stakeholders' priorities and interests and the different channels for future engagement in the project were discussed. The relevant stakeholders identified included government ministries and agencies, international institutions, private banks, private charging service providers, private car dealers, public and private public transport operators, and Bishkek City Hall. Their respective roles in the project are summarized in the table below.

A stakeholder engagement box, including stakeholders contacted and dates, is provided below. These consultations served to identify the key stakeholders included in Table 1.

#### **Stakeholders interviewed bilaterally during the Scoping Mission (October 23-26, 2023):**

Ministry of Economy and Commerce; President's Office; Ministry of Natural Resources, Ecology and Technical Supervision;

Ministry of Transport and Communications; Ministry of Energy; Bishkek Mayor's Office; EBRD; ADB; Passenger Transport Association; State Agency for Registration of Vehicles and Drivers under the Cabinet of Ministers of the KR (UNAA); KOICA; Trolleybus Municipal Company; Doscredobank; Charging equipment providers and operators (Elkub.kg and EVION; Car dealers and importers (Electromobile.kg).

**Stakeholders participating at the workshop on social, environmental and gender issues (October 26, 2023):**

Mutakalim, Bishkek Feminist Initiatives; Alga CSO, Association of Women in Energy.

**Stakeholders participating at the design workshop (October 27, 2023):**

Ministry of Economy and Commerce; President's Office; Ministry of Natural Resources, Ecology and Technical Supervision; Kyrgyzdromet; Ministry of Transport and Communications; Ministry of Energy; Passenger Transport Association, KOICA, ADB, NGO Movegreen, NGO 'Women's Aid Center', Bishkek Feminist Initiatives, Gender Information Centre CSO, Central Asian Institute for Applied Geosciences.

**Stakeholders participating at the PIF validation workshop (April 29, 2024):**

Ministry of Economy and Commerce; Ministry of Natural Resources, Ecology and Technical Supervision; Ministry of Transport and Communications; Bishkek Mayors Office; Climate Finance Center; State Agency for Registration of Vehicles and Drivers under the Cabinet of Ministers of the KR; ADB; KOICA; Civil Urban Initiative Peshcom; Bishkek Feminists; NGO 'Women's Aid Center'; Ekois Public Association; Doscredobank; University of Central Asia; Passenger Transport Association; Electromobile.kg; Elkubkg.

Table 1: Relevant Project Stakeholders

Stakeholder	Role and how it will be engaged in the project
Ministry of Natural Resources, Ecology and Technical Supervision	MNRETS is the GEF Operational Focal Point (GEF OFP) and competent for the implementation of climate change policies as well as environmental quality policies, including waste management, relevant for the disposal and recycling of vehicles at their end of life and e-waste such as batteries.
Ministry of Transport and Communications	MTC is competent for establishing the legal framework for licensing transport operators to provide regular passenger interurban transport services. It is also competent for the technical approval of vehicles to be commercialised and operated in the Kyrgyz Republic.
President's Office	It coordinates the government's policy and actions, including those on the green economy and e-mobility.
Ministry of Economy and Commerce	MEC is competent for setting up and implementing the general economic, fiscal and trade policy, technical regulations, and metrology. This includes the implementation of the current Green Economy Development Programme, which foresees, inter alia, the deployment of e-mobility in the country.
Ministry of Finance	MF is competent for setting up and implementing the fiscal framework, in particular for transport services and transport equipment. This is relevant for the continuation or update of current fiscal incentives to EV and EVCS in the Kyrgyz Republic.
Ministry of Energy	ME is competent for setting up and implementing the energy policy, including the regulation of the electricity market. This is relevant to facilitate access to electricity as the EV fleet expands, and to facilitate the deployment of private and public charging stations.
State Registration Service (UNAA)	UNAA is the primary source of information on the characteristics and trends of the vehicle market, including information on the vehicle fleet, imports, and registrations.
State Agency for Architecture, Construction and Housing (Gosstroy)	Gosstroy is competent in setting up and implementing building regulations, which should include in future the installation of EVCS in private residential and commercial buildings as well as in the public space.
Government's fleet managers	The government has earmarked USD 5 million for the addition of EVs to the government's fleet. Decisions on vehicle purchase are shared between the Ministry of Finance and the ministries and government agencies managing these vehicles.
Bishkek Vicemayor in charge of transport	The Vicemayor supervises the operation of the municipal bus and trolley companies, as well as the department in charge of traffic management, and the design and implementation of the overall mobility policy of the city.
Bishkek Municipal Trolleybus Company (BTU)	Owned by the municipality, BTU operates 11 trolley routes and is engaged in the modernisation and expansion of its network.
Bishkek Municipal Bus Company (BPATP)	Owned by the municipality, BPATP operates 23 bus routes in Bishkek as it modernises its fleet with the replacement of old buses with higher-capacity electric and CNG units.
Bishkek Urban Transport and Road Infrastructure Department	This department is responsible for traffic management and street and road maintenance and construction, which makes it critical for the implementation of sustainable mobility measures in Bishkek related to public transport prioritisation and reallocation of street space among transport modes.

Stakeholder	Role and how it will be engaged in the project
EBRD	EBRD is supporting the modernisation of the public transport fleet in Bishkek and Osh, as well as the preparation of a Green City Action Plan in Bishkek. It is also providing resources for the financial sector to provide loans for green investments, although e-mobility is not included yet.
ADB	ADB is supporting the electrification of BPATP's bus fleet and envisages the implementation of a green mobility corridor in Bishkek.
KOICA	KOICA is currently providing training on e-mobility to the Ministry of Economy through its E-Mobility Academy, a support that will continue until 2025. It is also planning a project to support the electrification of Kyrgyz Post's fleet as well as those of other logistic corporations.
World Bank	The World Bank is supporting the expansion of the country's electricity generation capacity. It is also completing a study to identify transport decarbonisation policies and projects that would reduce carbon emissions, reduce energy consumption, and improve connectivity in the Central Asia region.
UNEP	UNEP has participated in studies and projects related to air quality in Bishkek, Osh and Karakol and leads the GEF-7 and GEF-8 financed Global Electric Mobility Programmes.
UN-Habitat	Launched in November 2023 the project "Building back safer, more sustainable and resilient transport in the aftermath of COVID-19 in Western Balkan and Central Asian Landlocked Developing Regions", which should deliver a Sustainable Urban Mobility Plan for Bishkek and other 4 cities in the region by mid-2026.
Global Green Growth Institute	GGGI is assisting the government in the development of a multi-year GCF readiness support project proposal on the development of a green bond market and is assisting the Community Development and Investment Agency (ARIS) through its GCF accreditation process.
Passenger Transport Association	A key stakeholder to facilitate the participation of private operators of urban and interurban passenger transport services.
EV and EVCS dealers	Private companies such as Elkub and Electromobile.kg are providing and, in some cases, operating public EVCS, as well as retailing EVs.
Private corporate fleet managers	Private corporations with large fleets, including taxi and logistics services, could become early adopters of EVs with the project's support.
Banks	The banking sector is increasingly interested in green financing. For example, Doscredobank has pioneered the implementation of green bonds in the Kyrgyz Republic, and is offering loans for the procurement of EVs, in partnership with some local EV dealers.
State Development Bank	SDB is a public-owned bank recently established by the GoKG. One of its areas of interest is the provision of support to the deployment of a green economy.
Women's association, association of People with Reduced Mobility (PRM)	Integration in the project of universal mobility principles, access to job opportunities and prevention of violence and harassment in the passenger transport system.

### ***Alignment with the country's priorities: Baseline investments and lessons learned from previous projects***

Public policy is well formalised in Kyrgyzstan through an array of official plans and strategies. From the government's long-term vision articulated in the National Development Strategy (NDS, 2018-2040) to the medium-term National Development Programme (NDP, 2021-2026), the Green Economy Development Plan (GEDP, 2019-2023) and the MTC's *Concept for the development of road transport of the Kyrgyz Republic for 2020-2024*, there is a keen interest in improving environmental conditions in cities through the development of urban public transport and the introduction of cleaner vehicles, with a growing focus on electric ones. Another area of priority is the expansion of electricity generation, with a strong focus on hydro projects, to cope with the growing demand associated to economic development, and to road transport electrification.

The table below summarizes the most relevant projects in progress contributing to the modernization of public transport, electrification of the road fleet and the expansion of electricity generation from renewable sources.

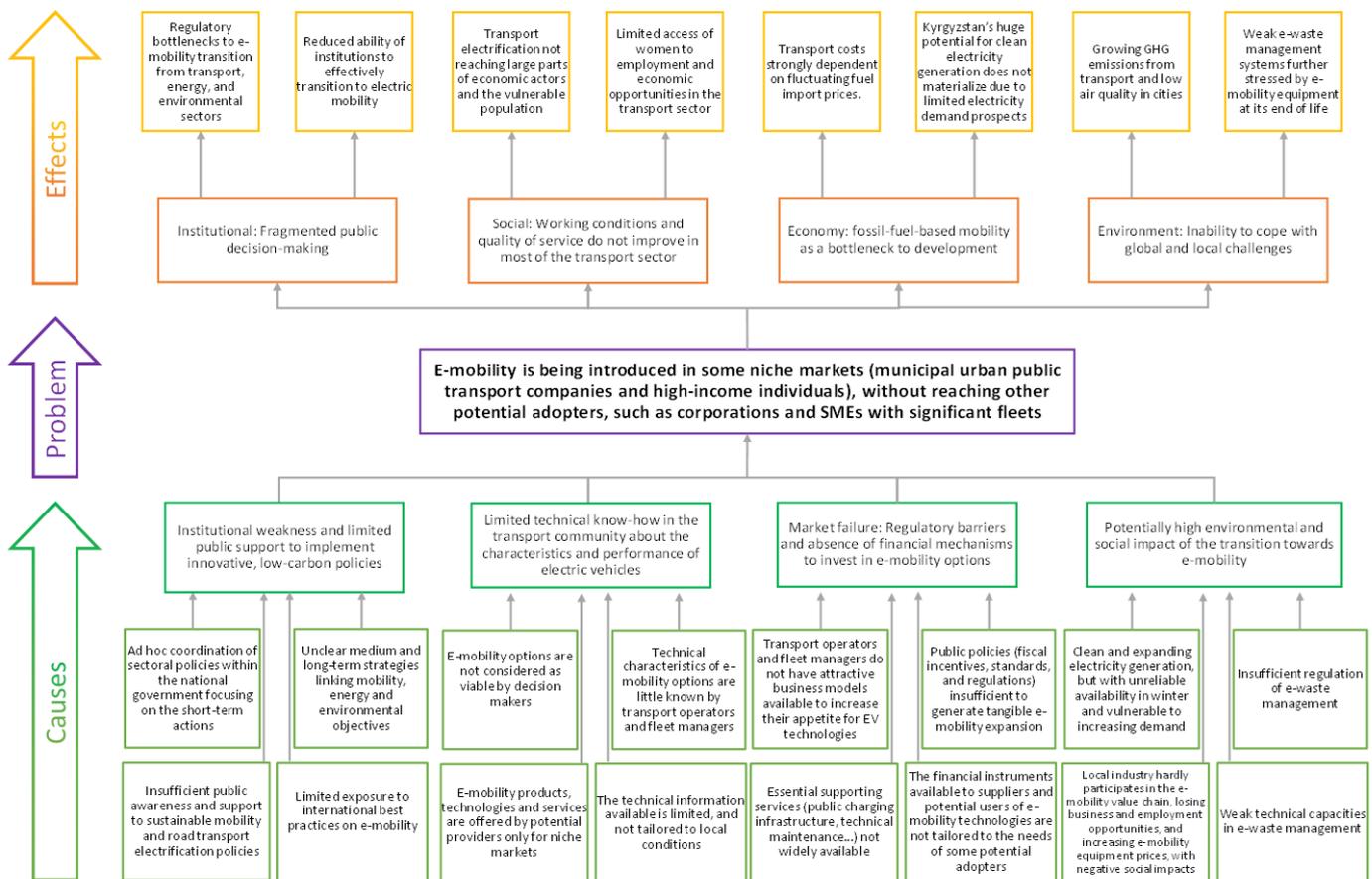
Table 2: Electro-Mobility Projects in the Kyrgyz Republic

Project Name	Agency	Description	Period	Budget, USD Million
Kyrgyz Renewable Energy Development Project	World Bank	Promoting the expansion of electricity generation from hydro and other renewable sources	2023-2028	80.2
Kyrgyz Republic Air Quality Improvement Project	World Bank	Reduction of pollutant emissions in urban areas, with a focus on heating systems and air quality monitoring and management	2024-2030	50.0
Urban Transport Electrification Project	ADB	Supporting the electrification of public transport municipal buses in Bishkek and the implementation of a green mobility corridor	2021-2026	ADB: 50.65. Counterpart: 8.9
Bishkek Bus Project	EBRD	Supporting the modernisation of public transport in Bishkek, the procurement of CNG buses for the municipal bus company and the preparation of a Green City Action Plan	2022-2025	35.9
Electric cars and a network of electric charging stations - a pilot project to convert the state vehicle fleet to electric cars	KOICA	Around 50 electric vehicles to be operated by Kyrgyz Post and another government agency, as well as charging infrastructure in Bishkek.	2024-2027	11.0

Table 3: Renewable Electricity Generation Projects

Name of the project	Technology	Power (MW)	Budget* USD Million	Construction period
Construction of the Upper Naryn HPP station Cascade	Hydro	237,7	727,7	5 years
Construction of the Kambar-Ata HPP-1	Hydro	1 860	2,868.5	8 years
Construction of the Suusamyr-Kokomeren HPP station Cascade	Hydro	1 305	3,300	8 years
Construction of the Kazarman HPP station Cascade	Hydro	1 160	2,000	8 years
Construction of the Sary-Jaz HPP station Cascade	Hydro	1 100	2,500 – 3,000	8 years
Construction of the Chatkal HPP station Cascade	Hydro	1 800	1,370	5 years

Figure 1: Project's problem tree



## B. PROJECT DESCRIPTION

### Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

The project aims at accelerating the uptake of electric mobility in the Kyrgyz Republic, with a focus on reducing GHG emissions and fossil fuel and energy use, improving air quality, and increasing the inclusivity and efficiency of the passenger transport sector. The project's theory of change addresses the four barriers or causes described in the previous section by achieving the following outcomes:

- **The first outcome** of the project's implementation is that "an inclusive and coordinated national framework for electric mobility is established through a government-supported, gender-responsive strategy, strengthened technical capacities, and an informed stakeholder network to drive sustainable e-mobility initiatives". This contributes to addressing the institutional barriers.
- **The second outcome** of the project's implementation is "enhanced readiness and capacity for large-scale electric vehicle (EV) adoption in interurban transport corridors and fleet operations, demonstrated through established charging infrastructure, electrified public and government fleet operations, and data-driven insights on EV performance and commercial feasibility". This contributes to addressing the barriers related to limited technical knowledge and expertise in the context of deployment of electric modality/infrastructure in the transport sector at the national level.

- **The third outcome** of the project's implementation is that "supportive policies, financial tools, and operational guidelines for electric mobility are established, promoting EV adoption through updated standards, inclusive procurement practices, optimized fiscal incentives, and expanded financing options for low-carbon mobility". This contributes to addressing the barriers imposed by current market failure in the supply and demand of electric vehicles and associated equipment.
- **The fourth outcome** of the project's implementation is that "enhanced capacity for sustainable electrification in transport is achieved, with assessments on renewable energy needs, e-waste management initiatives, and regulatory reforms for EV battery lifecycle management, fostering a circular economy". This contributes to addressing the environmental barriers and hazards generated by the additional electricity demand and the disposal of EV batteries at their end of life.

The project's achievement of these four outcomes translates into more favourable intermediate states leading to the project's objective of reducing GHG emissions from passenger road transport in the country:

- Outcomes 1, 3 and 4 provide gender-responsive strategies, roadmaps and regulations that need to be formally adopted and implemented by the national government. Such intermediate state assumes that there is sufficiently strong political support to transition towards electric mobility and, more generally, to the sustainable transport paradigm.
- Outcome 2 provides demonstrations which should result in an intermediate state with improved management and growing electrification of early adopters' public and private transport fleets. Such intermediate state requires as a driver for its materialization the mobilization of private investors and the government to support the expansion of the charging network beyond the project's demonstration. It is further strengthened by the synergies with other innovations associated to digitalization, such as the deployment of computer-aided dispatching and other fleet management tools increasing efficiency in fleet operations (reducing idle vehicle times, pre-emptive maintenance planning, drivers' monitoring and tailored training to improve energy consumption and passengers' safety, and rational allocation of vehicles and drivers to routes in accordance with demand), enhanced security with an impact on the confidence of women and vulnerable users (e.g., in case video cameras and driver-management centre communication services are provided) and improved passenger's experience (e.g. through real time information provision, allowing for reliable trip planning and contactless payment), increasing the competitiveness of public transport services compared to private car use.
- Outcome 3 provides the key elements (financing instruments, fiscal incentives and technical regulations) necessary to strengthen the market for e-mobility vehicles and equipment in the Kyrgyz Republic. It assumes that global manufacturers and other global stakeholders are actively engaged in Central Asia markets, so that new e-mobility products are promptly distributed in the Kyrgyz Republic.
- Outcome 4 provides the conditions to achieve an intermediate state in which clean electricity supply is ensured and end-of-life management of batteries and other e-waste is aligned with circular economy principles. This requires as a driver that generation from renewables and grid integration be prioritized by the government. It also implies the assumption that global networks will be established for reusing and recycling EV batteries (as the Kyrgyz market will probably be too small to generate circularity at the domestic level).

Social, environmental and gender dimensions are mainstreamed within the project, and a Gender Action Plan, backed by specific budget lines and plans for its monitoring and reporting, and tailored Environmental and Social Management Framework (ESMF), will be prepared within project design.

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The combination of such intermediate states creates catalytic conditions to move forward in the transition to electric mobility, towards reaching a state in which electrification and sustainable fleet management practices are widespread at scale in professional transport operations. This intermediate state assumes that the electric energy system continues to be strengthened with generation from renewables, to cope with the growing demand from EVs, and that the transport policy actively encourages efficiency and phases out unsustainable mobility practices.

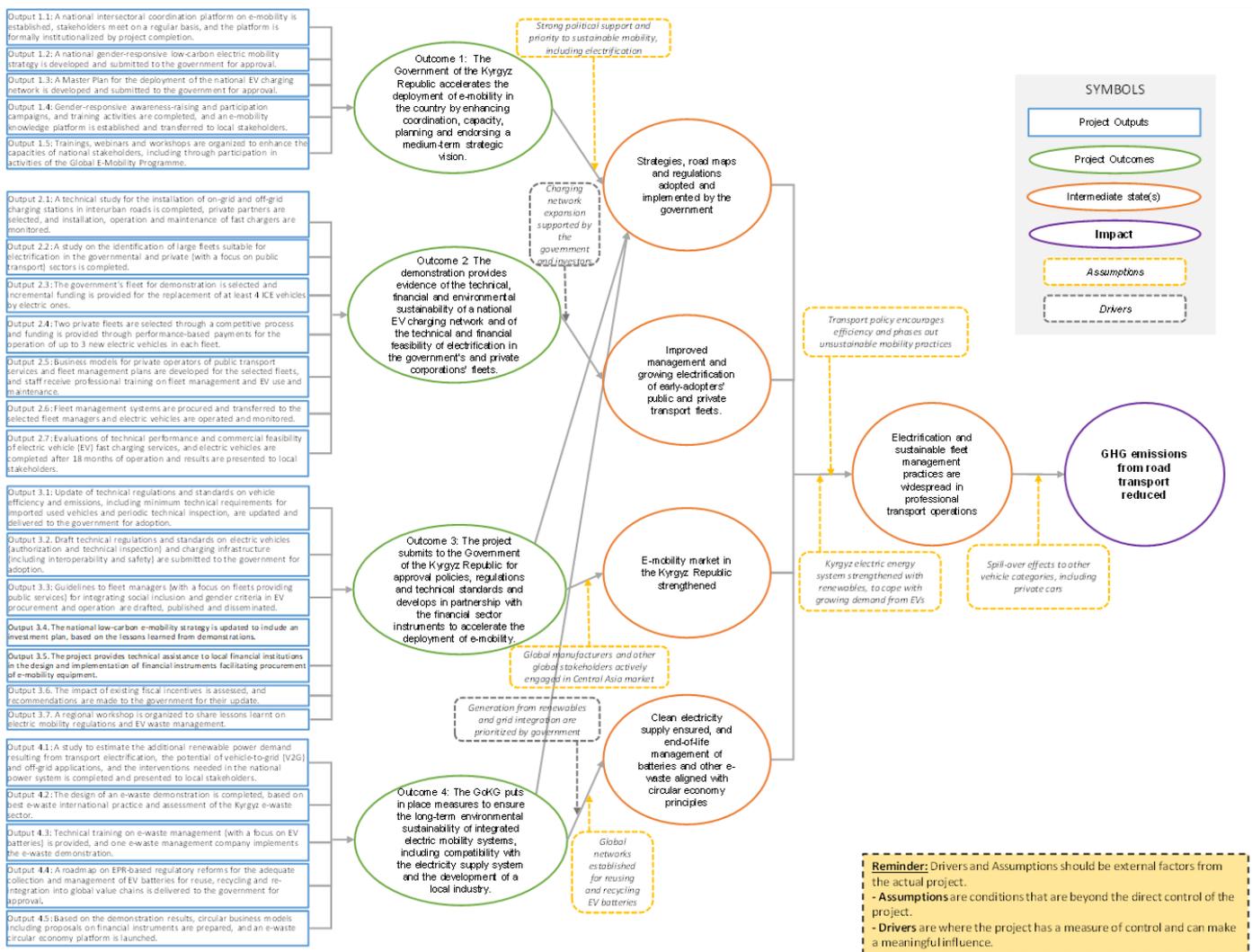
The attainment of substantial GHG emission reduction from road passenger transport is built on the assumption that the positive trends in professional fleets spill over to other vehicle categories, especially to private cars, fostered by the much lower cost of electricity compared to fuel<sup>[1]</sup><sup>11</sup> and the availability of imported second-hand electric vehicles.

The theory of change described above is presented in the figure below. It is resilient to changes in the drivers described in section A, in the sense that it enables the country to rapidly benefit from any technological progress achieved at the global level while making better use of the mobility resources available to cope with the needs of the economy and of individuals as the economy and the population grow, avoiding any development bottlenecks due to road transport electrification; it also builds upon awareness raising among the public and decision makers on sustainable development, resulting in the adoption of lifestyles and production and distribution processes resulting in lower GHG emissions from transport.

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[1] KGS 74 per liter of gasoline compared to KGS 2.39 per kWh.

Figure 2: Project's theory of change



The project is structured around four components plus one monitoring and evaluation (M&E) component, as follows.

### Component 1. Strengthened institutional foundation for sustainable electric mobility.

**Expected Outcome 1:** An inclusive and coordinated national framework for electric mobility is established through a government-supported, gender-responsive strategy, strengthened technical capacities, and an informed stakeholder network to drive sustainable e-mobility initiatives.

Under this component, the project will strengthen the institutional architecture that is currently pushing for the development of electric mobility in the Kyrgyz Republic. The first step (output 1.1) is to establish a national intersectoral coordination platform on e-mobility, building upon the past and existing short-term working groups and intersectoral committees, and providing sustained coordination among stakeholders. The platform will be led by the Ministry of Economy and Commerce or the President's Office and will include representatives from key line ministries and institutions (i.e. transport, energy, environment, finance, etc.), while being opened to the participation of private sector (public transport operators associations / unions), and civil society stakeholders (gender equality associations, vulnerable users' associations).

Secondly (output 1.2), the project will support the development of a national gender-responsive strategy on low-carbon electric mobility to provide the country with a strategic medium to long-term vision, which is lacking in the short-term action plans implemented thus far. This strategy will cover all aspects of e-mobility, including used EV imports, charging infrastructure, renewable power generation needs, grid requirements, battery/EV end-of-life, and the local EV value chain. The strategy will be revised by the end of the project, to integrate the lessons learned from the project's demonstrations in components 2 and 4.

The project (output 1.3) will also provide gender-responsive awareness-raising and participation campaigns and will support the design, implementation, and transfer to a local institution (or association, if established as a result of Component 3 activities) of an e-mobility knowledge management platform to ensure that all information, knowledge products and tools associated with the e-mobility sector are accessible and disseminated to all local stakeholders.

Finally, (output 1.4) the project will improve national capacities through a broad range of training activities, including through participation in the Global Thematic Working Groups, Global Partnership, Regional Support and Investment Platforms organised by the GEF-8 GEMP. This will include webinars and training on policy and regulatory frameworks, EV technologies, charging infrastructure, all aspects of batteries' life cycle (collection, reuse, recycling, re-integration into local and global value chains), renewable energy integration into e-mobility systems, and importation of second-hand EVs. These trainings will target decision-makers from key line ministries as well as from the private sector (transport operators, fleet managers, EV and EVCS importers, etc.). In addition, the project will benefit from market-place events organised by the GEMP to create communities of practice, and the peer-to-peer workshops organised to exchange best practices and lessons learned with other countries already engaged in e-mobility. To this end, the project will allocate some resources to participate in such events and to properly coordinate with the GEMP.

## **Component 2. Short-term barrier removal through demonstrations supporting the deployment of fast EV charging systems and fleet electrification by early adopters.**

*Expected Outcome 2: Enhanced readiness and capacity for large-scale electric vehicle (EV) adoption in interurban transport corridors and fleet operations, demonstrated through established charging infrastructure, electrified public and government fleet operations, and data-driven insights on EV performance and commercial feasibility.*

This component will consist of two demonstration projects, with the first one supporting the rolling out of charging infrastructure to enable long distance travel. This will include the installation of on-grid and off-grid fast charging stations (including mobile ones) along the Bishkek-Karakol and Bishkek-Osh routes, the latter eventually connected to wind or solar generation systems as a bridging technology to provide convenient charging services in places poorly served by the grid system. Due to the project's modest budget, such fast-charging stations will be located in places already equipped with sufficient electricity power and reasonable paved access and parking space. The deployment will be undertaken in partnership with the private sector through a competitive procedure, in which the selected partners will be compensated in accordance with the charging services provided up to reaching a certain percentage of the total investment costs<sup>[1]</sup> (see text box below for details).

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[1] Subsidies for the installation of public charging vary among countries, depending inter alia on the short-term use expectations, with higher values in low-populated areas and locations outside major roads. For example, subsidies reach up to 30% in Finland (<https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/finland/incentives-legislations>) for installations of at least 11 kW (35% for installations above 22 kW), 40% in Spain ([https://esmove.es/instalacion-puntos-recarga/subvenciones/?utm\\_source=google&utm\\_medium=cpc&utm\\_network=g\\_21104770454\\_%7bcampa\\_ign%7d\\_kwd-1186499964928\\_159556130389&gclid=Cj0KCQjwsoe5BhDiARIsAOXVoUvwkJ60YL0joVhznO5JCjfu0](https://esmove.es/instalacion-puntos-recarga/subvenciones/?utm_source=google&utm_medium=cpc&utm_network=g_21104770454_%7bcampa_ign%7d_kwd-1186499964928_159556130389&gclid=Cj0KCQjwsoe5BhDiARIsAOXVoUvwkJ60YL0joVhznO5JCjfu0))

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[OE9maNSIowQXE5rRV\\_PZsiERvbP2hIaAjnTEALw\\_wcB&gad\\_source=1](#)) (50% for installations above 50 kW), and 80% in [Virginia \(https://www.energy.virginia.gov/renewable-energy/EVC.shtml\)](https://www.energy.virginia.gov/renewable-energy/EVC.shtml) (USA), the latter only if located in underserved communities. The precise cap for the project demonstration will be established based on the results from output 2.1.

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## Demonstration of fast charging infrastructure facilities

**Objective:** This demonstration will provide evidence of the financial and operating conditions required to expand the interurban charging network in the Kyrgyz Republic. The added value of the demonstration compared to the current market conditions is to focus on interurban locations and on fast charging services.

**Procurement:** The project will support the provision of fast charging services in 10 locations (each equipped with one to four chargers) along two main national routes during at least 18 months (540 days) with defined minimum technical requirements (number and type of connectors, power, etc.) and with remote monitoring and control. Bidders will be asked to include in their offer the total investment cost and the cost charged to the project per day of actual operation (i.e. excluding days in which the charger is not providing service). The maximum payment made by the project for each charger cannot exceed 40% of the investment cost (to be consistent with subsidies provided in other countries). Offers will be classified in accordance with the daily payment requested, and those requesting lower payments will be selected until completing the allocated budget.

**Payment method:** The beneficiary will receive partial payments upon achievement of the expected partial results, each time 30 days of operation are achieved until the completion of the pilot. The project will have access to the remote monitoring system to verify the number of days the charger is operational and will provide monthly certifications. In case at the end of the project the beneficiary does not complete the expected 540 days of service, the project will not provide payments for any remaining days.

**Potentially interested market participants:** During the scope mission in October 2023, two private companies currently installing public charging stations in Bishkek were approached. Additional private companies are likely to enter this market, following the current government's support to the expansion of charging facilities in Bishkek. Furthermore, owners of gas stations and other facilities along the highways are expected to be interested.

**Financing options:** Some of the private companies engaged or interested in this market are vehicle dealers or importers, already active and with certain financial capacity. Furthermore, private banks are issuing green bonds and offering loans for e-mobility equipment. The State Development Bank, recently established by the government, sees green financing as a priority area for its activity.

**Performance-Based Payment (PBP) implementation:** A Low-Value PBP agreement **or similar contract** will be signed with each selected beneficiary (responsible party (RP)). Partial payments will be made upon completion of each 30-day service and conditioned to the submission of monthly deliverables by the RP, each deliverable providing the technical information on the public charging service provided during each 30-day reporting period. Verification of the information provided in the monthly deliverable will be made by the Project Management Unit through the information provided by the monitoring system, to which it will have permanent access.

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This component will consist of two demonstration projects, with the first one (output 2.1) supporting the rolling out of charging infrastructure to enable long distance travel. This will include the installation of on-grid and off-grid fast charging stations (including mobile ones) along the Bishkek-Karakol and Bishkek-Osh routes, the latter eventually connected to wind or solar generation systems as a bridging technology to provide convenient charging services in places poorly served by the grid system. Due to the project's modest budget, such fast-charging stations will be located in places already equipped with sufficient electricity power and reasonable paved access and parking space. The deployment will be undertaken in partnership with the private sector through a competitive procedure, in which the selected partners will be compensated in accordance with the charging services provided up to reaching a certain percentage of the total investment costs<sup>[1]</sup> (see text box below for details).

This demonstration will provide valuable information to interested investors on the demand and risk associated with these facilities, and to the GoKG on the incentives that would be needed to deploy the charging network in the country.

For the second demonstration, the project (output 2.2) will undertake a screening of relatively large government and private fleets to identify suitable candidates for electrification and fleet management optimisation. The government fleets will be selected (output 2.3) in cooperation with the GoKG, taking into consideration the actions planned by KOICA, to avoid overlapping and maximise synergies. The project will provide the incremental funding necessary for the replacement of at least 4 conventional vehicles by electric ones, focusing on utilitarian vehicles used for public services (due to their higher mileage travelled compared to vehicles used for the mobility of public officials, which will be excluded). More elaborated criteria for this demonstration will be prepared during the PPG stage. Governmental fleets are included in the demonstration due to its potential to inform the government's public procurement policy to transition toward electric fleets by providing evidence of the conditions under which the use of electric vehicles provide total cost ownership savings and about the transitional costs associated (staff training, new fleet management practices, etc). Additionally, the adoption of electric mobility by governmental fleets is expected to accelerate vehicle electrification at the country level by (1) providing a sustained demand for EVs, making vehicle dealers more confident to commercialize them and (2) acting as early adopters and as a reliable reference for private corporations to follow. These positive replication effects (which translates into secondary direct and indirect emission reductions) outweigh the slight decrease in the primary direct emissions mitigated by the project due to the eventual smaller mileage travelled by governmental vehicles. As for the selection of the private fleets, the project (output 2.4) will launch an open competition for selecting the most suitable partners (giving priority to micro, small and medium enterprises (MSMEs)), offering them the provision of technical support for their electrification and the implementation of state-of-the-art fleet management systems and, in the case of private operators of public transport services, also a performance-based financial compensation<sup>[2]<sup>12</sup></sup>. The project will engage as first priority private minibus operators in the urban periphery of Bishkek or other cities if, during the project design stage, the feasibility of such demonstrations can be verified; as a second priority, taxi services will be included and, as a third priority, large private fleets in other sectors. EV demonstrations engaging the municipal public transport companies in Bishkek are not initially considered, as ADB and EBRD are already actively involved in these. These demonstrations are expected to increase the market acceptance of e-mobility in the Kyrgyz Republic.

The project's partners for the demonstrations will receive (output 2.5) training and technical support for the selection, procurement, operation, and maintenance (including professional training for their mechanics) of the e-mobility equipment, as well as for setting up viable business models for public transport services consistent with electric vehicles' characteristics, performance and total cost of ownership (TCO). The trainings will contribute to promoting women's participation and will address their specific safety and mobility concerns. Such support will include (output 2.6) the setting up or upgrading of fleet management practices incorporating gender-responsive elements with the project's contribution to the provision of the necessary equipment, software, and professional training. In return, the project demonstration partners will be required to complete certain performance targets (in terms of charging energy delivered by their EVCS or km driven with their EVs) and to provide the data collected (disaggregated by gender when applicable) during their operations for analysis and dissemination among national decision makers and other market actors (see text box for details).

The project (output 2.7) will evaluate the technical performance and commercial feasibility of the electric vehicles and fast charging services after 18 months of operation and the results of the pilots (in terms of GHG emissions saved, energy consumed, distance travelled, detailed TCO, including maintenance, operation and amortisation and disruptions, failures and incidents, if any) will be presented to local stakeholders and disseminated through a gender-responsive awareness raising campaign (output 1.3) targeting not only decision makers and transport practitioners, but the general public in the Kyrgyz Republic. Besides disseminating the results of the demonstrations, this awareness raising campaign will provide general information on the results of GEF-7 and GEF-8 child projects of the GEMP in other countries and sensitise the public on the contributions e-mobility can provide to green economic development in the Kyrgyz Republic.

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[1] Subsidies for the installation of public charging vary among countries, depending inter alia on the short-term use expectations, with higher values in low-populated areas and locations outside major roads. For example, subsidies reach up to 30% in Finland for installations of at least 11 kW (35% for installations above 22 kW), 40% in Spain (50% for installations above 50 kW), and 80% in Virginia (USA), the latter only if located in underserved communities. The precise cap for the project demonstration will be established based on the results from output 2.1.

[2] Finance support will be provided on a performance basis, monthly monitoring the distance travelled with the electric vehicles procured by the partners and paying them an amount per kilometer. Such amount will be initially defined by a feasibility study and subsequently reduced in the amount offered by the partners during the bidding process for their selection.

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## **Demonstration on the electrification of private fleets dedicated to the provision of public transport services.**

**Objective:** This demonstration will provide evidence of the financial and operating conditions required to accelerate the electrification of corporate fleets in the Kyrgyz Republic, with a focus on private operators of public transport services (buses and, if budget allows, taxis and hail-a-ride services, and finally other large fleets) in Bishkek and its metropolitan area.

**Procurement:** The project will request the provision of data on the operation of electric vehicles within private fleets dedicated to the provision of public transport services for at least 63,000 km (which corresponds approximately to up to 18 months of effective operation) per vehicle of a

minimum of 3 electric vehicles in each selected fleet (as a way of engaging different operators, and maximizing the information obtained from the pilot with the project resources available), compliant with certain minimum technical requirements. Bidders will include the total investment cost, and the cost charged to the project per km of actual operation reported in their offer. The total payment per vehicle made by the project should be capped, so that it does not exceed in average 50% of the additional cost of an electric vehicle compared with a conventional one. Offers will be classified in accordance with the daily payment requested, and those requesting lower payments will be selected until completing the allocated budget.

**Payment method:** The beneficiary will receive partial payments for each deliverable submitted reporting the operating conditions for every 3,500 km of operation of each vehicle, until completing the total 63,000 km target. The project will have access to the remote monitoring system to verify the mileage reported in each deliverable and will provide the corresponding partial payments until reaching the total amount requested by the bidder or until the end of the project, whatever happens first. In case at the end of the project the beneficiary does not complete the 63,000 km target, the beneficiary will not be entitled to receive any compensation for the not completed mileage.

**Potentially interested private fleet managers:** A list of large private fleets in the country has been requested to the government and will be contacted during the project design stage.

**Financing options:** Private banks are already offering loans for e-mobility equipment. It is expected that these loans can be adapted to finance the procurement of at most 3 EVs for the selected partners, to take into consideration the additional financing provide by the project.

**Performance-Based Payment (PBP) implementation:** A Low-Value PBP agreement or other equivalent contract will be signed with each selected beneficiary (responsible party, RP). Payments will be associated to the completion of periodic deliverables by the RP, each deliverable providing the technical information on the operations of the electric vehicles during each partial reporting period. Verification of the information provided in the monthly deliverable will be made by the Project Management Unit through the information provided by the tracking monitoring system, to which it will have permanent access.

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Finally, based on the demonstrations' results the project (output 2.8) will prepare a Deployment Plan for of the national EV charging network. This Plan will serve as a follow-up to the national strategy (component 1) and will include provisions for the implementation of international and national standards (aligned with component 3). Depending on the level of detail provided by the Plan on prospective locations and on the size of the facilities foreseen, this might also include the completion of a Strategic Environmental Assessment or include requirements for the subsequent assessment of the suitability of some specific locations with respect to environmental and social safeguard risks, including climate risk vulnerabilities.

Component 2 demonstrations will be designed in detail based on feasibility studies including gender, social and environmental assessment of each demonstration's impacts, providing sound reference for establishing the reasonable financial support to the private partners to materialize the demonstrations, and framing the electrification actions within the broader perspective of digitalizing fleet management and public transport operations. The feasibility study will also consider the impact of fleet electrification on urban public transport fares (combining the opposite effects of higher CAPEX and lower OPEX associated to electric vehicles) and the social acceptance of impacts of changes in such fares.

### **Component 3. Scale-up and replication of e-mobility**

*Expected Outcome 3: Supportive policies, financial tools, and operational guidelines for electric mobility are established, promoting EV adoption through updated standards, inclusive procurement practices, optimized fiscal incentives, and expanded financing options for low-carbon mobility.*

Building upon components 1 and 2, this component aims at establishing an appropriate catalytic policy framework to allow the scaling-up of e-mobility in the Kyrgyz Republic through the development of a comprehensive legal framework including fiscal, regulatory, and other policy measures, to support the uptake of EVs and charging infrastructure. Updated technical regulations and standards (output 3.1) will be delivered to the government with requirements on vehicle efficiency and emissions, minimum quality requirements for imported used vehicles, vehicle authorization and periodic technical inspection. Output 3.2 will provide technical regulations and standards on electric vehicles for their authorisation and technical inspection, focusing on inclusion of EVs in the motor vehicle legislation and periodic technical inspection system. Output 3.2 will also support the creation of new regulations on charging infrastructure, with a key focus placed on interoperability (to ensure public chargers can be used by different car brands) and safety. Regulations on charging infrastructure will cover minimum standards, technical specifications, technical approval, and installation, as well as the update of regulations for their connection to the grid or to off-grid generation (e.g. to solar-powered supplies). Special care will be given to making sure the policies and regulations are aligned with regional developments. Finally, the project (output 3.3) will develop guidelines to fleet managers (with a focus on private fleets providing PT services) for integrating social inclusion and gender criteria in their EV procurement and operations.

Building on the findings of the demonstration projects and lessons learned from other countries in the GEMP, the project (output 3.4) will review the national gender-responsive e-mobility strategy (component 1) in order to include an investment plan for the upscaling of EVs and charging infrastructure, covering the entire country, while further supporting gender-responsive approaches.

Additionally, the project (output 3.5) will work with the government, financial institutions, and multilateral development banks to develop gender-responsive financing instruments to support e-mobility investments by the private sector, focusing on the electrification of corporate fleets and the deployment of public charging infrastructure. The technical assistance in design and implementation of financial instruments will result in actionable recommendations on how to promote financing schemes accessible to women entrepreneurs and women-led businesses. As the GoKG has already put in place an array of fiscal incentives for e-mobility, the project (output 3.6) will review their impact and will provide recommendations to optimise the impact of such incentives, and to disincentivise and progressively phase out the most polluting technologies. Finally, the project (output 3.7) will strengthen regional cooperation through the organization of a regional workshop to share lessons learnt on electric mobility regulations and EV waste management in Central Asia.

### **Component 4. Long-term environmental sustainability of electric mobility through electricity availability and management of EV batteries at their end-of-life**

*Expected Outcome 4: Enhanced capacity for sustainable electrification in transport is achieved, with assessments on renewable energy needs, e-waste management initiatives, and regulatory reforms for EV battery lifecycle management, fostering a circular economy.*

This component seeks to facilitate the long-term sustainability of e-mobility in the Kyrgyz Republic by addressing the environmental externalities related to a wide deployment of EVs. The lessons learned in this

**component** will be shared with other countries in Central Asia with a view to facilitating the development of common practices in electric vehicle and battery management at their end of life, through **the regional workshop foreseen in component 3 (output 3.7), together with the lessons learnt on electric mobility regulations.**

Based on the demonstrations' results, the project will undertake **(output 4.1)** a study to estimate the additional renewable power demand resulting from a transformation of the transport sector to e-mobility and the respective roles of vehicle-to-grid (V2G) and off-grid applications and the interventions in the national power transmission and distribution networks that may be required. **The conclusions of this study will be presented to the Ministry of Energy and to key public and private stakeholders in the transport and energy sectors and** may require the subsequent update of the national e-mobility strategy (feedback to component 1).

The project will provide **(output 4.4)** a roadmap **with the** regulatory reforms necessary for the adequate collection and management of EV batteries for reuse, recycling, and re-integration into global value chains, based on the extended producer responsibility (EPR) principle and within the framework of e-waste legislation and policies under implementation by the GoKG. **The project will also provide support to the consolidation of a local EV battery management industry through (1) (output 4.2) the design of a demonstration on e-waste collection and management, with a focus on EV batteries, engaging e-waste management authorities, private and public companies active in these activities and potentially interested investors, based on international best practices and an assessment of the Kyrgyz e-waste sector; (2) (output 4.3) the provision of gender-responsive professional training on e-waste management, the selection of a partnering company and the implementation of the e-waste management demonstration by that company; due to the limited project's budget, the demonstration will not entail the construction of dedicated facilities and will be limited to the preliminary stages of battery collection, handling, storage, repurposing and transportation; (3) (output 4.5). Based on the demonstrations' results, the project will develop gender-responsive circular business models and financing instruments for the expansion of the local industry's capacities for managing EV batteries reuse and re-integration into global value chains. These activities will be carried out in cooperation with car dealers and importers, as well as the local e-waste management companies, and could be formalized in the form of a circular economy platform to facilitate its follow-up after the end of the project and facilitate promotion of equitable opportunities for women entrepreneurs and employees.**

**The audience targeted for output 4.1 is the Ministry of Energy and key public and private stakeholders in the transport and energy sectors (including investors in public charging services); the audience targeted for output 4.2, 4.3 and 4.5 is e-waste management authorities, private and public companies active in these activities, potentially interested investors, and the local financial sector, as well as car dealers and importers (being those ultimately responsible for adequate management of electric vehicles at their end of life). In total, the activities within these outputs will target 60 direct beneficiaries, through participation in workshops.**

The work on EV battery end-of-life will be undertaken in close coordination with the **GEMP** (GEF-7 and GEF-8), for example to regulate quality of used EVs being imported from global north, as well as issues on re-integration of used battery materials into the global value chains, and related regulatory issues, such as cross-border trade of e-waste.

## **Component 5. Monitoring and Evaluation**

***Expected Outcome 5: The project is effectively monitored and evaluated.***

Under this component, the project management unit will ensure that all monitoring and evaluation products of the project are delivered, including annual PIRs, financial reports, minutes of the project steering committee meetings, mid-term and terminal evaluations. **Gender-responsiveness/mainstreaming will be integrated within all these products, including gender disaggregated data on relevant impacts and indicators (e.g. business and employment outcomes, changes in access to mobility, and participation in decision-making).** This project will collaborate on sharing lessons learned with other countries under the GEF-7 and GEF-8 **Global Electric Mobility Programme, contributing to the assessment of the impacts achieved by the Global Programme.**

## Core Indicators

Project Core Indicators		Expected at PIF
1	<b>Terrestrial protected areas</b> created or under improved management (hectare)	NA
2	<b>Marine protected areas</b> created or under improved management (hectare)	NA
3	Area of <b>land and ecosystems under restoration</b> (hectare)	NA
4	Area of <b>landscapes under improved practices</b> (hectare)	NA
5	Area of <b>marine habitat under improved practices</b> (hectare)	NA
6	<b>Greenhouse Gas Emissions Mitigated</b> (metric tons of CO <sub>2</sub> e)	163,800 tons direct 382,200 tons indirect
7	<b>Shared water ecosystems</b> under new or improved cooperative management (count)	NA
8	Globally over-exploited <b>marine fisheries</b> moved to more sustainable levels (metric ton)	NA
9	<b>Chemicals of global concern and their waste reduced</b> (metric ton of toxic chemicals reduced)	NA
10	Persistent organic pollutants to air reduced (gram of toxic equivalent gTEQ)	NA
11	People benefiting from GEF-financed investments <b>disaggregated by sex</b> (count)	1,745 beneficiaries, including 873 women

**Direct benefits count the GHG emission reductions and energy savings obtained from (i) 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 (ii) 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 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 period of ten years after the end of the project.**

**At this stage, a preliminary assessment of GHG emission mitigations from the project's demonstration has been completed. This assessment will be fine-tuned at the project design stage by a top-down estimate of secondary direct and indirect GHG emission**

reductions, based on the E-Mob model prepared by UNEP for the child projects of its GEF-7 and GEF-8 GEMP. The preliminary estimate provided below considers that 10 electric vehicles (how these will be distributed among categories will be established at the project design stage; the average figures considered below for mileage and fuel consumption are conservative values for a demonstration fleet of 5 minibuses and 5 cars or vans, with annual mileage respectively of 60,000 and 20,000 km per year) and 10 charging locations providing 15 charging points are directly attributed to the project's investments in the demonstrations. The expected direct primary GHG emission reduction from the project along the timespan of these investments is estimated at 9,100 tons CO<sub>2</sub>e (see table below).

Parameter	Value	Unit
Number of vehicles	10	vehicles
Vehicle lifetime	15	years (1)
Average km travelled per year	40,000	km/year (2)
Average fuel consumption	10	l/100 km (3)
Average electricity consumption	15	kWh/100 km (3)
Carbon content of fuel	2.5	kg CO <sub>2</sub> /l fuel (3)
Specific emissions from electricity generation	100	kg CO <sub>2</sub> /MWh (4)
Annual saving per vehicle	9,400	kg CO <sub>2</sub>
total savings per vehicle	141,000	kg CO <sub>2</sub>
Total savings per fleet	1,410,000	kg CO <sub>2</sub>
(1) In accordance with average fleet age in the country.		
(2) Consistent with international values on annual mileage of corporate and commercial fleets. See e.g. <a href="https://www.fleetnews.co.uk">https://www.fleetnews.co.uk</a>		
(3) In accordance with the values considered in the E-mob programme in various e-mobility child projects.		
(4) 2021 value was 127 kg CO <sub>2</sub> /MWh due to unfavourable raining regime; current values provisionally estimated at 100 kg CO <sub>2</sub> /MWh.		

Parameter	Value	Unit
Number of charging locations	10	places
Average number of chargers per location	1.5	Chargers/place
Number of EV chargers	15	Chargers
Charger lifetime	15	Years (1)
Average charge	30	kWh (2)
Equivalent fuel	20	Litres
Net emission savings per charge	47	kg CO <sub>2</sub> e
Number of charges provided by day	2	
Number of annual charges	730	
Annual saving per charger	34,310	kg CO <sub>2</sub> e
Total savings per charger	514,650	kg CO <sub>2</sub> e

Total savings per network	7,719,750	kg CO2e
(1) Lifespan of EV chargers between 10 and 20 years in accordance with providers (e.g. autoe.co.uk)		
(2) Energy provided in less than 20 minutes by a charger with power above 90 kW; sufficient to drive 200 km.		
Note that vehicles participating in the demonstration are not considered to be using these charging facilities, as they will most probably be engaged in urban and periurban travel and will make use of their own charging infrastructure at the premises of the entities participating in the demonstration.		

The values in the table above result in primary direct emission mitigation values of 9,100 tons CO2e. The **bottom-up** approach **considers** a replication factor of 60 for a period covering 11 years after project termination. This replication factor is consistent with (see Excel file attached for details) (1) the size of the national road fleet owned by legal persons, i.e. corporate fleets (in 2022, over 50,000 cars and 4,400 minibuses, 60% of which are considered as potentially suitable for electrification), (2) the length of the interurban road network (34,000 km, of which 18,700 under the responsibility of the Ministry of Transport; for example, 310 charging locations - with at least 2 charging points each - would be a minimum to provide service every 60 km), and (3) a project causality factor of 60%, in accordance with the current limited action undertaken in these areas (corporate fleets and interurban charging stations). This results in 546,000 tons CO2e reduced. Of them, 30% (163,800 t) are considered to be direct and 70% (382,200 t) indirect, following the distribution recommended by the E-mob model.

Parameter	t CO2e
Direct GHG emission savings	163,800
Of which, primary direct	9,100
Of which, secondary direct	154,700
Indirect GHG emission savings	382,200
Total GHG emission savings	546,000

The number of estimated direct beneficiaries is 1,745, in accordance with the assumptions in the table below. In consistency with the project's commitment to advance the presence of women in the transport sector, the share of female beneficiaries should be at least 873 (50%).

Parameter	Value	Unit
Average number of staff per vehicle	3	persons
Average number of users per vehicle (minibuses)	160	persons/day
Id (vans and cars)	20	persons
Workshops and trainings (5 events)	100	persons/event
User of chargers	730	persons

Number of minibuses	5	
Number of cars	5	
Number of minibus staff and users	815	persons
Number of car staff and users	100	persons
<b>Total beneficiaries</b>	<b>1745</b>	<b>persons</b>

### Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

No

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

Detailed implementation arrangements will be determined during the PPG stage and GEF consulted on execution services, in line with GEF policy.

Other on-going projects may provide valuable synergies, even if its budget is modest. This is the case of the *Building back safer, more sustainable and resilient transport in the aftermath of COVID-19 in Western Balkan and Central Asian Landlocked Developing Regions* project. It focuses on developing Sustainable Urban Mobility Plans, including long-term investment strategies that improve accessibility and connectivity for all, while simultaneously addressing climate emissions and reducing road fatalities. Bishkek and other 4 cities: Almaty (Kazakhstan), Chisinau (Moldova), Vushtrri (Kosovo), and Kragujevac (Serbia). The project is funded by the 15<sup>th</sup> tranche of the United Nations Development Account, will run from December 2023 to November 2026 and engages UNEP, UNESCAP and UNECE under the leadership of UN-HABITAT.

### Core Indicators

#### Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
<b>Expected metric tons of CO<sub>2</sub>e (direct)</b>	163800	0	0	0
<b>Expected metric tons of CO<sub>2</sub>e (indirect)</b>	382200	0	0	0

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

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

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)

<b>Expected metric tons of CO<sub>2</sub>e (direct)</b>	163,800			
<b>Expected metric tons of CO<sub>2</sub>e (indirect)</b>	382,200			
<b>Anticipated start year of accounting</b>	2025			
<b>Duration of accounting</b>	15			

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

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
<b>Target Energy Saved (MJ)</b>	7,338,127,860			

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

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

**Indicator 11 People benefiting from GEF-financed investments**

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
<b>Female</b>	873			
<b>Male</b>	872			
<b>Total</b>	<b>1745</b>	<b>0</b>	<b>0</b>	<b>0</b>

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

Direct benefits count the GHG emission reductions and energy savings obtained from (i) 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 (ii) 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 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 period of ten years after the end of the project.

At this stage, a preliminary assessment of GHG emission mitigations from the project's demonstration has been completed. This assessment will be fine-tuned at the project design stage by a top-down estimate of secondary direct and indirect GHG emission reductions, based on the E-Mob model prepared by UNEP for the child projects of its GEF-7 and GEF-8 GEMP. The preliminary estimate provided below considers that 10 electric vehicles (how these will be distributed among categories will be established at the project design stage; the average figures considered below for mileage and fuel consumption are conservative values for a demonstration fleet of 5 minibuses and 5 cars or vans, with annual mileage respectively of 60,000 and 20,000 km per year) and 10 charging locations providing 15 charging points are directly attributed to the project's investments in the demonstrations. The expected direct primary GHG emission reduction from the project along the timespan of these investments is estimated at 9,100 tons CO<sub>2</sub>e (see table below).

## Key Risks

	Rating	Explanation of risk and mitigation measures
<b>CONTEXT</b>		
Climate	Low	Preliminary screening of climate vulnerabilities in the selected pilot roads will be undertaken during intervention design, to assess the feasibility of the demonstrations.
Environmental and Social	Moderate	Gender and social issues in project design will be discussed in detail during project preparation, highlighting their relevance to all key stakeholders. A Gender Action Plan, backed by specific budget lines and plans for its monitoring and reporting, and tailored Environmental and Social Management Framework (ESMF) will be prepared within project design, and the need for a Strategic Environmental and Social Assessment (SESA) of the National Electric Mobility Strategy will be assessed during subsequent project design stage. Special attention will be given to end-of-life management of e-vehicles and battery recycling. A proper grievance redress mechanism will be set as well during project implementation.
Political and Governance	Low	There is strong political consensus in the country's current objectives and policies on climate change mitigation, expansion of renewables and transport electrification. The relatively weak economy of the country could result in political unrest and delays in policy implementation.
<b>INNOVATION</b>		
Institutional and Policy	Low	Strategies and Policies: Long term plans and policies (e.g. NDS, NDC) are in place and are widely supported.
Technological	Low	The mobilization of international expertise is necessary at both, project design and implementation, to bring best international practice to the country. UNDP will facilitate such expertise, as well as cooperation with on-going ADB, EBRD and (under initial exploration) WB projects.
Financial and Business Model	Low	Macroeconomic: The country has maintained reasonable macroeconomic stability for the last years, including through the COVID crisis. A deterioration of the macro-economic framework is unlikely but could result in delays in the project preparation and implementation, especially in the replication activities (e.g. incentives and financial instruments).
<b>EXECUTION</b>		
Capacity	Moderate	Institutional capacity for implementation and sustainability: The results of the capacity screening process of the relevant government entities have pointed to limited capacity to implement such project. The appropriate implementation arrangements will be put in place to ensure necessary capacities are available to ensure timely implementation of the project. These arrangements will be developed during PPG stage.
Fiduciary	Low	Fiduciary: Financial Management and Procurement: Despite the modest project's size and its focus on already well-known technologies, fiduciary risks

		would have been substantial, but have been significantly reduced through the proposed implementation modality.
Stakeholder	Moderate	Project preparation: Following the positive experience at the PIF preparation stage, stakeholder engagement will be facilitated by the support of a national consultant, and through careful design of interviews and meetings for time optimization. Project implementation: A Stakeholder Engagement Plan will be prepared.
Other		
Overall Risk Rating	Moderate	The screening and assessment of risks to project preparation and implementation resulted in 6 risks rated as low and 3 risks rated as moderate. Accordingly, the overall risk rating is considered as moderate. (Logic: if at least one risk is considered as moderate, the project as whole is categorized as moderate risk.)

### C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The project is fully aligned with objective 1.3 (Scale up zero-emission mobility of people and goods) of the GEF-8 climate change focal area strategy. The government of the Kyrgyz Republic has identified road transport electrification as a key action to achieve its ambitious decarbonization targets, as established in its updated Nationally Determined Contributions (2021) (conditional reduction targets of 43.62% by 2030) and the announcement made by its president at the UN General Assembly to achieve net zero by 2050.

Road transport electrification is also included in the priority directions for the development of the Green Economy Programme 2019-2023, within its section on “low carbon and ecologically clean transport”. In this sense, the project fully aligns with the government’s policies, and provides support to accelerate the electrification transition and to remove the institutional, technical, financial, regulatory, and environmental barriers now hampering the deployment of e-mobility. Furthermore, the project is consistent with the current efforts of Bishkek City Hall to support sustainable mobility options.

### D. POLICY REQUIREMENTS

#### Gender Equality and Women’s Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

## Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

### Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector: Yes

### Provide a brief summary and list of names and dates of consultations

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

## Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

## Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

### Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

## E. OTHER REQUIREMENTS

### Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

## ANNEX A: FINANCING TABLES

### GEF Financing Table

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
UNDP	GET	Kyrgyz Republic	Climate Change	CC STAR Allocation: CCM-1-3	Grant	1,968,265.00	186,985.00	2,155,250.00
<b>Total GEF Resources (\$)</b>						<b>1,968,265.00</b>	<b>186,985.00</b>	<b>2,155,250.00</b>

### Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

50000

PPG Agency Fee (\$)

4750

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNDP	GET	Kyrgyz Republic	Climate Change	CC STAR Allocation: CCM-1-3	Grant	50,000.00	4,750.00	54,750.00
<b>Total PPG Amount (\$)</b>						<b>50,000.00</b>	<b>4,750.00</b>	<b>54,750.00</b>

Please provide justification

### Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
UNDP	GET	Kyrgyz Republic	Climate Change	CC STAR Allocation	899,999.00
UNDP	GET	Kyrgyz Republic	Land Degradation	LD STAR Allocation	1,310,001.00

**Total GEF Resources**

**2,210,000.00**

**Indicative Focal Area Elements**

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
CCM-1-3	GET	1,968,265.00	13835000
<b>Total Project Cost</b>		<b>1,968,265.00</b>	<b>13,835,000.00</b>

**Indicative Co-financing**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Energy	Public Investment	Investment mobilized	10010000
Recipient Country Government	Ministry of Energy	In-kind	Recurrent expenditures	50000
Recipient Country Government	Ministry of Natural Resources, Ecology and T.S	Public Investment	Investment mobilized	500000
Recipient Country Government	Ministry of Natural Resources, Ecology and T.S	In-kind	Recurrent expenditures	50000
Recipient Country Government	Ministry of Finance	Grant	Investment mobilized	1000000
Recipient Country Government	Ministry of Finance	Public Investment	Investment mobilized	100000
Recipient Country Government	Ministry of Transport and Communications	Public Investment	Investment mobilized	1500000
Recipient Country Government	Ministry of Transport and Communications	In-kind	Recurrent expenditures	50000
Recipient Country Government	State Registration Service (UNAA)	In-kind	Recurrent expenditures	75000
Private Sector	EV demonstrators	Equity	Investment mobilized	150000
Private Sector	Fast charger demonstrators	Equity	Investment mobilized	250000

Private Sector	E-waste demonstrators	In-kind	Recurrent expenditures	100000
<b>Total Co-financing</b>				<b>13,835,000.00</b>

Describe how any "Investment Mobilized" was identified

The main identified sources, types and amounts of co-financing are described below.

- Ministry of Energy: Public investment mobilized in the framework of the government's plans to expand electricity generation from renewable sources (component 3). In-kind co-financing associated to the participation of its staff in activities promoting renewables and electric mobility and the preparation of the national electric mobility strategy (components 1 and 3).
- Ministry of Natural Resources, Ecology and Technical Supervision: Public investment mobilized in the framework of the government's plans to improve e-waste management (component 4). In-kind co-financing associated to the participation of its staff in the preparation of the national electric mobility strategy (component 1).
- Ministry of Finance: Public investment mobilized in the framework of the government's procurement of electric vehicles for its fleets (component 2 and component 3). In-kind co-financing associated to the participation of its staff in activities to support the implementation of the demonstrations (component 2).
- Ministry of Transport and Communications: Public investment mobilized in the framework of the government's facilitation of the demonstration on electric vehicles (as defined in component 2, e.g. support to the installation of charging equipment and the operation of electric vehicles along the two roads selected for the demonstration). In-kind co-financing associated to the participation of its staff in activities to establish the national electric mobility strategy (component 1) and up-scaling (component 3).
- Private sector: Investment by selected partners in the procurement and installation of charging infrastructure and electric vehicles (Component 2).
- Private sector: Investment by selected partners in the implementation of e-waste management systems including EV batteries (Component 4).

Note that the project's private partners cannot be identified at this stage, as they will be selected on a competitive basis during the project's implementation stage.

## ANNEX B: ENDORSEMENTS

### GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Nancy Bennet	9/5/2024	Alexandra Solovieva	+996-312-611211	alexandra.solovieva@undp.org

### Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Mirslav Amankulov	Deputy Minister	Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic	1/27/2025



## ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Significant Objective 1	No Contribution 0	No Contribution 0	No Contribution 0

## ANNEX F: TAXONOMY WORKSHEET

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

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

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

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

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