

# Supporting the Shift to Electric Mobility in the Republic of Zambia

Review CEO Approval and Make a recommendation

## Basic project information

**GEF ID**

11082

**Countries**

Zambia

**Project Name**

Supporting the Shift to Electric Mobility in the Republic of Zambia

**Agencies**

UNEP

**Date received by PM**

6/14/2024

**Review completed by PM**

10/7/2024

**Program Manager**

Wenxin Li

**Focal Area**

Climate Change

**Project Type**

MSP

## CEO

### Part I - General Project Information

#### 1. a) Is the Project Information table correctly filled, including specifying adequate executing partners?

Secretariat comment at CEO Endorsement Request

WL 8/5/2024: No.

Region: needs to be updated to Africa.

WL 10/7/2024: Cleared.

#### Agency Response

##### UNEP response ? 09/09/2024

There is no editable field on the GEF Portal for UNEP to change the region to ?Africa?. We believe this field would have to be updated by the GEF Portal IT team directly.

#### b) Are the Rio Markers for CCM, CCA, BD and LD correctly selected, if applicable?

Secretariat comment at CEO Endorsement Request

WL 8/5/2024: Yes.

#### Agency Response

##### 2. Project Summary.

a) Does the project summary concisely describe the problem to be addressed, the project objective and the strategies to deliver the GEBs or adaptation benefits and other key expected outcomes?

b) Does the summary capture the essence of the project and is it within the max. of 250 words?

c) [If a child project under a program] Does the project summary include adequate and substantive link with the parent program goal and approach?

Secretariat comment at CEO Endorsement Request

WL 8/5/2024: Yes, with suggestions. Please provide explicit linkage with the parent program goal and approach in the project summary, even though it's detailed in the other sections.

WL 10/7/2024: Cleared.

#### Agency Response

### UNEP response ? 09/09/2024

*Note: all edits performed in the CEO Endorsement Document have been highlighted in blue, for the sake of clarity.*

A new sentence has been added providing explicit linkage with the parent programme.

### 3. Project Description Overview

- a) Is the project objective statement concise, clear and measurable?
- b) [If a child project under a program] Is there a project Theory of Change that is aligned and consistent with the overall program goal and approach?
- c) Are the components, outcomes, and outputs sound, appropriate and sufficiently clear to achieve the project objective and the core indicators per the stated Theory of Change?
- d) Are gender dimensions, knowledge management, and M&E included within the project components and budgeted for?
- e) Are the GEF Project Financing and Co-Financing contributions to PMC proportional?
- f) Is the PMC equal to or below 10% (for MSP) or 5% (for FSP)? If above, is the justification acceptable?

### Secretariat comment at CEO Endorsement Request

WL 8/5/2024: Yes, with suggestions.

? B) Please consider including a brief summary of how the TOC is aligned and consistent with the program goal and approach.

WL 10/7/2024: Cleared.

### Agency Response

### UNEP response ? 09/09/2024

b) A short paragraph has been added to justify the alignment of the ToC with the Global Programme.

### 4. Project Outline

#### A. Project Rationale

- a) Is the current situation (including global environmental problems, key drivers of environmental degradation, climate vulnerability) clearly and adequately described from a systems perspective and adequately addressed by the project design?
- b) Have the role of stakeholders, incl. the private sector and local actors in the system been described and how they will contribute to GEBs and/or adaptation benefits and other project outcomes? Is the private sector seen mainly as a stakeholder or as financier?
- c) If this is an NGI project, is there a description of how the project and its financial structure are addressing financial barriers?

### Secretariat comment at CEO Endorsement Request

WL 8/5/2024: Yes.

## Agency Response

### 5 B. Project Description

**5.1 a) Is there a concise theory of change (narrative and an optional schematic) that describes the project logic, including how the project design elements are contributing to the objective, the identified causal pathways, the focus and basis (including scientific) of the proposed solutions, how they provide a robust approach? Are underlying key assumptions listed?**

**b) [If a child project under a program] Is the Theory of change aligned with and consistent with the overall program goal and approach?**

**c) Is there a description of how the GEF alternative will build on ongoing/previous investments (GEF and non-GEF), lessons and experiences in the country/region? [If a child project under a program] Does the description include how the alternative aligns with and contributes to the overall program goal and approach?**

**d) Are the project components (interventions and activities) described and proposed solutions and critical assumptions and risks properly justified? Is there an indication of why the project approach has been selected over other potential options?**

**e) Incremental/additional cost reasoning: Is the incremental/additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12? Has the baseline scenario and/or associated baseline projects been described? Is the project incremental reasoning provisioned (including the role of the GEF)? Are the global environmental benefits and/or adaptation benefits identified?**

**f) Other Benefits: Are the socioeconomic benefits resulting from the project at the national and local levels sufficiently described?**

**g) Is the financing presented in the annexed financing table adequate and demonstrate a cost-effective approach to meet the project objectives? Are items charged to the PMC reasonable according to the GEF guidelines?**

**h) How does the project design ensure resilience to future changes in the drivers and adaptive management needs and options (as applicable for this FSP/MSP)?**

**i) Are the relevant stakeholders (including women, private sector, CSO, e.g.) and their roles adequately described within the components?**

**j) Gender: Does the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities and have these been taken up in component design and description/s?**

**k) Are the proposed elements to capture and disseminate knowledge and learning outputs and strategic communication adequately described?**

**l) Policy Coherence: Have any policies, regulations or subsidies been identified that could counteract the intended project outcomes and how will that be addressed?**

**m) Transformation and/or innovation: Is the project going to be transformative or innovative? [If a child project under an integrated program] Are the specific levers of transformation identified and described? Does it explain scaling up opportunities?**

### Secretariat comment at CEO Endorsement Request

WL 8/5/2024: No.

? A) The TOC narratives (paragraphs 1 and 3 of Section B.2) and schematic (Figure 3) describe similar but inconsistent outcomes. Please ensure consistency and remove duplication. For example:

- o The narratives of outcome 2 refer to demonstration of 3 categories of vehicle fleets, but the schematic includes outputs for 2 fleet categories, i.e. public transport and government fleet.
- o The narrative of outcome 3 notes 'reach out to fleet managers, bus operators and industrial and professional activities' and 'is expected to result in mainstreaming good fleet management practices, the procurement and use of electric vehicles as the preferred option for users, the development of efficient public transport networks in cities and the continuation and consolidation of environmentally friendly mobility policies and regulatory reforms' but the schematic needs to clarify (1) an output on what technical and economic information from demonstration and financial mechanism and how to communicate it to fleet managers and bus operators and (2) an outcome on specific behavior change (procurement and use of electric vehicles as the preferred option and good fleet management practices) by the users (including fleet managers and bus operators ).
- ? D) Please clarify how the approach to develop policy, regulation, standard, strategy and pilot recommendations from the Project will be aligned with and build on the knowledge products and lessons learned to be developed under the global project.
- ? D) As recommended by STAP at the concept review, please clarify that intersectoral policy gap analysis will be part of the national e-mobility strategy and Component 1 will include the review of potentially conflicting policies that could affect the project objectives.
- ? D) For Component 2 and 3, please consider including electric two- or three-wheelers as a vehicle type for piloting and financial mechanism, instead of government fleet vehicles. If electric two- or three-wheelers are not included in this project, please provide the rationale.
- ? D) To be consistent with the TOC and the results indicator 1.2, Outcome 1 should be further clarified to ensure the Government endorses the national gender-responsive low-carbon mobility strategy developed by the Project.
- ? D) Outputs for Outcome 2 should clarify the number of pilot EVs (disaggregated their passenger capacity) and the number of charging stations (disaggregated by technical categories), and please ensure that the number of pilot vehicles are sufficient so that robust technical evidence of the feasibility and comparative advantages of electric mobility systems would be available for both the public transport pilot and the government fleet pilot.
- ? D/G) Please clarify for output 2.3: how many hours each of the four electric buses would be expected to operate per day and per year, which organization would (co-)finance the procurement of the [four] mid-size electric buses and charging instruments required for the public transport pilot, whether the financing for the buses would be committed as co-financing of the Project and if not how the financing would be secured to deliver this and dependent outputs, which organization would retain the ownership of the electric buses throughout their useful lifetime.
- ? D) Please clarify for output 2.4: what's the passenger capacity of the electric vehicles for the government fleet, how many hours each of the three electric vehicles would be expected to operate per day and per year, which organization would retain the ownership of the electric vehicles throughout their useful lifetime.
- ? D) Outputs 3.1, 3.2 and 3.3 should be clarified that the incentives and financial mechanism need to ensure economic/financial viability of EVs in terms of cost of ownership in comparison with ICE vehicles, for relevant business models and for each types of vehicles (by capacity and by end use) to be scaled up and accelerated in adoption by Output 1.2
- ? D) To be consistent with the TOC and the results indicator 3.1, Outcome 3 and its outputs should be clarified that relevant policies, regulations and standards are adopted.
- ? D) Please clarify for output 3.1: how to ensure that the incentives and financial mechanism need to ensure economic/financial viability of EVs in terms of cost of ownership in comparison with ICE vehicles, for relevant business models and for targeted vehicle types (by capacity and by end use).
- ? D) Please clarify for output 3.5: how the consolidation of public transport cooperatives would accelerate the adoption of e-mobility and contribute to the objectives of the project.
- ? G) Out of the \$2 million GEF financing, only \$80,000 is used for capital investment, which in this project only includes vehicles, while \$400,000 is spent on operating the EV public transport pilot for 12 months. Please provide further information on how the \$400,000 is estimated and justified (considering that the operation costs should be covered by the bus fares as for ICE buses) and how

the operation of EV public transport after 12 months will be financed. Please consider how to leverage co-financing for the operations of the pilot and use GEF financing to provide incentives for acquiring more vehicles to participate in the pilots.

PO 8/15/2024: On gender, as per GEF Guidance, please ensure that the outputs and activities developed in the Gender Action Plan are also integrated into the project document. For example, ensure that the policies, frameworks and the financial and investment mechanism are gender responsive (e.g. 3.1.1, 3.1.2, 3.1.4, 4.1.1). Also please ensure that women's organization are actively targeted in the financial schemes and piloting programs (e.g. 3.1.3., 3.1.5., 4.1.2). During project implementation, the PIRs, the MTE and the TE should include a review and reporting of the GAP and relevant gender dimensions of the project.

PO 10/2024: Cleared.

WL 10/07/2024: No, regarding Component 2 and Output 2.4. For the government fleet demonstration, please consider redesign of the budget (\$80,000) and conditions (GEF project financing of one EV for each 2 EVs purchased by each of the governmental fleet managers): the GEF funding (\$ 80,000) could be used to cover all/part of the incremental costs of ownership of EV compared to conventional vehicles, e.g. at \$9,000 to \$10,000 per vehicle depending on the total number of EVs purchased by the government fleet managers. This should be accordingly reflected in the GHG indicator calculations for direct emission reductions.

WL 10/07/2024: Cleared.

## Agency Response

### UNEP response ? 24/10/2024

*Note to reviewer: all new edits performed in the CEO Endorsement Document following this 2<sup>nd</sup> round of comments have been highlighted in yellow, for the sake of clarity.*

### Component 2, Output 2.4:

We thank you for your comment. Due to national public procurement planning and budgeting policies and practicalities, unfortunately Zambian governmental institutions are not able to ?blend? a portion of GEF financing into their regular budget to top up the incremental cost of an EV compared to an ICE vehicle. The annual public procurement budget must be planned for the full procurement of an asset ? not just a portion of it. It is for this operational reason that the matching approach outlined in output 2.4 was chosen to implement the governmental EV demonstration.

It is however noteworthy to highlight that this approach still follows an incremental logic, in line with GEF policy. To emphasize this, the incrementality of the matching concept for the demonstration has been further elaborated in the narrative of output 2.4 (in section B.3 of the CEO Endorsement Request), as well as its other operational advantages in terms of de-risking the implementation of this demonstration.

The total number of EVs piloted therefore remains 9 (i.e. 3 from the GEF and 6 funded by governmental entities). However, a conservative assumption of only 8 EVs has been considered for GHG calculations, to factor in the possibility of the governmental EV pilot not fully delivering as planned. This is reflected in Annex M of the CEO Endorsement Request Document.

#### UNEP response ? 09/09/2024

##### A) ToC narrative:

- This was a typo. The actual number of fleet categories is 2 (public transport and government). This has been corrected in the CEO Endorsement Request document.

- Apologies for the oversight. The description of outcome 3 that had previously been provided in the TOC section corresponded to an earlier draft version of the document and was not updated. It has now been corrected / updated to align with the actual outputs that will be delivered under component 3.

D) Building on knowledge products / lessons learned from Global Programme: further details have been added in section B.1 to emphasize this.

D) Potential conflicting policies: a new paragraph was included in section B.3 (description of output 1.2) stating that an intersectoral policy gap analysis will be part of the national e-mobility strategy as well as the review of potentially conflicting policies that could affect the project objectives.

D) e-2-3 wheelers: The government of Zambia considers 2 and 3-wheeler taxis as a source of road accidents and competition for scarce road space in Lusaka and other cities. Accordingly, the provision of public transport services with 2 and 3 wheelers is outlawed. The use of 2-3 wheelers is therefore mainly for own personal mobility or for delivery services. This is the reason why the project does not include a pilot on 2-3 wheelers within the demonstrations in Component 2, which covers public transport and government fleets, and does not mention them explicitly in component 3, as scaling up is primarily focusing on fleets and not on individual users. An explanatory paragraph is included in the description of component 2, section B.3.

D) Outcome 1 statement: to clarify this, the outcome 1 wording is modified from 'endorsing a strategic vision' to 'endorsing a national gender-responsive low carbon mobility strategy'.

D) Outcome 2 clarifications on number of pilot EVs: the exact number and size of buses in the public transport fleet demonstration will be established by the feasibility study and implementation plan and in the selection process for the operator. The GEF budget (USD 400,000) assigned for this demonstration is consistent with the operation of 4 mid-size buses (capacity of at least 20 passengers), and their charging equipment. This was already stated in the description of output 2.3 and is the basis for the GHG estimate in Annex M. For the government fleet demonstration, the budget (USD 80,000) and conditions (GEF project financing of one EV for each 2 EVs purchased by

each of the governmental fleet managers) is expected to result in 3 EVs financed by the project and 6 EVs financed by the participating governmental agencies, or 9 in total for the demonstration; in Annex M (GHG estimates and beneficiaries) a conservative assumption of 8 EVs (electric cars) is considered. This is now explicitly stated in the description of output 2.4.

D/G) Output 2.3 clarifications: Further detail is now provided in the output 2.3 description in section B.3. In summary, the operating conditions considered in Annex M (60,000 km per year) and bus size are based on current PT operating practices and could change as a result of the studies (Outputs 2.1 and 2.2). The mid-size buses (or other vehicles, if considered more advantageous during the studies) will be procured by and remain the property of the operator. The project's financial contribution to the operator is expected to facilitate the procurement of the EVs but its purpose is to make sure there is sufficient operation of the vehicles to generate data on performances and ridership. This is consistent with the objective of Component 2, which is to provide evidence of the technical feasibility and cost of operation EVs in the public transport system. But the contribution is not estimated as a part of the operating costs (this would not make much sense, as EV operating costs are lower than for ICE vehicles). What it intends to do is to compensate the operator from the additional capital costs and the additional risks (as the operator is not familiar with the new technology) associated to purchasing and operating these vehicles; such compensation needs to be estimated by the operator, and the competitive process established in output 2.2 for the selection of the operator (together with the 40% cap of the total investment costs, which is slightly higher than the grants offered in some developed countries) provides some mechanisms to avoid requesting too high compensations.

D) Output 2.4 clarifications: the precise characteristics and operating conditions of the electric vehicles for the government fleet will be established in deliverables 2.4.1 and 2.4.4, during project implementation. The Output 2.4 narrative in section B.3 has been revised to provide further details. With the budget available (USD 80,000, including slow chargers and fleet monitoring), it is estimated that up to 3 EVs will be procured; considering the matching principle established in this output (1 vehicle financed by the project for every 2 vehicles financed by the beneficiary), the maximum expected number of vehicles in the demonstration would be 9 (although to make a conservative estimate, only 8 EVs (cars) have been considered in Annex M, each with an annual mileage of 20,000 km per year. The vehicles will remain under the property of the governmental agency. ZEMA has already indicated its participation in this scheme in its co-financing letter; one or two additional entities will be selected during project implementation.

D) Outputs 3.1, 3.2, 3.3 economic/financial viability of EVs in terms of cost of ownership: one general paragraph has been added in section B.3, in the description of Component 3, and further clarifications have been added in the narrative of each of these outputs.

D) Results indicator 3.1, Outcome 3 and its outputs: we wish to clarify that the Outcome 3 statement already explicitly states that the relevant policies, regulations and standards will be adopted by the government: *“The Government of Zambia adopts policies, regulations and technical standards and endorses a financing scheme to accelerate the introduction of integrated electric mobility systems”*. As for the indicator 3.1 / target 3.1 statements, we have replaced the word “approved” by “adopted”



to answer the reviewer's comment (see Annex C). Regarding the comment on output statements, we construe the actual 'adoption' as behavioral change that is to be captured at the outcome-level, and which is a stronger approach than capturing a delivery at the output-level. As such, the outputs 3.1 and 3.2 statements will remain with '[?] and submitted to the government for approval' (output 3.1) and '[?] and submitted to the government for endorsement' (output 3.2). However, we have clarified in the narrative description of the 2 outputs that the PMU will support the process of getting the relevant technical products adopted / endorsed by the government. Regarding the financial mechanism, the sought behavioral change is not related to the 'government's adoption' of the mechanism, but rather its 'operationalization through a financial institution'. As such, this is precisely what indicator 3.2 / target 3.2 captures in the project results framework (Annex C).

D) Clarification for output 3.1 economic/financial viability of EVs in terms of cost of ownership: refer to our earlier response above. This has been further emphasized in the description of component 3 / output 3.1.

D) Output 3.5 on how consolidation of public transport cooperatives would accelerate the adoption of e-mobility and contribute to the objectives of the project: as stated at the end of section A.1, PT services 'are provided by a myriad of small operators, too often with decrepit minibuses with doubtful roadworthiness conditions, and an oversupply of such vehicles further contributing to urban traffic congestion. There is no limit on the vehicle age to provide public transport (PT) services. The quality of the service is poor, with long waiting and travel times, poor safety conditions, limited accessibility and relatively high prices considering the purchase power of most of the population.' The consolidation of these operators into cooperatives is a preliminary step to obtain economies of scale, facilitate control and enforcement (schedules, vehicle conditions?) and provide concession rights linked to the lines (which can be accepted as collateral by lenders). This puts the operators in a better position to undertake electrification. This is now described in output 3.5.

G) Financing of the EV public transport pilot: we wish to clarify that the total 'Investment' portion of this GEF project is \$550,000, which includes the \$80,000 for the government fleet EVs, the \$400,000 for the public transport fleet (including vehicles + charging infrastructure) and the \$70,000 for the 2 fleet management systems (1 for public transport and 1 for government fleet). As described in the responses to comments on output 2.3 above and included now in the output description, the \$400,000 are estimated as a financial contribution for the procurement of electric buses by the selected operator (the selected operator to be chosen through a bidding process in which the lower request for the financial contribution is chosen, through a procedure to be fully defined in D.2.3.2). Such contribution will be provided through monthly installments, linked to the compliance of service conditions (i.e. minimum km driven, compliance with schedule, etc.) to make sure the demonstration is completed. The operator will be charging the usual fares from its passengers. As the project's financial contribution is capped at a maximum of 40% of the total investment cost, the selected operator will contribute with the remaining investment and the operating costs. Finally, we wish to clarify that since the operator will be selected on a competitive basis during year 2 of the project's implementation, the associated co-financing cannot be confirmed at the time of the CEO Endorsement Request document preparation.

#### Gender:

The main table in the Gender Action Plan (Annex K) now includes gender-responsiveness activities for outputs 3.1 (for the fiscal / financial incentives), 3.2 and 4.1. Note that a gender activity was already considered for output 3.4 in the GAP. The GAP budget has been increased accordingly (refer to Annex K) and the ToR for the relevant consultancies (contracts 110404, 110405 and 110407) have been revised accordingly (Annex I).

Additionally, in section B.3 of the CEO Endorsement Request document, the descriptions provided in the *‘Tentative content and required activities’* column for the following deliverables have been revised to make an explicit reference to gender-responsiveness: 1.4.1, 1.4.3, 1.4.4, 1.4.5, 1.4.6, 1.4.7, 1.4.8, 1.4.9, 1.4.10, 1.4.11, 1.4.12 (trainings), 2.3.1 (TORs for the procurement of pilot EVs), 3.1.2 (financial / fiscal incentives), 3.2.2, 3.2.4, 3.2.6 (investment plan), 3.4.4 (updated NMT strategy), 4.1.2 and 4.1.3 (technical guidance package on end-of-life of EV batteries).

Concerning the engagement of women’s organizations, this has now been included in section B.3 the description provided in the *‘Tentative content and required activities’* columns, for the following deliverables: 3.3.2 (output 3.3), 3.5.2, 3.5.4 (output 3.5), 4.2.4 and 4.2.8 (output 4.2).

Concerning the PIRs, the MTE and the TE, the description of deliverable 5.1.4 (component 5) in section B.3 contains the consideration of the GAP in these activities, as follows: *‘The PTC will implement the Gender Action Plan as part of project activities implementation. The PTC will monitor the implementation of the Gender Action Plan and report on it twice a year, as part of the half-yearly progress reports and PIRs. The implementation of the Gender Action Plan will also be reviewed and assessed as part of the MTR and TE.’*

#### 5.2 Institutional Arrangements and Coordination with Ongoing Initiatives and Project

- a) Are the institutional arrangements, including potential executing partners, outlined on regional, national/local levels and a rationale provided? Has an organogram and/or funds flow diagram been included?
- b) Comment on proposed agency execution support (if agency expects to request exception). Is GEF in support of the request?
- c) Is there a description of coordination and cooperation with ongoing GEF and non-GEF financed projects/programs (such as government and/or other bilateral/multilateral supported initiatives in the project area, e.g.).
- d) [If a child project under an integrated program] Does the framework for coordination and collaboration demonstrate consistency with overall ambition of the program for transformative change?

Secretariat comment at CEO Endorsement Request WL 8/5/2024: Yes.

#### Agency Response

##### 5.3 Core indicators

- a) Are the identified core indicators calculated using the methodology and adhering to the overarching principles included in the corresponding Guidelines (GEF/C.62/Inf.12/Rev.01)? [If a child project under a program] Is the choice of core indicators consistent with those prioritized under the parent program?
- b) Are the project’s targeted contributions to GEBs (measured through core indicators and additional listed outcome indicators) /adaptation benefits reasonable and achievable? Are the GEF Climate Change adaptation indicators and sub-indicators for LDCF and SCCF properly documented?

## Secretariat comment at CEO Endorsement Request

WL 8/5/2024: No, please provide the Excel file for estimating GHG emission reductions.

WL 10/7/2024: No. Please update the vehicle numbers as suggested above. Please provide brief justifications and consider the suggestions below for key assumptions in the GHG emission reductions calculation sheets, specifically:

- (a) The baseline projection of EV penetration at about 0% up to 2050. As it's probably unrealistic to assume that almost no EV would be adopted in the market in the absence of the project, please consider proposing more realistic/conservative projections of EV share in sales for the baseline;
- (b) The causality factor of 40% and the split of the market impact into replication and policy at 30%, 70%. Alternatively, (1) 20% causality relative to the overall market outcome is considered as more appropriate for indirect impact from policy development, and (2) the replication impact should be considered indirect, which can be estimated to be approximately the same as the impact of the EVs directly financed by the project;
- (c) The benchmark/baseline fuel for buses is gasoline, while the market currently has 90% diesel buses.

WL 10/30/2024:

Cleared. Please note that in the calculation of the baseline bus emissions (sheet ?Results for PPG? cell C101), the ?WTT CO2 Emission Factor by fuel type? uses the electricity value and should use the diesel value. The correct value of baseline bus emissions and emission reductions are 173 tCO2e lower. Please amend this during the implementation monitoring.

## Agency Response

### UNEP response ? 24/10/2024

The number of electric cars (LDV) considered for the GHG estimations of the governmental pilot remains 8, as clarified above.

Please note that we have revised the GHG calculations sheets using updated data on LDV and bus stocks in Zambia. In addition, in the previous set of calculations the LDV category only include passenger cars, while it now also includes pick-ups, vans, and LCVs.

#### (a) Baseline EV penetration:

We have revised the benchmark scenario for buses and LDVs. The e-buses benchmark share is now considered as follows: 3% in 2030, 15% in 2040 and 30% in 2050. As for the LDV category, the share of diesel ICE accounts for 6%, gasoline ICE for 92% and hybrids (non-plugin) 2% in 2020. In the benchmark scenario, the share of hybrids increases to 10% in 2030, 15% in 2040 and 20% in 2050. At the same time EVs (BEV and PHEV) are introduced at a share of 6% in 2030, 14% in 2040 and 30% in 2050.

#### (b) Causality factor:

We have reduced the causality factor to 20%. With regards to the split between secondary direct and indirect effects, we suggest keeping the methodology as it is, as it has been applied for most GEF7

and GEF8 e-mobility projects. Replication and upscaling due to financing schemes as well as policy interventions are jointly accounted for. As such, 30% of this joint mitigation impact is assumed to be associated with secondary direct effects.

**(c) Gasoline / diesel:**

Thank you for your comment. We have revised the scenario. The technology share for buses in the benchmark scenario is now assumed to be 10% gasoline and 90% diesel buses in 2022.

**UNEP response ? 09/09/2024**

The GHG emission reductions calculation sheets have been uploaded on the ?Documents? section of the GEF Portal in a ZIP file named ?11082\_EM Zambia\_GHG calculations sheets?. The ZIP package is made of the following Excel files:

- EMOB-ZM\_BUS-Calculator-v4.xlsx. This file provides the estimates for the bus category. The first key sheet in this file is the ?Input? sheet, which includes all the assumptions: GDP, population and fleet growth trends, average mileage and consumption, etc. The second key sheet in this file is the ?Results for PPG? sheet, which provides the final GHG (and energy) reduction estimates and distributes it among direct (primary and secondary) and indirect. The GHG emissions results are obtained by comparing the results from the ?Benchmark? and the ?EMOB? files. Please, note that the results in the sheets in yellow other than the ?Results for PPG? sheet are not relevant (i.e. ?Output Graphs?, ?Cost Benefit Analysis?, ?Total Cost of Ownership? and ?Output Tables?).
- EMOB-ZM\_LDV-Calculator-v4.xlsx. This file provides the estimates for the LDV (cars) category. The first key sheet in this file is the ?Input? sheet, which includes all the assumptions: GDP, population and fleet growth trends, average mileage and consumption, etc. The second key sheet in this file is the ?Results for PPG? sheet, which provides the final GHG (and energy) reduction estimates and distributes it among direct (primary and secondary) and indirect. The GHG emissions results are obtained by comparing the results from the ?Benchmark? and the ?EMOB? files. Please, note that the results in the sheets in yellow other than the ?Results for PPG? sheet are not relevant (i.e. ?Output Graphs?, ?Cost Benefit Analysis?, ?Total Cost of Ownership? and ?Output Tables?).
- Summary of GHG and Energy\_FINAL.xlsx. This file summarizes the final results from the two previous files.

**5.4 Risks**

**a) Is there a well-articulated assessment of risk to outcomes and identification of mitigation measures under each relevant risk category? Are mitigation measures clearly identified and realistic? Is there any omission?**

**b) Is the rating provided reflecting the residual risk to the likely achievement of intended outcomes after accounting for the expected implementation of mitigation measures?**

**c) Are environmental and social risks, impacts and management measures adequately assessed and rated and consistent with requirements set out in SD/PL/03?**

Secretariat comment at CEO Endorsement Request WL 8/5/2024: Yes.

Agency Response

**5.5 For NGI Only: Is there a justification of the financial structure and of the use of financial instrument with concessionality levels?**

Secretariat comment at CEO Endorsement Request WL 8/5/2024: N/A.

Agency Response

**6 C. Alignment with GEF-8 Programming Strategies and Country/Regional Priorities**

**6.1 a) Is the project adequately aligned with Focal Area objectives, and/or the LDCF/SCCF strategy?**

**b) [If a child project under an integrated program] Is the project adequately aligned with the program objective in the GEF-8 programming directions?**

Secretariat comment at CEO Endorsement Request

WL 8/5/2024: Yes, it's aligned with CCM Objective 1.3: Scale up zero-emission mobility of people and goods.

Agency Response

**6.2 Is the project alignment/coherent with country and regional priorities, policies, strategies and plans (including those related to the MEAs and to relevant sectors).**

Secretariat comment at CEO Endorsement Request WL 8/5/2024: Yes, it's aligned with its NDC which refers to a Nationally Appropriate Mitigation Action (NAMA) on sustainable transport.

Agency Response

**6.3 For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), does the project clearly identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and how it contributes to the identified target(s)?**

Secretariat comment at CEO Endorsement Request WL 8/5/2024: N/A

Agency Response

**7 D. Policy Requirements**

**7.1 Are the Policy Requirement sections completed?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**7.2 Is the Gender Action Plan uploaded?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**7.3 Is the stakeholder engagement plan uploaded?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**7.4 Have the required applicable safeguards documents been uploaded?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**8 Annexes**

**Annex A: Financing Tables**

**8.1 GEF Financing Table and Focal Area Elements: Is the proposed GEF financing (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):**

**STAR allocation?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes

Agency Response

**Focal Area allocation?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**LDCF under the principle of equitable access?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: N/A

Agency Response

**SCCF A (SIDS)?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: N/A

Agency Response

**SCCF B (Tech Transfer, Innovation, Private Sector)?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: N/A

Agency Response

**Focal Area Set Aside?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: N/A

Agency Response

**8.2 Project Preparation Grant (PPG)**

**a) Is the use of PPG attached in Annex: Status of Utilization of Project Preparation Grant (PPG) properly itemized according to the guidelines?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**8.3 Source of Funds**

**Does the sources of funds table match with the amounts in the OFP's LOE?**

**Note: the table only captures sources of funds from the country's STAR allocation**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

Agency Response

**8.4 Confirmed co-financing for the project, by name and type: Are the amounts, sources, and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines?**

**e.g. Have letters of co-finance been submitted, correctly classified as investment mobilized or in-kind/recurring expenditures? If investment mobilized: is there an explanation below the table to describe the nature of co-finance? If letters are not in English, is a translation provided?**

Secretariat comment at CEO Endorsement Request

WL 8/5/2024: No

? Please indicate the time frame for the contribution in the co-financing letters from ZEMIA (i.e. the grant from the Drive Electric Campaign of Climate Works Foundation.)

? Co-financing letter from MoE is for installing renewable power to be provided to charge 2900 EVs by 2030, estimated as a share of the cost to install the renewable energy target in ?Integrated

Resource Plan for the Power Sector in Zambia (2023)? The letter also highlighted that the Ministry of Energy will not be obliged to any direct contribution towards the project implementation?.

- o Please provide justification for the eligibility of RE supply investment as co-financing of this project, e.g. as integral part of project design, theory of change or results framework.
- o Please clarify which entity, if not MoE, is obliged to provide the co-financing related to renewable energy supply.
- o The estimation of investment volume and 2900 EVs to be charged by RE by 2030 is disconnected from the project design, indicators and results framework.

WL 10/07/2024: Cleared.

WL 10/30/2024: Confirmed.

## Agency Response

### UNEP response ? 24/10/2024

Please note that we have received an additional co-finance letter from the Ministry of Transport and Logistics (US\$ 100,000 in-kind) in September 2024. It has now been included in the revised CEO Endorsement Request document and on the GEF Portal.

### UNEP response ? 09/09/2024

ZEMIA letter:

The period of the Drive Electric Campaign of Climate Works Foundation grant to the ZAMBIAeMOBILIZE project extends from 1 August 2023 to 31 July 2025 (24 months). As such and to be more conservative, out of the total US\$ 150,000 mentioned in ZEMIA's signed letter, we have revised the co-financing amount attributed to the GEF project to only account for a proportional part of the budget prorated to year 2025, i.e. approx. US\$ 40,000. Given that it will be very challenging to obtain a revised letter from the partner, we hope this conservative approach is suitable for the reviewer.

Ministry of Energy letter:

- Eligibility of RE investments as co-finance to the project: the MoE co-financing contribution in the form of investments in electricity generation from renewables planned by the government are important to cope with the additional electricity demand in the transport sector. It is noteworthy to highlight that the electricity sector is summarily described in the baseline (section A.2), as access to electricity, prospects to increase generation and the carbon emissions of electricity generation are all relevant for the feasibility and decreased carbon impact of road transport electrification. Indeed, the cleaner the national electricity grid is, the more Zambia will be able to mitigate GHG emissions by transitioning to an electrified transport sector. This is now made more explicit by including a new



driver on ?expansion of electricity generation from renewables? in the ToC (in the transition from outcome 3 to intermediate state 3), in section B.2 of the CEO Endorsement Request document. Project component 3 already includes the preparation of an investment plan for the deployment of charging infrastructure (output 3.2), which strongly relies on the expansion / availability of electricity produced from renewables ? for which a study on the additional RE demand will be developed within the preparation of the national low-carbon mobility strategy (deliverable 1.2.4 under output 1.2). An explanatory paragraph has now been included in the description of output 3.2 (section B.3) to justify the relevance of the MoE?s contribution along these lines.

- In its letter, what the MoE meant is that it will not be required to make direct financial transfers to the GEF project. The investments foreseen in the document ?Integrated Resource Plan for the Power Sector in Zambia (2023)? mentioned in the co-finance letter are expected to materialize mainly by the private sector through concessions, under the oversight of the MoE. The MoE?s co-financing letter is therefore based on the investments expected to materialize over the life time of the GEF project.

- The 2,900 EVs to be charged by RE by 2030 are aligned with the assumptions made in Annex M of the CEO Endorsement Request document, and also outlined in the calculation sheets shared with this resubmission. In accordance with these assumptions, the EV stock in 2030 would be some 5,800 vehicles (300 buses and 5,500 LDVs, as indicated in the ?Results for PPG? sheet of Excel files EMOB-ZM\_BUS-Calculator-v4.xlsx and EMOB-ZM\_LDV-Calculator-v4.xlsx), and 50% of them would be charged with RE. This explanation is now included in the co-financing narrative referring to the MoE and in Annex M (Zambia electromobility scenario).

#### **Annex B: Endorsements**

**8.5 a) If ? and only if - this is a global or regional project for which not all country-based interventions were known at PIF stage and, therefore, not all LOEs provided:**

**Has the project been endorsed by the GEF OFP/s of all GEF eligible participating countries and has the OFP name and position been checked against the GEF database at the time of submission?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: N/A

#### **Agency Response**

**b) Are the OFP endorsement letters uploaded to the GEF Portal (compiled as a single document, if applicable)?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

#### **Agency Response**

**c) Do the letters follow the correct format and are the endorsed amounts consistent with the amounts included in the Portal?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

## Agency Response

### Annex C: Project Results Framework

**8.6 a) Have the GEF core indicators been included?**

**b) Have SMART indicators been used; are means of verification well thought out; do the targets correspond/are appropriate in view of total project financing (too high? Too low?)**

**c) Are all relevant indicators sex disaggregated?**

**d) Is the Project Results Framework included in the Project Document pasted in the Template?**

**e)[If a regional/global coordination child project under an integrated program] Does the results framework reflect the program-wide result framework, inclusive of results from child projects and specific to the regional/global coordination child project? [If a country child project under an integrated program] Is the child project result framework inclusive of program-wide metrics monitored across child project by the Regional/Global Child project?**

## Secretariat comment at CEO Endorsement Request

WL 8/5/2024: No,

- ? B) Outcome 1 should be further clarified to ensure the Government endorses the national gender-responsive low-carbon mobility strategy developed by the Project.
- ? B) Outcome 2: additional indicator should be included for public transport fleet: number of electric vehicles procured for public transport and specify the type of vehicles (based on capacity, e.g. buses, minibus)
- ? B) Outcome 3: the incentives and financial mechanism need to ensure economic/financial viability of EVs in terms of cost of ownership in comparison with ICE vehicles, for targeted vehicle type
- ? B) Outputs 2.3 and 2.4: should include target related to the number and the total operating hours of the electric bus for public transportation and those of the electric vehicles for government fleet.
- ? B) Outcome 4 and its outputs should be clarified that relevant policies, regulations and standards are adopted.

PO 08/15/2024: Please provide the logic that leads to an anticipated start year of GHG emission reduction accounting in 2029, in the field "Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators". Consider revising the start year as appropriate.

WL 10/07/2024: Cleared.

## Agency Response

### UNEP response ? 09/09/2024

B) Outcome 1: refer to our earlier response to the comment section 5.1 above. The outcome 1 statement and indicator / target 1.2 mentioned in the results framework (Annex C) already explicitly states that the aim is for government's adoption of the strategy.

B) Outcome 2: To address this comment, we have included one additional indicator 2.3 in the results framework (Annex C) with an end-of-project target of 4 mid-size e-buses. This is aligned with the budget and GHG estimates, which are based on the operation of 4 mid-size (20 pax at least) buses.

B) Outcome 3: refer to our responses to comment section 5.1 above. The Component 3 description has been revised in section B.3 to address this issue.

B) Output 2.3 and 2.4: The GHG estimates are based on an annual mileage of 60,000 km for public transport vehicles (output 2.3) and 20,000 km for government vehicles (output 2.4). We prefer to use this metric, as monitoring mileage is simpler and more directly linked to GHG emissions than monitoring days and time of operations. Note, however, that the precise operating conditions will be established within the respective feasibility studies to be carried out under component 2.

B) Outcome 4: the outcome level indicators for outcome 4 (results framework, Annex C) already explicitly refer to the government's approval / endorsement of the products. The outcome 4 statement has been slightly revised as follows: *"The Government of Zambia endorses a roadmap with measures to ensure the long-term environmental sustainability of integrated electric mobility systems including EV and battery end-of-life"*.

Anticipated start year of GHG accounting: The anticipated start year of GHG accounting is year 2029 which is the year of the GEF project's anticipated technical completion. This is an approach taken for all e-mobility child projects under the GEF-8 e-mobility programme. Indeed, given that the GHG emission reductions outlined in the calculations (Annex M) are largely based on the top-down impact of the adoption of the national strategy (component 1) and policies / regulations (component 3) by the government of Zambia, the conservative assumption is that these benefits will start materializing in year 2029. An explanatory text has been added in section B.5 (core indicators).

#### **Annex E: Project map and coordinates**

**8.7 Have geographic coordinates of project locations been entered in the dedicated table? Are relevant illustrative maps included?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

#### **Agency Response**

#### **Annex F: Environmental and Social Safeguards Documentation and Rating**

**8.8 Have the relevant safeguard documents been uploaded to the GEF Portal? Has the safeguards rating been provided and filled out in the ER field below the risk table?**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: Yes.

## Agency Response

### Annex G: GEF Budget template

**8.9 a) Is the GEF budget template attached and appropriately filled out incl. items such as the executing partner for each budget line?**

**b) Are the activities / expenditures reasonably and accurately charged to the three identified sources (Components, M&E and PMC)?**

**c) Are TORs for key project staff funded by GEF grant and/or co-finance attached?**

## Secretariat comment at CEO Endorsement Request

PO 8/15/2024: Project Coordinator is charged across the projects components. Per Guidelines, the costs associated with the project's execution must be covered by the GEF portion and the co-financing portion allocated to PMC.

11. Salary and benefits/Staff Costs	\$	13,318	\$	1,245	\$	3,246	\$	2,090	\$	19,898	\$	2,101	\$	123,200	\$	145,200
Project Technical Coordinator	\$	13,318	\$	1,245	\$	3,246	\$	2,090	\$	19,898	\$	2,101	\$	88,000	\$	110,000

PO 10/2024: Cleared.

## Agency Response

### UNEP response ? 09/09/2024

The reason why the Project Technical Coordinator (PTC) is budgeted across project components and PMS is because he/she will have dual responsibilities, both managerial (his/her principal role, budgeted under PMC) and technical (budgeted across the different substantive components 1 to 5). Further details to clarify the difference between the management activities and the technical activities have been provided in the TORs for the PTC, provided in Annex I of the CEO Endorsement Request document. This is compliant with GEF policy and consistent with the practice on past GEF projects.

### Annex H: NGI Relevant Annexes

**8.10 a) Does the project provide sufficient detail (indicative term sheet) to assess the following criteria: co-financing ratios, financial terms and conditions, and financial additionality? If not, please provide comments.**

**b) Does the project provide a detailed reflow table to assess the project capacity of generating reflows? If not, please provide comments.**

**c) Is the Agency eligible to administer concessional finance? If not, please provide comments.**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: N/A

## Agency Response

**Additional Annexes**

**9. GEFSEC DECISION**

**9.1.GEFSEC Recommendation**

**Is the project recommended for approval**

Secretariat comment at CEO Endorsement RequestWL 8/5/2024: No.

**9.2 Additional Comments to be considered by the Agency during the inception and implementation phase**

Secretariat comment at CEO Endorsement Request

**9.3 Review Dates**

	<b>CEO Approval</b>	<b>Response to Secretariat comments</b>
<b>First Review</b>	<b>8/5/2024</b>	<b>9/9/2024</b>
<b>Additional Review (as necessary)</b>		<b>10/24/2024</b>
<b>Additional Review (as necessary)</b>		
<b>Additional Review (as necessary)</b>		
<b>Additional Review (as necessary)</b>		