Terminal Evaluation – Philippines LCUTS Project

Promotion of Low Carbon Urban Transport Systems in the Philippines

UNDP PIMS ID # 5304
GEF Project ID # 5717

***a project of*:**

Government of the Philippines Department of Transportation (DOTr)
United Nations Development Programme (UNDP)
Global Environment Facility (GEF)

November 24, 2023

Prepared by:

Eugenia Katsigris, Managing Director, Parnon Group

With input from:

Evelyn Taboada, National Consultant

Basic Information of Project and Terminal Evaluation

Project

Basic Items	
Official Project Title:	*Promotion of Low Carbon Urban Transport Systems in the Philippines*
Abbreviated Project Title(s):	*Philippines LCUTS* or *LCUTS Project* or *LCT Project*
Country	Philippines
Region	Asia Pacific
UNDP PIMS ID	# 5304
GEF Project ID	# 5717
Executing Agency/ Implementing Partner	Philippines Department of Transportation (DOTr)
GEF Focal Area/ Strategic Program (GEF 5)	
Focal Area:	Climate Change
Strategic Programs (under GEF 5, known as "Focal Area Objective")	Objective 4: Promote energy efficient, low-carbon transport and urban systems
Focal Area Outcomes:	4.1 Sustainable transport and urban policy and regulatory frameworks adopted and implemented 4.2: Increased investment in less-GHG intensive transport and urban systems

Terminal Evaluation

TE timeframe

Initial Mission by National Consultant: April 27 – May 11, 2023 (in-person and virtual)
Mission led by International Consultant: June 1 – 26, 2023 (virtual)
Draft Report Submission: July 21, 2023
Final Report Submission: October 12, 2023
Updated Report Submission: November 19, 2023

TE Team:

Eugenia Katsigris (International Consultant and drafter of this report)
Evelyn Taboada (National Consultant)

Acknowledgements

The author is highly appreciative of the many stakeholders who supported the TE through generous contributions of their time, effort, and insights for in-person, virtual, and email consultations, including, in some cases, substantial follow up support through responses to queries after initial consultation. More specifically, she thanks those persons representing the 7 different transport cooperatives, the 9 LGU departments or offices (from the project's 4 pilot cities), 2 other LGU-based partners (a barangay council and a university consortium), 4 organizations from the e-jeepney supplier side (including 3 suppliers and one association), 2 government financial institutions, and 9 national agencies (or departments or sub-agencies thereof) that were interviewed. The evaluator also thanks interviewees from the UNDP CO and UNDP Bangkok Regional Hub as well as the 6 individual consultants and 3 firm consultancies hired by the project that were consulted. And, she thanks the 12 current or recent and 7 past project team members that participated in individual interviews. The names of individuals and organizations associated with all of the aforementioned thanks and appreciation for consultation and follow-up support are provided in Annex 2, organized by organization type. The names and organizations are also listed by interview tranche, specific interview, and interview date in Annex 1. A special thanks is given to the LCUTS Project Manager Rasia Salvador and its Monitoring and Evaluation Officer Marikris de Guzman for facilitating the TE, which included the unusually high number of 75 consultations (or 70, not including email consultations) and many document and information requests. Angel Aparicio, Senior Technical Advisor to the project, is thanked for his ongoing expert input. Appreciation is also extended to the UNDP CO team of Edwine Carrie (Deputy Resident Representative), Floradema Eleazar (Team Leader, Climate Action Team), Gwyneth Palmos (Program Analyst), and Katherine Ivy Custodio (M&E Officer) for their special attention to this evaluation.

Contents

Acronyms, Abbreviations, and Definitions

ACE Project – Accelerating NDC through Circular Economy in Cities Project. Government of Japan funded project in the Philippines related to circular economy. UNDP CO currently implementing this project.
Active Transport – transport, such as cycling and walking, that does not use outside energy sources
AFCS – automated fare collection system. This is required of jeepney cooperatives for PUVMP bank loan purchased vehicles and is installed in such vehicles. In practice, however, most jeepney cooperatives that have these are either not utilizing them or at least not reporting data from them.
AGT – automated guideway transit. A type of transit system that LCUTS project design called for the project to demonstrate, along with e-jeepneys. In the end, the project did not do any work related to AGT systems.
AVP – assistant vice president
Baguio – one of the project's four pilot cities. Baguio has hilly terrain and some local air pollution concerns. It is located on Luzon, to the north of Manila. Baguio now has an approved LPTRP.
barangay – a small administrative district forming the most local level of government in the Philippines. LGUs are comprised of many barangays.
BOD – board of directors
BRH – Bangkok Regional Hub. Asia regional headquarters of UNDP.
BRT – bus rapid transit. Typically such a system includes dedicated roadways or lanes for buses.
CAMPI – Chamber of Automotive Manufacturers of the Philippines, led largely by Toyota and Nissan. In 2021, CAMPI provide funds towards the development of a hybrid technician TR, though this got stalled at the functional analysis stage.
causality – In this document, used to discuss influence of the project, when it is considered partially responsible for desirable results. While difficult to assess, causality may be assigned a causality factor, such as 20%.
CavSU – Cavite State University. Faculty at the university developed a CS for a pure battery EV technician training course for e-jeepneys and e-buses in 2021 with funding from DOE. This happened before the project's work with TESDA began to progress.
CBO – community based organization
CCC – Climate Change Commission. A national-level government agency. Also an LCUTS PB member.
CCM – climate change mitigation. LCUTS is considered a UNDP-GEF project in the CCM area.
CDP – comprehensive development plan. A type of LGU plan.
CDR – Combined Delivery Report. A UNDP report that tracks project expenditures.
CEO – chief executive officer (in this case refers to CEO of the GEF)
CER – CEO Endorsement Request. Along with ProDoc, a key document submitted to the GEF for approval of detailed design of a GEF project.
CHRG – project contractor handling feasibility study and design of demo charging stations.
CLUP – comprehensive land use plan. A type of LGU plan. It is the basis for the existing and future use of land resources in the locality and is thus essential in transport planning.
CNG – compressed natural gas
CO – country office. In this document, refers to UNDP Country Office in the Philippines.
CO2 and CO2eq – carbon dioxide and carbon dioxide equivalent. Means of measuring and comparing GHG emissions. CO2eq may be used when other greenhouse gases besides CO2 are involved.
co-financing – For UNDP-GEF projects, defined as financing other than GEF funds that contributes to the aims of a GEF project. Typically, co-financing is committed at the time of project design and is several times the level of GEF funding.
COO – chief operating officer

Covid-19 or Covid - In this document, used to refer to the contagious disease or pandemic caused by the Cov-2 virus that spread around the world starting in 2020, leading to lock-downs and other restrictions in many countries as well as death, economic dislocation, and reduced use of public transport.
CPAP – country program action plan: A four-year "living document" that represents the plan for work for UNDP with a partner government.
CPD – country program document. A UNDP document that outlines the strategy and targets for UNDP's cooperation with a certain partner country.
CREVI – Comprehensive Roadmap for the Electric Vehicle Industry, which was required by EVIDA to be developed.
CS – competency standards, a term used by TESDA to indicate standards designed to be achieved by a certain technician training program. While TESDA participates in the development of CSs, a higher and more desirable level to be reached is the training regulation (TR), as TRs have associated national-level certifications issued.
DBP – Development Bank of the Philippines, a government financial institution. Among other things, it offers low interest loans for modern jeepneys under the government's PUVMP program. PB member.
DENR – Department of Environment and Natural Resources. A PB member and GEF operational focal point in Philippine Government.
DFIs – Development Financial Institutions. Another term for Government Financial Institutions that provide loans to advance policy objectives.
DILG – Department of Interior and Local Government. Mentioned in the ProDoc, but not active in LCUTS implementation. Particularly relevant to public transport in the case of trikes.
DOE – Department of Energy. A PB member that has strong interest in EVs and is actively involved in charging station work. Lead agency for EVIDA implementation.
DOTC – Department of Transportation and Communications, the entity preceding DOTr and IP at the time of project design.
DOST – Department of Science and Technology. A PB member that has strong interest in EVs.
DOTr – Department of Transportation. The IP of the project.
DRR – Deputy Resident Representative. High-level official in a UNDP Country Office.
DTI – Department of Trade and Industry. A PB member that has strong interest in EVs, particularly in development of the industrial value chain.
DTI-BOI – Board of Investments, an agency under DTI.
Durabuilt – Jeepney supplier in the Philippines that will be supplying e-jeepneys to CITSCO, a TC in Iloilo that will receive a charging station from the project. Durabuilt previously supplied only Euro IV versions of jeepneys.
e-jeepney - electric jeepney
e-js or ejs – abbreviation for e-jeepneys used in tables in this document.
EO – executive order. At the LGU level, this is an order signed by the mayor. It does not have punitive power as an ordinance by the LGU council would have, but can nevertheless guide activities and initiatives. There may also be EOs at other levels, including the national level.
EOP – end of project
ESMP – environmental and social management plan. For UNDP-GEF projects that have SESPs indicating a certain degree of risk concern, it is required that an ESMP be prepared. Yet, no ESMP was required to be prepared for LCUTS. Depending on results of an SESP for the charging stations, an ESMP may be prepared for them.
EST – environmentally sustainable transport
Euro IV – An emission standard of the European Union issued in 2005. Since that time, Euro V and VI standards have been issued and Euro VII is expected in 2025. PUVMP requires that traditional jeepneys be replaced by either Euro IV (or higher) jeepneys or e-jeepneys. The former is by virtue of the Philippines' DENR DAO 2015-04, which sets Euro IV as the minimum standard in the country.
EV – electric vehicle
EVAP – Electric Vehicle Association of the Philippines. A PB member.

EVCS – electric vehicle charging station
EVEE - Electric Vehicle Expansion Enterprises, Inc. An organization that pledged USD600,000 in co-financing at the time of LCUTS design, but that is not known to have been involved in implementation.
EVIDA – Electric Vehicle Industry Development Act. An act passed by the Philippine legislature that became law in 2022. LCUTS played a role in supporting development and adoption of this act.
GCF - Green Climate Fund. An international financing facility that is known, in some cases, to provide funds for very large projects, such as in the hundreds of millions USD.
GEF – Global Environment Facility. Main source of funds for LCUTS implementation.
GESI – gender equality and social inclusion. The project held a GESI workshop in each of its four pilot cities.
GET – Global Electric Transport. An e-jeepney provider active on the Project Board and listed as a co-financer with USD12 M committed at time of LCUTS design. To date, GET has supplied e-jeepneys for private shuttles. Yet, it is said to now have a pipeline of 900 public transport e-jeepney orders. GET e-jeepneys were the only ones tested that "passed" the Baguio test run, which was challenging due to hilly terrain.
GenSan – General Santos City. One of the first cities in which TCs deployed e-jeepneys. Located in Mindanao, a major island of the Philippines situated in the south of the country.
GHG – greenhouse gas emissions
GHG ER – greenhouse gas emissions reduction. An important measure of results of UNDP-GEF CCM projects.
GP Sarao – e-jeepney supplier in the Philippines whose vehicle is one of those featured in the Baguio test run report. It is not known to have supplied e-jeepneys to public transport to date.
Green routes – routes that, for public transport purposes, are designated to be handled by public transport EVs only.
HACT – harmonized approach to cash transfer. A HACT assessment is one that UNDP commissions to assess the IP's finance and operations procedures, systems, and controls.
HLURB – Housing and Land Use Regulatory Board. An entity mentioned in the ProDoc but not known to have been active in project implementation. HLURB has now been reconstituted as the Department of Human Settlements and Urban Development (DHSUD).
IA – Implementing Agency. In this document, refers to international agency tasked with providing oversight to the implementation of GEF projects. UNDP is GEF IA for the Philippines LCUTS Project.
IC – international consultant. (Can also stand for individual contractor. For UNDP projects this is a single person contractor in contrast to a contractor that is a multi-person organization. In this document, however, the meaning of "IC" is international consultant unless otherwise specified.)
Iloilo – One of the project's four pilot LGUs. Located on Panay Island in central west area of the country. No suppliers were able to supply vehicles for test runs to Iloilo, so a test run there was done with a Star 8 vehicle already in operation. The terrain there is relatively flat/ average as compared to Baguio. Iloilo now has an approved LPTRP.
Incentive Program – The project's competition to award 100% grant e-jeepneys to TCs. In the application, TCs request one or more 100% grant e-jeepneys of a certain brand and pledge to purchase a certain number of "multiplier e-jeepneys" through PUVMP bank loan.
INV – investment designation in GEF CERs. GEF requires that each outcome's budget allocation in the CER be designated as either TA or INV. It is expected that funds requested as INV in project design be used for designated investment purposes and not for TA.
IP – Implementing Partner: Used in this document to refer to the national government organization responsible for implementation of a UNDP-GEF project in NIM modality. For the Philippines LCUTS Project, DOTr is the IP.
IRRs – implementing rules and regulations. In this document, used to refer to EVIDA IRRs.
jeepney – a vehicle in the Philippines used like a mini-bus. Common in public transport, traditional jeepneys are often old and polluting and historically were WW II military jeeps. The government's PUVMP program has the goal of replacing these traditional jeepneys with either at least Euro IV

jeepneys[1] or e-jeepneys, both of which it calls "modern jeepneys" and which most often appear more like mini-buses.
JMC – joint memorandum circular. A government document in the Philippines that is signed by multiple government departments. The project is pursuing a JMC for an interagency LCT coordinating mechanism.
kW and kWh – kilowatt (a measure of power) and kilowatt hour (a measure of energy = power over time)
L – likely. A rating for sustainability of UNDP-GEF projects. It is the top rating on a four point scale.
LBP – Land Bank of Philippines. A government financial institution that, among other things, offers low interest loans for modern jeepneys under PUVMP. It is also a PB member.
LCT – low carbon transport. Transport that emits less carbon than business as usual, such as through low carbon motorized vehicles (e.g. EVs) and active transport. "LCT Project" is often used to refer to the project being evaluated.
LCUTS – Low Carbon Urban Transport Systems Project, an abbreviation for the project being evaluated.
LGU – local government unit. In this report, used to refer to cities in the Philippines, especially the project's four pilot partner cities.
LPTRP – local public transport route plan. These plans indicate the number of public transport vehicles (fleet size) of each type (mode) that will ply various routes. The LPTRP also determines the final route network. An LPTRP is now needed for LTFRB to provide franchise rights (more precisely known as Certificate of Public Convenience, CPC) for a route and for the government banks to provide loans for modern jeepneys. Baguio and Iloilo have prepared their soon-to-be-approved or now-approved LPTRPs. Santa Rosa and Pasig do not have LPTRPs. Initially, as part of Metro Manila (part of the "MUCEP" area), these LGUs were not required to craft their own LPTRPs, given that a broader Route Rationalization Plan (RRP) was to cover these cities instead. In August 2023, however, there was a change in direction that now requires MUCEP LGUs to craft their own LTPRPs.
LTFRB – Land Transport Franchising and Regulatory Board. An agency under DOTr that is responsible for providing franchises (route rights) to public transport vehicles. LTFRB has regional offices and is in contact with transport cooperatives.
LTO – Land Transport Office. Agency subsidiary to DOTr.
M – million
M&E – monitoring and evaluation
ML - moderately likely. One of four rating levels used regarding sustainability of UNDP-GEF projects.
MS – moderately satisfactory. One of six rating levels used for evaluation of certain aspects of UNDP-GEF projects, such as relevance, effectiveness, and efficiency.
MTR - Mid-Term Review. For full-sized UNDP-GEF projects, a required evaluation that takes place roughly half-way through the project. One of its major aims is to provide suggestions for course correction of the project, as needed.
multiplier vehicles – a term used in this report to refer to the vehicles that project Incentive Program applicants pledge to buy with PUVMP bank loans, to go along with the "free" vehicles they request from the project.
NC – national consultant
NCCAP – National Climate Change Action Plan
NCE – Nature Climate and Energy Team: Team at UNDP providing technical guidance to vertical fund projects in the energy, environment, and climate areas.
NCTS – National Center for Transportation Studies. A think tank affiliated with University of the Philippines that has held two major contracts with the project, one for the bike lanes study (won through competitive bidding) and one for training LGUs on LCT planning (assigned directly without competition through "responsible party" agreement).
NDCs – Nationally Determined Contributions

[1] Euro V and Euro VI would, of course, be acceptable.

NEDA – National Economic and Development Authority. A PB member. Also does assessment of donor projects in the country.
NGO – non-governmental organization. A non-profit civil society organization
NIM – National Implementation Modality. A modality of implementation of UNDP-GEF projects in which government counterparts lead implementation.
NIP – national implementation plan
NPD – National Project Director. In UNDP-GEF NIM projects, the IP official responsible for day-to-day liaison and approvals for the project.
OIC – officer in charge
Open Streets – An initiative in which part of a street is blocked off for community activities. The project held open streets workshops in Pasig and Santa Rosa.
OTC – Office of Transport Cooperatives. An office of DOTr that deals with the TCs.
Pasig – One of the project's four pilot cities. It is located in the Metro Manila Area. It already has 4 EVCSs; and the project will provide 2 more. Because it is in the Metro Manila Area/ is a "MUCEP LGU", it is not required to have an LPTRP.
peso – In this document, refers to the Philippine peso. At the time of preparation of the draft version of this report, about 55 pesos were equivalent to one USD.
PB – Project Board
PHUV – An e-jeepney supplier said to be operating in the Philippines in the past, but to have stopped operations. It is not known to have supplied any e-jeepneys to the public transport sector.
PIF – Project Information Form. A proposal to the GEF for a new project concept. Once approved, funds are set aside awaiting detailed project design and its subsequent clearance by the GEF.
pilot cities – In this document, refers to the four cities selected during project implementation as partner cities for the project.
PIMS – project information management system. Internal terminology for UNDP project management.
PIR – Project Implementation Review. A required annual assessment of UNDP-GEF projects that takes place around July of each year.
PM – project manager
PMU – project management unit. In UNDP-GEF project, this refers to group of staff typically paid by the project to coordinate its implementation.
PNS – Philippine National Standards
PPG – Project Preparation Grant. Funds from the GEF for the detailed design of projects, to be carried out after PIF approval.
PRF – Project Results Framework. A table in UNDP-GEF ProDocs and CERs that shows project objective and project outcomes and the indicators and indicator targets associated with each.
ProDoc – Project Document. In the case of UNDP-GEF projects, along with CER, a key document submitted to the GEF for approval of detailed design of a GEF project.
PV – photovoltaic
PUV – public utility vehicle
PUVMP – Public Utility Vehicle Modernization Program. A government program for modernizing the public transport sector. It requires jeepney operators to consolidate into transport cooperatives and to upgrade vehicles to Euro IV (or higher) jeepneys or e-jeepneys with the support of a subsidies and low-interest government loans. Jeepney modernization, however, is not the sole target of the program.
responsible party – In a UNDP project, the responsible party, while not being the IP, is responsible for implementation of certain project activities or components and will provide specific inputs for delivery of expected outputs.
RBM – results-based management. A form of management of development projects that emphasizes progress towards results. In RBM, there are indicators that reflect results that are due to the project.
RR – Resident Representative. The lead official of a UNDP Country Office.
S – satisfactory. One of six rating levels used for certain aspects of UNDP-GEF projects, such as efficacy.

Santa Rosa – city south of Manila on Luzon and located in Laguna Province. As a Metro Manila/ MUCEP LGU, Santa Rosa is not required to have an LPTRP.
SDGs – Sustainable Development Goals. Started in 2015, a collection of 17 goals articulated by the UN and considered a blueprint for development.
SESP – Social and Environmental Screening Procedure. A screening form and process required of UNDP-GEF projects and typically included in an annex of the ProDoc.
spot check audit – an audit that checks project finances and financial procedures at a certain point in time.
STA – Senior Technical Advisor. An international expert hired by the project in Oct. 2022 to advise on various matters. The STA was instrumental in finally coming up with a plan for the project to deploy its demo e-jeepneys, which is called the Incentive Program.
Star 8 – e-jeepney supplier in the Philippines responsible for the greatest portion of the 375 e-jeepneys now deployed in public transport.
Streets for Kids – Initiative in Baguio whereby students designed improvements for the street area around their school. The city improved the designs and has allocated funds to implement them.
Sumilang – Barangay in Pasig that has been consistently having an "open streets" event each Sunday for over a year, starting prior to the project's open streets workshop. A portion of the street is closed off for various activities.
SYSTRA – organization that is contracted by the project to provide business plans to two TCs for the adoption of e-jeepneys. So far, work on the business plans has been delayed.
t - ton
TA – technical assistance. In GEF CERs, outcome budget allocations must be indicated to be either TA or INV. TA is typically composed of soft support, such as consultancies and training.
tbc – to be determined
TC – transport cooperative (abbreviation used in this document to refer to jeepney transport cooperatives)
TC/O – transport cooperative or operator. Used in this document to refer to jeepney cooperatives or jeepney operators.
TE – Terminal Evaluation. For UNDP-GEF projects, an evaluation that takes place around the time of project close. This report is the TE report for the Philippines LCUTS Project.
TESDA – Technical Education and Skills Development Authority. Philippine Government entity responsible for developing competency standards, training regulations, and certifications for technicians. Project is cooperating with TESDA to develop EV related technician TRs.
TOC – theory of change. An aspect of development project design that maps out how different elements contribute to achieving project objectives.
TOD – transit oriented development. Urban planning and development that considers a city's public transport needs. The project prepared TOD standards for Baguio (adopted as an EO) and a list of TOD principles for Iloilo.
Tojo Motors – e-jeepeny supplier based in Santa Rosa that is one of two suppliers known to be responsible for the 375 e-jeepneys on the road in public transport to date.
TOR – terms of reference. A description of professional services to be provided.
TR – training regulation. TESDA terminology for a set of standards and processes for technical training whereby trainees can achieve national certification. The project targets to achieve EV related technician TRs through cooperation with TESDA.
trike – refers to motorized tricycle in the Philippines used as a sort of short-distance taxi-service.
TWG – technical working group
UMP – urban mobility plan
UNDAF – United Nations Development Assistance Framework. A strategic medium-term framework and vision of UN agencies collectively to respond to the development needs of a country.
UNEG – United Nations Evaluation Group
UNDP – United Nations Development Program
UNDP BRH – UNDP's Bangkok Regional Hub, a regional headquarters of UNDP for the Asia region.

UNDP CO – UNDP Country Office (in the case of this project, UNDP Philippines Country Office)
UNDP-GEF - Refers to GEF-financed projects for which UNDP provides oversight as GEF IA.
UNIDO – United Nations Industrial Development Organization. UNIDO has a GEF-funded EV project in the Philippines with DTI as IP. This project is relatively new.
UNDP NCE – UNDP Nature Climate and Energy Team. Team responsible for technical oversight of environment-focused vertical fund projects, such as GEF and GCF projects. It was previously called UNDP-GEF Team.
UP – University of Philippines
UP-NCTS – University of Philippines National Center for Transportation Studies. A think tank affiliated with UP that has held two major contracts with the project, one for a bike lane study and the other for LGU training on LCT planning.

Executive Summary

Project Information Table

Project Title	*Promotion of Low Carbon Urban Transport Systems in the Philippines (Philippines LCUTS Project)*		
Project Details		Project Milestones	
UNDP Project ID (PIMS#):	5304	PIF Approval Date:	May 25, 2014
GEF Project ID:	5717	CEO Endorsement Date:	August 31, 2016
Atlas Business Unit Award #: Project ID:	86135 93480	ProDoc Signature Date (date project began):	November 16, 2017
Country:	Philippines	Date project manager hired:	July 2019 (*start date*)
Region:	Asia Pacific	Inception Workshop date:	December 10-11, 2018
Focal Area:	Climate Change Mitigation (CCM)	Midterm Review completion date:	February 2021
GEF Focal Area Strategic Objectives:	CCM-4: Promote energy efficient, low-carbon transport and urban systems	Planned project closing date:	Nov. 16, 2021 (*original closing date before first extension granted*)
Trust Fund:	GEF TF	If revised, proposed operational closing date:	Nov. 16, 2023 (*with first 1.5 year extension and then six month extension*)
Executing Agency/ Implementing Partner:	Department of Transport (DOTr)		
Other Execution Partners:	Project design's "Management Arrangements" call for "Responsible Partners" to be DOE, DOST, and relevant agencies within DOTr		
NGO/ CBO Involvement	EVAP, an industry association, involved in project board; NGOs on board include Aksyon Klima Pilipinas and Clean Air Asia; various NGOs involved in project workshops		
Private Sector Involvement	Transport cooperatives key project beneficiaries; e-jeepney suppliers are also key players		
Geospatial Coordinates of Project Sites	Baguio: 16° 25' 0.0012" N and 120° 35' 60" E; Pasig: 14°35'8" N 121°03'24" E Iloilo: 10° 43' 13" N and 122° 33' 43" E; Santa Rosa: 14°18'44" N 121°6'41" E		
Financial Information			
PPG	at approval (US$M)	at PPG completion (US$M)	
GEF PPG Grants for Project Preparation	0.100	0.039423	
Co-Financing for Project Preparation	NA	NA	
Project	at CEO Endorsement (US$M)	at TE (US$M)	
[1] UNDP contribution	0.090	0.305967 (as of Oct. 19, 2023)	
[2] Government	9.749979	64.230411 (as of Oct. 19, 2023)	
[3] Other multi/bi-laterals	0.0	0.0	
[4] Private Sector	12.6	1.038594 (as of Oct. 19, 2023)	
[5] NGOs	0.0	0.0	
[6] Total co-financing [1] + [2] + [3] + [4] + [5]	22.439979	65.574972 (as of Oct. 19, 2023)	
[7] Total GEF funding	2.639726	1.32467587 (as of June 30, 2023)	
[8] Total project funding [6+7]	25.079705	66.89964787†	

†GEF spending is as of June 30, 2023. Government, UNDP, and private sector co-financing components are as of Oct. 19, 2023. Project will continue to spend funds until operational close in Nov. 16, 2023; and there may then be additional expenditures in the remaining three months after that, until financial close.

Project Description: The UNDP-GEF-DOTr Project *Promotion of Low Carbon Urban Transport Systems in the Philippines* ("LCUTS") was allocated USD2,639,726 in GEF funding and originally had a designed four-year duration. Its objective is to create an enabling environment for the commercialization of low carbon urban transport systems, with a focus on electric and hybrid vehicles in public transport. It has a three-pronged strategy of policy support (Outcome 1, aiming for adopted and enforced polices and support), capacity building (Outcome 2, aiming for adopted and implemented LCT plans and programs in

cities), and investment (Outcomes 3.1 and 3.2, aiming for increased private sector involvement in deployment, commercialization, and investment of/in low carbon transport). It is considered a very important and pioneering project as it addresses the problematic area of public transport in the Philippines, particularly the issue of modernizing the jeepney sector. Jeepneys are akin to mini-buses in function and very common in urban transport in the Philippines. The public transport jeepney sector is known for its outdated, polluting vehicles, traditionally owned and driven by individuals, though now undergoing consolidation as required by the government in its PUVMP ("Modernization Program"), launched in 2018. LCUTS's project design aims to demonstrate electric jeepney (e-jeepney) deployment in the public transport sector, along with charging stations to support them. Officially launched on Nov. 16, 2017, the project faced around a year and half of delays before hiring staff, finally getting started on its activities in the second half of 2019, with just about 7 months of implementation before Covid-19 lockdown was instituted in the country. It was eventually granted a first, then a second extension for total extension time of 2 years, making it a 6-year project, but with 4.5 years of active implementation. By the time of the TE consultations (April – June, 2023), there were already 375 e-jeepneys on the road in Philippine public transport, though the project had not yet launched its demos.

DOTr is the IP responsible for LCUTS execution. While DOST and DOE are indicated in the ProDoc as responsible partners for the project's Components 2 and 3, in the end they did not have this role and served as Project Board members only. The Project Board was quite active in discussing the EV industry and has held ten meetings to date. In addition to a part-time NPD seconded from DOTr, the design called for PM, M&E Officer, administrative assistant, finance associate, and three component leads (the last three to be provided by government, but in the end hired on the market). The project followed this staffing model until 2022, but experienced very high turnover (e.g. 3 different persons holding each component lead position) and often had empty positions. In 2022 and 2023, it added six more positions and, at peak, the PMU had 14 persons and generally, by end of 2022, one year before project close, had a much fuller team than before, though the team contracted by the time of project close in Nov. 2023. Main stakeholders include public transport jeepney operators, e-jeepney suppliers, national government officials, national development banks, LGU officials (particularly in the project's 4 pilot LGUs), barangay councils, universities, and everyday persons, particularly riders of public transport.

Philippines Project **Evaluation Rating Table** (*for rating scales, please see Annex 4*)

Evaluation Ratings:			
1. Monitoring and Evaluation	***Rating***	**2. IA& EA Execution**	***rating***
M&E design at entry	S - = 4.75	Quality of UNDP Oversight	S - = 4.75
M&E Plan Implementation	S - = 4.75	Quality of Execution - Executing Agency	MS = 4.0
Overall quality of M&E	S - = 4.75	Overall quality of Implementation / Execution	S - = 4.75
3. Assessment of Outcomes	**rating**	**4. Sustainability**	**Rating**
Relevance (Outcome 1. S, OC 2. S -, OC 3. S)	S = 5	Financial resources:	ML=3
Effectiveness (Outcome 1. S-, OC 2. MS+, OC 3. S)	S - =4.75	Socio-political:	ML=3
Efficiency (Outcome 1. S -, OC 2. S -, OC 3. S -)	S - =4.75	Institutional framework and governance:	ML=3
Overall Project Outcome Rating	S- = 4.75	Environmental:	L-=3.75
		Overall likelihood of sustainability	ML=3

Findings and Conclusions

Design[2]: Overall, the project design is logical and uses a multi-pronged approach (policy, capacity building, and investment/demonstration) that is based on past experience with UNDP-GEF projects. And,

[2] Design here refers to the work done in the PPG and PIF phases, which ultimately resulted in the ProDoc and CER. It does not refer to additional design work done during implementation, such as the work done well after the MTR was carried out to design the public transport e-jeepney "Incentive Program." In fact, the references to the problematic design of Outcome 3 and to the need for design to be "implementation ready" imply that, ideally, design of the "Incentive Program" would have been carried out at the PPG stage.

the design is quite relevant to the nation's needs and first of its kind so that the project is considered "pioneering." Yet, some challenges in design were identified. Some point out the title "Promotion of Low Carbon Urban Transport Systems in the Philippines" is misleading/ confusing as it does not mention the focus is on EVs, though the objective statement does mention EVs. A close read of the ProDoc shows strong emphasis on EVs across many activities, though perhaps the scope for more ambiguous activities could have been better defined. In hindsight, the design of policy activities might have been more specific and strategic, to avoid the ad hoc approach that ensued, where the project ended up being a commenter on many different policies and standards, but an important driver of few. Design of Outcome 2 planning activities lacks a strong connection between training on LCT planning and actually getting LCT into plans that are adopted and implemented. The latter is the target. Outcome 3 design is particularly problematic as it lacks a detailed plan for deploying the e-jeepney demos, reflective of the design not being "implementation ready." Lastly, while the project's indicators overall do a good job in capturing progress towards meaningful results, there are challenges in interpreting several of the indicators. And, some are stated as if being global, rather than specifying the need to capture the impact of the project, as would be desired in "results based management."

Results: Externally, this pioneering project faced the double challenge of the high difficulty level of public transport projects in usual times and the disproportionate impact of Covid 19 on the public transport sector. Internally, it faced some very challenging implementation issues (discussed below). Yet, despite these extreme odds, the project in the end is seen to have had meaningful impacts. First, it has made some significant contributions to policy/ standards (Outcome 1), based mostly on work occurring earlier in its history. And, of particular note, through its tremendous last year effort and much belated Incentive Program to launch e-jeepney demos and related activities, it has played a critical role in reinvigorating a stagnant sector, bringing new cooperatives and suppliers into the public transport e-jeepney space (Outcome 3) and supporting the transition from lead acid to lithium ion batteries in this space. Outcome 2 has held a very large number of events (54), several of which have received positive feedback. The project was slow to focus on moving from capacity building work to efforts that will achieve the target of adopted and implemented low carbon plans in cities, but aims to generate commitments for such adoption and implementation at its closing "Sustainability Workshop." The Project Board, in particular, and the project more generally are seen by some as a valuable forum for bringing together government, financial institutions, and the private sector in the run up to and early stages of implementation of the EVIDA law.[3] More details on achievements and potential gaps to fill are given by outcome below.

Outcome 1 results – policies, standards, and institutional mechanism: The project has had some important successes in the policy-standards-institutional areas at the national level. At the same time, while the project claims contributions across a large number of national-level policy and standards items, for many of these, Outcome 1 struggled to have significant impact due to its often taking on the role of "commenter." In the end, project contributions incorporated into a policy or standard for which credit is claimed may just amount to a few lines. Yet, two national-level stand-out successes, along with a third item of interest, are enough to consider the outcome effective: (1) LCUTs made multi-pronged contributions to EVIDA (Electric Vehicle Industry Development Act), adopted in 2022. It contributed significant content to the EVIDA bill (namely, the requirement of green routes, DOTr capacity building of jeepney cooperatives, and DOST funding of local transport studies by state universities); it organized small group meetings of Project Board members (government and private sector) with the senator drafting the bill; and it represented DOTr at multi-agency formulation meetings. (2) LCUTS drafted Green Routes Guidelines, which are criteria for developing routes that will, as far as public transport is concerned, be

[3] One stakeholder comments that, ideally, this kind of forum will continue. One option may be for the UNIDO-GEF-DTI EV project to provide a platform to discuss monitoring results for the e-jeepneys and TRs for battery electric vehicle areas. (There is a TWG associated with EVIDA, but it is said to be composed of government entities only.)

plied only by EVs, such as e-jeepneys. The Guidelines have been incorporated into DOTr's Omnibus Guidelines. (3) LCUTS commissioned a bottom-up, multi-LGU bike lane study/ plan with training. While this USD145,000 effort was charged to Outcome 3 and does not fit there and was not a part of project design, it has been popular with DOTr and some LGUs. DOTr carried out formal "handover" ceremonies of the plan with the three metro areas covered. While called a "master plan," it is somewhat patchwork, because each LGU decided upon the nature of planned bike lanes within its borders.[4] Nevertheless, it does include some connections between LGUs. And, partial implementation by some LGUs is anticipated. The outcome also targeted a presidential order for an interagency LCT institutional mechanism. Due to challenges in adoption, the project shifted to targeting an LCT JMC to be signed by the involved agencies. By EOP, DOTr had accepted the project's draft of the JMC and circulated it to other agencies for comment. It has so far received comments from two agencies: DOE and Department of Interior and Local Government.

Two local level policies/standards prepared by the project or partially stimulated by it are considered promising in terms of potential impact. These are: (1) In Pasig, an adopted EO for a Trike Cooperative TWG, which is considered sustainable, given that a council person has committed funding. The EO was requested by the LGU and drafted by the project. (2) In Baguio, an Ordinance to support LCT Research and Innovation in the City. While the project did not directly support the development of this ordinance, the project's facilitation of formation of an LCT-related university consortium in Baguio is considered to have partially stimulated the ordinance. As legislation adopted by the City Council, the ordinance is considered to have good potential for impact. Some other local level policies and standards promoted by the project are not expected to be that impactful. They include EOs for LCT committees founded in three LGUs to implement the project. (Such committees typically disappear after project end, though Baguio's might sustain.) They also include an EO for TOD standards for Baguio. It's unclear whether the municipality will act on this.

Outcome 2 results – capacity building, LGU LCT plans, and EV-related technician certifications: Individual activities of Outcome 2 were carried out well and capacity was likely built across a range of areas. Yet, a strategic approach to ensure that the results contributed to the targeted outcome as stated and the related indicator (both of which refer to "adopted and implemented LCT plans and programs") was mostly lacking prior to the laudable efforts to garner commitments to implementation of plans developed under the project at its closing "Sustainability Workshop." The capacity building workshops/ conferences/ trainings have some notable successes and highly appreciated items: The investment forum (Jan. 2023)[5] and prior meeting with transport cooperatives and manufacturers are seen as impactful in promoting e-jeepney deployment in public transport. And, the two fleet management workshops for transport cooperatives are seen as meeting high in-demand needs. The "Streets for Kids" and "Open Streets" workshops have both stimulated budget allocations or likely ones (the former in Baguio, the latter expected in Santa Rosa). The LCT planning work was focused mainly on training. This is where an opportunity may have been missed to achieve the aforementioned indicator target of adopted and implemented plans and programs. As illustration, one pilot city, Iloilo, after the project training and preparation of the associated "re-entry action plan," asked for project support on its urban mobility plan. It seems that funds (around USD100,000 in total) might have better been spent on tailored support for integration of LCT measures into the plans the cities were already prioritizing. Aside from workshops/ events, project awareness and outreach work has been weak. There has been no organized, periodic outreach to jeepney operators, which, in the author's view, should be the top priority audience of the project. Further, the project faced challenges in getting its time-sensitive communications released due to

[4] Rather than have a unified design, each LGU picked its own design (e.g. some with protected bike lanes, some without). If the whole plan were to be implemented, it could be confusing to both bikers and motorists as they pass from one LGU to the next. LGUs have purview over bike lanes, but some kind of effort to synergize may have provided a stronger product.

[5] The investment forum is actually charged to Outcome 3 and also fits with Outcome 3 aims. It is included here, because it is related to the more general capacity building theme of Outcome 2.

problems in the approval process at UNDP CO. In the final months of the project, however, release of communication materials improved and the project was allowed by UNDP to start using its Facebook page again, though use of its website was never resuscitated.

As for other Outcome 2 results: (1) Establishment of an LCT university consortium in Baguio was facilitated by the project. The Consortium has already taken up LCT-related support of the city and may conduct meaningful work related to local priorities in the future. (2) The development of EV related technician training regulations and curricula finally got off to a promising start late in the project. Its adaptive management to harmonize previous efforts and get the work on track towards a TESDA TR is applauded. Yet, due to time constraints, the work did not achieve the original aim of an EV technician TR and registered courses at two institutions by EOP. Instead, it completed revision/ expansion of the more easily achieved CS that was initially prepared by others and posted on TESDA's website in 2021. The project also held a training of trainers for this CS. A clear plan for exit strategy to ensure the TR is eventually achieved after project close is needed and may have been addressed at the project's closing Sustainability Workshop. There are two other areas designated by TESDA for TR based on the project's "skills mapping": charging station technician and EV battery technician. An exit strategy for each is needed to ensure the TRs are developed in a timely fashion. The UNIDO-GEF-DTI project may be a good candidate to carry on this work. It is surprising that LCUTS's TESDA work did not move forward in a substantial way earlier, given that the project launched its activities overall in the second half of 2019. The project did not hire a consultant to handle the EV technician TR work until April, 2022 and it was in the interim in 2021 that other entities developed the EV technician CS covering e-buses and e-jeepneys.

Outcome 3 results – commercialization of, deployment of, and investment in low carbon transport: The strongest result of the project is related to its "Incentive Program," which provided one or more e-jeepneys to winning cooperatives that agreed to purchase a "multiplier" number of e-jeepneys with support of PUVMP bank loans. The "Incentive Program" has contributed to re-stimulation of the public transport e-jeepney market, following a stagnant period in the market/ industry since mid-2020. With attribution to the project, two cooperatives that did not have e-jeepneys before have purchased some; and two additional suppliers have entered the e-jeepney public transport market (with a few additional ones considering entry). New e-jeepney models from suppliers are in the approval pipeline and, under project influence, DOTr may be speeding up approval. At least 12 of pipeline or recent e-jeepney purchases may be attributed to the project, of which 5 will be direct purchases by the project. Also, supplier GET is said to have developed a huge pipeline of 900 purchase orders for public transport e-jeepneys, many now with applications at the bank for loans. This particular supplier's pipeline is mentioned, because there may be some causality from the project (≈20%), which helped highlight GET as the only supplier to "pass" the Baguio test run. And, GET participated in all ten project board meetings and may have participated in the smaller group EVIDA meetings, getting exposure to the public transport industry, which it is just now shifting into, and its regulators.

Carrying out monitoring post-project of the e-jeepneys deployed by the project's partner cooperatives to show how financial returns compare to those of Euro IV jeepneys could prove to be the most valuable contribution of the Incentive Program. While the project has developed a monitoring sheet, more parameters focused on costs and financial returns may be needed, as well as a sustainable plan to continue the monitoring post-project. (The project's "Sustainability Workshop" may have worked to confirm post-project monitoring partners.)

Other Outcome 3 results are more mixed. The business plan work (done for two jeepney cooperatives) was slow to yield results. While the evaluator has not seen the final business plans, these are understood to have emphasized alternative means of generating income (such as ads or using garage space to earn parking fees). The evaluator had expected the plans would focus more on e-jeepneys, though it is understood these alternative means of generating income may be meant to help generate funds for e-

jeepney purchase. The test runs were not done in a way that results could be shared with transport cooperatives. Instead, the report appears more academic. Yet, the test run did stimulate interest in e-jeepneys in Baguio; and, even the Iloilo results (though the test run there only included one vehicle and that was a vehicle already on the road in Iloilo), are said to have inspired some confidence. Lastly, charging stations are considered an important step forward in facilitating the growth of the e-vehicle fleet on the road. In the end, two of the project's three planned charging stations had to be cancelled due to land issues. Because of this and other expenditures not realized, the project will return USD400,000 to the GEF.[6] Findings suggest the original plan on charging station placement may have been more strategic. For example, since Pasig (for which two charging stations were targeted under the project) is likely to deploy more EVCSs with or without project help (and already has four), it may have made more sense to support Baguio with charging stations. At the same time, it is realized that the project aimed to distribute benefits to its partner cities evenly.

Progress towards GHG ER target: Findings suggest the project will make progress toward its direct GHG ER target, which is among the project's objective level indicators, but will not reach the target. The methodology for the original target probably overestimates what can be achieved given the rough number of vehicles it indicates to be involved (≈65 e-jeepneys[7]). The ProDoc target implies an increment of 52,959 t CO2eq, but improved methodology (assuming 65 e-jeepneys) implies a target increment of 23,010 tCO2 eq. ProDoc activities target 15 to 20 e-jeepneys, so the roughly 65 vehicles must include replications. So far, the project appears to have 12 e-jeepneys either firmly in the pipeline or already deployed that can be attributed to the project, implying direct lifetime GHG ERs of 4,248 t CO2. One challenge is that, of the three "Incentive Program" winners so far, two already had deployed e-jeepneys; and the "multiplier e-jeepneys" they are expected to deploy (or have recently deployed) appear to have already been planned, so cannot be attributed to the project. Yet, among the 12 attributed to the project are 5 e-jeepneys to be deployed by a transport cooperative that did not "win" the Incentive Program, but was originally to be provided with an EV charging station by the project. While the charging station was cancelled due to land issues, the cooperative still purchased these e-jeepneys due to the influence of the project. While some earlier reporting claimed project influence on and project attribution for the 375 e-jeepneys already on the road in public transport in the Philippines prior to the project's Incentive Program rollout, extensive follow-up on this topic shows most of the first e-jeepneys in involved cities were deployed before the project could have had an influence (2018, 2019, and early 2020). And, for the two cities that have done their first deployments since, it was found their decision to deploy was not influenced by the project. This research, however, led to the finding that the public transport e-jeepney market surged after institution of PUVMP, but came to almost a standstill in terms of deployment in new cities after that (i.e. after early 2020). It appears that the LCUTS project, along with EVIDA passage in 2022, and in conjunction with recovery from the pandemic, has led to a recent resurgence. Increased follow up via monitoring and communications with jeepney operators could lead to a sustained trend rather than another temporary surge. As for project initiatives in active transport, these were either too early stage to result in GHG ERs or did not have substantial GHG ERs that could be assessed.[8]

[6] It is estimated that about half or less of the returned amount is accounted for by cancellation of the two charging stations, as originally three charging stations were planned with total allocation of USD300,000, presumably, leaving USD200,000 unspent. At the same time, some of the extra funds available due to this cancellation are said to have been used to provide a charging station feasibility study to Baguio. It's not clear that each charging station would cost as much as USD100,000 (including feasibility study), though solar PV charging stations were targeted.

[7] One reviewer of a draft version of this report notes their view that the ProDoc's estimate of 130,816 km per year for these vehicles is unrealistic.

[8] The bike lane master plan was merely a plan so did not achieve GHG ERs during the project's lifetime. Some of the open streets activities are not attributable to the project. When they are, there are street areas closed off to cars for activity during the weekend. While they may result in some persons driving less to enjoy the street activities near home, GHG ER benefits are hard to assess. Based on experience, new active transport initiatives do not provide the same level of GHG ERs as replacement of fossil fuel vehicles with electric ones.

Cross-cutting topics: The project has made significant efforts in gender and social inclusion. It held four GESI workshops, one in each pilot city. It had a GESI Action Plan, but this was not implemented. The "Streets for Kids" initiative is a form of social inclusion. It resulted in adoption and funding of plans for a street near a school as drafted by children, persons usually not consulted in city planning. The project has achieved 40% attendance of women on average across its 54 events, amounting to over 800 person-attendances by women (which may include some double counting). In terms of knowledge management and stakeholder engagement, an unmet need to try and engage jeepney operators nationwide and provide them with various knowledge products was identified by the TE. At the same time, stakeholder engagement through workshops was strong and a wide range of stakeholders were involved in this project. One strength was bringing the private sector (suppliers) together with government via the platform of the Project Board, along with smaller group efforts to support EVIDA drafting. As for risks and safeguards management, these were well addressed at the time of project design. Risks have been updated; and an update on safeguards was expected prior to construction of the charging stations and deployment of the e-jeepneys. One risk that was missed and might be added is the dissatisfaction of jeepney operators with the implementing mechanisms of PUVMP. This was evidenced by protests in March 2023, though sources suggest demands have been met by a six month extension of the deadline (to Dec. 31, 2023) to consolidate into cooperatives or corporations.

Implementation strengths and challenges: Some implementation strengths of the project are: (1) The Project Board served as a positive forum for stakeholders in the EV space, bringing together the government and private sector. (2) The project added field technical officers in the first part of 2022. This greatly enhanced and accelerated work with the pilot cities. (3) The competition approach used for the demos and known as the "Incentive Program" was successful in raising awareness to a larger group of jeepney operators than might have been achieved if there were no competition. This approach has been seen in other projects to be an effective way to promote the focus of their respective demos.

Implementation challenges include the following: (1) There were substantial delays prior to signing of the ProDoc (which did not happen until 15 months after CEO clearance) and about 1.5 years of delays after signing, before project team was hired. Delays like this can make project design "stale." (2) Many stakeholders pointed out low engagement and unavailability of the IP to be a key reason the project progressed slowly. Responsible officers at the IP had a heavy load of other projects. Also, DOTr has very high staff turnover. This low engagement of the IP is said not to be the norm in the Philippines. (3) While Covid-19, an external problem, has been mentioned above, it also created difficulty in differentiating between pandemic issues and other implementation issues. As noted, for example, the project delayed its TESDA work a long time, so much so that another group prepared a CS for pure battery EV technician for e-jeepneys and e-buses in 2021. (4) There was very high turnover of the project team. This is said not to be typical of UNDP projects in the Philippines and is believed to be a secondary effect of the team feeling discouraged that they were not fully empowered to make progress towards targets and that the activities they needed to implement were not clear. (5) For the period up until the STA was hired in Oct. 2022, a decision was made by UNDP CO not to allow procurement of e-jeepneys as designed and shift the funds to other uses, such as TA. This decision was made without well-documented justification, transparency, or exploration of the demo options. It shows a lack of recognition of GEF's emphasis on respecting the "INV" designation in the CER, to which over USD 1 million was allocated in this project. (6) The project suffered from disagreement between those that wanted to stick with the original design and those that wanted to broaden the project to include specific activities related to cycling and pedestrian aspects. In the end, the project at times seemed to some extent to lose focus and choose activities in an ad hoc way. At the same time, the Covid pandemic and shut-down of public transport may have been a justification for some diversification during the most difficult period. Yet, a revisiting of project strategy should have been conducted before major changes in fund use and activities were allowed. (7) There may be a need to tighten up procurement ensuring a wall between those who advise the project on its direction

and those that participate in work stemming from decisions associated with that advice. And there may be a need to institute separation periods for former staff from decision-making organizations (e.g. the IP, UNDP) before participating in work associated with contracts of the project. (8) There may be a need for cost estimates of work and consideration of cost-effective alternatives that may better address targets. In some cases, very tailored advising for LGUs, for example, may be more effective than a large budget training program applied to multiple LGUs.

Key Lessons Learned: Lessons from the above include the following: (1) Detailed demo design should be included in the ProDoc. (2) Indicators need to be very specific, without multiple possible interpretations. Indicator design and assessment should show what the project specifically has achieved, rather than what has been achieved without contribution of the project. (3) Project policy work should not be reduced to ad hoc commenting on draft policies. Design and implementation of policy components need to come up with a way for the project to be more strategic and more impactful. (4) The key audience of the project (in this case the jeepney operators) needs to be identified and outreach ramped up, such as through KM dissemination program. (5) In implementation of UNDP-GEF projects, there needs to be a focus on targeted outcomes and indicator targets, not just on implementing activities. (Key example is being too activity focused is the LGU planning work.) (6) Any decision not to implement demos and shift demo funds to other purposes needs to be fully transparent, discussed, and justified with documentation. Strong efforts to generate options for implementing the demos need to be made before abandoning them as unviable. (7) If a project needs to change course, the strategic framework should be revisited and revised as needed. Ad hoc addition of activities is not advised. (8) Demo design that incorporates competitions can be a very effective means of promoting the subject of the demo. (9) Placing staff in the field for projects that have partner cities or partner regions can be an effective approach to accelerating results. (10) For NIM projects, the IP can be critical to success. Thus, more attention beyond HACT survey alone needs to be paid to potential pitfalls, needed qualities, and thus alternative methods of due diligence.

TE Recommendations for *Philippines LCUTS Project*

#	TE Recommendation	Responsible Entity	Timeframe
A	**Building on e-Jeepney/EV and Charging Station Work**	---	
A1	**e-jeepney monitoring**: Refine monitoring template to include all data needed to assess cost effectiveness of e-jeepneys versus Euro IV jeepneys (e.g. not only charging, but cost of charging and repairs; not only number of passengers, but also passenger revenues (or passenger km travelled)). Ensure that both Incentive Program e-jeepneys and "multiplier" e-jeepneys are included to provide a good number of monitored vehicles with latest technology. Verify financial benefits (one year minimum, but ideally ongoing monitoring) and technical viability (ongoing monitoring). Ideally, AFCS will be used. Determine institutions that will continue to coordinate monitoring after EOP, such as LGUs, DOTr, DTI, and UNIDO-GEF-DTI Project.	PMU, STA, DOTr (OTC, LTFRB), DTI (possibly, DOST, EVAP), UNIDO-GEF-DTI Project	Phase 1: Dec. 2023 – Dec. 2024, then ongoing
A2	**Jeepney operator outreach program**: Develop system (preferably electronic) for reaching out to all transport cooperatives/ operators with jeepneys and provide key materials on fleet management, e-jeepney financial viability, Incentive Program jeepney monitoring results, pricing, etc., with updates after EOP on a periodic basis. When it is available, review DOE assessment on transport cooperative concerns about EVs on major thoroughfares to better understand needs and barriers of transport cooperatives with regard to EVs.	PMU, LTFRB, OTC, DTI (maybe DOST, DOE, UNIDO-GEF-DTI Project)	Dec. 2023 and ongoing
A3	**e-jeepney price/ cost analysis:** Conduct price analysis of e-jeepneys, including international comparison and explanation of key component costs and changes in vehicle pricing over time. Share findings with transport cooperatives/ operators and banks.	Committee comprised of DOTr, LTFRB, DTI, LBP, DBP	Phase 1: Dec. 2023 – Jan. 2024, then ongoing

A4	**Charging station rollout in coordination with PUVMP and monitoring of charging stations:** Resuscitate and finalize prior draft agreement between DOE and DOTr, whereby DOTr provides DOE info on PUVMP e-jeepney participants and DOE provides charging stations directly (with DOE funds) or facilitates cost-effective rollout via the private sector. Institute monitoring program for the project's pure solar PV charging station in Pasig and expand as more are put in place via DOE or DOE facilitation.	DOTr, DOE, LGUs	Dec. 2023 – June 2024 for agreement and initial monitoring; ongoing for cooperation and monitoring
A5	**PUVMP 2.0 with e-jeepney subsidy rationalization and traditional jeepney scrapping program:** Based on monitoring results (Recommendation A1), preparation of PUVMP 2.0 with rationalized incentive level for e-jeepneys (if needed), charging station cooperation with DOE (per Recommendation A4), and scrapping requirement plus scrapping/recycling program for retired traditional jeepneys; piloting of PUVMP 2.0; and, subsequently, perhaps, application to the GCF for low interest e-jeepney loan facility.	DOTr, LTFRB (maybe DTI, DOST, EVAP, UNIDO-DTI EV project, EU ACE recycling project)	Jan. – Feb. 2024 for design of PUVMP 2.0, March – Sept. 2024 for piloting and scrapping program design, then ongoing
A6	**Exit strategy for EV training certification**: Develop concrete plan and timeline for EV related training regulations (TRs) in the pipeline for TESDA (pure battery EV technician, EV battery technician, EV charging station technician, and hybrid vehicle technician). Ensure exit strategy is in place so that there are responsible parties and a viable, clear path to adoption of all 4 TRs (or of one umbrella TR with 4 sub-specialties) within 1.5 years post-project. Perhaps, seek out other funding partners to speed up the process using the methodology of accelerated preparation demonstrated by LCUTS.	Training expert, TESDA (maybe a funder, such as UNIDO-GEF-DTI project, DOE, CAMPI)	Dec. 2023 for planning; Jan. - 2024 to June 2025 for implementation
B	**Building on Public Transport and LCT Efforts More Generally**		
B1	**DOTr Notice for follow-up:** Develop and get signed a DOTr Notice listing key progress made by the LCUTS project and specific follow-ups that DOTr and LTFRB will engage in post-project including: (i) Continue monitoring 40+ e-jeepneys related to Incentive Program; (ii) continue providing reports related to e-jeepneys (such as on monitoring results) to jeepney TC/Os on distribution list; (iii) develop and enforce regulations requiring public transport jeepneys to use AFCS; (iv) resuscitate draft agreement with DOE to provide them info on e-jeepneys purchased under PUVMP so that DOE can provide/ facilitate provision of charging stations; (v) develop PUVMP 2.0 once Incentive Program monitoring provides data needed to rationalize e-jeepney subsidy (PUVMP 2.0 should enforce requirements of AFCS, monitoring, and traditional jeepney scrapping, and might be piloted and then GCF funding pursued); (vi) promote development of integrated city public transport plans (so that bus, jeepney and tricycle routes do not overlap) that are tailored to each region and its resources; (vii) continue to support with budget allocations and high-level encouragement build-out of bottom-up bike lane proposals developed under LCUTS (but with enhanced efforts at integration) to achieve implementation in at least 5 LGUs; and (viii) finalize work to get LCT JMC signed and replicated out to the regional level where region and city-specific LCT planning, such as of vehicle type suitable to each region, can be carried out.	DOTr, OTC, LTFRB	Dec. 2023 - Jan. 2024 drafting; then, ongoing implementation
B2	**Integrated route planning for different vehicle types, site-sensitive LCT planning, and set-up of regional LCT committees:** Pilot improved planning of urban public transport routes and vehicle types, addressing current shortcomings so that planning for routes of buses, jeepneys, and trikes are done in an integrated way such that each route is assigned the most appropriate vehicle type, rather than multiple vehicle types. Similarly, when considering options of electric versus ICE, versus alternative fuel vehicles, consider the situation of various locales (e.g. electricity price and natural resources) to develop region-specific public transport plans. Integrate "green routes" that will feature only EVs (e-buses or e-jeepneys) into the planning work. As part of this, promote the development of regional LCT committees to carry out LCT planning under the proposed national LCT JMC. This may require an addendum to the draft JMC.	LTFRB, DOTr, OTC, DILG, selected pilot cities and regions, possibly upcoming UNDP-GEF Sustainable Cities Project	Jan. 2024 – Jan. 2025 for pilot planning and setting up of regional LCT committees; then ongoing for implementation, replication, additional regional committees

B3	**Incorporation of LCT into adopted LGU plans; initiation of nationwide LGU LCT outreach program:** Building on commitments at the project's Sustainability Workshop, work with the project's 4 pilot LGUs, so that comprehensive set of LCT measures are incorporated into existing plans or key plans in their pipelines that will be adopted soon. Develop nationwide LGU contact list to promote various LCT ideas and knowledge products to LGUs nationwide. Post on a website LCT training modules prepared by NCTS, for example, and provide link to those on the LGU contact list. Determine institution that will maintain the LCT LGU website and communications with LGUs. Through dissemination, encourage the setting up of permanent LGU LCT committees, more integrated planning of public transport routes (e.g. so buses and jeepneys don't overlap), designation of "green routes" over which only LC public transport vehicles can traverse, and development of bike lanes, more pedestrian friendly streets, and, potentially, permanent (7 days a week) pedestrian streets (with a focus on mobility aspects over street activities).	4 pilot LGUs, LGUs nationwide (possibly, upcoming UNDP-GEF Sustainable Cities Project, cycling associations), DILG's Urban Act Program	Dec. 2023 – Jan. 2024, then ongoing, especially 2025 and beyond if upcoming Sustainable Cities Project takes this up
B4	**Ensuring delays from and policies of CO are not shutting down project communications; press liaison:** On future projects, improve turnaround time within UNDP CO of brief project articles to a few days for an approval and carry out press liaison to get project concepts and achievements widely cited in the media. Assess current framework for CO involvement in project communications to ensure it is helping rather than shutting down projects' communications outreach: (i) Institute maximum 5-day turnaround on communications related emails and institute mechanism to address failure to respond. (ii) Allow project team to issue clearance for non-sensitive items that adhere to UNDP Philippines Communications Team guidelines. This may include social media postings. Involvement of UNDP CO should only be required for identified sensitive topics. (iii) If UNDP CO will still need to clear substantial volume of project communications items, reassess/ ensure human resources within CO are adequate to respond quickly (5 days maximum turnaround for emails and for review and approval of short articles, perhaps 10 days maximum for review and approval of longer items).	UNDP CO RR, DRR, Communications Team, Climate Action Team Lead and Program Analysts, the press and similar persons for other projects	Starting by Dec. 2023 and ongoing
C	**Recommendations for UNDP NCE Team and Philippines Country Office to Enhance Future Donor Projects**		
C1	**Written demo guidelines/ advice/models/success stories to prevent UNDP-GEF project demo immobilization**: Given widespread use of demos in UNDP-GEF projects and the frequent challenges and delays faced by projects in (a) designing demos that have replication/ scale-up potential and (b) designing demo financing / procurement mechanisms that meet UNDP's requirements, the NCE team should prepare an easy reference booklet on demo design and implementation. The booklet should cover models/ examples of types of demos that have good replication or scale-up potential. It should also explain what kinds of means for investing GEF project funds into the demos are acceptable/ allowed by UNDP, given different types of partners, such as city government, private sector, etc. (This booklet may address CCM demos generally, but also have a specific section on sustainable transport demos.) The booklet may include demo success stories as well.	UNDP NCE Team (and review/ study by project designers, project teams and COs)	Dec. 2023 – May 2024 for booklet preparation and ongoing for updates and review/ study
C2	**Written guidance on strategic implementation and results-based management of UNDP-GEF projects and required treatment of CER "INV" allocations**: UNDP NCE Team should provide guidance, including a written booklet, to COs so that they are clear on: (i) The nature of project strategy and results-based management of UNDP-GEF projects and (ii) rules and recommendations on reallocation of funds designated as "INV" in the approved GEF CER. The NCE Team should consult GEF on GEF's definition of "INV" funds and their requirements for shifting "INV" funds to "TA" funds once project is operational. COs should understand that GEF-approved projects should be highly focused on achieving targeted outcomes and indicator targets and do not normally change their outcomes. Given the high level of challenge of GEF projects, there is not much room for incorporation of ad hoc activities, particularly costly ones. If there is a	UNDP NCE Team - preparation of booklet Review/ study: UNDP Philippines CO, others involved in design and implementation	Dec. 2023 – May 2024 for booklet preparation and GEF liaison, ongoing for updates and capacity building of CO staff

	need for strategy adjustment, then the project framework must be revisited and any changes must be made in a transparent and well-documented way. In project design, INV funds should be allocated only to areas defined as INV. And, funds should not later be reallocated from INV to TA unless it is confirmed that GEF allows for this. This means that any decision not to implement project demos needs to be thoroughly and transparently discussed, documented, and approved.	of UNDP-GEF projects	
C3	**Due diligence in partner selection// Enhancing capabilities as partner:** UNDP Philippines CO, building on the challenges of LCUTS implementation, should conduct more due diligence on and negotiation with potential partners for each project at both the pre-concept stage and PPG stage to determine whether the partner will be able and willing to execute proposed projects successfully. (This will be different than standard HACT assessment.) Due diligence will include gathering intelligence on partner performance on other donor projects. In addition, UNDP may assess: availability of permanent staff to work with (rather than high turnover contract staff), officers potentially responsible for the project not being overloaded with other projects and having interest in the project at hand, and agency being a good fit for the topic at hand. In cases where the agency is a good fit thematically, but lacks needed track record and capacity to implement, UNDP may choose a stronger partner as IP, but make the good-fit-thematically agency an advisor to the project.// DOTr may want to consider developing some divisions or offices that have long-term staff and thus could work better with donors and perhaps have more focus on their projects. It may wish to develop monitored criteria for the NPD, such as for the time the NPD will be required to put into the project, mandatory attendance at relevant meetings, etc.	UNDP Philippines CO, DOTr	Ongoing
C4	**Written guidelines to address long-standing problems with indicators in UNDP-GEF projects; more serious redesign at inception when needed**: Give more attention to design of project indicators so that they are not ambiguous. Offer written guidelines on issue of whether indicators should require clear attribution to project or not. Ideally, indicators will be designed and assessed to reflect influence of project, thus facilitating results-based management. Past practices of assessing indicator achievements blind to whether these may be attributed to the project should be abandoned in favor of methodologies that focus on results due to the project. Further, if project design and indicators seem outdated at inception, the opportunity of revision at inception should be taken more seriously to thoroughly align activities and aims with what IP partner is doing and with what will be effective in the current environment.	UNDP NCE (prepare guidelines), UNDP CO and project teams (for re-design at inception); UNDP-GEF project designers, UNDP-GEF project evaluators	Dec. 2023 – May 2024 to prepare guidelines, then ongoing
C5	**Strategic policy component design for UNDP-GEF projects in Philippines:** For design of policy components of UNDP-GEF projects, UNDP Philippines CO should assess its strategy given what a project might achieve in 3 to 5 years and what kinds of outputs may offer the most impact and the most strategic result. Since brand new policies and standards at the national level might not be achieved on the time-scale of a project, an alternative indicator of progress may be needed for such efforts. At the same time, merely commenting on the draft policies of others in an ad hoc and limited way may not represent a significant enough contribution/ impact to project targets to justify a "policy outcome." Perhaps, in some cases, the project role could emphasize lobbying or holding a legislative conference to push for adoption of existing pipeline policies. Alternatively, national plans and department orders, as easier to achieve on project timescales, might be pursued. Or, efforts may shift to local level policies and standards. In that case, however, the project should ensure these items are drafted interactively with the LGU or region.	UNDP Philippines CO, project design consultants, IPs	Ongoing
C6	**Implementation strategies for LGU cooperation**: As UNDP learns from LCUTS and pursues a city-centered strategy in some future projects, it may consider some recommended options. It may have a field technical associate or manager in each pilot city, a strategy that a number of interviews indicate is one of the best things	UNDP CO and partners. Perhaps, UNDP-	Dec. 2023 and ongoing

	LCUTS did. It is recommended UNDP consider giving these persons a title that conveys more authority than "field technical assistant," so they have more leverage to do their jobs. Further, UNDP may wish to consider a decentralized PMU. Depending on number of staff, the field technical advisors might also double as component managers if they have those capabilities. In this scenario, the PM, M&E, and admin staff may be based in Manila, but other staff will be in the field where they can better leverage face-to-face interaction. An alternative or something to do in addition is to ensure that the project has a strong champion in each local government.	GEF Sustainable Cities Project	

1. Introduction to the Terminal Evaluation

This section presents background on the *Philippines Low Carbon Urban Transport Systems (LCUTS)* Terminal Evaluation (TE): its purpose, scope, methods and analysis, ethics, and limitations. The section further introduces the content of this TE Report.

1.1 Purpose of the TE

The TE has two key purposes: (1) Transparency: Providing information on and assessment of the project, so that interested parties can know whether funds were well spent. This includes identification of achievements/ progress toward targeted results and challenges. (2) Lessons and recommendations for the future: For the Government of the Philippines, especially DOTr and other agencies with work related to sustainable transport, UNDP, and other interested parties, identifying: (a) Priorities for building upon project results to realize LCT in the Philippines. (b) Ways to improve donor projects more generally, particularly in the Philippines.[9]

1.2 Scope

The scope of this TE is the LCUTS Project and its three components, as described in Section 2, covering policy support for low carbon modes of transport, awareness and capacity building for low carbon transport, and investment/ private sector engagement in low carbon urban transport systems in the country. Key aspects of the evaluation include relevance (e.g. was the project needed, innovative/providing results different than what would have happened in its absence), efficacy (were there results and were they meaningful/ impactful), efficiency (cost effective use of resources), and sustainability of results. The evaluation will also address the strengths and weaknesses of the project's design and its implementation. The greatest focus will be on the intended time period of implementation, from the time of project document signing on Nov. 16, 2017 to project close date (after two extensions) Nov. 16, 2023. To a lesser extent, the evaluation addresses design work carried out earlier. The PIF (an early concept note) was submitted in March 2014, presumably with work done in the several months leading up to that. The detailed design was submitted in June 2016. The geographic scope is the Philippines. Stakeholder segments include jeepney operators and cooperatives, distributors and manufacturers of e-jeepneys, charging station installers, government and commercial banks, relevant national level institutions and officials, LGU officials, barangay (neighborhood) councils, everyday people with urban transport needs, and universities and training institutes.

1.3 Methodology

TE methodology put heavy emphasis on in-depth stakeholder consultation and document review. It also included special information requests. Interviews had three different formats: face-to-face (16 meetings), online (55 meetings), and exchange of email questions (5 "meetings," some with multiple rounds). For many of the in-person and online meetings, there were also often follow up exchanges via email. Altogether, there were 71 meetings, or 76 if the pure email consultations are included. This is an extremely high number of meetings as compared to the norm for UNDP-GEF TEs, which might more

[9] UNDP's *Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects*, 2020, states four aspects of TE purpose, separating out the transparency/ accountability purpose from the purpose of assessing project results. The author of this TE report sees these two purposes as intertwined: assessment of project results provides transparency and accountability. The other two purposes listed are lessons learned (as included above) and gauging the convergence of the project with priorities of the UNDP country program. The last purpose is not mentioned above as a key purpose of this TE, though is addressed in this report in Section 8 under "Alignment with UNDP and GEF strategic priorities."

typically include 20, 30 or 40 interviews. The complexities of the project in that many different types of stakeholders were involved and there were many changes in the project team over time are among the chief reasons for the large number of meetings. For most meetings, confidential meeting notes were prepared. These included initial conclusions and needs for further follow up with stakeholders or in document review, which were then acted upon. The interviews are listed chronologically in Annex 1. Annex 2 organizes persons consulted by organization type. Exhibit 1-1 gives an idea of the range of types of organizations interviewed and the number of organizations of each type consulted (though individual project team members and individual consultants are each counted as one "organization"). Based on past experience, consultations with both stakeholders/ beneficiaries and implementers are a critical means to gathering information and insights into aspects of UNDP-GEF projects that are not always easily grasped by document review alone. For the LCUTS TE, stakeholders brought many different types of expertise to the discussion and shared their insights and time generously. Qualitative interviews allowed the discussion to address key questions as to whether and how the results are useful in addressing needs and what the prospects of sustainability are. The discussions also contributed greatly to insights for recommendations and lessons learned.

Exhibit 1-1: LCUTS TE: Organizations Interviewed in Each Category (based on Annex 2)

Note: Each "count" represents at least one and maybe more meetings.

Category	Number Interviewed	Category	Number Interviewed
Transport cooperatives	7	UNDP (CO and BRH)	2
LGU (City) departments/ officials	9	Current or recent project team members (each team member counted individually)	12
Other pilot LGU partners (university consortium, barangay council)	2	Past project team members (each team member counted individually)	7
Suppliers of e-jeepneys (including relevant association)	4	Individual consultants retained by project	6
Government financial institutions	2	Firms retained by project	3
National agencies and their departments	9		

Based on the above categorizations, 63 different "organizations" interviewed (see Annex 2), though each project team member is counted separately. Otherwise, if PMU is counted as just "one organization," the count of organizations interviewed would be 45. There were 76 interviews altogether (or 71, if email interviews not included). The number of interviews is higher than the number of organizations, because sometimes more than one person per organization was interviewed.

Document review was also critical to the evaluation process. The PMU provided documents of many types, including various documents related to the project's design and reporting on progress, project board meeting minutes, and the many document outputs of consultants and firms retained by the project. Policies and standards supported by the project were also provided, as well as some assessment of contributions by the project that were utilized in the final version of national policies and standards. Substantial document review before consultations enabled the interviews to be more successful and build on the basic information in the documents. Annex 3 lists documents reviewed.

Information requests were also an important part of the process, though more limited. There was a request for a list of contracts with individual consultants and firms that was fulfilled and was of great help in understanding some of the project expenditures and activities.

1.4 Data Collection and Analysis

The discussion of methodology (sub-section 1.3 above) explains how information and data were collected for the TE. To elaborate, after document review, lists of questions addressing main evaluation areas, such

as relevance, efficacy, efficiency, sustainability, gender and other cross-cutting issues, project design, and project implementation were prepared, as were a number of clarification questions. Specific questions on these topics were organized for each of the three outcomes and the project overall. A long question list emerged, though a more tailored, concise list was prepared prior to many of the interviews. Many of these questions (from the long list) are provided in Annex 6. Key, selected questions from the longer list are shown in the Evaluation Matrix, provided in Annex 5, which also identifies sources of information that were to be used to answer the questions. Having interviews with multiple different persons and organizations, along with consultation of documents, allowed for triangulation to increase confidence in answers to certain question. In particular, it helped the evaluators determine answers to questions on which responses among stakeholders were inconsistent with one another. As noted, following interviews, interview notes would be prepared to highlight important insights and conclusions and identify question areas that would require further research or triangulation. As a part of analysis work, tables of different types were prepared to understand trends and numbers. Assessment of the project indicators proved to be especially challenging, due to both interpretation issues and challenges in assessing the level of project contribution to achievements. For this purpose, the evaluator prepared an in-depth discussion document. The document highlighted some of the potential differing interpretations of the indicators. It also included sub-tables on some of the indicators. At times, color coding was used to reflect various aspects, such as project contribution and meaningfulness/ potential impact of the result.

1.5 Ethics

The evaluation follows the UN Evaluation Group code of conduct (see Annex 7). In particular, special care is taken not to reveal what a specific stakeholder said during consultations. Further, the evaluators must be unbiased and not allow their assessment to be influenced by relationships with UNDP, the Project Team, the IP, etc. The situation is delicate, as the UNDP CO commissions the work, but is also being evaluated. And, the Project Team typically makes arrangements for the evaluation and provides documents, but is being evaluated.

1.6 Limitations to the Evaluation

Evaluation of UNDP-GEF projects is by nature very challenging, as the evaluators are tasked with assessing a very large amount of information by various methodologies in a short period of time. Clear answers are not always easily available, so that the evaluators must utilize triangulation between various sources and logic to piece together the reality of what has happened and what has been achieved. Beyond this typical challenge and approach to all such evaluations, the TE of the Philippines LCUTS Project faced the following more specific limitations:

- The evaluation was begun before the author of this report was onboard. She did not participate directly in the first 37 interviews nor in the formulation of questions for them, including all of the interviews with the critical beneficiary stakeholder groups of transport cooperatives and LGU departments/offices. Of this set of interviews, 21 were online and recorded, so that the author could review them. Yet, about ten of the 21 recorded interviews had significant parts not in English. To address related challenges, the author was able to request follow-up feedback from some of the relevant stakeholders via email.
- The project faced substantial turnover in its project team and in DOTr leadership of the project. In many cases of PMU positions (probably for each of the project's thee component leads), three different persons had held the position and there had been gaps in between them. So, for a six year project, but with 4.5 years of real implementation, considering one particular component lead position, there may have been three different persons holding the position somewhere between six months and one year each. Handover between successive position holders was reported to be weak or

nonexistent. This resulted in a lot of challenge trying to understand project history and particularly achievements before the current team came on board. To address the situation, there was outreach to former project team members, two via online interview and four via email interview. Considering also that the project team, at the time of most TE consultations, had about 14 members, 11 of whom were working on results-oriented tasks and interviewed individually, the task of understanding the PMU's work over the full 4.5 active years of the project (even the most recent year) was quite challenging. As for DOTr, there were a couple of interviews with relevant persons, but, though the project had three different NPDs, none were interviewed.

- The Covid-19 pandemic occurred during the project's active 4.5 years. As a public transport focused project, the pandemic had disproportionate impact on the project's sector as compared to other UNDP-GEF projects in the country. Because the project also faced other challenges, however, it is difficult to disentangle what was due to the pandemic and what may have been a result of other challenges. Understanding what else was going on in the sector during 2021 and 2022 (such as e-jeepney purchases for public transport in those two years) may provide some perspective.

1.7 Structure of TE Report

Per UNDP request, the TE report follows the sample structure provided in the TOR for the assignment and includes related content indicated in UNDP's *Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects*, 2020. In some cases, additional sections or sub-sections have been added. In particular, separate results sections (Sections, 5, 6, and 7) have been added for each of the three project components as a means of providing the reader with more in-depth content on what the project has done and how this addresses the criteria of relevance, effectiveness, efficiency, and sustainability. These precede the overall results section (Section 8, which is provided in Annex 10) that includes the content recommended by the aforementioned UNDP TE guidelines. Also, because the recommended content under each section may result in some repetitiveness, in some cases the reader is referred to other sections to avoid such repetition.

To summarize the content of the report in sequence: A summary of the main findings and recommendations of the TE can be found in the Executive Summary at the beginning of this document. The main text begins with two preliminary sections, this one, Section 1, being an introduction to the TE itself. The following one, Section 2, presents background on the project and the country context. Section 3 assesses project design. Section 4 presents findings and assessment on project implementation. Section 5, 6, and 7, present findings and assessments on each of the project's three components, respectively, while Section 8 (which may now be found in Annex 10), provides the standard overall assessment of project results with required content. Section 9 presents conclusions, lessons, and recommendations.

2. Project Description and Background Context

Before moving to assessment of the Philippines LCUTS Project in subsequent sections, a description of basic project situation and relevant background are provided in this section, including: (i) project timeline, financial resources, and implementation arrangements; (ii) development context and baseline situation at time of project launch; (iii) problems, threats, and barriers targeted; (iv) immediate and development objectives, theory of change, and targeted results; and (v) main stakeholders to be involved.

2.1 Project Timeline, Financial Resources, and Implementation Arrangements

Project focus and timeline: The UNDP-GEF-DOTr Philippines Low Carbon Urban Transport Systems Project was designed as a four year project, with its main focus on public transport and electric vehicles.

Exhibit 2-1 shows the project timeline and major milestones. Red ovals show some key delays. The project document was signed Nov. 16, 2017, which is the effective project launch date and over a year after the CER was cleared by the GEF, representing significant delay. After official launch, the project didn't have its inception workshop until about one year later, in Dec. 2018. And, another subsequent delay is that the project manager and rest of the team were not hired until the 3rd and 4th quarters of 2019. Together, these two delays after launch mean that the project lost about 1.5 years of implementation time, thus being reduced to a 2.5 year project, spanning the Covid-19 pandemic, with original close date Nov. 16, 2021. The project received a 1.5 year extension sometime in 2021. Then, in May 2023, close to its then new close date, it received a second extension of six months. Thus, total project duration is 6 years, but given time lost in start-up, effective time for active implementation including the two extensions is 4.5 years.

Exhibit 2-1: Philippines LCUTS Project's Timeline (*designed duration of project implementation: 4 years; duration with two extensions 6 years total, but active implementation of 4.5 years*)

Red ovals indicate delays between steps that are excessive. Size roughly corresponds to duration of excess time gap.

PIF Approval	CER/ ProDoc clearance	ProDoc last signature	Inception Workshop	Implementation	Original close date	Current close date
May 25, 2014	Aug. 31, 2016	Nov. 16, 2017	Dec. 10, 2018	[Staff hired Q3, 2019] [*MTR finalized: Feb. 2021*]	Nov. 16, 2021	Nov. 16, 2023

Financial resources for the project: GEF funds for the project are USD 2,639,726. Of this, the CER indicates USD1,086,776 classified as "INV" or investment, with the rest as TA. Committed co-financing from UNDP is USD70,000; from the private sector, USD12.6 M; and from government, USD9,749,979 (from DOTC, predecessor to DOTr, and DOST). Total committed co-financing is thus USD22,439,979. Each of the sources of committed co-financing are indicated to be a combination of cash and in-kind, with the majority being cash.

Implementation arrangements: DOTC, now DOTr, is the project IP responsible for implementation, with UNDP being the GEF IA, responsible for quality control. The ProDoc, however, indicates DOST and DOE as "Responsible Partners." It further specifies that DOTC will be responsible for the project's Component 1 (policy), providing the associated component lead, whereas DOST and DOE will be responsible for Components 2 and 3, providing the associated component leads. In practice, this did not happen. DOST and DOE, while members of the Project Board, did not have any other role; and all three component leads were hired on the market.

The design calls for a Project Board to be responsible for major management decisions, such as changes to the project, and contribute to M&E and oversight. The ProDoc diagram on implementation arrangements indicates project board members to include: (i) Government agencies: DOE, DENR, DTI-BOI, HLURB, DOST, TESDA, DILG; (ii) Private sector: vehicle manufacturers, associations of operators, investors; (iii) Financing institutions: Commercial banks, DFIs, Multilateral donors; and (iv) Academia, research institutions, and civil society: NCTS (a research institute, which later held two major contracts with the project and is associated with University of the Philippines), universities, NGOs.

In terms of the PMU, the project calls for a Project Director, seconded from DOTr, to be appointed to oversee day to day issues on a part-time basis, and a full-time project manager. It also calls for an administrative assistant, a finance associate, and the three aforementioned component leads (to be provided by the government). In practice, during the first three or so active years of implementation, all team members were hired on the market and included, though positions were often not filled, a project manager, an M&E officer, three component leads, a finance officer, and an administrative assistant, for a

total of seven persons. Between Feb. and April 2022, a field technical assistant was newly added to be based in each of the pilot cities, bringing the total number of positions to eleven. Then in Dec. 2022 and Jan. 2023, three "research associates," one for each component, were added, bringing the total number of PMU positions to 14. As noted, there was considerable turnover in the original positions, with an estimated three different persons serving in the component lead role for each of the three components. And, there were times when posts were empty and remaining staff had to cover multiple roles. By the time the Terminal Evaluation began in late April 2023, seven of the core staff working on activities (so, not including the admin assistant and finance officer) had been with the project just around six months or less. The four field technical assistants had each been with the project a bit over one year. Just the component one lead, at 1.5 years, had been in place longer. Yet, by the time of the drafting of this report, that component lead had left the project, two of the field technical assistants were no longer in place, and one of the research associates had left, bringing the very large team that maxed at 14 down to ten persons. And, the two other component leads left prior to EOP, with total staff at EOP estimated at around seven.

2.2 Development Context and Baseline Situation

Energy, environment, public transport, and traffic concerns as motivations for the project and related background: At both the time of project design and launch (Nov. 17, 2017), the transport sector in the Philippines was (and continues to be) a top consumer of energy and emitter of GHG emissions in the economy. Data presented by DOE indicates the transport sector accounted for 35.7% of total final energy consumption the Philippines in 2018, consuming 12.2 MTOE that year, a rise of 3.4% from the prior year. Road transport, in turn, made up 87.9% of energy demand within the transport sector that year and saw a 4.1% rise in consumption. The number of registered road vehicles in the Philippines in Dec. 2018 was 11.6 million, a rise of 11.4% from the previous year, reflective of an ongoing rapid increase in the vehicle stock. The transport sector is indicated by DOE to have been responsible for 27.9% of GHG emissions in 2018.[10] The Philippines is a net importer of petroleum products, with net imports in 2018, according to DOE, hitting USD12.1 billion. Added to this, the increasing vehicle stock and use of road vehicles continue to exacerbate already problematic air quality issues and traffic concerns in many cities. Road vehicles are considered the top source by far of air pollution in most urban areas. Thus, it can be seen that there are several interrelated motivations for pursuing lower carbon road transport in the Philippines, such as through use of EVs in public transport, the original focus of project design. These motivations include reducing energy consumption, reducing local air pollution and GHG emissions, and increasing energy security/ lowering import expenditures.

In addition to the above motivations for the project, stakeholders have expressed that the need to improve both public transport and the traffic situation in general in the Philippines is great. Traffic jams abound and, particularly at the time of project launch (but continuing, albeit with some improvement, until today), public transport has not been rationalized to the extent needed, in terms of which types of vehicles ply which routes and how many vehicles of each type are allowed to ply a certain route. Important public transport vehicle types include jeepneys (like mini-bus in scale and the main focus of the project), buses, and motorized tricycles (which actually serve as taxis). For many LGUs, trikes are the main form of motorized public transport within the LGU; and jeepneys and buses ply routes between LGUs. Yet, for other LGUs, jeepneys and buses have significant intra-LGU routes.

Situation of jeepneys, PUVMP, and LPTRPs: Jeepneys are a prevalent form of public transport in the Philippines and a main focus of the LCUTS Project. Many of the jeepneys on the road at the time of project design (and up to the present) were/ are old and polluting. And, many of the jeepney owners were

[10] DOE, *Philippine Energy Plan 2018-2040*, Chapter 1, Energy Situationer, August 2020. [https://www.doe.gov.ph/sites/default/files/pdf/announcements/1_Energy%20Situationer_19Aug2020.pdf?withshield=1 accessed June 28, 2023.]

individuals who drove their own jeepneys. While they may have had a franchise[11] from LTFRB to ply a certain route, the situation on the road was nevertheless often chaotic, with jeepneys stopping wherever they pleased. Some may have paid a certain amount to businesspersons who lease public transport terminals to obtain stopping rights. Stakeholders explain that, for the individual jeepney owners/drivers, the jeepney may be seen as a "livelihood" more than a formal business. That is, the individual jeepney owner lives day to day from daily earnings of driving the jeepney and has neither the means nor know-how to assess investment opportunities and opportunities to scale and streamline the business.

In 2018, after the official project launch, but before LCUTS really began to be active, the government, via DOTr, launched its Public Utility Vehicle Modernization Program (PUVMP). This program has strong emphasis on jeepneys from two angles (though is not limited in scope to jeepneys). It requires the individual jeepney drivers to consolidate into transport cooperatives; and it requires eventual upgrade of old jeepneys from inefficient, polluting models to either Euro IV (or higher) jeepneys or electric jeepneys ("e-jeepneys"). For this upgrade, the program offered a subsidy of 160,000 Philippine pesos per vehicle purchased (about USD3,000), which continued for most of the LCUTS's project lifetime (though was raised to 280,000 pesos[12] close to project close) and the rest may be obtained in low-interest bank loan from a government financial institution, either Development Bank of the Philippines or Land Bank of the Philippines. Officially, these loans require no collateral other than the purchased vehicle itself. Consolidation of jeepney operators was originally required to be completed by June 30, 2023, but after protests by jeepney owners in March 2023, the deadline was extended to December 31, 2023.

PUVMP has other aspects, such as the requirement of Local Public Transport Route Plans (LPTRPs). These were actually introduced earlier, but have now been taken under the umbrella of PUVMP. They designate how many and which public transport vehicles will ply which routes. The government financial institutions require that an approved LPTRP exists for the concerned LGU before approving a loan for new jeepneys for a transport cooperative. This is to ensure the cooperative is not at risk of losing or deletion of route or major changes in the existing route and that repayment is viable. It has been a challenge for many LGUs to get the LPTRP prepared and approved. And, as noted by some stakeholders, while the LPTRPs are a good step, in theory they should determine the most appropriate vehicle type per route (e.g. bus or jeepney) and not mix the two on the same route. This more comprehensive "rationalization" may result in more buses and fewer jeepneys, given the high population density in many urban areas of the Philippines. Yet, because jeepneys are closely tied to livelihoods and have strong political organization, the apparent strategy is to take any such transition to vehicle type rationalization slowly. Thus, there continues to be an overlap in vehicle types on different routes in the LPTRPs.

Electric jeepneys: The ProDoc indicates that there were already a few e-jeepneys on the road in the Philippines at the time of project design.[13] Yet, according to findings, the baseline situation is that there may have been some e-jeepneys on the road by 2017 in private contexts, such as employer shuttles, but that e-jeepney deployment in public transit did not begin until PUVMP did, with the first e-jeepneys deployed in public transport in 2018 and more in 2019 and early 2020 (the latter being about the time the project activities began to ramp up). During this period (2018 to early 2020), there have been two main suppliers of e-jeepneys to public transport, Star 8 and Tojo Motors.[14] Another supplier, GET, included as a co-financier in project design, had deployed its vehicles for private customers, but not in public

[11] One reviewer of this report suggests the official term "CPC" (Certificate of Public Convenience) be used instead of "franchise." The term franchise was commonly used in consultations to describe permission granted for a certain transport cooperative to ply a certain route.

[12] This is for Class II public utility vehicles, which is the category of most e-jeepneys.

[13] According to one reviewer of this report, there were e-jeepneys on Makati as early as 2007.

[14] The earlier models of Star 8 and Tojo Motors, according to one source, operate with lead batteries and not lithium batteries, which have much shorter operating range and battery life, lower power and speed, as compared to lithium batteries, which the latest models are now using.

transport. Recent DOTr statistics (prior to launching of the project's Incentive Program vehicles) indicate a total of about 375 e-jeepneys on the road in public transport.

Government agencies relevant to EVs: A number of government agencies are relevant to electric vehicles. Key among these are DOTr, DTI, DOE, and DOST. DOTr's role is tied to public transport and efforts to promote EVs in public transport. DTI's interest is from the angle of promoting development of the EV industry and associated value chain. DOE's interest is from the energy angle and includes a focus on charging stations and vehicle energy efficiency labeling. DOST's interest is in R&D and includes topics such as improved batteries.

Policies and certifications related to EVs: At the time of project launch in November 2017, there were few policies adopted related to the promotion of electric vehicles and associated guidance. As noted, PUVMP allows for subsidies and low interest bank loans for e-jeepneys. Yet, the subsidy is no higher than the subsidy for Euro IV jeepneys, representing, as some stakeholders explain, DOTr's ongoing position of remaining "technology neutral." (Note: Many countries have promoted EVs by offering higher subsidies for them.) For some years, there had been a draft bill in the Philippine legislative branch for promoting electric vehicles, but it had seen no recent progress by the time of project launch. There were also, at that time, no official pure battery EV technician training programs or "training regulations" and certifications[15] under TESDA, the national authority for certifying training programs and technicians. TESDA had approved the development of a hybrid vehicle technician training regulation in 2015, but the process of preparing the criteria for national certification was never completed.

Active transport: While active transport (walking and cycling) were certainly present in the Philippines at the time of project launch in Nov. 2017, some stakeholders have emphasized that city design is often not friendly to pedestrians and cyclists. During the Covid-19 pandemic, these modes of transport gained in popularity in the Philippines. While, as will be discussed, the project design called for LCT plans for LGUs (which might be broadly interpreted to include active transport), other aspects of project design were more squarely focused on EVs and public transport. Yet, in implementation, the project began to put more emphasis than planned on active transport. DOTr has a special division focusing on active transport.

2.3 Problems and Barriers that Project Sought to Address

The main problem that the project seeks to address is high energy use and high GHG emissions from urban transport systems in the Philippines. In particular, it addresses the lack of enabling environment for commercialization of low carbon urban transport systems (especially electric and hybrid vehicles) with emphasis on public transport vehicles.

Barriers that the project sought to remove to address this lack of enabling environment include the following:

Lack of needed policy and standards, planning, and institutional capacity: As noted, at time of project launch (Nov. 2017), there was a lack of policies and programs to support low carbon transport, particularly the deployment of EVs. While bills that would have promoted EVs had been drafted, their future progress remained uncertain. Thus, fiscal and non-fiscal incentives were weak. (As noted, in the public transport sector, PUVMP, launched shortly after project launch, provides only the same incentives for e-jeepneys as for Euro IV jeepneys, being "technology neutral".) Many needed standards and guidelines, such as those for charging stations, were lacking. And, there was also no clear coordination mechanism among government departments or platform for involvement of the private sector with

[15] A completed training regulation under TESDA allows for national certification of the technicians trained, specifying the criteria to be met to obtain the certification.

government in promoting EVs. There was a Philippines Alternative Fuels Roadmap 2013-2030 in existence, but this was mainly the domain of DOE and focuses more on LPG and CNG vehicles, except for its emphasis on electric three wheelers.

Lack of capacity, awareness, and information: There was also a lack of knowledge and expertise regarding low carbon transport planning at the national and LGU levels. A particular challenge has been (and continues to be) lack of data collection on urban transport projects. In the case of e-jeepneys, this has meant uncertainty as to their financial viability and, in some cases, their technical viability. There is a lack of technicians that can service EVs, lithium ion batteries, and charging stations. As noted, nationally coordinated certification, at the time of project start, had no progress on pure battery EV servicing certification and limited progress on hybrid technician certification. Information and awareness among the public and policy makers regarding e-vehicles and low-carbon transport generally was also weak. Further, some incidents with lithium ion battery combustion have led to lack of confidence in EVs.

Lack of established market, supply, and infrastructure: At the time of project start, suppliers of EVs and their ability to provide service was limited, given that the suppliers lacked both market and scale. By the end of 2018 (a year into "official" project implementation but before real activity was launched), there were only two suppliers in the Philippines that had deployed e-jeepneys in the public transport sector (Star 8 and Tojo Motors), though there were one or two more (GET and, possibly, PHUV) that were supplying these vehicles to entities serving private routes, such as in the case of employee shuttles. There was also a lack of charging infrastructure, which resulted in a lack of confidence about EVs.

Lack of investment and access to finance: At launch of project, there was a lack of dedicated finance for low carbon vehicles, such as EVs. Yet, DBP already had its Green Financing Program. And, Land Bank had a project known as REWARD/ Electric Vehicle Project. Still, it was not until PUVMP was launched in 2018 that jeepney cooperatives began to access government financial institution low-interest loans for e-jeepneys. And, sources indicate that, since that time, processing of loans has been very slow, with many stalled in the banks' pipelines, even resulting at times in vehicles being delivered before processing is complete. One explanation offered, however, is that the banks quite reasonably require LPTRPs to be approved to ensure that the route on which the proposed e-jeepneys will be deployed is secure, so that loan repayment will be possible.

2.4 Immediate and Development Objectives, Theory of Change, and Expected Results of Project

Project objective: The project objective, corresponding to the above-discussed main problems it aims to address is: "To create an enabling environment for the commercialization of low carbon urban transport systems (e.g., electric and hybrid vehicles) in the Philippines." Given the ensuing debate on what exactly the project is about, it should be noted that the objective emphasizes commercialization, as well as electric and hybrid vehicles. The emphasis on EVs can be seen throughout the activities described in the ProDoc. The project's Outcome 3 further puts heavy emphasis on the private sector.

Project components, outcomes, and outputs: Exhibit 2-2 summarizes basic project design showing, for each component, its outcome(s) and, for each outcome, its outputs. The three components correspond roughly to policy support for low carbon transport, capacity building and awareness for low carbon transport, and private sector involvement to achieve deployment of EVs in public transport. Outcomes of UNDP-GEF projects are meant to contribute to achievement of the project objective and are the key level at which terminal evaluations assess progress. They are thus typically not altered during project implementation. Outputs are meant to contribute to achievement of their associated outcome, but can be changed during implementation as a part of adaptive management if it is realized they are no longer

needed or not useful to outcome achievement, or if another approach would be more effective. Later in this report, in Sections 5, 6, and 7, progress towards the outcome statements and the output statements is assessed for each component, respectively.

In Exhibit 2-2, GEF funding allocation for each outcome is also indicated. GEF requires outcome funding allocations be designated as either TA (technical assistance) or INV (investment), the latter meant to be associated with investment, such as in infrastructure or vehicles. Among the project's four outcomes, only Outcome 3.1 is an INV outcome. Yet, with an allocation of USD1,086,776, its GEF budget accounts for about 41% of the project's full GEF budget of USD2,639,726. In the author's experience, GEF takes the INV allocation in CCM projects very seriously and does not want it reduced, as it typically represents a very clear path to at least a minimum amount of direct GHG ERs to be achieved by the project.

Exhibit 2-2: Philippines LCUTS Project Components and their Targeted Outcomes, and Outputs

Component 1: Policy support for the promotion of low carbon modes of transport
Outcome 1: Effective enforcement of policies and support provided for the promotion of low carbon transport (GEF: USD624,900 TA)
Output 1.1: Developed supportive policy framework and regulations to facilitate the uptake of low carbon transport systems Output 1.2: Established coordination mechanism among agencies involved in low carbon transport planning and development Output 1.3: Developed Low-Carbon Transport Master Plan Output 1.4: Developed guidelines for local government units on the approval of related supportive infrastructures (e.g. charging station locations, right-of-way) Output 1.5: Approved and enforced low carbon vehicle operators and manufacturers guidelines
Component 2: Awareness and institutional capacity development
Outcome 2: Adopted and implemented low carbon transport plans and/or programs in major cities (GEF: USD400,350 TA)
Output 2.1: Developed capacity of planning institutions and regulatory agencies on (a) coordinated policy making, investment planning, and implementation of low carbon transport; and (b) modern planning tools, registration, and licensing of low carbon vehicles Output 2.2: Completed awareness and advocacy program Output 2.3: Established centers of excellence to support local capability and expertise for new applications/ services/ products Output 2.4: Developed sufficient number of skilled local technicians
Component 3: Investment in low carbon transport systems in the country
Outcome 3.1: Increased private sector participation in the widespread deployment and commercialization of low carbon transport (GEF: USD402,000 TA)
Output 3.1.1: Completed public transport route rationalization assessment and feasibility studies
Output 3.1.2: Developed standard procedures for on-road and laboratory tests of new vehicle fuel technologies
Output 3.1.3: Established and approved electric vehicle (EV) charging protocol and standardization
Outcome 3.2: Increased private sector investment in low carbon transport (GEF: USD 1,086,776 INV)
Output 3.2.1: Completed and adopted viable business plan to support the wider application of low carbon vehicles
Output 3.2.2: Installed standardized solar EV charging stations in pilot areas and cities
Output 3.2.3: Introduced and operational at least 15-20 hybrid or electric vehicles for mass transit and operational automated guideway transit (AGT) system

Theory of change: The original project design did not include a theory of change. On October 29 and 30, 2020, about a year into active project implementation, the project held a theory of change workshop

attended by ten persons and developed a theory of change. The theory of change developed takes PUVMP and challenges in its implementation as the TOC baseline, which is stated as:

"National program on Public Transport Modernization Program will be implemented in an uncoordinated, fragmented manner with an inadequate focus on EVs and hybrid solutions. Phase of implementation will not result in visible impacts. Insufficient support for transfer policy and regulatory framework for transport. Weak incentive programs to encourage private sector participation. Public low confidence in EV technology."

From this baseline, the TOC diagram shows the original outputs as designed (as in Exhibit 2-2) to lead to the outcomes (also as in Exhibit 2-2). The outcomes in turn are shown to lead to 4 intermediates states, which then lead to two impacts, which then lead to the overall global environmental benefit of reduced GHG ERs and reduced local air pollution. (See Exhibit 2-3)

Exhibit 2-3: Theory of Change beyond project Outcomes

Intermediate States resulting from outcome achievement, and impacts resulting from intermediate states

Intermediate States (ISs) Resulting from Outcome Achievement (*outcomes and other ISs leading to the intermediate state*)	**Impacts (*intermediate states and other impact leading to impact*)**	**Global Environmental Benefit (*impact leading to global environmental benefit*)**
A. An enabling environment is created for commercialization of low carbon urban transport systems (i.e. electric and hybrid vehicles) (*Outcome 1*)	I. Increased number of approved low carbon transport systems in the Philippines (*ISs B and C*)	Reduced global GHG emissions and local environmental pollution (*Impact II*)
B. National government and LGUs advocate for increased funding for low carbon transport and green urban development (*Outcome 2 and IS A*)		
C. Increased confidence of the public and the government of low carbon transport systems and green urban development (*Outcome 3.1 and IS B*)	II. Scaled-up investments in e-vehicles for public transport and the private sector in the Philippines (*ISs C and D, Impact I*)	
D. Increased investor confidence in returns from low carbon transport investments (*Outcomes 3.1 and 3.2 and IS C*)		

Project objective and outcome indicators and targets: Exhibit 2-4 summarizes the objective-level and outcome-level indicator targets of the project as designed. (No official changes were made to these indicators throughout the life of the project.) In addition to progress towards outcome and objective statements, progress towards objective and outcome-level indicator targets is another key means by which TEs assess UNDP-GEF projects. Suitability of indicator design is discussed in Section 3. Section 3 also elaborates the author's suggestion that indicators be interpreted such that they allow for results-based management. That is, indicator assessment, to the extent possible, should provide information on results due to the project.

Exhibit 2-4: Philippines LCUTS Project Objective-Level and Outcome-Level Indicator Targets

Objective indicator targets (*3 targets*)
1. Incremental direct GHG emissions reduced due to Project over technology life time (tCO2eq) [Baseline 16,054 t CO2eq, Target 69,013 t CO2eq][16] 2. Number of people gainfully employed in the low carbon transport sector [Baseline 50, Target 222][17] 3. Number of daily users of new transport options using low carbon transport systems [Baseline 6,500, Target 20% increase per year]
Outcome 1 indicator targets (*3 targets*)
1. Number of issued policies that support the promotion of low-carbon transport by Year 3 [Baseline 0, Target 4][18] 2. Number of standards promulgated for low-carbon vehicles by Year 3 [Baseline 0, Target 3][19] 3. Executive Order for interagency coordination on low-carbon transport system approved and adopted by EOP [Baseline 0, Target 1]
Outcome 2 indicator targets (*2 targets*)
1. Number of cities capacitated by adopting and implementing low carbon transport plans and programs [Baseline 1, Target at least 4] 2. Number of institutions certified to conduct low carbon vehicle technician training [Baseline 0, Target at least 2]
Outcome 3.1 indicator targets (*2 targets*)
1. Number of entities involved in deployment and commercialization of low carbon transport systems by EOP. [Baseline 3, Target 5]
2. Number of bankable business plans, supported by the Project, completed and funded by Year 3 [Baseline 0, Target 2]
Outcome 3.2 indicator targets (*2 targets*)
3. Number of additional investors who invested in low carbon transport solutions facilitated by the Project by EOP [Baseline 0, Target 3]
4. Cumulative investment in new low carbon vehicle projects by EOP [Baseline ≈USD7.5 M, Target ≈USD20.0 M]

2.5 Main Stakeholders: Summary list

Main stakeholders are mainly those (aside from implementers) that were interviewed for the TE and summarized in the left column of Exhibit 1-1 and detailed in Annexes 1 and 2, with the addition of the general public, and especially riders of public transport.

In the private sector, key stakeholders are the transport cooperatives and jeepney operators across the country and, particularly, in the project's four pilot LGUs. They also include suppliers of e-jeepneys, including those already supplying the public transport market (Star 8 and Tojo Motors), those supplying the private transport market only but with potential to support the public transport market (GET), those newly shifting into e-jeepneys (Durabilt), and other potential suppliers now studying the market.

At the local level, stakeholders include LGU officials in relevant departments and mayors for the project's four pilot cities and neighboring cities. Given bicycle network work not in the original design, but later added to the project, LGU officials in over 20 participating LGUs across Metro Manila, Metro Cebu, and Metro Davao are also significant stakeholders. The Barangay Councils in Pasig and Santa Rosa, where the project promoted "open streets" (explained in Section 6), are also relevant stakeholders. Other local-level organizations that are stakeholders include the three universities in Baguio that formed an LCT consortium. Also, key stakeholders at the local level are everyday citizens, especially those who utilize public transport and, with later additions to the project, those who engage in active transport.

At the national level, DOTr and other national level agencies are key stakeholders. DOTr is involved as project IP, but also as beneficiary. Relevant departments include Land Transport and Infrastructure and

[16] Footnote in PRF implies addition of roughly 60 e-jeepneys
[17] Footnote in PRF implies focus on charging stations and public transport vehicles
[18] 2 each of developed and revised with low carbon transport provisions
[19] 1 newly developed for each of e-jeepneys, hybrid buses, and AGT

also the Road Transport Division of the Planning Department and the Office of Transport Cooperatives. The Assistant Secretary overseeing Road Transport held the NPD role of the project. (There were three different NPDs during the project, as the Assistant Secretary changed two times during its lifetime.) DOTr's subsidiary agency LTFRB, responsible for issuing franchise permission for public transport cooperatives to ply certain routes, is particularly relevant. Three other agencies particularly involved in EVs are DOST, DOE, and DTI. TESDA, given the project's aims in training, is also relevant. And, other relevant government agencies with roles on the Project Board and more general links to the project content are: NEDA, DENR, and the CCC.

Important national stakeholders also include the two major national development banks, DBP and LBP. Project business plan work is said to have included some outreach to commercial banks as well.

As noted in the sub-sub-section on "implementation arrangements" above, DOTr is the IP and UNDP-GEF the IA. Within these organizations and hired by them is a constellation of "implementing stakeholders." This includes PMU staff over the years, which reached a maximum of 14 persons at one point in 2023. It includes UNDP CO and regional staff as well. In terms of consultants, a number of expert individual consultants were hired by the project and there were three firms that held major contracts: University of Philippines' NCTS (contract for biking network plans and contract for LGU training on planning, total value combined of about USD250,000); SYSTRA (preparing business plans for two cooperatives, total contract value about USD150,000); and CHRG (feasibility studies and designs for 4 or so charging stations, contract value of about USD65,000).

3. Findings on/ Assessment of Project Design

3.1 Analysis of Results Framework: Project Logic and Strategy, Indicators, and Activities

Objective and outcome statement design and project title: Overall, the objective and outcome structure of the project is logical and reflects experience in structuring past UNDP-GEF projects. A multi-pronged approach via the components and outcomes bring together policy adoption (Outcome 1), capacity building and awareness (Outcome 2), and private sector facilitation and demonstration (Outcomes 3.1 and 3.2) to make progress towards the objective of an enabling environment for low carbon urban transport (particularly EVs). The author, however, believes that some of the challenges that have become apparent in implementation originate more in the details – in the outputs and activities (as discussed in the next sub-sub-section, "detailed design of outputs and activities"). The author has the benefit of hindsight to see what challenges were faced in implementation and in trying to achieve targets.

One challenge encountered that is reflected at a high level (project title and objective), however, and that has created a lot of angst and confusion in implementation is the project scope in terms of low carbon transport system measures. The title of the project is *Promotion of Low Carbon Urban Transport Systems in the Philippines* and the objective is "to create an enabling environment for the commercialization of low carbon urban transport systems (e.g. electric and hybrid vehicles) in the Philippines." Thus, the title does not mention EVs, whereas the objective mentions both EVs and the commercialization concept, which suggests vehicle technology as the focus, rather than traffic reduction, cycling, or walking. As an example of the confusion, one project staffer felt surprised about the EV focus, not realizing from the project title and job TOR until after coming onboard that the project was focused on EVs.

A thorough read of the project document and activities shows the project is focused mainly on EVs in public transport, though also includes demonstration of an AGT system. Yet, if reading activities one-by-one, while many mention EVs specifically, many do not and instead refer to low carbon urban transport

systems. Some may interpret such activities to have a much broader scope. Given the situation in the Philippines, where traffic is a big problem, measures to reduce traffic/ vehicles on the road might be included. And, active transport, cycling and walking, could also be included. Ideally, to avoid confusion, the ProDoc would have defined its scope more clearly. Indeed, for each activity, it could have clarified if it was referring to work specifically addressing EVs in public transport, or addressing some of the other areas possible, such as traffic reduction, cycling, and walking. Some suggest it is good for projects to be flexible and this lack of commitment in the wording of the project perhaps provided some flexibility, but it also resulted in the project to some extent lacking a focused, strategic approach.

Detailed design of outputs and activities: As noted, hindsight/ experience with implementation illuminates some areas where the project design might have led to a surer path to success. Under Outcome 1, it was seen that, at the national level, the project was often challenged to be a driver of policy results. Aside from some important successes, in most cases, when impact of the project on claimed policy achievements was assessed, it was found that the project may have contributed just a few lines that were included in the final adopted policy. In retrospect, the project's design for making policy contributions is quite general. In the future, it may be recognized that it would be quite difficult for the project on its own to draft a new policy that becomes legislation issued by the legislative branch during the lifetime of the project. [In the case of LCUTS, EVIDA was issued, but is said to have been around in earlier versions for around ten years.] Thus, if project design wishes to initiate legislation from scratch, different measures of achievement/ progress may need to be included rather than adoption and implementation. Other angles to consider in design are to pursue, at the national level, issuances from specific government departments or to support the development of local level policies, which can be adopted more quickly. Yet, there needs to be a strategic approach in advance to determine which types of these policies and policy topics will be pursued, probably with PPG phase consultation with specific departments that may be pursuing issuances. In the end, the project seemed somewhat opportunistic, trying to pursue different things to get "points" towards its indicator target. Project design might have been more deliberate, or re-design at inception, at least, could have been so.

As for Outcome 2, the design of outputs and activities are not strong enough to put the project on path to achieve one of its two targeted indicators, "Number of cities capacitated by adopting and implementing low carbon transport plans and programs," or simply to achieve the outcome statement itself, "Adopted and implemented low carbon transport plans and/or programs in major cities." Among the ProDoc activities, there is LGU training for LCT planning, but there are no activities to ensure plans that will be adopted are developed and that they are actually adopted and implemented.

There are also challenges with the design details for Outcome 3. The biggest problem is that the project is clearly aiming to have demonstration EVs deployed with GEF funds that lead to direct GHG ERs and replication, but it offers no detailed plan on how this will be accomplished. In the end, for about 3.5 years of what will be the project's 4.5 year active lifetime, the use of GEF funds for demo EV deployment was blocked with the arguments that either the ProDoc did not call for it, or that no good plan was in place to ensure demos were deployed that would be replicated. GEF provides substantial PPG funds for the design of UNDP-GEF projects. Detailed design of the demos, explaining the model of demonstration, particularly who will own the vehicles (e.g. transport cooperatives, DOTr, or local governments), how GEF funds will support them (e.g. partial subsidy or full purchase), and how many there will be in each location or with each partner, should be a requirement of UNDP-GEF projects with substantial INV outcomes. If the ProDoc had supplied such a viable plan, then the ensuing discussion could have been about whether the plan still made sense, needed to be adjusted, etc. and not about the fact that no good plan existed.

Another challenge with regard to the details for Outcome 3 is that there is some text in certain activities that implies new technologies of EVs ("newer generation of more advanced, modern systems") will be

demonstrated. Some clarification in this regard may have been helpful. GEF CCM projects are not designed to support R&D, as the aim is during the project lifetime to demonstrate and achieve scale-up. It is possible to demonstrate technologies mature in other countries, but not yet demonstrated in the country of the project.

Overall, one of the biggest issues with project design is that it was not implementation ready, despite substantial investment in the PPG phase. Lack of detailed demo design (which could have been included in the ProDoc as an annex) is perhaps one of the biggest omissions. As a result, project team members when coming on board realized they did not have a project ready to be implemented, but instead had to figure out (and debate among parties) what exactly the project was going to do. While it is true there is often a lag time from design to implementation, it is suggested UNDP-GEF projects be designed to be implementation ready. Then, if there are major delays (though great effort should be taken to avoid them), at inception, a round of major revisions should be undertaken and documented and approved, rather than the more typical "revision-less" or "revision-light" inception report.

Project indicators and indicator targets: Please refer to Exhibit 2-4 to review project indicators. While the project's indicators overall do a good job in capturing progress towards meaningful results, there are challenges in interpreting several the indicators. First, while in a few cases there are footnotes to explain the indicators, there is not much information provided on how the designers came up with specific baseline values. Not unrelatedly, a number of the indicators are not sufficiently specified to know exactly what they are referring to. (Example: Indicator 3.1.1 Number of entities involved in deployment and commercialization of low carbon transport systems by EOP. [Baseline 3, Target 5] Do these include manufacturers, transport cooperatives, or both?) And, another major problem is that the indicators as designed, if interpreted broadly, do not provide a results-based-management M&E tool, as results may be due largely or completely to factors other than the project. As a result, this report focuses on interpretation of the indicators that can show the value of what the project has done and also aims to eliminate overlap between indicators (such as between the aforementioned Indicator 3.1.1 and Indicator 3.2.1 "Number of additional investors who invested in low carbon transport solutions facilitated by the Project by EOP [Baseline 0, Target 3]"). Thus, Indicator 3.1.1 is interpreted by the author as suppliers of e-jeepneys to public transport cooperatives (which was either 2 or 3 at baseline and for which the project can be seen to have played a significant role in the addition of at least 2 new suppliers to the public transport e-jeepney market). And, so as not to overlap and be results-based, Indicator 3.2.1 is interpreted as transport cooperatives newly adopting e-jeepneys due to the project. Interpretation and assessment of indicators at EOP is provided in Exhibit 8-1 (in Annex 10).

3.2 Assumptions and Risks

The project provides four assumptions in its project results framework: (i) Strong support from relevant government agencies. (Objective-level indicator). (ii) Proposed changes in policy and interagency coordination are supported by the responsible agencies. (Policy indicator) (iii) The regulations on the vehicle inspection is in place through the PNS. (Policy indicator) (iv) DOTC have been mandated to implement EST nationwide which LCTs can be promoted nationwide. (Private sector/ investment indicator). The first of these assumptions turned out to be quite prescient, as lack of strong support from the IP and the IP's interest to remain "technology neutral" may have resulted in less progress than hoped for.

The project design identified nine risks. One of the risks was "political risk from change in leadership and priorities." This was also quite prescient as indeed, with a change in administration around the time of design completion, the new appointees at DOTr did not seem as interested in LCUTS as the ones that had designed the project. Some stakeholders commented that project design cycles should better match

political cycles so that designing administrations can also implement, though this may not be practical. In the absence of such a synchronized approach, UNDP may need to think of more defined strategies to bring a new administration's appointees on board with a project designed earlier. As for mitigation measures, the risk log merely mentions the commitment letters from the previous administration's appointees and also that the new administration's appointees will be brought on board and oriented at inception.

Lastly, given the project's focus on jeepneys, the political organization of jeepney owners, and the sensitivities associated with jeepneys as "livelihoods" for their owners (particularly at the time of project launch), the project might have defined a risk in this area and determined associated mitigation measures. The risk would have recognized the challenges to political acceptance of e-jeepneys and called for the project to proactively address this risk.

3.3 Lessons from other Relevant Projects (e.g. Same Focal Area) Incorporated into Project Design

The project design does, in places, emphasize incorporation of lessons from previous experience. For example, under policy activities, it suggests review of the experience in enforcing the National Transport Policy. It also suggests that capacity building on LCT planning will incorporate international best practices and lessons from this field. In its activity of route rationalization studies for low carbon public transport (which was not completed), the project design suggests lessons will be drawn from relevant route rationalization work of World Bank and JICA for public buses and BRT systems.

A key area that comes to mind where experiences of previous UNDP-GEF (or other GEF) sustainable transport projects might be leveraged is demo design. The project struggled to deploy demo EVs and, in fact, for 3.5 years of 4.5 years of active implementation, was blocked from doing so, presumably because of lack of an attractive plan. It is suggested that UNDP NCE comes up with a booklet of viable and replication-stimulating demo design models that UNDP-GEF project designers may consider[20] and elaborate upon with detailed demo designs to be included in a ProDoc annex.

3.4 Planned Stakeholder Participation

The ProDoc includes a table listing stakeholders and explaining their planned role in the project. This is assumed to be the Stakeholder Engagement Plan, as a separate such plan was not found in the ProDoc. This table lists DOE and DOST, their role on the Project Board, and their technical interests. Yet, it does not designate DOE and DOST as Responsible Partners that will provide the leads for the project's Components 2 and 3 as does the ProDoc section on Management Arrangements. Had there been more discussions and a firmer plan for DOE's and DOST's direct involvement in implementation of Components 2 and 3, the project may have benefited substantially. (DOE and DOST have been shown to be keenly interested in EVs and much more proactive than DOTr in donor project implementation.) Given changes in the landscape, some stakeholder organizations listed in the aforementioned ProDoc table are no longer around or no longer relevant. The biggest omission from this table, however, is the jeepney operators themselves. Assessment of the situation at present indicates that these operators, now

[20] This evaluator feels strongly that preparation of such "template" designs are a viable proposal as it could highlight how to handle various scenarios, such as subsidies/ incentive to private sector operators, etc., and clarify what is allowed by UNDP policy and what is not allowed. One commenter on this report, however, suggested as an alternative: "success stories of good demos or some kind of simple 'pre-feasibility' check list to be applied at the time of project design and ProDoc revision." Perhaps a booklet on demo design for transport projects could include both the proposed "templates" and success stories-plus-checklist.

consolidating into cooperatives, are actually the key audience of the project. Thus, there needs to be substantial outreach to them to stimulate the uptake of e-jeepneys, the top aim of the project.

3.5 Linkages between Project and other Interventions within the Sector

The ProDoc lists "baseline projects" (projects that would occur anyway in the absence of the UNDP-GEF project) and linkages of LCUTS to them. In particular, it mentions initiatives of DOTr, DOST, and DOE. In practice, these initiatives were evolving, but the project did aim to support the agencies, particularly through its policy work. Yet, designing stronger linkages with government programs in future projects may increase the potential for project impact. One stakeholder suggestion for future design work, considering lessons learned with LCUTS implementation (for which the IP was not that engaged), is to make project design more fully in sync and congruent with the relevant program of the IP. In this way, the IP may become more engaged in the project and leverage it to realize greater impact with its much larger program. Since PUVMP came online after project design (though was probably being designed simultaneously), this kind of approach might have called for some redesign work at the time of LCUTS inception in Dec. 2018.

Another significant point related to linkages is that, while there were other donor projects related to EVs that came online after LCUTS, the evaluation did not find much coordination with them. One such project even installed charging stations in Pasig, something LCUTS was planning to do subsequently. There is also a UNIDO-GEF-DTI project on EVs. LCUTS project team has had meetings with this newer project in hopes that the latter will build on LCUTS's achievements. Enhancement of links between the two projects may indeed generate an opportunity to partner, such that the UNIDO-GEF-DTI project continues and builds on some of the successes of LCUTS (e.g. in developing EV technician training programs and certifications, in monitoring e-jeepney demos and disseminating results, etc.).

Future design work might recognize the fact that (1) critical government programs under preparation during project design may be launched after design is complete and (2) relevant projects with which to coordinate may also come online after a project being designed is launched. In the first case, the project design may call for realignment of activities with the government initiative if it is a close fit to what the project is trying to achieve. In the second case, the project design may call for interaction/ coordination with closely related projects that come online after project launch. Indeed, it seems often the case that the initiatives for which coordination is discussed in ProDocs are almost complete and less relevant than those that come online later or are being concurrently designed.

4. Findings on Project Implementation

4.1 Implementation Challenges and Strengths Identified

Before addressing aspects of project implementation as required by UNDP-GEF TE guidelines in sub-sequent sub-sections, this introductory sub-section raises prominent implementation challenges and strengths identified during the course of the evaluation.

Implementation Challenges Identified

1. Delays: As shown above in Exhibit 2-1, the LCUTS project suffered from a number of delays, which were detrimental both to the time the project had to implement and to the "freshness" of the project design. There were 27 months between PIF approval and CER/ProDoc clearance, whereas the goal is closer to 18 months. After CER/ ProDoc clearance, the ProDoc sat unsigned for 15 months. Ideally this should have taken no more than a few months. Once the project document was signed on Nov. 16, 2017,

it was then over a year before the inception workshop was held, but more importantly over a year and a half until staff were hired. This means that the four year project had its implementation time reduced to 2.5 years, before getting two years' worth of extensions, which allows it to now have 4.5 years of "active implementation" time. All of the aforementioned delays occurred well before the Covid-19 pandemic and suggest that UNDP and DOTr need to develop a better system for progress from initial project concept all the way through to launch of active implementation with hiring of the project team.

Delays with regard to specific activities were also reported. Response from DOTr on various items delivered to them was reported often to be especially slow and much slower than experienced with other agencies that partner with donors. UNDP processes also caused delays. For example, in designing the e-jeepney incentive program, to get from a first plan to a final one that UNDP would accept took about four months – and this was in a project that was very short on time. As another example, time sensitive articles drafted to promote the project tended to languish waiting for various approvals at UNDP, to the point that they became no longer relevant as written. Faster turnarounds on such items is needed and institution of minimum response times for short, timely articles is suggested.

2. Low engagement and unavailability of IP/ high turnover of IP: Many stakeholders pointed to what seemed like a lack of interest of the IP in the project during much of its implementation, though with some improvement closer to EOP. This is compared to a situation in the Philippines where IPs are often very proactive and quickly turnaround requests from their donor projects. A key issue is that the Road Transport Team at DOTr has many large projects on its plate. So, it was difficult for this project, comparatively small in budget and in an area of non-core focus, to garner much attention of busy officials. At one point, the Chair of the Project Board, also the NPD, was lookin for substitutes from other a encies so as not to have to attend board meetin s. [redacted] An additional challenge is that DOTr has high staff turnover, as many positions are political appointees. There were at least 3 different NPDs during the lifetime of the project and also a period when the role was unfilled. LTFRB, one of its subsidiary agencies, which has more permanent staff and offices throughout the country and links with transport cooperatives, might be a more dependable and suitable partner for a project like LCUTS. Yet, LTFRB may not have the status to be an IP on its own. Another proposal to address issues of high turnover is that DOTr hire long-term staff to handle donor projects and/or carry out "rightsizing" (restructuring and raising efficiency in terms of output per staff member).

Considering this experience, it is suggested that UNDP Philippines needs to have a more nuanced and strategic policy before confirmation of the IP for its UNDP-GEF projects and certainly before submission of the ProDoc and CER. Action items may include the collection of intelligence on potential IPs (beyond the HACT – such as information on their performance with previous donor projects) and also getting a strong commitment and other needed assurances from any potential IP. Such commitment may include specification of who or what sort of person will be NPD and how much time they will have to give to the project. At the same time, UNDP may need to consider an alternative model when the thematically best-fit IP lacks the capacity and interest to implement. An option, in such cases, may be cooperating with a more proactive IP in the space in question (for LCUTS, this may have been DTI or DOE) and bringing the thematically best-fit IP (DOTr in a case like LCUTS) onboard as a consulting party. A model such as actually intended by the ProDoc's Management Arrangements, whereby three agencies share responsibility by component, may also be worth consideration. It is not clear why this management plan was abandoned during implementation. Lastly, looking for partners with more long-term staff or at least those who are willing to assign interested and qualified long-term staff responsibility for a donor project (e.g. NPD role) is also recommended.

3. Covid-19 and difficulty differentiating between pandemic issues and other implementation issues: The Covid-19 pandemic should be recognized as a major implementation challenge for the project. By the time the team was onboard in third quarter of 2019, the project had less than six months to ramp up before lock-down ensued. While lock-down and the pandemic generally were difficult for all UNDP-GEF projects, public transport projects in particular are disproportionately challenged. And, this is on top of the relatively high difficulty level of public transport projects in normal conditions due to the range of stakeholders involved and, often, the need for political will. Yet, in the case of LCUTS, which clearly has implementation issues apart from the pandemic, important questions are: Was the recovery of the project post-Covid slower than it could have been? And, could more have been done to keep up engagement and complete preparatory groundwork during the lockdown and subsequent social distancing periods? The project, for example, did not sign a contract with the Senior Technical Advisor until Oct. 2022 (a recommendation coming out of the MTR finalized in Feb. 2021). The STA was finally able to design a program to launch the long-delayed (and, actually, blocked) deployment of EVs supported with GEF funds. Had he been brought on in a more timely fashion post-MTR, could the project have made more timely progress? One alternative explanation for delays in deployment of demo e-jeepneys is that transport cooperatives (who would be involved in the demos) had not yet recovered financially from the negative impact of the pandemic in 2021 and 2022. Yet, there are some limited examples of transport cooperatives procuring e-jeepneys in 2021 and 2022. Regarding the potential to have done more groundwork during the lock-down and social distancing period, some suggest it should have been possible to do more virtually on most TA aspects of the project during that period, so that investment work could have been ready to ramp up as restrictions were lifted and public transport returned to normal.

4. High turnover of project team: As discussed at some length in Sub-section 1.6 "Limitations of the Evaluation" (second bullet) and in Sub-section 1.2 "Implementation Arrangements," the project experienced high turnover of the project team and often had unfilled positions, until closer to the end of the project. The four field technical assistant positions were not added until the first part of 2022; and the three research associate positions (to support the component leads) were added in late 2022/early 2023, so that the project reached its maximum PMU team of about 14 persons at one point in 2023, before later losing staff again and dropping to around 7 persons. Prior to the additions, the targeted team of seven to eight persons was often incomplete. The author understands that such high turnover is not the norm for UNDP projects in the Philippines. The high turnover may be a secondary effect of other implementation challenges the project was facing, thus compounding the negative effects of those primary challenges. Consultations suggest the high turnover may be due to a combination of dissatisfaction with the situation of the project and the hiring of persons who were perhaps not that interested in the project's main focus on EVs (which, in turn, might not have been communicated well in the recruiting process).

The dissatisfaction with the situation of the project may stem from multiple angles: the lack of IP engagement and the resulting difficulty in moving work forward, the lack of clear progress towards targets, the at times haphazard directions from above in which targets/ plans were abandoned in favor of other initiatives, the lack of needed expertise, the reported delays at times from back and forth between TOR reviewers at both DOTr and UNDP before things could be approved, and blockage by UNDP of efforts to deploy e-jeepneys with support of GEF funds as called for by project design due to lack of attractive plan. The author's impression is that development professionals in the Philippine market are quite ambitious. They desire to work on projects that have clear targets and towards which they feel empowered to progress. In the case of LCUTS, some onboarded ready to work on implementing the project plan only to find that it was unclear what, exactly, the project was going to do in their area of responsibility. Another challenge mentioned by stakeholders that may have impeded team progress is that there is a lack of EV experts available on the market.

5. Decision for project not to procure EVs as designed – lack of sufficient justification and of sufficient exploration of demo options/ lack of recognition of GEF's emphasis on "INV" designation in CER: From the author's experience, GEF takes very seriously the designation of a certain amount of GEF funding as "INV" rather than "TA" in the CER. With INV of over USD1 million, it is likely GEF expected the LCUTS Project to invest over USD1 million in demonstrations that would directly reduce GHG emissions. While the ProDoc lowers this amount to USD750,000 (which probably was not noticed by the GEF in its approval process), it clearly states these funds are for EV and charging station demonstration. Somewhere along the way, it was decided by UNDP that the project should not allocate GEF funds for e-jeepneys; and, instead, any allocated amounts should go to more TA or perhaps to more charging stations. Different explanations are offered for this blockage of the demo e-jeepey plan, particularly that the project had no good plan of how to deploy the e-jeepneys. Even after the MTR consultant came out with the conclusion that the project needed to deploy e-jeepneys in order to meet its GHG ER targets (report finalized in Feb. 2021), no clear action was taken until the STA was onboarded in Oct. 2022.

The author suggests that, instead of simply blocking the deployment due to "no good plan," it would have been important to try and come up with a good plan for deploying the e-jeepneys. Or, if there was a really good reason not to deploy the e-jeepneys, then that should have been fully investigated and documented to justify such a major change in project design. One possible concern initially identified by the author is that, by the time the project finally got around to deploying its own e-jeepneys, the nation already had 375 e-jeepneys deployed in public transport. So, it might have been argued that 15 to 20 additional e-jeepneys deployed, as targeted by the project, would not have made a big difference in stimulating subsequent deployments. Yet, through research in the process of the TE, two rationales for continuing with the deployment plan were found: (1) First, it was determined that deployment of e-jeepneys to new cities mostly stalled after 2020; and the industry was in need of a boost after over two years of stagnation. (2) Perhaps even more importantly, having a fleet of new e-jeepneys associated with the project could facilitate some careful monitoring of them, something sorely needed to assess the financial viability of e-jeepneys and subsequently disseminate findings to jeepney operators nationwide. In addition, a reviewer of this report offers a third rationale: (3) Deployment presents an opportunity to demonstrate and promote the use in e-jeepneys of lithium ion batteries instead of lead acid batteries, which were mainly used in the surge of e-jeepney deployment in 2019-2020. These kinds of findings/ justifications should not have had to wait for the terminal evaluation to be illuminated and discussed. Instead, they could have been researched/assessed earlier in the project either to support a decision to move forward with e-jeepney deployment or to clearly justify a change in plan. At one point, there was discussion of an alternative plan to monitor the e-jeepneys of others already on the road, but no clear moves were made towards that end.

The above reflects a need for UNDP COs to better understand that GEF projects, while having some flexibility, should not typically cancel demos and "INV" targeted spending in favor of more TA spending or shift funds from demos with higher GHG ERs to those with lower GHG ERs. To do so is contrary to GEF's standards for CCM projects. It's postulated, based on statements at a Project Board meeting about other potential private sector initiatives, that part of the rationale for blocking EV demonstration may have been concerns about showing favoritism to any specific private sector entities. Yet, GEF projects do have a history of some private sector cooperation. And, sometimes calculated risks may need to be taken to have an impactful project. LCUTS's third component, after all, is focused on private sector engagement. Earlier in the project, a "business acceleration specialist" was hired for USD35,000 to work on private sector engagement options and came up with a plan for the project to partner with Grab Philippines, Sakay Mobility, or Lalamove. Yet, these concepts were blocked due to reputational concerns of working with specific private sector entities.[21] While this concern may have been valid in these specific cases (the evaluation did not look in depth at the proposals or reputation risks), it seems to reflect a

[21] This is documented in Project Board meeting minutes. The relevant statements are those referred to earlier in this paragraph.

pattern of blocking all private sector INV activities and also seems that the business acceleration specialist's work for the project went to waste.

6. Disagreement on whether LCUTS should focus on EVs as designed or broaden to include special activities for active transport: Another problem that plagued implementation was disagreement between those that wanted to broaden the project beyond its original design to specific activities for cycling and pedestrian aspects and those that felt the project should stay more focused on EVs. Typically, projects should only make such departures if the original plan is outdated or no longer viable. Some would argue that the pandemic resulted in this lack of viability of the EV plans, but that's not entirely clear. In June 2021, four months after the MTR (final report Feb. 2021) strongly recommended deploying the e-jeepneys as designed to meet GHG ER targets, the project signed a roughly USD150,000 contract to develop a bike lane network plan for LGUs across three major metro areas and build LGU capacity on this topic. The funds were taken out of the Component 3 (private sector) INV budget. Since it didn't really fit there, however, the work was reported under Component 1 (policy). The study has appeared popular with DOTr (which has an Active Transport Office); and LGU attendance at virtual capacity building also showed their strong interest. In the absence of Covid, this kind of broadening, when the project was not making progress on certain of its intended outcome targets and where the alternative activity does not clearly contribute towards achievement of those outcome targets,[22] would not have made sense. In light of Covid's impacts on public transport, it might well have made sense, particularly as active transport became more popular during the pandemic. Yet, a change in strategy should have involved justified and documented adjustments to the project's logical framework. The bottom line is that it appears the bike lane network plan was a popular activity with stakeholders, but did not fit well within the project's framework or contribute much towards its targets.

7. Possible need to tighten up procurement processes and have a clear "wall" between those advising on project activities and those competing for contracts on such activities: Some possible overlap was detected: (a) between (i) individuals involved in various individual contracts for the project and (ii) individuals serving on the team for firm contracts for the project or otherwise associated with such firms and (b) between (iii) those who had served in relevant roles at the IP and (iv) those who were later were associated with individual contracts or firms with contracts with the project. While (a) might be permissible if the assignments are unrelated, that some individual consultants advise the project on future direction needs to be carefully considered. As for (b), time of separation is relevant. Also, in the case of firm assignments, the project needs to understand clearly who is doing the work and not only who is the official lead. It is suggested that future procurement processes, particularly in sectors that may have a seemingly small talent pool, fully research and assess such overlap issues. This research and assessment work should determine whether overlap is due to there being only a very small pool of qualified individuals and institutions or due to conflict of interest. In general, the project should be casting a wide net and developing relationships with many channels of qualified individuals and firms, so that there is healthy competition on contract opportunities. Further, persons formally advising the project on topics such as the project's future direction should not have the opportunity to then obtain contracts or be part of teams obtaining contracts related to that future direction.

8. Need for cost estimates and consideration of cost-effective alternatives that may better address targets: While the project to date has not had any contracts larger than about USD150,000, some findings

[22] As pointed out by a reviewer of this report, cycling can contribute to reduction in GHG emissions which is an objective level target of the project, when the cycling initiative has induced persons to switch from fossil fuel powered vehicles to bicycles. Yet, experience shows that the level of GHG ERs tends to be relatively low given the investment level required if new bike paths need to be paved. And, importantly, what the project prepared was a plan and not actual investment to directly achieve GHG ERs. So, the funds were taken away from the demo pot, thus reducing the direct GHG ERs to be achieved by the project. Lastly, the cycling path study clearly does not contribute to the outcome from which funds were taken, which is stated as: "Increased private sector investment in low carbon transport."

suggest that it could be beneficial in procurement to do pre-estimates of the acceptable costs and also consider more cost-effective alternatives. Two items come to mind, both contracted to the same organization. The first, the bike lane network plan, as mentioned, was quite popular. Yet, done during Covid, it was a desk study combined with online training. The plan was also not that comprehensive or uniform, but instead emphasized guidelines/ best practices and input from the various LGUs. The cost seems high considering the result and work involved. Second, the training in LGU LCT planning, carried out under a contract of about USD100,000 for the four pilot LGUs, has the challenge that it did not, by EOP, lead to the target of adopted and implemented LGU LCT plans. Given that some LGUs already had other plans they were working on, a more tailored approach, spending about USD25,000 to advise and support each LGU to come up with a revised plan they could have adopted may have been a more cost effective way to reach the target. At the same time, it is recognized that the project's Sustainability Workshop, that was held close to EOP, aimed to gain commitment from the LGUs to adopt and implement the "Re-Entry Action Plans" developed under the aforementioned large contract.

Implementation Strengths Identified

1. Project Board and Project More Generally as a Platform for Discussions: Some stakeholders noted that the Project Board provided a positive forum for stakeholders in the EV space, including both government and the private sector, to discuss EVIDA and other EV-related topics. Indeed, a subset of the Board is said to have engaged in deeper discussions on EVIDA and had several visits with the senator responsible for drafting EVIDA. At the same time, it was noted that the Project Board is very large and that may not have been conducive to effectively making decisions for the project. One suggestion made is that there be a larger Project Board to serve as a platform of engagement, but a smaller one to make decisions. One reviewer of a draft version of this report conveyed the view that the project as a whole served as a very useful platform for the private sector, government, and others to exchange on EVIDA implementation and suggested that a way should be found to continue this platform post-EOP.

2. Field Technical Officers. As noted, between Feb. and April 2022, the project appointed four field technical assistants, one to be based in each pilot city. A number of stakeholders noted that this greatly facilitated progress in the field. At the same time, some said the more important approach would be to have a champion in local government, a focal person. It is suggested that the title being used for most of these persons, "field technical assistant," may not have given them as much leverage as would have another term, such as "field technical officer" or "field technical manager."

3. Competition approach to demos: The project adopted a competition approach to the demos, whereby applicant transport cooperatives developed a proposal requesting one or more e-jeepneys paid for by the project and pledged to purchase a certain multiplier number of e-jeepneys via bank loan. The competition had the effect of attracting attention and generating interest in e-jeepneys. It is possible that some transport cooperatives that did not "win" the competition and that were earlier not planning to purchase e-jeepneys will go ahead and purchase some. This type of competition approach has also been seen to be a successful means of dissemination and promotion in other countries. One challenge with the competition, however, is that those that are already planning to purchase e-jeepneys may apply and be able to "game" the competition by proposing a high ratio of loan vehicles to project-provided vehicles. It appears, in fact, that the majority of vehicles going to winners of LCUTS's competition went to those organizations that already had e-jeepneys and were already planning on buying more. Future projects may consider designing more sophisticated rules of application to ensure that the project is really having an impact – stimulating deployment of vehicles that would not have occurred in the "no project" case. At the same time, project aims may mean that such "already planning to purchase" entities are attractive winners. As discussed elsewhere, in the case of LCUTS, such entities, given their larger fleets of e-jeepneys, may be important partners in monitoring of e-jeepney fleets, so that results can be disseminated to the jeepney cooperative sector as a whole, perhaps stimulating more e-jeepney purchases.

4.2 Adaptive Management

Changes as a result of the mid-term review: As noted, the mid-term review (completed Feb. 2021) strongly recommended that the project deploy e-jeepneys as intended in the design to achieve its GHG targets. The management response indicated this would be done (March 2021). Yet, instead of doing it, a few months later (June 2021), the project took USD150,000 out of the corresponding demo/INV budget and used it on a bike lane network plan that did not fit the original project design. As noted, the bike lane network plan was popular. Yet, evidence suggests this plan was neither raised with nor recommended by the MTR consultant. It was not until 20 months after finalization of the MTR that a contract was signed with an international technical advisor (Project STA). The STA, like the MTR consultant, recommended deploying the e-jeepney demos; and, finally, the process towards a viable plan to do so began.

Issue of EV focus versus diversification into active transport: The competing views of whether to focus on EVs as in project design or diversify into other areas, such as cycling and walking, are discussed in Section 4.1. Diversification led to a lack of focus and lack of progress towards project targets and normally would not have been a good idea. Yet, the Covid-19 pandemic may, to some extent, justify the diversification. Ideally, diversification would not have so significantly dipped into the budget for the project demos; and EV work would have continued in a more timely fashion.

Articulation of changes to project design: One key issue as described in Section 4.1 is the blockage of the original plan for the project to purchase EVs (or partially support such purpose) for demonstration, without clear documentation to justify the major change in project design. Stakeholders indicate this was a position held by UNDP, but that DOTr and other Project Board members were in favor of deployment as articulated at board meetings. Review of Project Board meeting notes, however, does not make this change or the Project Board member positions on it clear. Since the reason for blocking the purchases is said to have been lack of a good plan and justification, this key issue may have fruitfully been discussed at Project Board meetings to determine if indeed it would not be useful to deploy EVs or if, instead, a viable plan that would stimulate replication and be worth the investment could be determined.[23]

Adaptive management successes: At the same time, the project shows some successes in adaptive management. The work with TESDA on training is one important example. While the development of training curriculum for EV technicians was deemed to be straightforward, in the end it was realized that there were already other efforts underway, with lack of coordination impeding true progress. Thus, the consultant hired for this assignment undertook not only to fulfill his TOR, but to harmonize the various efforts to date, bringing them in line with TESDA's requirements, to advance towards the aims of national training certifications someday. The Incentive Program (the competition mentioned in Section 4.1) is also an example of adaptive management success. Whereas the plan for demonstration is not clearly defined in the project document, this plan that was come up with in the last year of the project is not only resulting in deployment of vehicles, but has been a positive force in raising awareness of EVs among jeepney cooperatives.

[23] Eventually, the project developed the Incentive Program to carry out the project demos, but this was after much delay (beginning only after the onboarding of the STA in October 2022, about one year before project close) and was only realizable with the granting of a second extension. One commenter near EOP indicated that DOTr originally had a plan to fund an "Incentive Program" like effort for the project (without GEF funds), but the intended funds eventually turned out not to e available. This aspect of project history was not raised by other stakeholder; and late receipt of the comment made it difficult to verify/ explore further.

4.3 Actual Stakeholder Participation and Partnership Arrangements

Strengths of stakeholder engagement: The true strength of LCUTS's stakeholder engagement is the numerous events the project held to build capacity, train, and raise awareness. For example, the Jan. 2023 investment forum is considered to have been particularly successful in raising awareness among transport cooperatives about e-jeepneys and bringing them together with suppliers. Section 6 of this report (which covers the results of Component 2) provides a list of events and discusses them in more depth. Another positive aspect of stakeholder engagement is the hiring of a technical field assistant for each of the four pilot cities. These team members were effective in engaging LGU governments and, when relevant, transport cooperatives. The Project Board was also a positive means of engaging national government stakeholders and e-jeepney suppliers in discussion on the important area of electrification of public transport.

Challenges of stakeholder engagement: Yet, findings suggest some key areas in which engagement fell short. Aside from some key workshops for transport cooperatives, the project failed to consistently engage this key audience with periodic materials to educate them on e-jeepneys. The EV test run reports were academic and not written in a way suitable for dissemination to the TCs. And, at the time of TE consultations in June 2023, monitoring of the project e-jeepneys was not planned, though this could generate key information to provide to the nationwide jeepney TC cohort. Fortunately, there are now plans for monitoring, though as discussed elsewhere, the scope of data collected might be expanded to facilitate assessment of the financial viability of e-jeepneys, And, a plan for dissemination of monitoring results to jeepney cooperates should be developed and implemented.[24] LGU engagement through workshops has been positive, but somewhat weak in terms of policy development. One stakeholder mentioned a finalized LGU-level policy or standard that was delivered to the LGU without any consultation. And, as noted in Section 4.1, the large amount spent on an LCT planning training program may have been more effective had it been tailored to individual LGU needs with customized support to develop the plans these LGUs already had in the pipeline. Lastly, the communications work of the project faced internal barriers in "getting the word out" about the project. As noted in Section 4.1 ("delays"), draft articles submitted to UNDP were not turned around in a timely fashion, though some improvement was seen in the handful of months leading up to EOP. As multiple stakeholders pointed out during June 2023 consultations, an internet search yielded almost no information about the project. The project used to have a website, but it was asked to stop using it in favor of limiting posting locations to the UNDP CO website and UNDP CO social media accounts. Similarly, the project was also asked to stop using its Facebook page, though in the handful of months leading up to EOP, direct use of that page was reinitiated.

Gender: The project's efforts during implementation as related to gender are covered in three sub-sections of Section 8 (which is located in Annex 10): Sub-section 8.3 Effectiveness (gender sub-topic), Sub-section 8.4 Efficiency (integration of gender equality and human rights under resource allocation and cost effectiveness sub-topic), and Sub-section 8.8 Gender Equality and Women's Empowerment. A gender action plan was prepared but is not known to have been implemented. Yet, the project conducted GESI workshops in all four pilot cities and encouraged the participation of females at project events, where overall women account for 40% of attendees with a total of 869 women attendees at events (not excluding double counting for women that attended more than one event).

[24] At the time of consultations for this report (June 2023), the author found that monitoring was not planned for the Incentive Program e-jeepneys. By August or Sept. 2023, however, a template for monitoring was available. The evaluator recommends the scope of monitoring be expanded to include costs and revenues (or at least estimate revenues) to enable assessment of viability of the e-jeepneys.

4.4 Project Finance and Co-Finance

Project finance: Exhibit 4-1 shows annual expenditures of GEF funds through June 30, 2023. Considering total GEF funds of around USD2.64 M, a four-year project would have required average annual expenditures of GEF funds of around USD660,000 to complete deployment of the funds; and a six-year project, an annual average of USD440,000. Clearly, the project did not meet either of those spending levels for the years 2018-2022. Yet, because the project waited until the end to deploy its demonstrations, large expenditures of GEF funds are expected in the second half of 2023. At the same time, it is noted that the project will be returning USD400,000 to the GEF due to not being able to deploy two of three planned charging stations (as a result of land issues and accounting for up to half of the returned funds) and other areas where expenditures were less than anticipated. Exhibit 4-2 shows total expenditures of GEF funds to June 30, 2023 compared to EOP targets in the CER. It can be seen that only 50.9% of the project's funds had been spent by June 30, 2023. Given that the demos had not been deployed at that time, it is not surprising that Outcome 3 (the demo outcome), at only 36.4% spent is the most underspent of the Outcomes.

Exhibit 4-1. LCUTS Expenditures of GEF Funds by Outcome and Year (to June 30, 2023)
(*based on CDRs, in USD*)

Outcome	2017	2018	2019	2020	2021	2022	2023 (*to June 30, 2023*)	Grand Total to end of 2022
Adjustments	**---**	**---**	**---**	**---**	**---**	**---**	-30,232.36	**-30,232.36**
Outcome 1	0.0	6,913.87	37,031.25	104,884.31	95,053.86	83,250.78	85,001.73	**412,135.80**
Outcome 2	0.0	2,124.57	10,017.62	46,477.06	29,010.52	107,929.25	107,454.58	**313,013.60**
Outcome 3	0.0	4,882.19	26,713.47	94,935.21	95,573.67	157,866.45	162,374.94	**542,345.93**
Project Management	0.0	2,857.97	29,370.26	44,939.97	32,606.10	3,504.28	2,224.88	**115,503.46**
Grand Total	**0.0**	**16,778.60**	**103,132.60**	**291,236.55**	**252,244.15**	**352,550.76**	**326,823.77**	**1,342,766.43**

Exhibit 4-2. Expenditures of LCUTS GEF Funds (to June 30, 2023) as Compared to CER Allocation (*based on CDRs, in USD*)

Outcome	Realized to June 30, 2023	CER Allocation	% CER allocation spent as of 06/30/23	Funds remaining in allocation as of 06/30/23
Outcome 1	412,136	624,900	66.0%	212,764
Outcome 2	313,014	400,350	78.2%	87,336
Outcome 3	542,346	1,488,776†	36.4%	946,430
Project Management	115,503	125,700	91.9%	10,197
Total	**1,342,766**	**2,639,726**	**50.9%**	1,296,960

†In the CER, this is composed of two outcomes, Outcome 3.1 with GEF funds USD402,000 TA budget and Outcome 3.2 with GEF funds USD1,086,776 INV budget (targeted for investment).

In terms of variances, two findings are notable. First, as already discussed, the USD150,000 bike lane master plan was taken out of the demo budget for EVs and charging stations. While the CER indicates "INV" of over USD1.0 M, the ProDoc has an equipment budget under Outcome 3 of USD750,000 (which contradicts, to some extent, the INV designation in the CER by the substantial reduction).[25] Thus, the ProDoc allocation of USD750,000 for equipment will be reduced to USD600,000. The meeting notes for the Dec. 2020 and May 2021 Project Board meetings do not mention the Bike Lane Master Plan, though a contract was signed for it in June 2021 and it represents a major expenditure and change in direction.

[25] Based on experience, design work for demo projects may be counted as INV, but other, less directly related TA work should not be included as INV.

Neither do they mention a reduction in the demo equipment budget from USD750,000 to USD600,000. The change was probably included in the written budget, but it would have made sense for this item, representing a substantial change in direction, to be a documented topic of discussion on the agenda at a board meeting so that Project Board members could be alerted to the change.

Second, prior to deployment of the demos close to EOP, the project appeared to be spending a large proportion of funding on project team. Please see the pie chart in Exhibit 8-7 (in Annex 10), which shows 40% of expenditures to end of 2022 (USD425,695) were spent on staffing. Yet, the proportion is expected to shrink somewhat after expenditures on the demos is accounted for. (For example, about USD320,000 in GEF funds will have been spent on e-jeepneys by project financial close as compared to USD425,694 spent on staffing by end of 2022.) At the same time, when the project ramped up to 14 staff earlier in 2023, some stakeholders commented that the team seemed too large. It is postulated, however, that with so little time and so much in funds left, the strategy of expanding the team was to have "all hands on board" to try and complete as much as possible by EOP. As noted, by closer to EOP, the project team shrunk again to around seven or so persons.

In terms of audits, a HACT audit for 2018-2020 was reviewed by the author as was a "spot check" audit for 2020. Neither had any terribly concerning findings. Yet, audits for 2021 and 2022 were not available to the author.

Project co-finance: Exhibits 4-3 and 4-4 show co-financing reported as of Oct. 19, 2023. This data has been provided by the PMU, which gathered the information from government entities, UNDP, and private sector partners. Most notable is that the level of government contribution, reported to be about USD64.2 million is much higher that the roughly USD9.7 million targeted. And, this results in total co-financing at about USD65.6 M as being much higher than the USD22.4 M committed. A challenge is that, while the evaluator requested information showing the various types of activities and investments on which the funds were spent, this was not provided. It is, thus, not possible for the evaluator to assess the relevance of all the claimed co-financing. In the case of the private sector's USD1 million, however, the amounts indicated are known to be the expenditures on "multiplier vehicles" as part of the project's Incentive Program and thus are highly relevant investment mobilized by the project. Aside from this private sector co-financing, overall, the findings did not highlight close integration of co-financed activities with project activities. Indeed, closer integration with PUVMP, which has many of the same aims as the project, may have allowed LCUTS to leverage itself better.

In addition to the co-financing reported for the private sector, it is recognized that the 375 e-jeepneys deployed in public transport prior to deployment of LCUT's public transport demo e-jeepneys may be considered private sector financing. And, the progress represented by these 375 e-jeepneys in public transport offered important experience for LCUTS to learn from and build upon. Yet, based on GEF's definition of co-financing, because these funds were not committed at the start of the project, they cannot be considered "co-financing." And, because they were not a result of the project, they cannot be considered "leveraged financing." Instead, they are defined as "associated financing." [See GEF document *GEF/C.20/6*]. The originally committed private sector co-financing was to be from GET-COMET and EVEE I. Yet, deployments of e-jeepneys from these organizations are understood to be mainly for private transport (e.g. company commuter vans), rather than the public transport that is the focus of LCUTS. Thus, funds spent in this way do not really directly support the work of the project. Furthermore, no co-financing from these organizations was reported.

Exhibit 4-3. LCUTS Co-Financing Table Comparing Planned and Actual Co-Financing as of Oct. 19, 2023

Co-financing type	UNDP (USD)		Government (USD)		Private Sector (USD)		Total (USD)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants	20,000	0.0	8,120,996†	63,943,003‡	9.5 M*	1,038,594	17,640,996	64,981,597
Loans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-Kind	70,000	305,967	1,628,983‡	287,408	3.1 M**	0.0	4,798,983	593,375
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**90,000**	**305,967**	**9,746,979**	**64,230,411**	**12.6 M**	**1,038,594**	**22,439,979**	**65,574,972**

Notes: All reported co-financing is as of Oct. 19, 2023.
†Comprised of USD4.95 M from DOTr and USD3,170,996 from DOST.
‡Comprised of USD1.6 M from DOTr and USD28,983 from DOST.
‡According to MTR, USD716,000 of this is comprised of "management of funds from PUVMP and DOST research projects, all related to low carbon transport activities based on letters of intent from counterparts in government." No information is available about the very sizable rest of the USD63.9 M.
*Comprised of USD9 M from GET and USD500,000 from EVEE-I
**Comprised of USD3 M from GET and USD100,000 from EVEE-I

Exhibit 4-4. Confirmed Sources of LCUTS Co-Financing at TE Stage (showing breakdown of recurrent expenditure versus investment mobilized) as of Oct. 19, 2023

Source of Co-financing	Name of Co-financier	Type of Co-Financing	Recurrent expenditure or investment mobilized?	Amount (USD)
Recipient Country Government – National Level	DOTr	Grant	Investment Mobilized	1,184,748
		Public Investment	Investment Mobilized	41,391,258
		In-kind	Recurrent Expenditure	166,561
	DOST	Grant	Investment Mobilized	4,577,967
		In-kind	Recurrent Expenditure	14,118
	DOE	Grant	Investment Mobilized	409,483
	DTI	In-kind	Recurrent Expenditure	28,235
Recipient Country Government – LGU Level	Baguio City	Public Investment	Investment Mobilized	8,829,227
		In-kind	Recurrent Expenditure	32,382
	Pasig City	Public Investment	Investment Mobilized	517,275
		In-kind	Recurrent Expenditure	500
	Santa Rosa City	In-kind	Recurrent Expenditure	340
	Iloilo City	Public Investment	Investment Mobilized	7,033,046
		In-kind	Recurrent Expenditure	45,272
GEF Agency	UNDP	In-kind	Recurrent Expenditure	305,967
Private Sector (all are transport cooperatives)	Aerostar 1	Equity investment	Investment Mobilized	459,341
	IJODA	Equity investment	Investment Mobilized	170,173
	LADOTRANSCO	Equity investment	Investment Mobilized	409,080
Total Co-financing				**65,574,973**

Note: All co-financing reported is as of Oct. 19, 2023

4.5 Monitoring and Evaluation

M&E design at entry: Overall, the design of M&E activities (including M&E budget) is considered sufficient and fairly standard. M&E design calls for periodic assessment of indicators, an MTR, and a TE. As with all full-size UNDP-GEF projects, the annual PIR requirement results in detailed annual discussion on progress towards indicator targets. The weaknesses of M&E design are some shortcomings of the indicator design. These have been discussed above in Section 3.1 in a sub-sub-section on indicators and indicator targets. Some of the challenges mentioned are that the origin of baseline values is not explained, indicator interpretation is often unclear, and some indicators are global for the nation or EV sector, rather than being designed to highlight the specific contributions of the project as would be preferred for results based management. In the past, UNDP-GEF indicator design did sometimes emphasize such "global" indicators as it was believed the project would change the course of the entire nation in a particular area. This may be possible, but on the timescale of UNDP-GEF projects, might be less likely. Nevertheless, even if a project design were to utilize more global indicators, there should be some instruction to assess the role of the project in the achievement and how much of the achievement might be attributed to the project.

M&E implementation: Implementation of M&E is viewed positively, mainly because the reporting is strong and provides the reader with many details on progress made. And, the MTR and TE were conducted as planned. Challenges are related to interpretation of the indicators, so actually are related to design. For example, at one point the project was claiming 10 policy success, yet it was later learned that the project contribution to each policy was typically very small. (Please see Section 5 and Exhibit 5-1 for examples.) And, given the difficulty in interpreting certain indictors, no effort was made to assess them (or, alternatively, to assess expected progress towards them) prior to initiation of the TE, after which the STA prepared a report addressing all indicators.[26] The evaluator, prior to drafting of this report and prior to receiving the STE's report on indicator assessment, prepared a detailed document that offered some different interpretations of ambiguous indicators and offered rationale for selection of preferred interpretation. This type of work might have been done earlier in the project's lifetime. Interestingly, at one point, the Project Board had decided that the indicators were not challenging enough and set up a TWG to revise them. Yet, the revised indicators were never finalized. And further, the view that the indicators were not challenging enough was perhaps based on the global/ whole country interpretation rather than what the project would achieve. Another challenge with regard to M&E is that the key MTR recommendations were not followed up upon in a timely fashion. Instead, the project pursued initiatives in another direction. It took about 20 months post-MTR before activity addressing key recommendations (besides the recommendation to apply for an extension) were acted upon. In some aspects of implementation, there further seems to be a lack of attention to the indicators. This is particularly true for the LCT LGU planning work where the key indicator of "adopted and implemented LCT plans" could have been most directly addressed. Instead, the focus of that work was mainly on training. Nevertheless, it is admirable that the project's concluding Sustainability Workshop sought commitment from the LGUs for adoption and implementation of plans drafted as a result of the training.

Exhibit 4-5. LCUTS M&E Ratings

M&E Design	M&E Implementation	M&E Overall
S- = 4.75	S- = 4.75	S- = 4.75

Note: See Annex 4 for rating scale.

[26] Prior to the TE, three indicators were marked "to be determined" and several others were marked zero, some without projections of what was expected to be achieved by EOP. No Tracking Tool for the TE had been filled in by the project team even after 401 review comments were provided by UNDP on the draft TE, though guidelines indicate one should be provided prior to TE initiation. The Tracking Tool for the TE was finally provided months later, closer to EOP and as the final version of this report was being prepared. Consultations confirmed that the project team in some cases was unsure how to interpret indicators, perfectly understandable due to their ambiguity and sometimes global-sounding nature. After the TE begin, the STA assessed the indicators and, well into the TE process, his results were provided to the TE team.

4.6 UNDP Implementation/Oversight, Implementing Partner Execution, and Overall Implementation/ Execution

UNDP Implementation/ Oversight: For the LCUTS project, UNDP went beyond its standard role of oversight for NIM projects and got more involved in implementation. This was needed to compensate for the low level of engagement of the IP. Project funds were not routed through the IP, but instead handled by UNDP; and UNDP also handled all procurement. By 2022, the CO's DRR became quite actively engaged in the project to help coordinate with the IP and push progress forward. This is considered an important contribution in re-energizing the previously troubled project. Reporting was candid about the challenges faced by the project. Earlier, UNDP had managed the project concept preparation and preparation of the detailed project design. These processes are seen as fairly effective, though there was a longer than usual delay between the start dates of the two phases of 27 months (whereas maximum should be around 18 months). UNDP's pioneering approach to promote a project in an area of critical national need, despite great challenges, is to be applauded, as its very strong effort to compensate for the IP's weaknesses. At the same time, there are two critical concerns about how UNDP handled its involvement in implementation.

The first is UNDP's blocking of the EV demos that are part of project design and would have been critical to achieving the project's targeted GHG ERs. As has been discussed in Section 4.1, if the EV demos were to be cancelled, there should have been a detailed analysis showing why this was the right decision and how the project might alternatively achieve the targeted direct GHG ERs. If the problem was really that the project did not come up with a good plan to deploy the demos, it certainly should have been the role of UNDP, with all its experience in such projects, to help the project come up with a viable plan to support the private sector cooperatives with partial grants for e-jeepneys. Technical expertise within the NCE team should have been called upon to do this. Instead, the CO seemed to lack an understanding of GEF projects and the importance of realizing INV aspects of the project, the importance of engaging the private sector, and the negative impacts of changing the project plan somewhat arbitrarily without considering alternative routes to achieving targeted results and without having a very well justified reason for doing so. From review of Project Board meetings, it appears that an underlying reason for UNDP CO's blocking of deployment of the e-jeepneys and earlier proposed private sector cooperation might have been to avoid showing favoritism to any specific private companies. Unfortunately, this approach with a project that is meant to engage the private sector negates the progress made through various GEF projects in coming up with models to promote investment by the private sector. It seems that the UNDP CO's over-conservativeness with regard to engaging the private sector may have been part of the reason quashing the progress of this challenged project on top of everything else (Covid, uninvolved IP earlier in the project, high staff turnover). The MTR recommendations were not enough to turn this around, but finally when an STE was hired in Oct. 2022, via direct discussions with the CO, an agreement was finally reached to move forward with the project demos.

The second is UNDP's strong support of diversifying the project away from its original plan as designed, with the most obvious representation of this being the decision to take USD150,000 from the funds allocated for e-jeepney demos and charging station demos and spend this on a bike network "master plan" plus training for associated LGUs. Again, this reflects a lack of the CO's understanding of GEF projects, though, in this case, the challenges of Covid may perhaps make the move more acceptable. And, as noted, the work appears popular with DOTr and some of the LGUs covered. Yet, a more strategic and proper way to incorporate such a new activity would have been to carry out a redesign of certain parts of the project to show the logical structure and how this new and relatively expensive activity fit in and would promote progress towards potentially redefined indicators targets the project aimed to achieve. Some stakeholders perceived that the project became quite haphazard and opportunistic as various opportunities arose. Indeed, some implementers found the lack of focus embarrassing. The logframe approach for

UNDP-GEF projects is considered critical and to abandon it represents an abandonment of the principles of results based management.

Implementing partner execution: Implementing partner execution by DOTr has been very weak on average, though improved closer to EOP. For much of the project, senior level officials responsible for the project were not sufficiently engaged and are said to have often passed on important decisions to the working level focal point. Turnaround times were slow and ownership was quite limited. This is probably related to the very heavy load of projects carried by the IP officials given responsibility for the project. Yet, the IP's failure to support the project as needed during much of its lifetime is considered to be a key reason for its low level of delivery until recently.

Exhibit 4-6. LCUTS Oversight and Implementation Ratings

Quality of UNDP Implementation/ Oversight	Quality of Implementing Partner Execution	Overall quality of Implementation/Oversight and Execution
S - = 4.75	MS = 4	S - = 4.75

Note: See Annex 4 for rating scale.

4.7 Risk Management

Risk assessment: The project appears to have done a satisfactory job in updating its risk log, which is comprised mainly of the original nine risks identified at the time of project design, plus a few risks that were incorporated later. Two risks were added in 2020, the first being challenges in implementing Covid-19 health protocols and the second being that the project may be "challenged to implement its activities." Regarding the second, the 2022 comments discuss efforts to hire new staff. Updates to risks are provided in the annual reports; and the annual PIRs provide some discussion of risk. As noted in Section 3 (Sub-section 3.2 Assumptions and Risks), the assessment of project design, one risk that is missing is the political sensitivities among jeeney operators towards the modernization program. Given that there were protests by this segment against PUVMP in March 2023, it may have been useful to add the related risk to the risk log if had not been added already.

Social and environmental safeguards: To date, the project has been operating off of its original SESP prepared at the CEO Endorsement stage. The project's latest PIR (2022) indicates that the SESP will be updated when construction of the charging stations begins, as there may be some risks associated with this construction. The evaluator was not able to verify if this one done. (As noted, in the end, only one charging station will be built.) Beyond the SESP, the project was not required to prepare and did not prepare a more detailed ESMP. The SESP envisions the project contributing to an improved situation for women in terms of health, safety, and livelihoods, as the project will ultimately contribute to modernized, cleaner, and more comfortable public transport. The SESP identifies three risks: (i) that low carbon transport systems are impacted by climate change (moderate); (ii) risks to health and safety during construction and operation (e.g. of charging stations and e-jeepneys) (low); (iii) pollution risk (low). The first risk was to be addressed by consideration of the risk in demo design. The second was to be addressed via compliance with lithium ion battery safety standards and training of technicians, drivers, and other relevant persons. The third was to be addressed by proper compliance with waste control measures.

5. Findings on Project Results Part I: Detailed Findings on Component 1 Results

This section is the first of three (Sections 5, 6, and 7) providing information on and assessment of results of key project activity areas under one of the three project components, as well as assessing results overall for the respective component. This section covers Component 1. Sections 5, 6, and 7 each begin with discussion on one activity area at a time, and conclude with full component analyses of relevance, effectiveness, efficiency, and sustainability. Section 8 (provided in Annex 10) synthesizes these findings for the project overall, providing required TE Report content. The activity areas and achievements in this section (Section 5) are organized as (1) national level policy achievements, (2) bike network master plan, (3) local level policy achievements, (4) national level standards achievements, (5) local level standards achievements, and (6) national level institutional mechanism.

5.1 National Level Policy Achievements

The project contributed to a substantial number of national-level "policies," including legislation, regulations, guidelines, and roadmap related to the EV industry and energy efficiency in transport. This includes its important contributions to EVIDA and EVIDA's adoption, which are considered the outstanding contribution of the project in the national policy area. In no cases, however, did the project prepare full drafts of these policies, but instead generally played the more limited role of "commenter." Considering the large and wide-ranging group of policies that were adopted, the project might be applauded for its breadth of involvement. At the same time, assessment of specific contributions show in most cases (aside from EVIDA) the project impact was probably very low (see Exhibit 5-1). And, many of the items are departmental level issuances rather than legislation. Stakeholder interviews did not turn up any cases where the project contribution to content of any of these policies was said to be extensive. And, the author has some concern that the project took an ad hoc approach, such that at Project Board meetings it might be asked to comment on whatever policy (or standard) an attending agency had in the pipeline. Based on this experience, future project design work may wish to consider whether a "commenting" role is desirable and, if so, how to ensure this role, in terms of policies commented upon and nature of comments, is strategically in line with targeted outcomes. At the same time, the project had the broad aim of promoting EVs in public transport; and the national policies supported can all be seen to contribute to this aim.

In contrast to quite limited contributions in some other cases, project contributions to EVIDA and EVIDA's adoption are assessed to be significant. While total volume of project-recommended content adopted in the EVIDA legislation is low (e.g. 11 or so lines in 10 pages of text), the project is understood to have made three significant content contributions: (a) requirement that green routes (which require use of EVs in public transport on certain routes) be incorporated into LPTRPs (local public transport route plans); (b) requirement that DOTr provide capacity building for transport cooperatives; and (c) requirement that DOST provide funding for transport studies to state universities. And, multiple stakeholders indicated that the project played a role in convening government departments and the private sector in small group format for discussions on EVIDA and for informal briefings with Senator Gatchalian, the principal author of EVIDA. Lastly, project team members represented DOTr at official online discussions of EVIDA. While, given some sensitivity with regard to roles, they may not have offered their views at the meetings, their presence (particularly when DOTr staff did not attend) may be considered important in moving the process forward with all key agencies represented.

Exhibit 5-1. Project Contributions to National Level Policies

National Level Policy/ Type of Policy (Year Adopted)	Project Contribution and Significance Level
EVIDA (Electric Vehicle Industry Development Act)/ Legislation (2022)	Significant considering multiple angles of involvement: (1) Project recommendations included in final version are: (a) local public transport route plans must include green routes; (b) DOTr to conduct capacity building for affected PUV operators and drivers; (c) DOST to provide technical and financial support to state universities and colleges for localized transport studies. These represent 11 lines out of perhaps 1,000 in EVIDA, but author considers these items (especially the first) quite meaningful. (2) Project formed small group with government agency and private sector representatives to discuss EVIDA during formulation and brief Senator Gatchalian, author of the Act. (3) Project team attended EVIDA formulation meetings and hearings: Sometimes they were the only ones representing DOTr.
EVIDA IRR/ DOE and DOTr (joint, 2022)	Limited: Project recommendation included in final version is represented by 3 lines in 20 page document and regards DOTr providing capacity building in cooperation with TESDA
CREVI (Roadmap for EVIDA, not officially issued, but current draft finalized and to be periodically revised)	Limited: Project recommended content in final version: (1) Extending of timeline on use of EVs to at least 2040. (2) Conducting of research on alternative batteries, because not all batteries may be recycled.
Policy Framework on Guidelines for the Development of EV Charging Stations/ DOE Dept. Circular (2021)	Limited: Project recommended content in final version: (1) EVCS operators need to constantly coordinate with host LGU. (2) DOE needs to review the rules every 2 years [*2 out of 10 recommendations originally made*]
Consolidated Guidelines in Classification, Registration, and Operation of All Types of Electric Motor Vehicles/ DOTr Admin Order (2021)	Limited: Project recommended content in final: Category L2a and L2b (which are 3-wheel "e-mopeds", but less power than e-trikes) allowed on all roads except those that are unsafe for it. Comprises about 1 of 10 pages.
DOE Policies Signed May 2023, Adopted June 2023, to which it is said project contributed, but for which there is no evidence of specific contribution	
Guidelines on Unbundling EVCS Charging Fee Pursuant to EVIDA	
Guidelines on Accreditation of EVCS Providers and Registration of EVCSs Pursuant to EVIDA	
Guidelines on EV Recognition and Adoption of EV Standard Classification on Road Transport for Incentive Eligibility Pursuant to EVIDA	

5.2 National Level Standards Achievements

The author finds that the project uses a relatively broad definition of "standards" to also encompass some items like guidelines that convey criteria. While the project has attended meetings regarding more traditional technical standards work related to EVs (being part of technical committees of DTI's Bureau of Philippine Standards), it was found development of such standards is quite a long process, with achievements slow in coming. Thus, the project adjusted efforts to include other types of "standards." Of the national-level standards supported by the project, only one was fully drafted by the project, whereas for others (like the policies above), the project provided comments. The "standard" drafted in full by the project, *Green Routes Guidelines* (criteria for selection of routes that may be restricted in public transport to EVs only) is considered a very important contribution in laying the way for high visibility of EVs in public transport. It is said to have built on the work of others on this topic (such as a draft of such guidelines by a World Bank project). The *Green Routes Guidelines* have essentially been adopted at the department level by DOTr by incorporation into their *Omnibus Guidelines*. The project is also said to have contributed to a couple of DOE standards related to vehicle efficiency ratings, but the specific project contribution is unknown and, based on feedback, supposed not to be that significant.

Exhibit 5-2. Project Contributions to National Level "Standards"

National Level "Standard" (Year Adopted)	Project Contribution and Significance Level
Green Routes Guidelines incorporated into DOTr's *Omnibus Guidelines* (2023)	Critical/ Extremely significant: Project drafted the guidelines, though is said to have built on previous efforts such as by World Bank project. Project got the requirement of green routes incorporated into EVIDA so that these guidelines themselves become important. It is understood that one of the topics the small EVIDA group set up by the project discussed with the senator drafting EVIDA was green routes.
DOE Standards Signed May 2023, Adopted June 2023, to which it is said project contributed but for which there is no evidence of specific contribution	
Prescribing Fuel Economy Performance Rating (FEPR) Guidelines on Road Transport under the Philippine Transport Vehicle Fuel Economy Labeling Program (VFELP) for compliance of Vehicle Manufacturers, Importers, Distributors, Dealers, and Rebuilders	
Prescribing VFELP for compliance of Vehicle Manufacturers, Importers, Distributors, Dealers, and Rebuilders	

5.3 Bike Lane Network Master Plan

Considered a major activity of the project, the "bike lane network master plan" work was actually comprised of two components: (1) the bike lane study/ "masterplan" and (2) training of LGUs on bike lane planning. The intended scope of the plan and training covered 20-plus (but not all) of the LGUs in three of the nation's largest metro areas: Metro Manila, Metro Cebu, and Metro Davao. The plan includes some interconnections of the proposed bike lanes among these LGUs. The work was carried out by University of Philippines National Center for Transportation Studies (NCTS) under a contract for USD145,000 launched in June 2021. The work appears popular both with DOTr's Active Transport Office and participating LGUs.

For the "masterplan," almost no site visits were conducted due to the Covid-19 pandemic, so the NCTS team relied mostly on google maps and street view or other online data sources, combined with inputs from the LGUs (as derived from the workshops discussed below). The report and training provide best practices. The bike lane plan for each LGU was prepared by the respective LGU and is based on the type of design chosen by the LGU. Thus, the bike lane network overall represents a bottom-up process, which lacks unified design. For example, some LGUs may have chosen protected bike lanes and others may not have. As a result, if actually implemented, the situation could be quite confusing for bikers and motorists passing from one LGU to another. And, some of the 20-plus LGUs designated in the original scope did not participate, so input from them was missing. The term "masterplan," then, is somewhat misleading. On the other hand, bike lanes is an area that LGUs may determine themselves, so there may not have been an easy way, without expending a lot more effort in facilitation, to come up with a unified plan.

The training (conduced online due to the pandemic) is considered successful, as it was well attended, of significant duration, and LGUs created outputs via active learning. The training is what resulted in each LGU preparing the design of bike lanes in their area that eventually was incorporated into the "master plan." Around 80 to 100 participants from across the target LGUs attended; and the project's four pilot cities were invited to attend as well. In total, there were 6 to 8 two-hour sessions involved.

The cost of this assignment, at USD145,000, seems high given that there were few if any site visits and no face-to-face workshops. Both would have been difficult given the Covid-19 situation, but, according to sources, could have been possible.

This activity was not a part of the original project design and is a major manifestation of the decision to broaden the scope of the project beyond EVs for active transport activities. It doesn't fit clearly into any of the project outcomes as designed. Yet, it fits better in Outcome 1, where it is reported, than in Outcome 3, to which it was charged, as the latter is the "private sector" outcome. A positive aspect of this work is

that DOTr appears quite engaged with it and has allocated budget either to implementing the plan or at least to promoting it. (While the author requested information on DOTr's allocated budget amount and use, this was not provided.) DOTr's Active Transport team used the plan as a part of its awareness campaign on the benefits of bike lanes to society. DOTr conducted a formal handover ceremony with each of the three metro areas (Metro Cebu, Davao, and Manila) in July 2023, sending a high level person to each event in the respective metro area. UNDP at a high level also participated. According to one source, the bike lane network plan of the project far exceeds what was available before. That is, there had been no bike lane plan of this scale. At best, a city might have had its own plan, but it was not as comprehensive as what is done in the study. In terms of whether the LGUs will implement, sources suggest that changes in administration in some of them means there will be pushback in cases. Yet, there are said to be cities with no change in administration that are very supportive of bike lanes, yielding some confidence they may implement. The study is said to include both bike lanes painted on the street and those requiring special, new paved paths.

5.4 Local Level Policy Achievements

Given the challenges of making a significant impact via national level policy and standards (completely new ones that the project might draft take a long time to be adopted and impact for commenting on draft ones is often limited), project policy work shifted its strategy somewhat to looking at the potential to initiate local level policies and standards. In 2022, four executive orders that were drafted by the project, one for each pilot city, were passed. Executive orders ("EOs"), signed by the mayor, are not as challenging or potentially impactful as resolutions passed by the city council ("ordinances"), but may still be considered good progress. Of special interest, Baguio passed an ordinance that, while not drafted or promoted by the project was partly stimulated by project work.

Three of the EOs (for each of Baguio, Iloilo, and Santa Rosa) are to set up LCT committees, the main function of which is indicated to be LCUTS project implementation. The author has seen this sort of local level cross-sector committee formation in many UNDP projects. Ideally, the EOs would emphasize that the UNDP-GEF project is only the initial step and the committees are meant to continue long-term. On the positive side, these EOs do list other LCT functions besides coordinating the project. Yet, these two to three page documents in each case actually list by names the persons to be on the committees, giving a feeling of temporariness. In practice, some are optimistic that the committee in Baguio will continue, while there is less optimism about the one in Santa Rosa and feedback about the one in Iloilo is mixed. It is said that the Baguio committee originally met two times per month in 2022, when project activities were ramping up and now meets one time per month. Based on past experience, these project-based committees typically do not survive project close.

For Pasig, at the city's request, the project prepared an EO to set up a technical working group (TWG) to facilitate the development of tricycle cooperatives. Under Component 2, the project provided facilitation of this group, which will clearly continue post-project, with one councilperson pledging funds. While the topic of the group is not necessarily low carbon transport, the potential link with the project is that, after cooperatives are formed, low carbon initiatives may be considered.

As for Baguio's ordinance, it promotes research and innovation in the city, including in low carbon transport. The low carbon transport aspect of the ordinance supports Dalan ni Taltallak, the Baguio university consortium that supports research and development for low carbon transport and to which the project provided facilitation support for its establishment. The city's earlier draft of its research and innovation ordinance did not include low carbon transport. The project pushed for the addition of low carbon transport and, via this push and involvement of a relevant council member in the project's Baguio LCT committee, this inclusion of LCT in the ordinance was achieved.

These five local level policies are summarized in Exhibit 5-3.

5-3. Project-Supported LGU Executive Orders Signed and City Council Ordinance Influenced by Project

LGU Executive Order (year adopted)	Significance Level/ Sustainability
Pasig: Creating a TWG to Facilitate Pasig Tricycle Drivers and Operators Associations (TODAs) Transport Cooperative Program (2022)	Significant/ Sustainable: Project drafted EO at request of city. TWG is quite active and funds have been pledged by council person to continue it. Drawback is that this TWG is not linked to LCT, but once there are cooperatives, a next step could focus on LCT aspects.
Baguio: Creation of TWG for UNDP LCUTS Project (2022)	Chance of sustainability: Document's title implies focus on project and TWG members are listed by name, but other LCT functions besides project coordination are listed. Committee meeting once monthly now. EO said to be drafted by city stakeholders, though has many similarities with the analogous EOs for Iloilo and Santa Rosa.
Iloilo: Creation of Iloilo LCT City Team (2022)	Limited chance of sustainability: Document lists members by name. Content mainly focused on project, though title broader than Baguio's. Drafted by project.
Santa Rosa: Creating LCT Santa Rosa City Team, EO (2022)	Sustainability unlikely: TWG attendance not as good as envisioned. Unlikely to continue post-project. Drafted by project.
Baguio: Ordinance on research and innovation, which includes low carbon transport	Significant/ sustainable: While the project was not involved in the drafting or overall promotion of this city council ordinance, it did push for the inclusion of LCT in the ordinance. With LCT included, the ordinance will now support/ promote the research and innovation work of the LCT university consortium in Baguio, establishment of which was facilitated by the project.

5.5 Local Level Standards Achievements

The project has drafted some EOs on standards for its partner LGUs. Only one of these has passed -- transit-oriented development (TOD) standards for Baguio. Iloilo has provided a letter of support for the TOD criteria the project has shared, but not an executive order. Findings indicate that Baguio's Legal Department carefully reviewed the ordinance as drafted by the project, made some revisions and also consulted with the City Council to ensure it did not conflict with the cycling ordinance the City Council has in the pipeline. In the case of Iloilo, no evidence of consultations with or revisions by the LGU were found. The TOD standards define active transport, connections in transit, mixed use development, etc. Instead of requiring specific measurements/ dimensions, the standards state a requirement "to be accommodating," such as by having adequate street lighting, shelter, access to bicycles, etc. The EO standards are envisioned as a first step towards TOD, with the next step being a city council resolution. The project also drafted some other LGU level standards such as for EVCSs (which got delayed due to waiting to see what CREVI might require in this regard) and for bike lanes for Baguio (in which the city is interested, but the EO has not been adopted and apparently there is now a cycling ordinance under consideration by the City Council). A summary of the project's local level "standards" work is provided in Exhibit 5-4.

5-4. Project's Local Level "Standards" Work

Proposed "Standard"	Status	Potential Impact if Adopted and/or Likelihood of Adoption
Baguio EO: Standards and Principles for Transit Oriented Development (TOD)	Adopted 2023	Unclear. This lacks metrics and instead states development should be accommodating to various needs (such as by having "adequate lighting"). It might be a first step to be followed up upon with a city council resolution and more specific requirements, perhaps, but not clear if this is likely to happen. The city's legal department reviewed the draft EO and made some revisions and also consulted with the City Council to make sure the EO did not conflict with any other legislation including a pipeline cycling ordinance the city council is now considering.
Iloilo: List of TOD standards	Not officially adopted	Letter from mayor saying the list of TOD standards was welcomed. Not clear if this will have any impact. No evidence that LGU input played a role in drafting the list.
EVCS standards for LGUs	Not adopted	Project team drafted these, but then had been waiting for CREVI as it was anticipated this may have changed requirements. CREVI was released in April 2023, but no further action taken by the project on these EVCS standards.
Baguio: EO for standards for bike lanes	Not adopted	Apparently there is strong interest by mayor. At the same time, however, the author learned the City Council is considering a cycling ordinance, which it is guessed would pre-empt a cycling EO. It's not clear if the draft ordinance draws from the project drafted EO or not.

5.6 National Level Institutional Mechanism

The project has an aim to establish a coordination mechanism among agencies involved in LCT planning and development. By the time of the July 2020 PIR, the project reported that it had drafted an Executive Order for such interagency coordination under the Office of the President with the aim of developing low carbon and sustainable transport plans. Yet, this was never approved and, by late 2021, the project reasoned it is difficult to get an EO signed late or early in a presidential administration (at that time it was late in the administration). Thus, the project shifted strategy to pursue a Joint Memorandum Circular (JMC) to be spearheaded by DOTr and signed by all involved agencies, which is considered easier to achieve. At the same time, the document was redrafted to have much broader emphasis, marrying land use and sustainable transport and considering not only DOTr but also Department of Human Settlements and Urban Development as key agencies in the effort. Different stakeholders have different views of the meaningfulness of this initiative. Now that it's been broadened to this extent, it may overlap with the Infrastructure Committee of NEDA and some other functions of the planning system already in place in the country. Other stakeholders note the partial overlap with the EVIDA committee (which will focus on EVs), but see the need for a broader LCT committee and wonder if the two can be merged. Yet another suggestion the author heard is that the real need for such committees is at the regional level, so that this national committee could oversee regional ones that would do the low carbon transport planning work. At the time of project close, DOTr had circulated the draft JMC to the agencies envisioned to sign it for their comments. So far, only DOE and DILG have provided comments. The project's EOP "Sustainability Workshop" was aiming to develop an initial list of national LCT priority items that could serve as the basis of an national LCT plan for the LCT committee, if it comes into being, to build upon. One stakeholder suggests pursuing a Departmental Order from DOTr, perhaps instead of the JMC or perhaps to commit to follow up on the JMC and other items that need to be pursued post-project. This idea was recommended in a much earlier version of the TE report (July 2023), but no action was taken on the idea.

5.7 Relevance of Component 1 Results

LCT is an area that benefits highly from policy support, standards, and plans, so the general work under Component 1 is highly relevant. The really strong achievements of the outcome, contributions to EVIDA, drafting and adoption of Green Routes Guidelines, and perhaps the Bike Network Master Plan (which may stimulate more bike lanes than business as usual in a good number of LGUs), show themselves to be highly relevant as the project made a difference in these areas that may have not occurred in the absence of the project. The interagency LCT mechanism may have the potential to be quite relevant, though there is debate about whether this group will be redundant and add further burden to already too-busy officials. Thus, how to make the inter-agency effort relevant (such as by pursuing the idea of action-oriented LCT committees at the regional level) needs to studied and strategized. As for those national-level policies and standards for which the project's realized contributions were quite limited, it is questionable whether project support of this type is really the best use of the component's resources. At the local level, LGUs do have a need for support in developing more LCT policies and standards, so this type of work is generally deemed relevant. Relevance of the outcome is rated S.

5.8 Effectiveness of Component 1 Results

The project has had a few stand-out achievements in its national level policy and standards work. For other claimed accomplishments in these areas, however, it is seen to have struggled to have a significant impact due to it often taking on the role of commenter, which results in achievements that are not typically that impressive. The stand-out successes, though, are enough for the component to be considered effective: multi-pronged contribution to EVIDA (content, small group meetings with the legislation's author, and representing DOTr at formulation meetings), Green Routes Guidelines, and, perhaps, Bike Network Master Plan. If the LCT JMC targeted is adopted in the future and can find a way to be impactful (such as through a strategy linking a central committee with regional ones that actually prepare plans), that could also be a positive contribution, though it's not clear whether work on the JMC will continue post-project. Exhibit 8-1 (Annex 10) in the cross-component results section shows progress towards Outcome 1 indicators. Because of the indicator design combined with the high variation in significance of various claimed achievements, the author proposes giving full points for strong achievements and partial points for lesser ones. Using this method, the policy target is roughly met, the standards target roughly met, and the interagency coordination mechanism target not yet met.

Exhibit 5-5 provides comments on progress towards the outcome statement and progress towards output statements of Component 1. It is noted that outputs of UNDP-GEF projects can be revised based on the situation. In the case of LCUTS, though not formally revised, some outputs were in practice somewhat disregarded, with 2 of the 5 outputs under Outcome 1 either not pursued or pursued only in a limited way. One output, the Low Carbon Transport Master Plan, was promisingly revived towards the end of the project, so that there is now a plan for the project's closing Sustainability Workshop to develop an initial National LCT Sustainability Plan that may serve as a basis for a future National LCT Master Plan.

Exhibit 5-5. Outcome 1's Progress towards Outcome and Output statements.

Outcome 1. Effective enforcement of policies and support provided for the promotion of low carbon transport	
Good progress towards outcome statement: While enforcement of new policies has not been clearly reached, project has facilitated the adoption of new policies, particularly EVIDA and Green Routes Guidelines, that are seen to be on their way to enforcement. Further, the bike network "master plan" and training work is assessed to have a good chance of generating support for implementation of LCT from perhaps 7 or so LGUs in the three metro areas it covers.	
Outputs (as designed) – 2 to 3 of 5 outputs not pursued, or pursued in only a limited way	
1.1: Developed supportive policy framework and regulations to facilitate the uptake of low carbon transport systems	Good, sustainable progress: In the case of EVs, EVIDA, EVIDA IRRs, and CREVI (roadmap) are developed, with the project contributing strongly to EVIDA. There is no such framework for LCT systems more generally, though some say the more viable next step (more viable than a policy, that is) is the interagency coordination mechanism for LCT (see next cell below).
1.2: Established coordination mechanism among agencies involved in low carbon transport planning and development	Some progress, sustainability not clear: A draft mechanism is in place (the "JMC"). DOTr has circulated it for comments, but only two agencies have responded. It is not clear if this work will be continued after EOP.
1.3: Developed Low-Carbon Transport Master Plan	Limited work: efforts made at very end of project to provide initial basis for future LCT Master Plan[27]: The ProDoc calls for a plan focused mainly on EVs and hybrids, though also states the "scope will be reviewed in detail during project implementation and finalized upon in-depth national consultations." A targeted output of the project's Sustainability Planning Workshop in November 2023 will be the National-Level LCT Sustainable Plan. Project implementers envision this can be an input/ starting point for a Low Carbon Transport Master plan. They further envision that this output can be passed to the inter-ministerial LCT Committee, the formation of which the project aimed to support through its draft JMC, for which DOTr is now soliciting comments from other departments before asking them to sign a finalized version.
1.4: Developed guidelines for local government units on the approval of related supportive infrastructures (e.g., charging station locations, right-of-way)	Limited progress: Project originally drafted EVCS guidelines for pilot LGUs, but these were put on the shelf, given concerns that CREVI may have invalidated some content. Yet, after CREVI's first version was issued, this work was not picked up again. Project did not draft other EV related guidelines for LGUs.
1.5: Approved and enforced low carbon vehicle operators and manufacturers guidelines	Output dropped: Not clear why

[27] Some say this output was initially dropped because of CREVI, which is a roadmap for EVs and does not address the broader aspects of LCT, such as active transport or public transport from a systems/ flow perspective (as opposed to vehicle technology perspective). While the ProDoc description of the output focuses on EVs/ hybrids, it also mentions aspects such as behavioral change in transport.

5.9 Efficiency of Component 1 Results

Exhibit 5-6 shows expenditure by major activity area or type of expenditure for Outcome 1 to facilitate assessment of cost effectiveness of the results achieved by this outcome. The unusual aspect is that the largest line item (at USD202,875) is project team member salaries charged to the outcome. Yet, project team members were directly involved in some of the key activities, particularly commenting upon or drafting of policies and standards. While the bike network master plan is the second most costly line item and seems a bit pricey, this achievement has already stimulated DOTr to allocate budget and is likely to stimulate follow up by a portion of the LGUs involved. Taking out this line item and considering expenditures of about USD300,000 for the other achievements (EVIDA, green routes and other policies and standards), the expenditure appears in the ballpark of what other projects spend on policy work. Yet, had there been the foresight to know which items would have been most impactful, greater focus on those alone could likely have been achieved with much less budget. Efficiency is rated as S-.

Exhibit 5-6. Overview of Expenditures for Component 1 by Major Activity Area or Type of Expenditure (USD)
2018 – 2022 (2023 not included)

Activity or Item	Expenditure to date	Total contract if relevant
Project Team (portion of full-time team member salaries charged to component)‡	202,875	NA
Bike Network Master Plan for Selected LGUs in Manila, Cebu and Davao†	145,245	145,245
National Consultant Total* [*Note: USD28,624 in local consultant missing from contract list provided by PMU to TE Team and per 3 items below. It might be accounted for by extensions of the Project Transport Specialist's contract*], including but not limited to:	56,792	NA
Project Transport Specialist (gave technical presentations at workshops, etc.) – Sept 2019-Aug 2020	*9,550*	*9,550*
Communications Officer (a consultant) – Nov. 2019 – June 2020	*9,462*	*9,462*
Institutional and Technical Consultant for Low Carbon Systems in Philippines – July-Oct. 2022	*9,156*	*9,156*
International Consultant [*also missing from contract breakdown provided by PMU*]	13,870	13,870
Workshops charged to Component ("Learning Expense"), including but not limited to:	23,014	----
Venue for Biz Development Workshop Oct. 2020 (Mimosa Cityscapes) – 166 attendees	*5,045*	*5,045*
Venue for low Carbon Urban Transport Forum Jan. 2020 (Novotel Manila) – 114 Attendees	*8,929*	*8,929*
Domestic Travel	2,554	NA
International Travel	583	NA
Total (*compares to CDR 2018-2022 total of USD327, 134, but the USD145,245 for the bike master plan was charged to Outcome 3, despite its achievement being situated here. Without it, the table's total is 299,688, about USD26,000 less than the CDR total, perhaps explained by some miscellaneous items not included here*)	**444,933**	**---**

‡Also includes Baguio Field Technical Consultant who played similar role to the full-time Field Technical Assistants in the other Pilot Cities. Included in this amount are "Service Contracts" and "National Personnel Service Agreements."
†The bike network assignment was officially charged to Outcome 3, but that is the private sector outcome and the achievement in reporting is claimed under Outcome 1. Since we are assessing cost effectiveness of results, it is included in the same outcome as its results are.
*Not including Baguio Field Technical Consultant.
Sources: Project contract list and CDRs

5.10 Sustainability of Component 1 Results

The top achievements of Outcome 1 are considered to have high potential for sustainability. These are EVIDA (which is legislation that has been adopted), Green Routes Guidelines (which have been incorporated into DOTr Omnibus Guidelines and is required by EVIDA and its IRRs), and perhaps the bike lane "master plan," which it is forecast a portion of involved LGUs will implement. Other national level policies and standards adopted, but with less contribution from the project [EVIDA IRR, DOTr administrative order on classification of EVs, and six items from DOE (4 standards and 2 policies)], are also deemed sustainable given their adoption combined with the need of them for achieving priorities such as implementing EVIDA. Sustainability of policy and standard work at the local level, though the project had a larger role drafting some of these items in full, is more mixed. The case of the Pasig trike cooperative EO is assessed to have strong sustainability and some of the Baguio items (particularly the research and innovation ordinance, which was influenced by the project to include LCT) is considered promising. The EOs to form LCT committees for each of three of the pilot LGUs have less certain sustainability, given, for example, that names of specific persons listed in the EOs give these a feeling of being short term, though, as noted, continuation of the Baguio committee in particular is considered possible. It is also not clear if there will be any follow up on the Baguio TOD Standards EO. Overall for Outcome 1, considering the strong sustainability of many of these items, particularly of the most important achievements, despite some other items having more challenges for sustainability, the outcome's achievements are given a sustainability rating of "L" (likely).

6. Findings on Project Results Part II: Detailed Findings on Component 2 Results

The project's second outcome aims for the adoption and implementation of LCT plans and programs in major cities. In practice, activities have encompassed the areas of capacity building (via workshops, conferences, and trainings); LGU LCT planning; awareness, advocacy, and communications; higher education and research; and technical training.

6.1 Capacity Building

The project held a range of workshops, conferences, and training events, some at the national level but most in its four pilot LGUs. TE consultations yielded positive reviews about some of these events and, in a few cases, identified actual follow-up action. One overall concern, however, is that the portfolio of events was quite broad and might have achieved more concrete results with narrower focus. Exhibit 6-1 provides a list of events and numbers of attendees derived from information provided by the PMU. This sub-section also includes discussion of some of the events by topic, though the focus is on the more recent events of the project, given that stakeholder insights on earlier events was quite limited. Capacity building related to LGU planning (integration workshops and NCTS-provided training on LCT planning) is included in the next sub-section on planning. Gender equality and social inclusion (GESI) workshops are covered in relevant discussions in Section 8 (Annex 10), including those on relevance, efficacy, and efficiency.

Exhibit 6-1 includes 54 events, though some are considered internal to the project. There were just three events with over 100 people. Two were held early in the project (in 2020) and one fairly recently (Dec. 2022). There were 19 events with 40 or more persons. Counting the number of person-events (one point for each time a person attended an event, which means many persons will be counted multiple times), there were 2,172, of which 40% were women. Clearly, the project put enormous effort into events and at minimum reached a lot of people with a lot of good content.

Exhibit 6-1. List of Project Events

Notes: Does not include main Project Board meetings, but does include TWG under PB. Not all events are charged to Component 2, but it is likely the Component 2 Team was involved in putting on most of the events.

Date day/mo/year	Event	Attendees F+M=Total	Location
24/9/19	1st Technical Working Group	12+7=19	Quezon
19/11/19	2nd Technical Working Group	9+13=22	Manila
07/1/20	Low Carbon Urban Transport Forum	57+114=171	Quezon
21-23/1/20	Baguio City's Project Work Planning	7+16=23	Baguio
5/2/20	2nd TWG Meeting on National Air Quality Forum	8+12=20	Mandaluyong
18-20/2/20	Iloilo City's Project Work Planning	16+26=42	Iloilo
26-28/2/20	General Santos City's Capacity Building and Santa Rosa's Benchmarking	6+19=25	GenSan
23/9/20	TWG Meeting	32+54=86	NA
20-22/10/20	First Business Development Workshop	90+166=256	NA
29-30/10/20	Workshop on the Development of Theory of Change	10+5=15	NA
3/11/20	Results-based Management Workshop	6+3=9	NA
10/3/21	Field Visit to Santa Rosa City	4+11=15	Santa Rosa
24-26/3/21	The E-Mobility Future for the City of Sta. Rosa's Public Transportation (3-day virtual)	23+31=54	virtual
29/6/21	1st DOTr Low Carbon Transport Committee Meeting	10+6=16	NA
27/8/21	Kick-Off Meeting: Establishment of Bike Lanes in Metro Manila, M. Cebu, M. Davao	22+51=73	NA
11/3/22	Presentation of the Bike Lanes Network Master Plan	29+61=90	NA
22/3/22	Courtesy Call with Mayor Jerry Trenas and Iloilo LCT Team	3+7=10	Iloilo
7-8/4/22	Conference and courtesy call to the Iloilo Mayor's office	5+11=16	Iloilo
19-20/4/22	Orientation on Gender Equality and Social Inclusion and GESI Analysis Training-Workshop of Road Transport National Policies and Programs (combined)	25+11=36	NA
14/6/22	Work Planning at UNDP	5+4=9	Mandaluyong
24/6/22	Work Planning at DOTr Clark Pampanga	9+5=14	Pampanga
8-9/8/22	Orientation-Training and Fieldwork on Route Characterization	20+20=40	Baguio
5-6/9/22	Route Characterization to Promote EV Technology	26+37=63	Iloilo
14-15/9/22	Write shop: Formulate Framework of Baguio Consortium of Incubators for Research and Innovation	18+17=35	Iloilo
12/10/22	Cross-Sectoral Meeting between the Department of Energy, Local Government of Baguio, Transport Cooperatives, and Electricity Providers	26+36=62	Baguio
11-12/10/22	Capacity-Building Workshop for Gender Equality and Social Inclusion (GESI)	16+11=27	IloIlo
9-11/11/22	Benchmarking for Low Carbon Transportation (LCT) Research and Innovation	38+24=62	Manila
13/11/22	Baguio EV Test Run Launch	15+20=45	Baguio
21-22/11/22	Capacity-Building Workshop for Gender Equality and Social Inclusion (GESI)	12+10=22	Santa Rosa
24/-25/11/22	Ceremonial Memorandum of Agreement (MOA) Signing and Launching of Dalan ni Taltallak Consortium for Low Carbon Transportation (LCT) Research and Innovation	14+13=27	Baguio
3/12/22	Baguio EV Test Run	13+19=32	Baguio
5-6/12/22	Capacity Building Workshop for Gender Equality and Social Inclusion (GESI) for Transport Entities and Cooperatives and University Staff and Professors	12+8=20	Baguio
8-10/12/22	Audit Visit: Electric Vehicle Operations of Transport Cooperatives	18+25=43	GenSan
12-13/12/22	Knowledge Sharing on Fleet Management System, Biz Dev. Planning; Meeting with EV Manufacturers for Transport Entities in Operation of Modernized Jeepneys	38+61=99	Iloilo
16/12/22	Consultative Meeting with Pasig Transport Cooperatives and Pasig LGU	10+11=22	Pasig
16/12/22	Consultative Meeting with Pasig TODA Members and Pasig LGU	9+12=21	Pasig
15-26/12/22	Knowledge Sharing on Fleet Management System, Biz Dev. Planning; Meeting with EV Manufacturers for Transport Entities in the Operation of Modernized Jeepneys	38+72=110	Baguio
18/12/22	People's Streets Tour and Meeting with Barangay Officials in Pasig City	2+3=5	Pasig
27/1/23	TWG Meeting: Incentive Programme Concept Note	13+11=24	virtual
30/1/23	Iloilo EV Test Run Launch	16+24=40	Iloilo
30-31/1/23	LCT Project E-Jeepney Investment Forum	18+33=51	Pasig
23-25/2/23	Low Carbon Streets Workshop	27+37=64	Pasig
2/2/23	TWG Meeting: EVCS Design for Pasig and Iloilo City	8+11=19	Virtual
8/2/23	Workshop on Integrating Low Carbon Transportation in the LPTRP, Comprehensive Development Plan (CDP), Comprehensive Land Use Plan (CLUP), and the Proposed Smart Mobility Plan in Baguio City	16+24=40	Baguio
8/2/23	Business Development Criteria Setting for Selection of Transport Cooperatives	5+2=7	Virtual

20/2/23	Iloilo Test Run Assessment	12+25=37	Iloilo
8/2/23	Business Development Pairwise Comparison for the Criteria	5+2=7	Virtual
6/3/23	Sta. Rosa Courtesy Visit and Project Updates	3+6=9	Santa Rosa
7/3/23	Pasig City Transportation and Mobility Committee Meeting re MOA	---	Pasig
17/3/23	Training Needs Assessment Validation Workshop	8+26=34	Pasig
20/3/23	Training Needs Assessment Validation Workshop	8+9=17	Baguio
21/3/23	Training Needs Assessment Validation Workshop	8+17=25	Santa Rosa
23/3/23	Training Needs Assessment Validation Workshop	5+25=30	Iloilo
29/3/23	Write Shop on the TESDA Competency Standards/Training Regulation on Low Carbon Urban Transport and Electric Vehicles and Needs Assessment Report	4+8=12	Mandaluyong
Total person-events (includes multiple counting of people who attended multiple events) = 869 women+1292 men = 2,172 (40% women)			

Investment Forum: The Investment Forum held in Pasig in January 2023 attended by 51 persons appears to have been a successful event in terms of reaching the target audience and imparting the knowledge and awareness targeted. (It should be noted that the Investment Forum is charged to Outcome 3 and is quite in line with Outcome 3 aims, but is included here by virtue of its capacity building/ dissemination nature.) Over 30 transport cooperatives attended this meeting. And, the Chair of a well-known transport cooperative in General Santos City, one of the first adopters of e-jeepneys, was invited to speak. His talk emphasized the financial benefits of going electric. One attendee at the meeting stated, "It was a good way to give momentum. They [the transport cooperatives] were presented with so many options." Suppliers of e-jeepneys were also in attendance, giving the transport cooperatives the opportunity to meet with them. And, it is said that the forum highlighted the opportunity of the public transport market to some suppliers that are now considering getting into that market with e-jeepneys. Targeted results may have benefited from the project having more events bringing the cooperatives together with those with experience in e-jeepneys, as well as with suppliers, thus building awareness and knowledge of e-jeepneys among cooperatives.

EV fleet management: Another workshop that got high marks was the transport cooperative fleet management training held in Baguio in Dec. 2022, attended by 110 persons. One stakeholder raised the wide participation of this event, saying, "It really addressed their needs – when you respond to a need, the impact is significant rather than just pushing what [you] want." This high level of interest suggests it may have been worthwhile for the project to provide knowledge products for the transport cooperatives on topics such as fleet management, designed to be easy for them to read and understand. This is something that post-project stakeholders hoping to build capacity of jeepney transport cooperatives may wish to consider.

Pedestrian issues: In 2023, the project began to have some workshops related to pedestrian issues in its partner LGUs. The one with the most tangible results so far is a workshop in Baguio called "Streets for Kids." The children from a school were able to identify problems with the street by their school and come up with a preliminary design. The city built on this and allocated the funds to improve the area, including more sidewalk space to improve walkability.

In Pasig and Santa Rosa, the project has held "Open Streets" workshops. In Pasig, there was already activity in the area of "Open Streets" whereby a barangay (a sort of neighborhood) may close off part of the street on a weekend day for enjoyment and activities. One particular barangay in Pasig, Sumilang, has been doing this for a while and probably for a year or so before the project got involved in 2023. So far, terminal evaluation findings did not reveal project impact on "open streets" activity in Pasig. The project supported the painting of the street area used by the Sumilang Barangay, and invited artists and others to attend. Yet, while a lot of enthusiasm was generated, the paints were water based and quickly washed away. This did give the Barangay Council the idea to seek out more long-term paints. At the request of the city, LCUTS also held an "inclusive streets" workshop in Pasig to develop more inclusive designs for streets, which would thus encourage more active transport. After the Santa Rosa "open streets" workshop,

the mayor instructed the city planning and development office and the barangays to ensure funds for "open streets" will be included in the barangays' annual investment programs or budgets for 2024. The city planning and development office is planning to have a pilot street to implement "open streets."

Exhibit 6-2. Summary of Key Areas of Recent Workshops and Results/ Impact

Topic and Events	Results/ Impact
Intro of e-jeepney investment opportunity -Investment Forum in Jan. 2023 -Earlier event with cooperatives and suppliers in Dec. 2022	-Over 30 transport cooperatives in attendance at investment forum (officially a part of Outcome 3). Gave them opportunity to hear from cooperatives seeing financial benefits of e-jeepneys. -Both events believed to have increased the interest of some suppliers entering the market and given them opportunity to exchange with cooperatives
EV fleet management -4-day event in Iloilo -Event in Baguio	-Feedback that these events were very well received as they reflect needs of the cooperatives who have transitioned from solo businesses to larger groups. -Popularity suggests an easy-to-read/ easy-to-understand KM product on fleet management designed for jeepney cooperatives would be well-received and may be considered by those wishing to build jeepney cooperative capacity post-project.
Pedestrian issues -Streets for kids workshop: kids design improved street by school (Baguio) -Open streets workshops (Pasig and Santa Rosa) -Inclusive streets workshop in Pasig (at request of city)	-Baguio has built upon children's design and allocated funds (≈USD18,000) to improve street/ sidewalk near their school -Santa Rosa mayor has requested City Planning and Development Office and barangays to set aside funds in 2024 budget for open streets. Santa Rosa did not have open streets before. -Pasig already had active open street activity in one barangay for over one year – no big change after workshop. Project supported street painting event at this barangay, though paint washed away.
LCT Planning workshops -"Integration workshop" (Baguio, 2 days Nov. 2022) for city to brainstorm LCT ideas -UP-NCTS 10 module online training on LCT planning for each city followed by live workshop	- Results of the integration workshop have been included in the Baguio City database for different programs, but there is a need to learn how to integrate these proposed LCT items in city plans -NCTS training carried out in 4 cities followed by development of re-entry action plan. Not clear if the latter will be integrated into cities' plans for implementation. There is some concern that cities have parallel efforts and this work was not tailored enough to their own initiatives to ensure utilization. In the case of each pilot city's re-entry action plan workshop, some neighboring cities and municipalities attended. -Project's EOP "Sustainability Workshop" planned to try and get commitment at the workshop from each pilot LGU to implement the project-supported re-entry action plans.
GESI workshops -held in 4 cities	-Said to have given stakeholders exposure to social inclusion concept, but substantial impact not detected. It's notable that transport cooperatives (traditionally male sector) were main attendees at these events.

6.2 Planning

Given that Outcome 2 is stated as "Adopted and implemented low carbon transport plans and/or programs in major cities," capacity building in planning/ programming and support in developing and adopting LCT plans/programs at the LGU level should be an important aspect of the project. Yet, work targeting the development of a plan or integration into existing plans was not begun until late 2022, when an "integration workshop" was held in Baguio. The purpose was to brainstorm LCT measures with different city departments in attendance. The measures selected are said to be included in a city information database, but there was a lack of work on how to integrate them into official plans. Since that time, the project has retained UP-NCTS (via direct contracting) with a USD 100,450 contract to build capacity in low-carbon transport planning. NCTS prepared an intense 10 half-day online training program which was offered to all four cities followed by an in-person "re-entry action plan" workshop for each pilot LGU in

which an actual plan was developed. Yet, stakeholders consulted in June/ July 2023 did not see any real plan or actions in the pipeline to integrate these items into official city plans. To be results-based, it would have been critical for the project to carefully consider how to leave the cities with LCT plans that will be both adopted and implemented. Importantly, there was some feedback that the training was not tailored to what was already going on in the city. For example, there was feedback that Pasig stakeholders were relatively passive in the workshop, but that they already have a number of LCT initiatives in their pipeline via various initiatives. Exhibit 6-3 shows information on other plans the cities have or are working on. A second example is that Iloilo is keen to work on its urban mobility plan and has asked the project for help on it. It seems it would have been better to have training or TA focused on this plan in the case of Iloilo. This is not to say that NCTS did not assess the situation in each city before carrying out their training – reports are that they did do some level of assessment. Rather, the whole idea to develop a training that could cover all four cities as the main part of the contracted effort did not fit well with the situation that, in order to get LCT measures into plans that will be adopted, a very specific and different approach focused on pipeline/ existing planning efforts in each LGU is what was needed. To address some of the aforementioned concerns, the project planned, in its EOP "Sustainability Workshop," to try and elicit commitments from each pilot LGU to implement the re-entry action plans.

Exhibit 6-3. Other Plans the Four Pilot Cities have that Might be/ have been Integrated with LCT Planning Work

Lesson for future projects: Integrate LGU planning support with cities' pre-existing initiatives and needs to increase chances of achieving adopted plan by EOP. Always check out baseline situation before commissioning planning support work.

City	Existing plans or new plans that they are working on	Possible follow-up steps post-EOP (*per TE assessment*)
Iloilo	Urban mobility plan in planning stage. Ironically (after online NCTS LCT planning course), project was said to be crafting introductory online training for the Iloilo Urban Mobility Plan (UMP) TWG. At the same time, mobility plan is said to be spatial, while "re-entry action plan" prepared with NCTS assistance is matrix that facilitates targets and budgets.	There is a need to align NCTS work with urban mobility plan. City had asked for help with latter, but instead got re-entry action plan. Project planned to offer a little introductory support on UMP, but this was likely not enough support. Urban mobility plans require a lot of time, study, and data.
Santa Rosa	Existing bicycle and pedestrian master plan under discussion, but opposed by a councilor. Project influence said to have inspired this plan.	Steps might be taken for re-entry action plan to incorporate this bicycle and pedestrian master plan. Then, work may be done to lobby for adoption.
Pasig	Pasig lacks comprehensive LCT plan, but has many pieces in place or that it is working on: e.g., zoning ordinance, their own e-tricycle fleet that they want to increase, other projects to increase electric mobility. Also, Pasig has plans for preparing transport master plan.	Instead of creating a whole new plan like the re-entry action plan, Pasig may benefit from support to integrate the various items they already have into a coherent/ comprehensive LCT plan, which then might have a better chance of adoption.
Baguio	Baguio has 3 plans that need to integrate LCT measures: (1) LPTRP/transportation management plan; (2) community plan and comprehensive land use plan; and (3) smart mobility plan. As for comprehensive land use plan, results of integration workshop have been put in database so initiatives could be incorporated into this plan.	City Planning Office can take the lead, but may benefit from guidance of how to integrate "integration workshop" initiatives and re-entry action plan with official plans. Actually, purpose of integration workshop was supposed to be to integrate LCT into the three plans mentioned in cell to the left.

6.3 Awareness, Advocacy, and Communications

While the project has achieved awareness through its many events, the author finds that awareness, advocacy, and communications work of the project through other (non-event) channels did not live up to potential. First, it should be recognized that the transport cooperatives were a key and perhaps the top audience of this project. Yet, the author did not detect any kind of ongoing effort to get these organizations useful information on a regular basis and also sees an absence of focus on getting them key results items after EOP. During its lifetime, the project, working with LTFRB or OTC, might have developed a contact database (preferably electronic, if such communications will catch their attention) of jeepney transport cooperatives and this still might be done post-project by interested entities. Materials/ brochures on key topics, especially fleet management and simple calculations on the potential lifetime cost advantage of e-jeepneys over Euro IV jeepneys might have been delivered and still might be, post-project, by interested parties. Ideally, the project's EV test runs would have been designed to provide information to the cooperatives, but instead the reports were more academic. Lastly, if post-project monitoring of the incentive program e-jeepneys (including the "multiplier" e-jeepneys) with the aims this report recommends is successful, updates on monitoring results could be shared with a transport cooperative contact list, as described above.

LGUs may have been a second audience for the project to target through ongoing communication, by first developing a contact database and then sharing key information. Such work might be carried out post-project by interested entities, such as the upcoming Sustainable Cities Project. For example, the LCUTS project invested a significant amount of funds in the online LCT planning modules developed by NCTS. These could be posted online by interested parties post-project and a link shared with other LGUs that might be interested.

Perhaps most surprising is, later in the project, the absence of both a project website and dissemination of articles to the public. The situation seemed quite problematic at the time of TE consultations in June and July 2023, but saw some improvement in materials disseminated or soon to be disseminated by around EOP in November 2023. Still, as of Oct. 2023, information suggests that six articles prepared between February and May 2023 were still languishing for approval on a desk in UNDP CO. Three had been approved by UNDP CO's Communications Department and were waiting for approval from the CO's Climate Action Program, while the other three were still waiting for approval from both departments. The mechanism for full clearance through UNDP should be improved with maximum turnaround time of, say, five days for short articles so they do not become stale like these have. UNDP CO, however, did, close to EOP, publish two project-prepared articles on its website and social media accounts. The project contracted a web development specialist from April 2020 to December 2020 and is said to have had a website, but the website no longer existed at the time of TE consultations. In the review comments on the draft version of this report, one stakeholder indicated the website was abandoned for two reasons: (1) so that UNDP's website could be used instead and (2) because it was concluded the project website would not be sustainable after project close. It seems the impetus for the decision to close down the project website came from UNDP CO. Some stakeholders mentioned trying to find out about the project using web search and coming up with little if anything. Earlier on (Nov 2019 to June 2020), the project had a part-time Communications Officer; and it retained a new one in Dec. 2022. In June/July 2023, there was also lack of a means of the project to post items more quickly, such as on its Facebook page, which UNDP had asked the project to no longer use. By EOP, however, use of the project's Facebook page was reinitiated and did provide a way for the Project to communicate with stakeholders quickly. It is true that the project encompasses a topic that is sensitive. In March 2023, there were protests against PUVMP by jeepney drivers. Yet, reports are that negotiations and an extension of time to comply have satisfied the protesters. If there are concerns about jeepney-related issues, then articles on that topic may receive more scrutiny, but articles on other topics such as the bike lane master plan or open streets, should be cleared

quickly. Ideally, communication efforts should involve the press so that they, too, write articles about the project. In a positive development, DOTr Communications Department tapped their media contacts to write about two past events of the project, the Bike Lane Master Plan turnover in July 2023 and the signing of an MOA with transport cooperatives and LGUs regarding the Incentive Program e-jeepneys on Oct. 12, 2023. At times, though, the project has surprisingly foregone media invitations, probably at the direction of UNDP CO. Other communications activities close to EOP include publishing and printing of the *Bike Lane Master Plan* (achieved) and preparation of case studies of a few transport cooperatives that have adopted e-jeepneys (in the pipeline). A few more articles are expected around EOP as well as a publication: *LCT Training Toolkit for NGAs and LGUs.*

6.4 Higher Education and Research

The project provided support to the development of a Baguio-based three-university consortium, known as a "Center of Excellence," that has a focus on transport and, particularly, LCT. Mainly, the project provided the inputs of its Baguio Field Technical Consultant to organize cooperation. In June 2023, the University of Baguio launched its transport engineering degree in association with this center, with the Secretary of DOTr and UNDP RR in attendance. The consortium does not have a separate budget, though each university uses its own budget to support the Center. The purpose of the consortium is mainly to collaborate on research and innovation. UNDP has pledged to provide some basic equipment like traffic counters and CO_2 meters. The equipment is not expensive, but procurement in finding quality items was a challenge and was much delayed. UNDP is also providing this equipment to the other cities. The author sees UNDP's support of this consortium, located in Baguio, its enthusiastic pilot city partner, to be beneficial. At the same time, the output is less core in terms of some of the critical results the project aims to achieve in the near-term. The consortium is known to be engaged in partnership with the city government for smart mobility projects and in trying to engage partners abroad, as well as providing research and innovation components for development projects with which Baguio is engaging.

6.5 Technical Training

Many stakeholders conveyed to the author that the project's target of developing technical training programs for EV technicians addresses a critical need. The project design calls for cooperating with TESDA, the agency responsible for government training standards and certifications. And, indeed, it is considered a good sustainability strategy to develop training standards recognized nationally in this way. Yet, the project made very slow progress in cooperating with TESDA until its last 1.5 years or so of implementation. It may be that, since EVIDA has been adopted and specifically mentions TESDA's role in the industry (as do the EVIDA IRRs), TESDA is now ready to take the need quite seriously. Yet, TESDA's prior progress on EV training standards with other partners (as will be discussed) shows that the problem was more likely an LCUTS project implementation issue.

TESDA divides its training standards into competency standards (CSs), which are easier to develop, and training regulations (TRs), which take longer to develop but involve the availability of national certification for the trainee. Some years ago, in 2015, TESDA's board determined that a TR for hybrid EV technician should be developed but, aside from possibly skills mapping, no other progress was made.[28] Then, more recently, in 2021, a CS for pure battery technician for public transport vehicles (e-jeepneys and e-buses) was developed by Cavite State University (CavSU) faculty members with funding from DOE. This CS is posted on TESDA's website, but cannot become a TR, because no proper needs assessment and market study was done as required by TESDA.

[28] This work had the sponsorship of CAMPI, an organization of private car companies in the Philippines, largely headed by Toyota and Nissan.

This background on previous efforts at related TRs or CSs was unknown to the project until, in April 2022, it hired a training specialist to support the TESDA work. The approach of having outside support from LCUTS helped TESDA speed up its timeline, which is typically quite slow. The specialist discovered the challenges of preexisting but incomplete efforts in the EV technician field. While initially hired to support TESDA in development of the EV technician TR and curriculum, given needs, the scope of work expanded from simply developing the TR to also bringing together the various efforts so that there will be a unified and sustainable action plan towards developing the EV technician TR. To make the eventual certification more attractive to potential technicians (and because competency standards for e-jeepney and e-bus technicians had just recently been developed), it was proposed that the specialist expand the scope of what had been developed to include technician skills for EV cars as well. That way, graduates that get certified will have prospects of a much broader job market. The specialist first conducted the required skills mapping and needs assessment across all areas (EV cars, e-jeepneys, and e-buses). Market demand and specific training needs were identified. In addition to pure battery EV technician, needs for charging station technician and EV battery technician were identified. Plans are still underway, but there is a chance that an umbrella EV technician TR will eventually be developed someday, along with subspecialties in each area (pure battery EV technician, EV battery technician, and charging station technician).

The challenge is that it takes a long time to get a TR approved, so that the project targeted and achieved only an integrated CS (integrating the e-jeepney and e-bus CS with e-car CS) by EOP that will have the proper background work (skills mapping and market assessment) to eventually become a TR. Given that there will not be a TR by around EOP, it is recommended that an action plan be put in place by TESDA and partners so that the TR will eventually be achieved. The project may have addressed this issue at its "Sustainability Workshop" near EOP. Further, given the needs for charging station technician and EV battery technician, a decision needs to be made as to whether these will be subspecialties of the main TR, or separate TRs. In either case, the plan for these two items should also be mapped out by TESDA and other interested partners. As for the project target of two institutions being certified to offer the EV technician training course, it is now understood that, instead, the way TESDA operates is to allow institutions to register proposed courses if these meet certain criteria. Yet, this registration may be only in the case of TRs. Instead of achieving this "registration," the project carried out a training of trainers for the EV technician CS, which is considered progress towards the higher level aims.

6.6 Relevance of Component 2 Results

The author finds the activities and achievements under Component 2 as implemented to have varying levels of relevance, though all are relevant in subject matter to the basic need to develop LCT. The topics of the many events held, covering not only e-jeepney and cooperative aspects, but also active transport, are relevant to developing LCT. The planning work had some weaknesses in relevance as it did not carefully take stock of the planning work and targets already in place with the municipalities. And, while project design targeted adopted plans, the work as implemented did not. As noted, however, the project's EOP Sustainability Workshop may have worked to elicit commitment from LGUs to implement the re-entry action plans supported by the project, thus representing some progress to the higher level aim of adoption and implementation. As for other types of awareness/advocacy work, while these were somewhat limited, the draft and published articles reviewed are relevant to promoting awareness of LCT topics with which people may not be familiar. The university consortium, while relevant to the LCT topic, will not be critical to nearer term goals, but may make contributions in the longer run. Lastly, the work with TESDA to harmonize existing efforts to develop a CS for pure battery EV technician that can eventually become a TR is considered highly relevant. Yet, more information is needed on whether concrete plans for achieving the EV technician TR, the EVCS TR, and battery technician TR have been made by TESDA and partners, perhaps with impetus from the project's EOP Sustainability Workshop.

All in all, with these varying degrees of relevance and particularly considering the challenges in relevance of the planning work, a rating of S - for relevance is given for the results of this outcome.

6.7 Effectiveness of Component 2 Results

In terms of effectiveness of Outcome 2 work, while individual items have been carried out well, there is some lack of strategic approach to ensure that the results contribute to the targeted outcome, outputs, and indicators. The capacity building workshops/ conferences/ trainings have some successes and highly appreciated items. The Investment Forum (Jan. 2023), officially a part of Outcome 3, and prior meeting with transport cooperatives and manufacturers is seen as impactful in promoting e-jeepney deployment. The two fleet management workshops for transport cooperatives are seen as meeting highly in-demand needs. The Streets for Kids and Opens Streets workshops have both stimulated budget allocations or likely ones (the former in Baguio, the latter expected in Santa Rosa). The planning work, however, is not seen as that effective as it did not consider the baseline situation in each city and build on that to deliver a product that the cities would be likely to adopt. And, the awareness and outreach work (aside from the workshops/ events) has been weak – there has been no organized, periodic outreach to jeepney cooperatives, something that could have benefited the aims of the project greatly. Further, the project is no longer using its website; and its communication efforts (articles drafted after events) get lost in the approval shuffle at the UNDP CO. Yet, as noted, there have been improvements in some articles published and the project now being allowed to use its Facebook account again. The LCT university consortium in Baguio has already taken up support of the city and may conduct meaningful work related to local priorities in the future. The development of EV related technician training standards and curriculum will represent solid progress towards eventual goals of developing relevant TRs, though the TR target was not reached during the lifetime of the project. This work is especially appreciated as lack of coordination and completion of previous efforts were identified and work on harmonizing these efforts as well as newly providing the required analyses and content was achieved. Yet, it is not clear whether a strong exit plan that will ensure a TR in the near future will be put in place.

Exhibit 8-1 (see Annex 10) in the cross-component results section shows progress towards Outcome 2's two indicators. Because the first indicator refers to cities being capacitated by "adopting LCT plans and programs," the author deems progress towards the target as partial, as no LCT plans or programs facilitated by the project have been adopted, though isolated activities, such as "streets for kids" have been allocated budget and the project's EOP "Sustainability Workshop" will aim to elicit commitment from LGUs for adoption and implementation of the Re-Entry Action Plans prepared under the project. The second indicator targeting two institutions with registered course for low carbon vehicle technician training has also not been met, though progress has been initiated in coordination with TESDA. Given the mixed effectiveness of results and lack of completion of two key targets, the effectiveness of this outcome is rated MS+.

Exhibit 6-4 provides comments on progress towards the outcome statement and output statements. It is noted that outputs can be revised based on the situation. While the project did not formally change any of the outputs, there may have been a partial shift from Output 2.1, while all other outputs appear to be quite in line with activities. Overall performance is seen to be weak in this analysis as well. The problem may be that, while the outcome has a huge amount of activity (see Exhibit 6-1 for all the meetings and workshops), workshops and meetings alone do not bring achievement of targets. A more strategic approach was needed to ensure that the outcome leaves a lasting legacy that can be measured.

Exhibit 6-4. Outcome 2's Progress towards Outcome and Output Statements.

Outcome 2. Adopted and implemented low carbon transport plans and/or programs in major cities	
Partial progress towards outcome statement: The project's Outcome 2 has not taken a results based management approach in targeting achievement of this outcome statement. There have been many events and trainings that have likely raised awareness (though no measurement mechanism was utilized). Yet, the planning work was not strategically designed to achieve adoption of LCT plans and programs. It's positive, though, that the EOP "Sustainability Workshop" will aim to elicit commitment from the LGUs to adopt and implement their project-supported "Re-Entry Action Plans."	
Outputs (as designed) – at least some progress on most outputs	
2.1: Developed capacity of planning institutions and regulatory agencies on (a) coordinated policy making, investment planning and implementation of low carbon transport; and (b) modern planning tools, registration and licensing of low carbon vehicles	Some progress: Assuming this output targets the LGU level, there has been some progress. Yet, while there has been training on planning, there is a need for learning by doing in developing polices, investment planning, and implementation as well as use of modern planning tools.
2.2 Completed awareness and advocacy program	Strong progress in events, but other types of outreach weak or facing challenges: As noted, project would benefit from developing a contact list of jeepney cooperatives and periodically sending them useful materials, such as brochures on fleet management and the financial cost advantage of e-jeepneys. Further, UNDP CO needs to work out its barriers to promoting project achievements in the media and online. By resuscitating its Facebook page, and finally getting a few articles published on UNDP's website, as well as completing one publication and working on another, improvements in communication were achieved by Nov. 2023, as compared to July 2023, but administrative barriers still exist.
2.3: Established centers of excellence to support local capability and expertise for new applications/ services/ products	Achieved: The project has established one such center in Baguio.
2.4: Developed sufficient number of skilled local technicians	Some progress: Project achieved initial steps towards an EV Technician TR and national certification. It did this by harmonizing and expanding upon earlier work on an EV Technician CS, including the achievement of TESDA required market assessment/ skills mapping and functional analysis.

6.8 Efficiency of Component 2 Results

Exhibit 6-5 shows expenditure by major activity area or type of expenditure for Outcome 2 to facilitate assessment of cost effectiveness of the results achieved by this outcome. The unusual aspect, as with the Outcome 1 cost effectiveness analysis, is that the largest line item (at USD88,170) is project team member salaries charged to the outcome. Yet, project team members were directly involved in many of the workshop activities. While results (as discussed above under effectiveness) are not as clearly impactful as would be hoped, the sheer volume of meetings (54 meetings), the majority of which might be charged to this outcome or at least involve project team members responsible for this component, does seem a value. By end of project, the most costly item in Outcome 2 will probably be the NCTS training at

USD100,450. Given that it has not been sufficiently tailored to the needs of each city and may not result in adopted LCT plans, that particular item may be considered not that cost effective. Further, the budget includes about USD10,000 for the web development specialist, but there is no longer a website in use, so that item also is not considered that cost effective. The training specialist contract might be considered high impact for the cost, given the strong consensus on needs for an EV Technician TR. The improved CS and associated skills mapping and functional analysis achieved via this contract are important steps. Given the variability in cost effectiveness, overall efficiency is rated as S -.

Exhibit 6-5. Overview of Expenditures for Component 2 by Major Activity Area or Type of Expenditure (USD)
2018 – 2022 (2023 not included)

Activity or Item	Expenditure to date	Total contract if relevant
Project Team (portion of full-time team member salaries charged to component)‡	88,170	---
National Consultant Total (*USD44,036 is sum of the contracts listed below, so pretty close to the total*)	46,504	---
Gender Equality and Social Inclusion (GESI) Specialist	*7,493*	*13,321*
Training Specialist for the Needs Assessment and Development of Training Curricula on Low Carbon Urban Transport	*8,858*	*44,290*
Senior Transport Specialist	*0.0*	*10,413*
Technical Expert on Transport during the Conduct of Electric Vehicle (EV) Test Run in Baguio City and Iloilo City	*0.0*	*8,512*
Communications Officer	*0.0*	*10,000*
Economist	*8,587*	*8,587*
Policy and Regulatory Specialist	*8,695*	*8,695*
Web Development Specialist	*10,403*	*10,403*
Training of LGUs in Planning – Contract to University of Philippines – NCTS	27,118	100,450
Workshops charged to Component ("Learning Expense")	31,910	--
Domestic Travel	6,928	--
International Travel	4,067	--
Total (*compares to CDR 2018-2022 total of USD195,559 – close, but CDR actual is a bit lower than computations, probably because NCTS paid initial amount in 2023*)	**215,100**	

6.9 Sustainability of Component 2 Results

Because it has put its greatest emphasis on events and less emphasis on delivering those items with more tangible sustainability, the endurance of project results from Outcome 2 in the long run is uncertain. Notably, the planning work has not resulted in adopted LGU plans and does not even seem to have aimed for such a result, though the efforts of the Sustainability Workshop around EOP to get a commitment from the LGUs for adoption/ implementation is a move in the right direction. The TESDA work, while very on-target to needs, achieved a CS and not a TR and it is not clear if work towards the end goal of TR and national certification will be continued post-project. Thus, considering all of the foregoing, sustainability of Outcome 2 results is at present rated as ML.

7. Findings on Project Results Part III: Detailed Findings on Component 3 Results

Outcome 3 aims to achieve an increase in private sector participation and investment in low carbon transport and is focused on deployment of e-jeepneys and charging stations to support them. Major

activities are discussed one-by-one below, followed by assessment of relevance, effectiveness, efficiency, and sustainability.

7.1 Test Runs

The project conducted "EV Test Runs" in Baguio and Iloilo to ascertain the performance of different models of e-jeepneys in these two cities. Baguio represents a special, more challenging case, as it has hilly terrain, whereas Iloilo is more flat. In the case of Baguio, the test run report does not clearly state which supplier vehicles were tested, though there is known to be more than one. Only the GET model passed the test as being suitable for deployment in Baguio. Suitability is tied to power or kW rating of the EV's powerhouse, though sometimes on-the-ground testing is needed to prove capability. The Baguio test run is considered to have been important in creating a mindset in Baguio to accept the potential of EVs and can be deemed a success for that reason. According to one source, there is a possibility that challenges faced with the Baguio test run resulted in one e-jeepney supplier working to improve their current design to be able to provide a viable product for Baguio transport cooperatives.

For the Iloilo test run, the situation was a bit atypical, as no supplier-provided vehicles could be obtained.[29] Instead, what was tested was a Star 8 supplied vehicle already plying the roads in Iloilo and owned by a cooperative there. Not surprisingly, it passed the test run. Yet, perhaps the formality of the test run increased confidence about e-jeepneys among cooperatives in Iloilo.

The author has concerns that the test run work and reports were not done in a way that is easily accessible to the transport cooperatives. In essence, they are too academic and might be more suitable as input to a journal article than to promotion to TCs. Indeed, the author has found that the project did not disseminate results of the test runs to e-jeepney cooperatives. Ideally, something readable and understandable by that audience would have been prepared. In terms of being "academic," it is understood the test runs used a certain kind of software, but in terms of the aims of the project, increasing private sector involvement and convincing the cooperatives to deploy e-jeepneys, it's not clear that the software had any useful purpose.

Further, there was a challenge that the manufacturers did not allow the test run team to connect to the battery to determine the energy consumption of the vehicles at various points in time, as the vehicle goes up and downhill. The position of the manufacturers is that this would invalidate the battery warranty. So, as a result, there was complex information provided by the software, which the cooperatives, the key audience, probably do not care about, but basic information on kWh used in various situations was not gathered.

7.2 Business Plans

In October 2022, the project signed a USD151,419 contract with SYSTRA to develop two business plans, each for a different transport cooperatives, with a focus of incorporating e-jeepneys into their fleets. Early on in this process, SYSTRA did some interviews with a number of project city-based transport cooperatives that did not already have e-jeepneys. Then, in conjunction with the project, criteria were developed to select the two cooperatives that would receive business plan assistance. Yet, it was not the top two cooperatives (vis-à-vis the criteria) that were selected. Instead, the top ranking cooperative (from Iloilo) was selected and then one of the lowest ranking cooperatives possible (this one from Santa Rosa) was also selected. The lowest ranking one was from Iloilo, so in order to spread the resources geographically this one was not selected. Further, some of the other lower ranking cooperatives from Santa Rosa were focused on trikes and did not have jeepneys. The rationale for selecting the top-ranking

[29] There was outreach to multiple manufacturers/ suppliers to participate, but none responded favorably.

and one of the lowest ranking cooperatives was so that the two business plans would apply to quite different situations and, thus, other cooperatives in each of these two different situations (either more like the top-ranked or more like the lower ranked) could later benefit from these model business plans.

SYSTRA first provided a market analysis, which is considered a necessary prerequisite to doing a business plan. Yet, the content of the report is fairly broad (even covering e-trikes and non-motorized transport) so might have been more focused. At the time of TE consultations, about 9 months into this 1 year contract (as of July 2023), there were still no business plans. Sources indicate SYSTRA was delayed by the challenge that there is no historical data to prove the financial viability of e-jeepneys. The problem encountered seems somewhat circular with the decision to launch the business plans in the first place. On the one hand, it is true that historical data is needed to construct standard business plans. Yet, at the same time, motivation in carrying out the business plans for e-jeepneys included the hope that the plans would contain the financial analysis needed to either make the business case that e-jeepneys are more cost-effective than Euro IV jeepneys or to determine the additional level of subsidy that the Government of Philippines would need to consider for e-jeepneys to stimulate their deployment. A financial analysis that "shows the math" as to whether the lifetime revenues minus lifetime costs (including purchase cost) of the e-jeepney are more than those of the Euro IV jeepney is what's needed to convince cooperatives to move forward with purchases. This could have been an important output of the project's business plan work disseminated to jeepney transport cooperatives.[30]

By EOP in Nov. 2023, sources indicate that the two business plans were completed. The author was not provided with a copy of these business plans, but did see some powerpoint presentations on them. Surprisingly, the business plans put some emphasis on alternative sources of income for jeepney cooperatives, such as advertisements and charging parking fees for their garages. The author did not detect strong emphasis on the financial returns of e-jeepneys as expected. Instead, the emphasis may have been on how to generate the capital to purchase them.

7.3 Deployment of E-Jeepneys – "Incentive Program"

Pushback on the deployment of e-jeepneys intended in project design: The deployment of e-jeepneys by the project, while part of the project design, faced push-back from certain parties, despite the project design and budget calling for them. Activity 3.2.3.4 in the design states "…the Project will support 15-20 units of EVs as direct demonstration." At the end of the activity, where explanation of financing is offered in brackets, it states: "GEF will provide partial funding as incremental investment to support the procurement of —the new vehicles, equipment and/or hardware…." Footnote 27 of the ProDoc budget in referring to a USD750,000 equipment allocation for Outcome 3.2 states: "Contractual services, procurement, setup and commissioning of demonstration equipment comprising EV solar charging systems within Output 3.2.2 and EV units within Output 3.2.3." Yet, by the time of the MTR (consultations in Nov. 2020, final report in Feb. 2021), there was still no plan for the project to contribute GEF funds towards e-jeepney deployment. Given inactivity in this key area of EV deployment, the MTR emphasized in its conclusions: "As such, the Project is in need of an extension using a refreshed LCUTS approach that re-focuses its efforts to generate GHG emission reductions from EVs by facilitating EV investments with DBP and other banks managing PUVMP funds to replace fossil-fueled vehicles." Recommendation 13 of the MTR is "Introduce at least 10 operational and new hybrid or EVs for mass transit in pilot cities as a part of Output 3.2.3." The Management Response to the MTR includes the

[30] According to one commenter on this draft report, the LCUTS project team already conducted such a financial analysis and disseminated results to transport cooperatives via the Incentive Program Fact Sheet. The author had not heard about this during the time of consultations, but views it as a positive development. At the same time, she sees further financial analysis carried out via business plan work and via monitoring of the incentive program demos as needed. Various stakeholders have offered input that, although some theoretical analyses indicate better returns for e-jeepney investments than Euro IV jeepneys, they feel uncertain of the validity of the conclusion under real conditions.

action of "Procurement of EV demonstration units for pilot cities" in September 2021 under "PMU responsibility." Finally, based on another recommendation of the MTR, the project in Oct. 2022 (one year and eight months after the MTR was finalized) signed a contract with an international Senior Technical Advisor (STA) and he too recommended that the project use GEF funds to deploy EVs. He worked to design an Incentive Program that would best leverage the funds. It was at this point that the project at last made a change and moved forward with pursuit of GEF support for e-jeepney deployment. As has been noted elsewhere, if there were strong justification for not carrying out the deployment of EVs with support from GEF funds, this could have been researched, documented, and discussed with the Project Board. With 375 public transport e-jeepneys already on the road at the time of the TE consultations and without influence from the project, there might have been justification and alternative approaches to consider.[31] From what the evaluator is able to gather, however, the decision to block use of GEF funds to support e-jeepney deployment was not handled in a strongly transparent and analytic fashion.

Incentive Program design and development: The initial plan for the Incentive Program was that the project would provide a partial subsidy, say 20%, for the cost of an e-jeepney. The rest was envisioned to be provided mostly via bank loan, also benefiting from the standard government PUVMP subsidy at the time of 160,000 pesos, or about USD3,000, per e-jeepney. The project subsidy was going to be given in the form of a performance-based payment after the vehicle purchase went through and the vehicle was deployed. This plan was agreed upon by the Project Board and UNDP BRH RTA. Yet, then began a period of delays in clearing the plan within UNDP and making revisions to it. Findings suggest there were different views from different persons at UNDP; and it was thus difficult to know what structure to use for the Incentive Program. At one point, it was understood by some that the recipients of funds would need to be nonprofits to receive project funds for e-jeepneys. And, it was said that the transport cooperatives were non-profit. The TCs are actually for-profit, so the planning hit a temporary roadblock, but later it was realized that deployment of funds to private sector, for-profit entities is permissible. Then came another problem: Within UNDP, it was raised that it would take a lot of effort to provide performance-based payments, so what was needed instead was for the project to purchase full vehicles. It's not clear to the author that the current plan with full vehicle purchase is any less effort than performance-based payments, because the terms require return of the vehicle if the cooperatives do not meet their commitments to demonstrate the vehicles for a certain amount of kilometers. This whole process of determining the structure of the incentive program took about four months. This is for a project facing urgent deadlines! A lesson (included in the recommendations) is that UNDP needs to have clear models and rules in advance about how transport demos with support of GEF funds can be deployed.

The problem with the new, "full vehicle" model that was adopted is that one cannot divide the vehicles, so the project is able to help fewer cooperatives than it could have in a "partial subsidy" model. The final format of the incentive program aimed to leverage the funds to get more e-jeepneys on the road. It required that the applicant transport cooperative provide a proposal in which they purchase "multiplier" vehicles through bank loans. For example, they may request one incentive vehicle paid for with GEF funds by promising to purchase three or more vehicles through bank loans. Despite this "multiplier" effect, the project funds for support would be spread over far fewer cooperatives than if the incentive had been 20% of the cost of one or two jeepneys per cooperative. In the end, only three cooperatives "won" the Incentive Program.

And, that two of the "winning" cooperatives already have e-jeepneys and likely would have bought more without project support suggests the aim of the project to stimulate additional e-jeepney purchases for

[31] At the same time, a commenter on the draft version of this report indicates that most of the 375 e-jeepneys already on the road are using lead acid batteries, which result in more limited speed, power, and range than lithium ion batteries. Thus, a reason for going ahead with the demonstrations (rather than blocking them), despite the 375 e-jeepneys on the road in public transport, would be to demonstrate the advantages of lithium ion based e-jeepneys and compare them to Euro IVs.

each project purchase was below expectations. That is, the e-jeepneys purchased by loan cannot be attributed to the project if the cooperatives had the intention of buying them whether or not they won the Incentive Program. In at least two cases, it seems the project helped well-established e-jeepney owners. Had there been a desire to avoid this, the program might have only allowed those with no e-jeepneys to apply, as did the business plan support activity.[32] Yet, despite this serious weakness in implementation of the Incentive Program, the benefits of the situation could be even greater, if adaptive management is used to take advantage of it. These established players have significant e-jeepney fleets. If they carry out monitoring that provides the critical information needed to asses financial viability of e-jeepneys (versus Euro IV jeepneys) and are willing to use all their lithium ion battery e-jeepneys to do so, the benefit to future e-jeepney deployment could be quite high. Yet, to achieve this, there is a need to expand the parameters monitored, ensure that all lithium ion battery e-jeepneys owned by the winning cooperatives are included, and ensure there is an effective mechanism in place post-project to continue the monitoring, assess the results, and distribute the findings and conclusions to as many transport cooperatives as possible. Data provided, if collected in a reliable way, may show that e-jeepneys have greater financial attractiveness than Euro IV jeepneys over their lifetimes. Or, if the data shows that the financial attractiveness of e-jeepneys is, in fact, lower than Euro IV jeepneys, there might still be benefits: The information could be used to adjust the subsidy for e-jeepneys upwards or to work on getting the cost of e-jeepneys sold locally down.

Exhibit 7-1 shows the evaluator's understanding of the winners/ results of the project's e-jeepney Incentive Program. Sources indicate one of the three winning cooperatives, located in Iloilo, already had 10 e-jeepneys purchased in 2022 and had the intention to buy 10 more regardless of whether they won the Incentive Program. Another, located in General Santos City, is also believed to have already had e-jeepneys and the intention to buy more.

Exhibit 7-1. Winners of LCUTS Incentive Program, Expected Deployments, and Attribution

City	Cooperative	Brand and Number of e-Jeepneys (total ejs = incentive program ejs + loan ejs)	Time Deployed or Expected to be Deployed	Attribution to the project (Were they going to purchase e-jeepneys anyway or did they get the idea from the incentive program?)
Iloilo	Aerostar 1 MPC	Star 8: 12 e-jeepneys = 2 incentive program + 10 loan; First 2 (incentive program) are 2019 model with lithium ion batteries and AC; the 10 loan ones will be 2023 model)	Tbd	They already had 10 e-jeepneys (research shows these are not attributed to the project) and were going to purchase 10 more anyway. Thus, only 2 attributed to the project.
Baguio	Irisan Jeepney Operators and Drivers Association	China Six Eleven: 3 e-jeepneys = 1 incentive program + 2 loan	Tbd	3 (all 3 very likely attributable to project; did not have e-jeepneys before this and it is believed that their intention to acquire them is due to project)
GenSan	LADO-TRANSCO	Tojo Motors: 7 e-jeepneys = 2 incentive program + 5 loan	Tbd	Analysis suggests GenSan cooperatives not influenced by project and were among earliest purchasers of e-jeepneys. Thus only 2 e-jeepneys attributed to project.
Total e-jeepneys attributed to LCUTS Project: 7				

[32] At the same time, according to one source, the program faced the challenge that only those with approved PUVMP (low-interest government) loans had a viable means of procuring some number of "multiplier" vehicles themselves, as private sector loans were found to be substantially higher cost. This and preference of the banks may have skewed the selection to more established/ larger cooperatives that already have significant e-jeepney fleets.

Incentive Program and its Promotion as Catalyst in Resurgence of E-Jeepney Industry: Despite the challenges in coming up with an effective format for the Incentive Program, findings suggest that the program and its promotion (combined with the recent adoption of EVIDA) are playing a role in the resurgence of the e-jeepney market, thus paving the way for potentially increased rollout with the implementation of EVIDA. The project has stimulated at least two cooperatives that did not have e-jeepneys previously to purchase them (one in Baguio, a winner of the Incentive Program, and one in Iloilo, which was earlier to receive a charging station from LCUTS, but, in the end, did not due to land issues). Both were have (or will) purchase e-jeepneys from suppliers that did not previously have deployments in the public transport market (GET, which had so far deployed e-jeepneys to private transport, such as shuttle services, and Durabuilt, which had previously sold only Euro IV jeepneys).

Findings suggest that, after a surge in orders and purchases in 2018 to early 2020, the public transport e-jeepney market in the Philippines had died down in terms of deployments to new cities and new cooperatives. Only now, with the Incentive Program and EVIDA adoption (combined with recovery from the pandemic), is the market beginning to ramp up again. Exhibit 7-2 shows that the majority of the 375 public transport e-jeepneys on the road in the Philippines (as of July 2023 and prior to Incentive Program rollout) are linked to the 2018 to early 2020 surge, after which the market, in terms of attracting new cities and probably new cooperatives, died down. Except for the 3 e-jeepneys rolled out during the pandemic in Makilala (probably in 2020 or 2021) and the 10 e-jeepneys rolled out in Iloilo in 2022, first deployments in all other cities where there are e-jeepneys for public transport occurred in 2018 (two cities) and 2019 or early 2020. It is assumed that in most cases follow-up deployments in the same cities are with the original purchasing cooperatives; or, if not, other cooperatives were influenced by the early movers. Since the project hired its team in the second half of 2019 and got active beginning of 2020, the possibility of the project being the influencer leading to initial purchases in these cities is very low. Stakeholder input confirms that, for cities that already had some of the 375 e-jeepneys, subsequent deployments were tied to earlier ones, rather than project influence. While the Iloilo 2022 deployment, based on a March 2021 bank loan application, might possibly have been due to the first few months activity of the LCUTS Project, consultations strongly imply that it was not. The Makilala deployment, given the city's location and stakeholder feedback, is also unlikely to be linked to the project.

A further impact of the Incentive Program and project generally is that suppliers are rolling out new, 2023 models, which are substantially improved from their previous ones. They are encouraged to do this by the program requirements and also the test run in Baguio, which showed only GET's model to meet requirements of the city's hilly terrain. DOTr as partner in the project is accelerating processing of certificates of compliance of these new models. One source indicates the Incentive Program resulted in the encouragement of some suppliers to consider supplying Class 2 e-jeepneys to the Philippines' public transport market. These include ENCA-Transport Connect, Assemblepointe, and China 661 Sales. China 661 Sales recently secured its Certification of Compliance from DOTr for its Class 2 e-jeepney. The source indicates the project had a partial influence in bringing this to fruition.

Exhibit 7-2. Break-down of 375 e-Jeepneys ("e-js) on the Road in Public Transport as of July 2023 – Attribution to LCUTS Project? Grouped by Manufacturer/ Supplier (Star 8 and Tojo Motors)
Estimates of number e-jeepneys in different cities with launch dates of first deployments per press articles, company websites, and interviews

City/ Location	Number ejs used in public transport	First acquisition date (*transport cooperative if known*)	Class	Attribution to LCUTS? (*Note: Project launched activities in early 2020*)
Star 8				
Cebu (Lapu Lapu City)	100	First 25 delivered Feb. 2019	Class 2	No - first 25 delivered too early to be attributed to project/ full plan of 100 already in place by time project became active
Tacloban	70	First 45 launched around Jan. 2018	Class 2	No – over half delivered in 2018 –too early to be influenced by project
Ormoc	20	First 10 announced in July 2019	Class 2	Unlikely as half were announced in July 2019, before project had any activities
Las Pinas	15	13 reported in Feb. 2019 *(South Metro Transport Cooperative)*	Class 2	No/ unlikely as most already on the road in 2019, before project became active
Makati	15	15 units by Jan 2019 *(provided by eSakay)*	Class 2	No - deployed before project activities started
Nueva Viscaya	15	Deployment of 10 reported in Feb. 2020	Class 2	Likely too early to have been influenced by project activities (first big workshop in Jan. 2020)
Lipa	15	Announced as coming around Feb. 2019	Class 2	No - too early to have been influenced by project
Tampanga	15	Nov. 2019, 10 of the 15 granted route rights (Electric Vehicle Expansion Services)	Class 2	No - too early to have been influenced by project activities
Iloilo	10	5 in Aug. 2022 and 5 in Dec. 22. Loan application March 2021 *(Aerostar MPC)*	Class 2	Stakeholders confirm purchase not due to project.
Sub-total Star 8	***275***			
Tojo Motors				
General Santos	80	First batch May 2018. Then 30 more 2020, 2021. *(Public Transport Alliance has 75 now.)*	Class 1 and 2	Unlikely, unless some of the replication was stimulated by project. More likely earlier deployments led to later ones.
Iligan for testing (Mindanao)	1	Late 2019	Class 1	Too early to be influenced by project
Butuan, Agusan Del Norte	15	3 late 2019, 12 more by March 2020	Class 1 and 2	Influenced by observing GenSan in 2019. Too early to have been influenced by project
Makilala	3	During pandemic (2020 or 2021)	Class 2	Most likely influenced by others on Mindanao and not the project.
Sub-total Star 8	***99***			
Grand Total	374 (*similar to DOTr 375 estimate of which 86 Class 1 and 289 Class 2 or 3*)			

Another positive result of the Incentive Program is that some of those who applied to the program, even though they did not win, decided to proceed with purchasing their multiplier e-jeepneys. In some cases (Cordillera TC in Baguio), they may have had the intention to purchase e-jeepneys even before the UNDP-GEF project and its Incentive Program came along, but the project and program increased their resolve and thus partial causation may be attributed to the project. Yet, in other cases, they were influenced by the project to pursue e-jeepneys such that the e-jeepneys they eventually deploy may be

considered fully attributable to the project. While the evaluation team was not able to track the situation in all cases of non-winning applicants to the Incentive Program, the information gathered is shared in Exhibit 7-3 below.

7-3. Non-Winners of Incentive Program and their Expected e-Jeepney Deployment

City	Cooperative	Brand and Number of e-jeepneys implied in application (total ejs = incentive ejs+loan ejs)	Is it likely that they will purchase all or some of the loan ejs anyway? How many? How certain are we?	If they are going to purchase some e-js via loan anyway, would they have done that on the same timeline in absence of Incentive Program or did Incentive Program get them interested to pursue e-jeepneys?	Number of jeepneys attributed to project (and why)
Iloilo	CITSCO	Durabuilt: 1?+5 = 6?	They have confirmed they will purchase all 5 of the loan e-js	Source indicates decision made largely as a result of participation in series of LCUTS activities	5 - Unlikely they would have purchased in the near future in absence of the project. Project provision of EVCS may have helped.
Baguio	Cordillera Basic Sector Transport Cooperative	GET number tbd	They will purchase some (perhaps 10 to 15) but number not confirmed.	Already determined to get e-jeepneys, but project may have strengthened resolve	20% x number of jeepneys that will be purchased (partial causation attributed to project)
Baguio	Baguio Benguet Transport Cooperative)	GET number tbd	Will not purchase	NA	NA
Santa Rosa	Unlad Star Transport Cooperative	Tojo number tbd	tbd	Not considering e-jeepneys prior to project as did not have route franchise. Project helped them get franchise.	If they do purchase, will be attributable to project.
Santa Rosa	Starcut	GET number tbd	tbd	GET was talking to Starcut long ago	If due to project, only partial attribution perhaps.
Santa Rosa	New Golden Life	Still working on franchise issues	Will not purchase any	NA	NA
Total attributed to project: at minimum 5 and maybe more					

GET deployment plans[33]: GET has a different business model than other e-jeepney suppliers in that it takes a 50% share in the e-jeepney and runs the business, including maintenance and employment of the TC's drivers (who are provided/ designated by the TC), offering the cooperative 70% of profits while keeping 30%. While at present no GET e-jeepneys are deployed in public transport, GET has developed a massive public transport e-jeepney pipeline. It is said to have 900 e-jeepneys in the public transport pipeline across 19 cooperatives. Already at least 500 of these potential purchases are said to have been submitted to a development bank for loans. GET was active in the Project Board meetings. It attended all

[33] One reviewer of a draft version of this report questions why the report discusses GET plans and not the plans of other e-jeepney suppliers. The reason is that the author sees potential for partial attribution of GET's e-jeepney pipeline to the project, whereas evidence of attribution for rollout of the pipeline of other suppliers was not found. Attribution of e-jeepney rollout, in turn, is related to potential GHG ERs attributable to the project.

ten of them, often with more than one person in attendance and often including its president. It's likely GET joined the small group EVIDA support committee mentioned earlier, but this has not been confirmed. At present, GET has 65 e-jeepneys (their model is called the "Comet") on the road in the Philippines. None of these are in public transport. In most cases, GET provides shuttle services to companies, such as for transporting employees. While no stakeholders indicated that the project has anything to do with GET's plans to enter the public transport market in such a massive way, it might be guessed that access provided via the project to the e-jeepney public transport discussion may have had some impact. Thus, it may be reasonable to give the project a 10 to 20% attribution for any of this pipeline that is realized, and use the results in computing secondary direct GHG ERs of the project. While 900 vehicles is extremely ambitious, with all those bank loan applications, it seems possible that 100 to 200 might be deployed over the next year if the challenge is solved of offering a bank loan for 50% of a vehicle. (Generally, in PUVMP loans, the vehicle itself is the collateral.)

Monitoring of Incentive Program jeepneys: Both the ProDoc and MTR emphasize the need to carry out monitoring of e-jeepneys deployed by the project. Yet, at the time of TE consultations in June/ July 2023, it was found the project had no such plans. Subsequently, though, the project did provide the Incentive Program winners a "monitoring template" that they are required to fill in. Review of this template shows it may not include all the parameters needed to assess financial viability of e-jeepneys versus Euro IV jeepneys. Such data will including not only charging amounts, but also the cost of charging and the cost of repairs. It would include not only number of passengers, but passenger revenues or passenger km travelled. It will be important to ensure that not only the Incentive Program purchased e-jeepneys are included, but also the "multiplier" e-jeepneys to ensure a good number of monitored e-jeepneys with the latest technology. There is also a need to ensure that monitoring continues post-project and is disseminated along with assessment/ conclusions to TC cooperatives nationwide. At present, the MOAs signed suggests DOTr will continue to collect monitoring data post-project with support from LGUs. Yet, for what could be the most important contribution of the project, it is important that the post-project monitoring plan is pinned down. It is suggested that financial aspects are monitored for a year or longer, while technical viability is monitored on an ongoing basis.

Based on consultations, it is clear that there is a lack of certainty of the financial benefits of e-jeepneys. Both government and cooperatives have been told that, theoretically, the cumulative costs over time (including purchase price) of e-jeepneys are lower than those of Euro IV jeepneys. Yet, they would really like to see this proven via monitoring. A positive result of such monitoring, if disseminated, would enhance the deployment of e-jeepneys. A negative result may give the government more information with which to adjust incentives for e-jeepneys, or it may also be used to explore price concerns.

Based on plans of the three Incentive Program winners, there may be 22 e-jeepneys in total deployed via the program and its multipliers. If Aerostar's original 10 e-jeepneys (which it is said are getting upgraded from lead acid to lithium ion batteries courtesy[34] of a DOST program) are also used and the GenSan cooperative provides 10 or more existing (lithium ion) e-jeepneys as well, that would yield a data set of at least 42 e-jeepneys. Further, the other Incentive Program applicant in Iloilo, CITSCO, while it did not "win" the program, plans to deploy its five "multiplier" e-jeepneys anyway. So, it might be willing to include its 5 expected e-jeepneys in the monitoring program, raising the total pool to at least 47. This would be 3 in Baguio, which has special terrain, 27 in Iloilo, and 17 in GenSan. The latter two (44 e-jeepneys across Iloilo and GenSan) may represent deployment over terrain more typical of Philippine urban areas on average, so could generate a strong dataset for this type of situation.

Ideally, the monitored jeepneys would use their automatic fare collection system (AFCS), so as to enable more reliable monitoring of revenues. In the past, the banks have required AFCS installation of bank loan

[34] meaning via financial support from DOST

supported e-jeepneys, but the TCs have tended not to provide AFCS data as required to the banks. One stakeholder suggests either they are not using the systems, or choose not to share the data. Yet, another stakeholder points out that there are often technical problems with the systems and that they are not unified across the country, so unattractive to passengers. Thus, it may be a challenge for the project to get the TCs to comply and share AFCS data. Yet, because AFCSs would be very important to ensure the strength of the monitoring data, it could be quite worth the effort to work with TC partners so they use the AFCSs and supply the data derived from them. At the same time, as one stakeholder points out, lack of AFCS use and reliable revenue information would not prevent all useful assessments. At minimum, annual costs, such as for charging or fuel and for repairs and maintenance, as well as annual days of use, can be gathered to compare the Euro IV jeepney case to the e-jeepney case.

7.4 Deployment of Charging Stations

The project has commissioned CHRG, an EV charging station firm whose founders have links to University of the Philippines, to conduct feasibility studies and to design EV charging stations for Pasig and Iloilo for the project. The designs were completed, but the Iloilo charging station and one of the Pasig charging stations faced problems with land issues and will no longer be installed. Thus, the number of project charging stations is reduced from three to one. This situation contributes to, but is not fully responsible for, the USD400,000 the project will return to the GEF. The charging stations planned are discussed below. While the author sees the positive of getting more charging stations deployed, the rationale and decisions behind the stations does not always seem strong. For example, Pasig already has four EV charging stations and plans 10 more and is said not to need the project to achieve this. In Iloilo, the station (now cancelled) was to serve one transport cooperative, but probably not anyone else. Baguio, at one point, had the impression it would get a charging station from LCUTS. In the end, the project will provide the feasibility study and design only for a Baguio EVCS, but will try and help the city secure financing for equipment and installation.

Pasig charging station situation and plans: The project was initially to install two EV charging stations in Pasig, but now will only install one, due to land issues. Both were to be completely solar powered, possible since they will be for slow charging. One was to have 16 charging slots and the other around five. Because Pasig has lots of modes of e-vehicles (especially smaller ones), these charging stations were to be for anyone who wanted to use them and suitable to cars and trikes. Findings suggest the charging station under installation will be owned by the LGU and charging will be offered free to users.

The baseline situation in Pasig is that there are already four charging stations. These are hybrid, with solar PV and grid combined, but it said the solar PV portion is not working. Pasig has a plan to install 10 more such charging stations and, given that the city has other partners in electric mobility, these are considered likely to be deployed. Indeed, one stakeholder concludes that Pasig's targeted charging station deployment will happen with or without the UNDP-GEF project.

Iloilo charging station situation and plans: Originally the project planned to support two charging stations in Iloilo, both for e-jeepneys[35], one for Aerostar Transport Cooperative and one for CITSCO Transport Cooperative. Because of problems with the Aerostar garage being leased property, the project no longer plans to construct that station. And, the CITSCO station was more recently cancelled due to "land issues" as well. The CITSCO station was to be fast charging for the Durabuilt e-jeepneys it will purchase. The author heard different views on whether this charging station could have been 100% solar PV due to the fast charging requirement. She heard different views on whether the charging station was to be available for use for others than CITSCO. The baseline situation is that Iloilo has no public charging stations.

[35]According to one source, typically Class II e-jeepneys use proprietary chargers from the supplier.

Baguio: There was earlier some confusion among stakeholders as to whether the project would support charging stations in Baguio. There seemed to be great interest in these by the LGU. The evaluator understands the project is supporting feasibility and design of charging stations for Baguio, but not the construction. One issue is to determine what type of EVCS will make sense in Baguio, given that EVs are new there and different types of EVCSs are needed for different types of EVs. The author heard from one source the project may assist Baguio in securing financing to construct the EVCS after EOP. In an earlier version of this report, it was suggested funds from the cancelled Iloilo EVCS might be used to construct one in Baguio, but now it is clear this will not happen.

7.5 Relevance of Component 3 Results

In theory, the four major activities of Outcome 3, e-jeepney test runs, e-jeepney business plans, e-jeepney deployment, and EV charging station deployment are highly relevant. The transport cooperatives need to see evidence of the technical viability (e-jeepney test runs) and financial viability (e-jeepney business plans) before they will be convinced to pursue e-jeepneys for their fleets. And more e-jeepneys deployed (and hopefully monitored) will also help to convince them. Finally, lack of charging stations is a barrier to deployment, so additional charging stations also help in barrier removal. In practice, there are some challenges to relevance. The test runs seem academic and no report that would make sense to the transport cooperatives was prepared or distributed. The Incentive Program is providing four of the five "free" e-jeepneys to cooperatives that already had e-jeepneys and were likely going to expand their e-jeepney fleets anyway. And, the charging station deployment has been reduced from three to one charging stations due to land issues. Still, understanding the great need to get stagnated deployment of e-jeepneys to public transport going again and realizing that the Incentive Program has helped to stimulate that, relevance of the outcome as implemented is rated as S.

7.6 Effectiveness of Component 3 Results

The strongest finding so far is that the Incentive Program has contributed to stimulating interest again in the public transport e-jeepney market. This has resulted in: (i) at least two cooperatives that did not have e-jeepneys before making e-jeepney purchases; (ii) two additional e-jeepney suppliers for the first time supplying to the public transport market; and (iii) new 2023 models from suppliers entering the approval pipeline, all after a period of stagnation in the industry. Other results are more mixed. The business plan work was slow to yield any results and, in the end, appears to have focused more on alternative sources of income than on e-jeepney financial analysis. And, the test run was not done in a way that results could be shared in writing with transport cooperatives. Yet, the test run did stimulate interest in e-jeepneys in Baguio. And, even the Iloilo results (though the test run was of a vehicle already on the road there) are said to have inspired some confidence. Lastly, although the charging stations are an important step forward in adding more charging stations on the ground, the selection of deployment locations might have been more strategic. And, as noted, only one such station will be deployed compared to original plans for three. As for selection of deployment locations, since Pasig is likely to deploy with or without project help, it may have made more sense to support Baguio with charging station support. At the same time, it is realized that the project would like to distribute benefits to its partner cities evenly. Considering the foregoing, particularly the impact of reinvigorating the e-jeepney industry, effectiveness of Outcome 3 is rated as S.

Exhibit 8-1, in the cross-component results section (in Annex 10), shows progress towards Outcome 3's four indicators. Progress towards indicators is positive. Three of the four indicator targets are roughly met (or will be met by project financial close) with some level of attribution to the project. The first indicator is somewhat ambiguous ("number of entities involved in deployment and commercialization of LCT

systems by EOP"). Considering that another of the indicators may be interpreted as the number of transport cooperatives investing in e-jeepneys and given the low baseline of 3 and target of 5 for this "number of entities involved" indicator, along with the RBM aim to use the PRF to highlight impacts of the project, it is concluded that this first indicator may best refer to suppliers of e-jeepneys to public transport. (This is the author's recommendation to ensure useful indicators and results-based management, which shows what impacts the project itself has had.) At baseline (which for purposes of results-based management is considered the time the project became active in the second half of 2019), the suppliers of e-jeepneys to the public transport market were Star 8 and Tojo. It is possible the baseline counted PHUV (though the evaluator found no evidence PHUV supplied e-jeepneys to the public transport market). Star 8 and Tojo have continued to supply the market and newly added are Durabuilt (which will supply its first e-jeepneys to the public transport market via the Incentive Program) and China Six Eleven (which is now set to supply its first e-jeepneys to public transport through the Incentive Program). GET, via its extraordinary pipeline of 900 public transport e-jeepney purchase orders, many of which are now under consideration with the government development banks, may also be counted. There are a few others that are trying to get compliance certificates and these too may have been influenced by the Incentive Program. All in all, deleting PHUV from the picture, the project has contributed to increasing the suppliers involved in the public transport e-jeepney market by two to three, with two being the increment targeted. And, those others interested could raise the increment further. As for the second target, two business plans, this is indicated to have been met. (The author did not see the completed business plans, but did see Powerpoint presentations regarding them. Ideally, these would have focused on financial analysis that can either make the case for e-jeepneys and be distributed to the cooperatives or make the case that the government needs to increase the subsidy in the case of e-jeepneys or get their price down in some other way. Yet, the "alternative sources of income" approach of the business plans might be useful to the cooperatives in setting aside funds for e-jeepney purchase.

As for the third indicator, it is stated vaguely, "Number of investors who invested in low carbon transport solutions facilitated by the project by EOP." To reflect the work of the project and the private sector focus of the outcome, the indicator is interpreted by the author to refer to jeepney cooperatives that newly purchase e-jeepneys. The PRF shows a baseline of 0 and target of 3. As the first e-jeepneys in public transport are understood to have been deployed in 2018, the baseline of 0 is perhaps accurate. Now, however, there are many such cooperatives, so the evaluator instead focuses on the increment of three. So far, it is clear that the Incentive Program will result in one cooperative, Irisan in Baguio, newly investing in e-jeepneys, whereas Aerostar in Iloilo and the GenSan cooperative had already invested in e-jeepneys. There is also a second cooperative, CITSCO, in Iloilo that did not win the Incentive Program, but will be receiving a charging station from the project and will acquire five jeepneys anyway, which has been assessed to be attributable to project influence. So there are at least two new transport cooperative investors attributable to the project. There may be one or two others influenced by the Incentive Program that still plan to buy e-jeepneys, but this is not confirmed. Yet, GET's extensive set of 900 purchase orders across 19 cooperatives certainly will include some new investors should loans for them be approved. The project cannot claim to have influenced such a wide range of investors but may have influenced some of them or at least GET, who actively attended all ten project board meetings. Further, sources indicate that Baguio's Cordillera Basic Sector Transport Cooperative is likely to buy 10 to 15 e-jeepneys. While it had this idea prior to working with the project, interaction with the project (including in business planning) is said to have increased its resolve. Thus, the assessment of the increment of this indicator is that it will be two or probably more by financial close and be roughly met.

The last indicator is difficult for the project to meet if an RBM approach requiring attribution to the project is used. The indicator is cumulative investment in new low carbon vehicle projects. The incremental investment from the baseline is USD12.5 million. If all the 375 e-jeepneys on the road in public transport are counted (even at an older price, such as USD35,000 per e-jeepney), then the target is met. Yet, if project attribution is required, these 375 do not count. Assuming the new, increased purchase

price of e-jeepneys in the Philippines at around USD65,000 each, around 192 e-jeepneys would be required to meet the target. E-jeepneys in the pipeline attributed to the project include 7 from the Incentive Program and 5 from the Iloilo cooperative that did not win the Incentive Program but will deploy anyway, for a total of 12. That's only about USD780,000. The project might claim some of GETs eventual deployment if this is looking quite likely by around EOP, but could only claim a small portion influence, such as 10 or 20%. So, if GET deploys 200 successfully, perhaps 40 (which is 20%) could be attributed to the project. That would bring the increased investment attributable to the project to USD3.38 million.

Exhibit 7-4 provides comments on progress towards the two outcome statements of the component and their respective output statements. It is noted that outputs can be revised based on the situation.

Exhibit 7-4. Outcome 3's Progress towards Outcome and Output Statements

Outcome 3.1 Increased private sector participation in the widespread deployment and commercialization of low carbon transport	
Progress towards outcome statement, particularly that attributable to project: The project, through its activities, has increased e-jeepney supplier interest in public transport. After a very stagnant period, the sector is developing strong pipelines again and that is attributed partly to the project. Entry of Durabuilt into the e-jeepney business (through an Incentive Program applicant that did not win) is attributed to the project. GET has developed a very large pipeline, said by some to consist of 900 e-jeepneys all targeted at public transport. This cannot be fully attributed to the project, but GET was quite active with the project, attending all ten board meetings and it is possible that ideas and developments gathered there and through participation in the project's smaller "EVIDA committee" may have influenced this massive targeted rollout. China Six Eleven has also entered the e-jeepney market by supplying one of the Incentive Program winners.	
Outputs (as designed) – Only limited progress on each of 3 outputs	
3.1.1: Completed public transport route rationalization assessment and feasibility studies	Project seems to have abandoned limited initial effort to help pilot cities with LPTRPs, though detailed activity design indicates project was to focus on "green routes" within these LPTRPs: Project said to have helped Iloilo begin to draft its LPTRP, but did not continue due to pandemic. Iloilo completed on its own. One stakeholder indicated project only deployed its National Transport Consultant to help with the LPTRPs, but this was not an adequate resource. Santa Rosa[36] and Pasig are said by once source not to be required to have LPTRPs, as they are part of the "MUCEP Route Rationalization Study" for Metro Manila. Yet, the rules changed later and these LGUs are required to have LPTRPs. Some indicate delay in having such a plan impacted their ability to deploy e-jeepneys in public transport. Baguio has a revised draft LPTRP, but is still waiting for its approval via issuance of a Notice of Compliance ("NOC", the approval document).
3.1.2: Developed standard procedures for on-road and laboratory tests of new vehicle fuel technologies	Limited: The two EV test runs had a certain methodology explained in their respective reports. Yet, as noted, the effort was not allowed by manufacturers to connect to the battery and thus the testing is considered relatively weak. And, there was not a systematic effort to develop the best procedures. The focus was more on getting the test runs done.
3.1.3: Established and approved electric vehicle (EV) charging protocol and standardization	Limited: Very limited input from the project was included in the now adopted *Policy Framework on Guidelines for the Development of EV Charging Stations/ DOE Dept. Circular* (2021). Yet, the author found no evidence the project contributed to charging protocol and standardization.
Outcome 3.2 Increased private sector investment in low carbon transport	

[36] In Santa Rosa's case, a government consultant is said to have been paid to prepare either an LPTRP or something like it, but not to have delivered. One recommendation is to consider having local consultants (based in the respective LGU) prepare the LPTRPs.

Progress towards outcome statement expected by EOP: The deployment of 12 e-jeepneys due to the Incentive Program (including winners and non-winners whose purchases are attributable to the project) are the most direct result. Project may claim partial causality for GET's massive pipeline of 900 vehicles. If some or all of this is realized, it would increase the investment realized estimate substantially.	
Outputs (as designed) – Good progress towards all 3	
3.2.1: Completed and adopted viable business plan to support the wider application of low carbon vehicles	Business plans completed, though are not as focused on e-jeepneys as expected: Consulting firm SYSTRA earlier seemed stuck with regard to business plan because of lack of historical data[37] on e-jeepneys. In the end, recommendations focused more on developing alternative sources of income (e.g. ads, charging for parking in cooperative garage) rather than e-jeepneys. Yet, the increased income could help the finance the e-jeepneys.
3.2.2: Installed standardized solar EV charging stations in pilot areas and cities	Installation of just one solar EV charging station expected by project financial close – standardization lacking: Project prepared feasibility studies and design for two such stations in Pasig and potentially one in Iloilo. (The Iloilo one was to be fast charging and it's not clear if it was to be 100% solar.) In the end, two of the stations were cancelled due to land issues, but one of the Pasig ones will proceed and should be installed by project financial close. No evidence found indicating the project had worked on a standardized design.
3.2.3: Introduced and operational at least 15-20 hybrid or electric vehicles for mass transit and operational automated guideway transit (AGT) system	Good progress toward the e-jeepney target expected by financial close: Project is well on its way to having 7 e-jeepneys associated with the Incentive Program and attributable to the project deployed. There are 5 others that will be deployed by non-winning Iloilo Incentive Program applicant. Total then is 12. There may be other non-winners stimulated to purchase e-jeepneys to bring total closer to 15, but these were not identified. Further, the project may have contributed for partial credit (e.g. 20%) to GET's massive pipeline of 900 purchase orders. If some of these are realized, project might claim a causality factor of 10 to 20%. Project may also claim partial credit (e.g. 20%) for the 10-15 e-jeepneys that Baguio's Cordillera Basic Sector Transport Cooperative may deploy. The cooperative had the idea to pursue e-jeepneys before interaction with the project, but is said to have increased its resolve with such interaction. AGT target was dropped early in project.

7.7 Efficiency of Component 3 Results

Exhibit 7-5 shows items charged to Outcome 3 through 2022 (though a few items from 2023 may have made it in). The bike lane study (of around USD145,000) was charged to this outcome, but is displayed under Outcome 1 for the cost effectiveness analysis, as the achievement is claimed under Outcome 1. Furthermore, Outcome 3 is the private sector outcome, so the bike lane study doesn't really fit. Additions for 2023 will include USD321,750 for e-jeepneys procured by the project. The cost of one charging station deployment (up to USD100,000, to be confirmed, may also be added). This total of USD421,750 (or initially targeted at USD600,000) is a reduction in the USD750,000 allocated in the ProDoc for these two items and an even greater reduction in the USD1.086776 M allocated in the CER for INV purposes.[38] Given the results already being seen with the Incentive Program and its promotion, that expenditure of USD321,750 is seen as effective in terms of what the project is trying to do and could be particularly effective if monitoring and dissemination of monitoring results are carried out. It is regretful that more of

[37] This refers especially to financials showing the profitability of e-jeepney operation. Yet, as one reviewer of a draft version of this report has pointed out, SYSTRA might utilize data for Aerostar in Iloilo which has been running 10 e-jeepneys for a year already. Or, it might get data from GenSantos City transport cooperatives which have been running e-jeepneys even longer. A problem, however, is that the battery technology has improved, but the experience to date is mostly with lead acid batteries.

[38] The bike lane study of USD145,000 officially charged to Outcome 3 is what roughly reduced the ProDoc allocation for equipment from USD750,000 to USD600,000. This is concerning as the bike lane study does not contribute to the achievement of Outcome 3.2 as stated, nor to the achievement of any of its indicators.

the over USD1 million in INV was not used to deploy more vehicles and get more cooperatives involved, particularly those that have not already deployed e-jeepneys.

As for the items in Exhibit 7-5, on an itemized level, some lack of cost effectiveness is seen. In particular, there was USD45,000 to 50,000 spent on national consultants, including a "business acceleration specialist for LCUTS" for USD35,000, a finance specialist, and a legal expert. While perhaps the historical record was lost, the author was not able to see progress towards results stimulated by this work. One problem in the case of the business acceleration specialist may be that UNDP CO vetoed the plan the consultant came up with to do a joint activity with some private sector entities, due to concerns about favoring particular private sector entities. At USD151,419, the contract to prepare two business plans is relatively large, particularly as the focus does not seem, in the end, to have been as fully on e-jeepneys as expected. Also, had they been prepared sooner, they might have been standardized and then shared with transport cooperatives. Still, based on overall performance of various Outcome 3 items in cost effectiveness, the associated rating is S -.

Exhibit 7-5. Overview of Expenditures for Component 3 by Major Activity Area or Type of Expenditure (USD), 2018 – 2022 (2023 mostly not included)

Activity or Item	Expenditure to date	Total contract if relevant
Development of 2 business plans for transport cooperatives – SYSTRA	15,142	151,419
Feasibility for solar PV EV charging stations – CHRG	6,950	64,497
Project Team (portion of full-time team member salaries charged to component)	56,629	--
National Consultant Total* *(The total of the three items below is 51,400, so about 5,000 over what's in the CERs)*	45,858	--
Business Acceleration Specialist for the Low Carbon Urban Transport System (Oct. 2019 – Feb. 2021)	*35,000*	*35,000*
Finance Specialist (Oct. 2019 – Jan. 2020)	*8,136*	*8,136*
Legal Expert (Oct. 2019 – June 2020)	*8,264*	*8,264*
Mid-Term Review	27,291	27,291
Terminal Evaluation	0.0	51,514
International Consultant Total** (*Senior Technical Advisor*)	31,208	69,350
Workshops charged to Component ("Learning Expense"), including but not limited to:	38,152	---
Orchard Hotel Baguio (Jan. 2023 Transport Cooperative Investment Forum)	*5,480*	*5,480*
Domestic Travel	12,445	---
International Travel	8,996	---
Total (*In actuality should be USD145,245 higher as bike lane contract charged to this outcome. Since the achievement is claimed under Outcome 1, however, it is included there in this analysis. With it, total would be USD393,396 comparing to CDR 2018-2022 total of USD379,971- gap explained by 2023 items included.)*	**248,151**	**---**

*Does not include MTR or TE which are separate line items.

**Does not include MTR or TE which are separate line items. Also, the recent STE contract payment does not appear in the 2022 CDR, but is included here, so must have been made in 2023.

7.8 Sustainability of Component 3 Results

The four main results areas for Outcome 3 have variability in potential sustainability. As noted, the Incentive Program has already had a potential impact in reinvigorating the e-jeepney market. To ensure this is sustained, however, a larger number of incentive vehicles may have been desirable. Expected to have a many-year lifetime, the charging station is also seen as sustainable. The test runs have had some impact, but because the results were not written up in a way useful to the transport cooperatives and disseminated to them and because there was no focus on developing a standardized testing protocol,

sustainability may be less than it could have been. And, the sustainability of the business plans is not clear, particularly as there are no clear plans to distribute key aspects to jeepney cooperatives nationwide. Yet, the two companies for which they were prepared may adopt the ad and parking garage strategies raised. Based on the foregoing, sustainability of the outcome is considered L, with the stronger sustainability of the deployments outweighing the weaker sustainability of the other two items.

8. Findings on Project Results Part IV: Results Overall / Synthesis (*Note: Section moved to Annex 10 due to report length limitations.*)

This section synthesizes the findings on results from individual outcomes as discussed in Sections 5, 6, and 7 and also provides other analysis of results as required by UNDP's guidelines for TEs of GEF projects. Due to report length limitations, it has been moved to Annex 10 at the end of this document.

9. Main Findings, Conclusions, Recommendations, and Lessons

Main findings and conclusions are presented below, followed by recommendations and lessons.

9.1 Main Findings and Conclusions

Main findings and conclusions are as follows:

Project Background and Context

- LCUTS has about USD2.64 M in GEF funding and was designed as 4-year project. With 2 extensions, total duration is 6 years, though with slow start-up, active implementation of activities will be 4.5 years.
  - While LCUTS was officially launched in Nov. 2017, the project's team was not in place until Q3 2019 (PM as of July 2019). Covid-19 lock-down ensued about 7 months later (March 2020).
- LCUTS's objective is to create an enabling environment for the commercialization of low carbon urban transport systems, with a focus on electric and hybrid vehicles in public transport.
- LCUTS's three-pronged strategy includes policy support (Outcome 1, aiming for adopted and enforced polices and support), capacity building (Outcome 2, aiming for adopted and implemented LCT plans and programs in cities), and investment (Outcomes 3.1 and 3.2, aiming for increased private sector involvement in deployment of, commercialization of, and investment in low carbon transport).
- LCUTS as designed is considered an important project, as it addresses the problematic area of public transport in the Philippines, and a pioneering one in that it, in particular, addresses the challenging issue of modernizing the jeepney sector.
  - Jeepneys, akin to mini-buses, are very common in urban transport in the Philippines. The public transport jeepney sector is known for its outdated, polluting vehicles, traditionally owned and driven by individuals.
  - The public transport jeepney sector is now undergoing consolidation as required by the government in its PUVMP (Modernization Program), launched in 2017. LCUTS's project design aimed to demonstrate e-jeepney deployment in the public transport sector, along with EVCSs to support them.

- By Feb. 2023, there were already 375 e-jeepneys on the road in Philippine public transport,[39] but the project had not yet deployed any.
- DOTr is project IP. DOST and DOE are indicated in ProDoc as responsible partners to provide Component 2 and 3 leads, but in the end, they only served as PB members.
- The PB was quite active in discussing the EV industry and has held 10 meetings to date.
- The NPD is part-time person seconded from DOTr. There have been 3 during lifetime of project and these are at the Assistant Secretary level.
- PMU design calls for PM, M&E Officer, Admin Assistant, Financial Associate, and, provided by government, 3 Component Leads. The project followed this staffing model until 2022, though hired the Component Leads on the market and often had empty positions. In 2022 and 2023, six more positions were added and, at peak, PMU had 14 persons. By end of 2022, there was consistently a much larger team than before, though it dropped to around 7 persons by EOP.
- Main stakeholders include public transport jeepney operators, e-jeepney suppliers, national government officials, national development banks, LGU officials (particularly in the project's 4 pilot LGUs), barangay councils, universities, and everyday persons, particularly riders of public transport.

Design

- Overall, project design is logical and uses multi-pronged approach (policy, capacity building, and investment/demonstration) based on past experience with UNDP-GEF projects.
- Design quite relevant to the nation's needs and first of its kind, so project is considered "pioneering."
- Focus of project on EVs could have been highlighted more prominently in design. Title ("Promotion of Low Carbon Urban Transport Systems in the Philippines") may be misleading as it does not mention the focus is on EVs, though objective statement does mention them. Close read of ProDoc shows strong emphasis on EVs in public transport through many activities, though perhaps scope for each activity (in terms of nature of LCT measures included) could have been specified for those that were ambiguous.
- Design of policy and standards activities might have been more specific and strategic, to avoid ad hoc approach that ensued, where the project ended up being a commenter on many different policies and standards, but an important driver of only a few.
- Design of Outcome 2 planning activities lack a strong connection between training on LCT planning and actually getting LCT into plans that are adopted and implemented. The latter is the target.
- Outcome 3 design lacks a detailed plan for deploying the e-jeepney demos, reflective of the design not being "implementation ready."
- While project indicator design overall does a good job in capturing progress towards meaningful results, there are challenges in interpreting several of the indicators. And, some are stated as if being global, rather than specifying the need to capture the impact of the project, as would be desired in "results based management."

Results – Overview

- Externally, this pioneering project faced the double challenge of the high difficulty level of public transport projects in usual times and the disproportionate impact of Covid 19 on the public transport sector. Internally, it faced some very challenging implementation issues (discussed below). Yet, somehow, against tough odds, the project in the end is seen to have meaningful impacts.
  - Mostly via earlier work, it has made some significant contributions to policy/ standards (Outcome 1).
  - Through its tremendous last year effort and much belated Incentive Program to launch e-jeepney demos and related activities, it has played a critical role in reinvigorating a stagnant market, bringing new cooperatives and suppliers into the public transport e-jeepney space (Outcome 3).

[39] According to one source, most of these operate on lead acid batteries.

- Outcome 2 has held an impressive number of events (54), several of which have received positive feedback. Yet, it has mostly failed so far to focus on moving from capacity building work to efforts that will achieve the target of adopted and implemented low carbon plans in cities. (The EOP Project Sustainability Workshop is the exception as it was to try and obtain commitment from the LGUs to adopt and implement project-supported Re-Entry Action Plans.) Much belated work on EV-related training certifications is on target, but did not have enough time to achieve a TR, so stopped with a CS. A follow-up plan to ensure pursuit of the TR is lacking, unless one was developed at the EOP Sustainability Workshop.

Outcome 1 ***(policies, standards, institutional structure)***

- Stand-out policy and standard achievements at the national level are EVIDA adoption by legislative branch and Green Routes Guidelines adopted via DOTr's incorporation of them into DOTr Omnibus Guidelines.
  - For EVIDA, LCUTS: (i) contributed significant content (including requirements of: green routes, DOTr capacity building of jeepney cooperatives, and DOST funding of local transport studies by state universities); (ii) organized small group meetings of Project Board members (government and private sector) with the senator drafting the bill; and (iii) represented DOTr at multi-agency formulation meetings.
  - Green Routes are to be plied only by electric vehicles. Thanks to the project, EVIDA requires them. The Guidelines prepared by the project lay out criteria on how to select them.
- For all the other national-level policies and standards "claimed," project struggled to have significant impact due to its usually taking on the role of "commenter," resulting in only a few lines of adopted content.
- LCUTS commissioned a USD145,000 bottom-up multi-LGU bike lane study and plan with training. Funds were taken out of Outcome 3's demo budget, but as the study did not fit under private sector/ commercialization aims, the achievement was reported under Outcome 1. The study appears popular with DOTr's Active Transport Office and some LGUs. The results in terms of bike lane network are somewhat patchwork, as each LGU decided upon nature of planned bike lanes within its borders. There are, however, some connections between LGUs; and partial implementation by some LGUs might be possible. DOTr is said to have already allocated some budget, perhaps for promotion, and highlighted the study with high-level handover events with each of the three major metro areas involved.
- Local level policies/ standards prepared by or influenced by the project include a few that are expected to be impactful and sustainable and others that are not expected to be that impactful:
  - An EO for a Trike Cooperative TWG (requested by the LGU) in Pasig: This was drafted by the project and is considered sustainable, with funding committed by a council person.
  - Baguio City Council Ordinance on research and innovation: This was not originally drafted by the project and did not include LCT in the draft, but with the influence of the project, LCT was added. This ordinance is expected to be impactful and, with its LCT aspect, has synergies with the three university consortium facilitated by the project.
  - 3 LGU EOs for LCT committees set up to implement the project: Experience shows these typically disappear after the project, though Baguio's might sustain. Baguio's is said to have been drafted by the city, though it has similarities with those of Santa Rosa and Iloilo, which were drafted by the project.
  - An EO for TOD standards for Baguio: This is somewhat general, so not clear if it will have an impact. Given Baguio's interest in environmental sustainability, however, it may someday be utilized.
- The outcome targeted a presidential order for an interagency LCT institutional mechanism. Due to challenges, the project shifted to targeting an LCT JMC to be signed by the involved agencies. So far, there is a draft that DOTr has circulated for comments, but only DOE and DILG have responded.

Outcome 2 ***(capacity building, LGU LCT plans, awareness/ outreach, EV-related technician certifications)***

- LCUTS's capacity building workshops/ trainings have some successes and highly appreciated items.
  - The Investment Forum (Jan. 2023), officially a part of Outcome 3, and prior meeting with transport cooperatives and manufacturers is seen as impactful in promoting e-jeepney deployment in public transport.
  - The two fleet management workshops for jeepney TCs are seen as meeting high in-demand needs.
  - The "Streets for Kids" and "Opens Streets" workshops have both stimulated budget allocations or likely ones (the former in Baguio, the latter expected in Santa Rosa).
- LCUTS's LGU planning work is not seen as very effective, as it did not result in adopted plans and did not integrate with plans that are in the cities' pipelines. Instead, it focused mainly on training. As illustration, one pilot city, Iloilo, after project LCT planning training and preparation of the associated "re-entry action plan," has asked for project support on its urban mobility plan. It seems that funds (around USD100,000 in total) might have better been spent on tailored support for integrating LCT measures into the plans the four pilot cities are prioritizing. At the same, it is considered positive that the project's EOP Sustainability Workshop will aim to elicit commitment from the LGUs to adopt and implement the project-supported Re-Entry Action Plans.
- LCUTS's awareness and outreach work (aside from workshops/ events) has been somewhat weak. There has been no organized, periodic outreach to jeepney operators, the top priority audience of the project. The project is no longer using its website. Its communication efforts (articles drafted after events) have often gotten lost in the approval shuffle at UNDP CO. Yet, close to EOP, the communications situation improved somewhat, with the project being allowed to reinitiate use of its Facebook page, achieving some publications, and getting two articles posted on UNDP CO's website.
- The LCT university consortium in Baguio, establishment of which was facilitated by LCUTS, has taken up LCT support of the city and may conduct meaningful work related to local priorities in the future.
- The project's development of EV related technician training regulations had important achievements, though, due to its late start, did not achieve a TR, settling for an improved CS instead. Its adaptive management to harmonize previous efforts and its work in preparing the TESDA-required skills mapping and functional analysis are applauded. The target of registered courses at two institutions was not achieved, though a training of trainers was held. An exit strategy that will ensure the EV technician TR is pursued, as well as the charging station technician TR and EV battery technician TR, is needed. These may have been pursued at the project's Sustainability Workshop around EOP, but the risk of this work languishing is of concern.

Outcome 3 ***(Commercialization of, deployment of, and investment in low carbon transport)***

- LCUTS's "Incentive Program" has yielded the strongest results of the project so far. The program provides one or more e-jeepneys to winning cooperatives that agree to purchase a "multiplier" number of e-jeepneys with support of PUVMP bank loans. The program has contributed to re-stimulation of the public transport e-jeepney market, following a stagnant period in the market/ industry since mid-2020.
  - With attribution to project, 2 TCs that did not have e-jeepneys before have purchased some.
  - Also with attribution to the project, 2 to 3 additional suppliers have entered the e-jeepney public transport market (with a few additional ones considering entry).
  - New e-jeepney models from suppliers are in the approval pipeline and, under project influence, DOTr may be speeding up approval.
  - At least 12 pipeline e-jeepneys purchases may be attributed to LCUTS (5 to be purchased by the project, 7 directly stimulated by it). Also, supplier GET is said to have developed a huge pipeline of 900 purchase orders, many now with applications at the bank for loans. There may be some causality from project (≈20%), as it helped highlight GET as the only supplier to "pass" Baguio test run. GET

participated in all 10 PB meetings and may have participated in the smaller group EVIDA meetings, getting exposure to the public transport industry, which it is just now shifting into, and its regulators.
- LCUTS's TC e-jeepney business plan work was slow to be completed. Instead of focusing squarely on e-jeepneys, it proposes alternative income streams (such as ads and parking fees for use of cooperative garage) to raise funds for e-jeepney purchase.
- LCUTS's e-jeepney test runs were not done and subsequently packaged in a way that results could be shared with jeepney TCs. Instead, the approach and report appear more academic. Yet, the test run did stimulate interest in Baguio and even the Iloilo results (though the test run there only included one vehicle and that was a vehicle already on the road in Iloilo) are said to have inspired some confidence.
- LCUTS originally targeted to deploy 3 EVCSs, but due to land issues, two were cancelled. The 1 EVCS that LCUTS will deploy (in Pasig) is an important step forward in adding more charging stations on the ground. Yet, deployment location might have been more strategic. Since Pasig is likely to deploy more EVCSs with or without project help (and already has four), it may have made more sense to support Baguio with charging stations. At the same time, it is realized that the project would like to distribute benefits to its partner cities evenly.

GHG ERs ***(progress towards direct GHG ER target, an objective level indicator; e-jeepney attribution)***

- With the 12 e-jeepneys purchased or in the pipeline that are attributed to the project, lifetime direct GHG ERs of 4,248 t CO2eq are expected.
- ProDoc target implies increment of direct GHG ER target to be 52,959 t CO2, but this is quite high compared to the roughly 65 e-jeepneys implied in ProDoc. A more conservative estimate with methodology used in above bullet is 23,010 t CO2. ProDoc activities target 15 to 20 e-jeepneys deployed in association with project, so other 45 to 50 implied by PRF footnote must be replications.
- One challenge in LCUTS e-jeepney attributions is that, of the three "Incentive Program" winners so far, two already had deployed e-jeepneys; and the "multiplier e-jeepneys" they are expected to deploy appear to have already been planned, so cannot be attributed to the project.
- Among the 12 e-jeepneys attributed to the project are 5 to be deployed by a TC that did not "win" the Incentive Program. It was originally going to be provided with an EV charging station by project, though this fell through due to land issues. Finding suggest the cooperative is purchasing these e-jeepneys due to the influence of the project. There might be more "non-winner" TC e-jeepneys attributable to the project in the pipeline that have not yet been discovered.
- While some earlier reporting claimed project influence on and project attribution for the 375 e-jeepneys already on the road in public transport, extensive follow-up on this topic shows most of the first jeepneys in involved cities were deployed before the project could have had an influence (2018, 2019, and early 2020). And, for the two cities that have done their first deployments since, it was found their decision to deploy was not influenced by the project.
  - This research led to the finding that the public transport e-jeepney market surged after institution of PUVMP, but came to almost a standstill in terms of deployment in new cities after that (i.e. after early 2020). It appears that the LCUTS project, along with EVIDA passage in 2022, and in conjunction with recovery from the pandemic, has led to a recent resurgence (that is in the pipeline). Increased follow up via monitoring and communications with jeepney operators could lead to a sustained trend rather than another temporary surge.

Cross-cutting Topics

- The project has made significant efforts in gender and social inclusion. It held four GESI workshops, one in each pilot city. It had a GESI Action Plan, but this was not implemented. The "Streets for Kids" initiative is a form of social inclusion. It resulted in adoption and funding of plans for a street near a school as drafted by children, persons usually not consulted in city planning. The project has achieved

40% attendance of women on average across its 54 events and over 800 person-attendances by women (which may include some double counting).

- An unmet need for stakeholder engagement and KM identified by the TE is to engage jeepney operators nationwide via dissemination of materials, providing them with various knowledge products. At the same time, LCUTS stakeholder engagement through workshops was strong and a wide range of stakeholders were involved in this project. One strength was bringing the private sector (e-jeepney suppliers) together with government via the platform of the PB, along with smaller group efforts to support EVIDA drafting.
- Risks and safeguards management were well addressed at the time of LCUTS project design. Risks were updated (e.g. addition of Covid) and an update on safeguards was expected (but not confirmed) prior to construction of the charging station and deployment of the e-jeepneys. One risk that was missed and is the dissatisfaction of jeepney operators with PUVMP. This was evidenced by protests in March 2023, though sources suggest demands have been met by a six month extension to Dec. 31, 2023 of the deadline to consolidate into cooperatives.

Implementation *(strengths and challenges)*

- PB served as a positive forum for stakeholders in EV space, bringing together government and private sector.
- The project added field technical officers in the first part of 2022. This greatly enhanced and accelerated work with the pilot cities.
- The competition approach used for the demos and known as the "Incentive Program" was successful in raising awareness to a larger group of jeepney operators than might have been achieved if there were no competition. This approach has been seen in other projects to be an effective way to promote the technology to be demonstrated.
- There were substantial delays prior to signing of the ProDoc (which did not happen until 15 months after CEO clearance) and about 1.5 years of delays after signing, before project team was hired. Delays like this can make project design "stale."
- Many stakeholders pointed out low engagement and unavailability of the IP to be a key reason the project progressed slowly. Responsible officers at the IP had a heavy load of other projects. Also, DOTr has very high staff turnover. This low engagement of the IP is said not to be the norm in the Philippines.
- While Covid-19, an external problem, has been mentioned above, it also created difficulty differentiating between pandemic issues and other implementation issues. As an example, the project delayed its TESDA training program work a long time, so much so that another group prepared a CS for pure battery EV technician for e-jeepneys and e-buses in 2021. The project hired its training consultant in April 2022.
- There was very high turnover of the project team. This is said not to be typical of UNDP projects in the Philippines and is believed to be a secondary effect of the team feeling discouraged that they were not empowered to make progress towards targets and that the activities they needed to implement were not clear.
- For the period up until the STA was hired in Oct. 2022, a decision was made by UNDP CO not to allow procurement of e-jeepneys as designed and shift the funds to other uses, such as TA. This decision was made without well-documented justification, transparency, or exploration of the demo options. It shows a lack of recognition of GEF's emphasis on respecting the "INV" designation in the CER to which over USD 1 million was allocated in this project.
- The project suffered from disagreement between those that wanted to stick with the original design and those that wanted to broaden the project to include specific activities related to cycling and pedestrian aspects. At times, the project seemed, to some extent, to lose focus and choose activities in an ad hoc way. At the same time, the Covid pandemic and shut-down of public transport may have been a

justification for some diversification during the most difficult period. Yet, a revisiting of project strategy should have been conducted before major changes in fund use and approach were allowed.
- There may be a need to tighten up procurement ensuring a wall between those who advise the project on its direction and those that participate in work stemming from decisions associated with that advice. And, there may be a need to institute separation periods for former staff from decision-making organizations (e.g. the IP, UNDP) before participating in work associated with contracts of the project.
- There may be a need for cost estimates of work and consideration of cost-effective alternatives that may better address targets. In some cases, very tailored advising for an LGU maybe more effective than a large budget training program applied to multiple LGUs.

9.2 Recommendations and Lessons

Lessons: Key lessons learned include the following:

- Detailed demo design should be included in the ProDoc.
- Indicators need to be very specific, without multiple possible interpretations. Indicator design and assessment should show what the project specifically has achieved, rather than what has been achieved without contribution of the project.
- Project policy work should not be reduced to ad hoc commenting on draft policies. Design and implementation of policy components need to come up with a way for the project to be more strategic and more impactful.
- The key audience of the project (in this case the jeepney operators) needs to be identified and outreach ramped up, such as through KM dissemination program.
- In implementation of UNDP-GEF projects, there needs to be a focus on targeted outcomes and indicator targets, not just on implementing activities. (Key example of being too activity focused is the LGU planning work.)
- Any decision not to implement demos and shift demo funds to other purposes needs to be fully transparent, discussed, and justified with documentation. Strong efforts to generate options for implementing the demos need to be made before abandoning them as unviable.
- If a project needs to change course, the strategic framework should be revisited and revised as needed. Ad hoc addition of activities is not advised.
- Demo design that incorporates competitions can be a very effective means of promoting the subject of the demo.
- Placing staff in the field for projects that have partner cities or partner regions can be an effective approach to accelerating results.
- For NIM projects, the IP can be critical to success. Thus, more attention beyond HACT survey alone needs to be paid to potential pitfalls, needed qualities, and thus alternative methods of due diligence.

Recommendations: Exhibit 9-1 provides recommendations/ lessons of the Philippines LCUTS Project TE in a table that includes each recommendation, additional explanation/ justification, who will be responsible for carrying it out, and timeline for implementation of that recommendation. The table is divided into three sections. The first two sections provide recommendations focused on building on, sustaining, and filling the gaps for the LCUTS Project. The first section of the table does this as relates mainly to enabling environment for e-Jeepneys, EVs generally, and EV charging stations. The second section of the table relates to both public transport and LCT more generally. The third section of the table focuses on design and implementation recommendations for future projects as derived from the experience of LCUTS.

Exhibit 9-1. TE Recommendations – Philippines LCUTS Project

Recommendations for Building on, Sustaining, and Filling the Gaps for LCUTS – Part I: Enabling environment for EVs (especially e-Jeepneys) and Charging Station Work
1. Refine Incentive Program e-jeepney monitoring template to include all data needed to assess cost effectiveness of e-jeepneys versus Euro IV jeepneys (e.g. not only charging, but cost of charging and repairs/ maintenance; not only number of passengers, but also passenger revenues (or passenger km travelled)). Ensure that both Incentive Program e-jeepneys and "multiplier" e-jeepneys are included to provide a good number of monitored vehicles with latest technology. Verify financial benefits (one year minimum, but ideally ongoing monitoring) and technical viability (ongoing monitoring). Ideally, AFCS will be used. Prior to financial close, Project should initiate and determine institutions that will continue to coordinate monitoring after EOP. Monitoring, if done properly and with results disseminated to jeepney cooperatives nationwide, has the potential to be the most impactful aspect of the Incentive Program and even of the whole LCUTS project! Monitored vehicles could number up to 42, including incentive e-jeepneys, "multiplier" e-jeepneys, existing e-jeepneys of some of the winners (Aerostar and GenSan) if using lithium ion batteris, and the 5 e-jeepneys to be deployed in Iloilo by CITSCO (which did not win the Incentive Program). While it's true that financial and technical results can be theoretically projected based on international data combined with local passenger information and routes, findings suggest both uptake of e-jeepneys and government policy/planning will benefit from monitoring of a significant data set (e.g. 30 or more vehicles) of public transport e-jeepneys on the road in the Philippines. Cooperatives need the evidence (to assess the opportunity) and government agencies need it to understand reasonable subsidy levels and plan industrial policies. (They would like to validate current assumptions about the financial benefits of e-jeepneys and see if they are applicable under local road conditions.) Indeed, PUVMP is designed to include acquisition of monitoring data, but in practice there has been no such follow up. An exit plan for continued monitoring is critical and may or may not involve LGUs at the local level and should involve OTC and/or LTFRB working with DTI and, possibly, DOST at the national level. DTI may offer detailed input on the parameters to monitor. On the technical side, long-term integrity of the vehicle, especially components like batteries and motor, should be assessed. As part of monitoring, Incentive Program cooperatives should be highly encouraged to use AFCSs if possible and submit AFCS data, so that revenues can be reliably assessed.[40] In addition (and even if AFCS data will not be available), financial monitoring should include charging costs, kilometers driven, frequency of charging needs and duration of charging, and maintenance costs (in addition to vehicle up-front costs). Monitoring these expenses, etc. of the e-jeepneys will be even more critical than monitoring the revenues. Ideally, the expenses would be compared to the fuel and maintenance cost of Euro IV jeepneys (in addition to their up-front costs) at similar locations. Per Recommendation 2, monitoring results should be periodically shared with a database of transport cooperatives in format useful to them to keep them informed. Costs of ongoing monitoring may not be that high, but might need to come from government budgets. If the 40 or more vehicle monitoring program is well-designed, however, with key stakeholders on board, a current donor EV-focused project, such as the GEF-UNIDO-DTI project, may pick up and expand upon the effort.
Who: PMU until financial close (design and initial implementation of e-jeepney monitoring program, determination of exist strategy). Then, possibly LGUs to support local efforts. On national level, OTC and/or LTFRB to coordinate (LTFRB perhaps leveraging its regional offices), and to support ongoing dissemination of findings to

[40] Simultaneously, DOTr may begin to develop and then enforce requirements that AFCS be used by public transport jeepneys and prepare and disseminate to jeepney TCs (per Recommendation 2) a pamphlet explaining the benefits. At the same time, there are some challenges with AFCS, such as technical problems and lack of universal systems. Installation and use of AFCS is supposedly required under PUVMP. The banks offering loans under the program also require it. Yet, sources suggest that, although they have the system installed, most modern jeepney owners are not using AFCS or at least not sharing data with others. The project, via its good relationship with its Incentive Program winners, could ask them to use their AFCSs for at least one year, while their e-jeepneys are being monitored for financial viability. Sources indicate AFCS is needed for reliable financial monitoring, as self-reporting of ticket sales is not very reliable. If AFCS could be implemented, at least among e-jeepneys and some Euro IV jeepneys for comparison, they will provide valuable on-the-ground information of financial results of these two different options.

wide group of transport cooperatives. DTI and, possibly, DOST and/or EVAP to support with monitoring program design and data analysis.
When: After launch of Incentive Program and for at minimum one year for financial related data (revenues and expenses), but ideally ongoing (Dec. 2023 – Dec. 2024 or ongoing). Ongoing (Dec. 2023 and on) for technical data.
2. Develop system (preferably electronic) for reaching out to all transport cooperatives/ operators with jeepneys and provide key materials on fleet management and e-jeepney financial viability, pricing, etc., with updates after EOP on a periodic basis. When available, review DOE assessment on transport cooperative concerns about EVs on major thoroughfares to better understand needs and barriers of transport cooperatives with regard to EVs. As a first step to this "jeepney TC/O" dissemination program, contact information for as many jeepney transport cooperatives/ operators as possible should be gathered, probably from the databases of either OTC or LTFRB. An emphasis should be put on gathering electronic contact information if possible and if it is confirmed that electronic communications can catch the attention of the jeepney TCs/Os. A website can also be set up, so that recipients of electronic communications can be referred to documents on the website. Key items to share with the newly established TC/O dissemination network will be: fleet management flyer, flyer on cost-benefit analysis of e-jeepneys versus Euro IV jeepneys versus traditional jeepneys (theoretical analysis), periodic results of monitoring of Incentive Program e-jeepneys and multiplier e-jeepneys (analysis of costs based on actual data collected to date), project test run results, the project's two e-jeepney TC business plans (generalized), and, possibly, pricing analysis for e-jeepneys. Communications with jeepney TCs/Os could be coordinated by OTC and/or LTFRB[41] with support from DTI and potentially DOE and/or DOST.
Who: PMU to assist with preparation of list. LTFRB and/or OTC and DTI (and maybe DOE and/or DOST) to sustain and send items.
When: Dec. 2023 and ongoing. Twice yearly updates on monitoring data from Incentive Program may be included.
3. Conduct price analysis of e-jeepneys, including international comparison and explanation of key component costs and changes in vehicle pricing over time. Share findings with transport cooperatives/ operators and banks: Given concerns of substantial price increases in e-jeepneys and variation in price among brands, there is a need to assess the reasons for the price increases/ differentials and determine best potential market prices for vehicles at various tiers of performance, features, and quality. Educating the jeepney TCs/Os themselves so they can be confident about approaching the market for purchase of e-jeepneys will be the key target of pricing analysis. Yet, this information will also be very important (a) to policy makers (such as DTI, DOTr) in considering industry subsidies and PUVMP TC/O subsidies and (b) to bankers in supporting clients to get the best deal/ most suitable product for the money in their e-jeepney purchases. The study may take two angles. One angle will assess price increments expected for different types of upgrades, such as in going from lead acid to lithium ion batteries or going from a lesser range (km per charge) to higher range. The other will do some international comparison of prices or checking with manufacturers, such as in China, on their cost estimates for vehicles meeting Philippine standards for Class II jeepney models. Knowledge product on pricing and price increments for various improvements will be prepared and disseminated to jeepney TC/O network (per Recommendation 2). And, the information will also be disseminated, perhaps in more detailed form, to relevant government agencies and banks for their consideration in policy and planning and in lending, respectively.
Who: Committee composed of DOTr, OTC, LTFRB, DTI, LBP, and DBP
When: Dec. 2023 - Jan. 2024 for first phase and then ongoing.
4. Resuscitate and finalize prior draft agreement between DOE and DOTr, whereby DOTr provides DOE info on PUVMP e-jeepney participants[42] and DOE provides charging stations directly (with DOE funds) or facilitates cost-

[41] One reviewer of a draft version of this report points out that OTC regularly reaches out to transport cooperatives and requires each TC provide an official email addresses, which may be used for the distribution list. The same reviewer notes that LTFRB has a "TSE Directory," which may also be used but that may need to be updated.

[42] According to one reviewer of a draft version of this report, EVIDA mandates that DOE consolidate and centralize data [related to EVs] and that, as a result, DOTr would be required to submit such data to DOE.

effective rollout via the private sector.[43] Institute monitoring program for the project's pure solar PV charging station in Pasig and expand as more are put in place via DOE or DOE facilitation: DOTr and DOE had been developing an agreement previously, but cooperation lapsed when relevant officer at DOTr left the agency.
Who: DOTr, DOE, LGUs
When: Dec. 2023 to June 2024 for agreement and initial monitoring, then ongoing for cooperation and monitoring
5. Based on monitoring results (Recommendation 1), preparation of PUVMP 2.0 with: rationalized incentive level for e-jeepneys (if needed), charging station cooperation with DOE (per Recommendation 4), and scrapping requirement plus scrapping/recycling program for retired traditional jeepneys; piloting of PUVMP 2.0; and, subsequently, perhaps, application to the GCF for low interest e-jeepney loan facility: Monitoring data should clarify whether or not a higher purchase incentive subsidy is needed for e-jeepneys to make them competitive with Euro IV jeepneys in terms of lifetime costs (e.g. both purchase and operation). PUVMP 2.0 should also aim to achieve a higher level of compliance than the original PUVMP in certain areas targeted, such as monitoring and use of AFCSs. Preparation of a GCF proposal may be on the agenda of the GEF-UNIDO-DTI EV project. Regardless, the government may consider the pros and cons of the GCF as an option. As for developing program for ensuring that traditional jeepneys replaced by modern jeepneys are scrapped and materials recycled: It appears that some of the old, traditional jeepneys replaced through PUVMP support are being repurposed for other uses besides public transport and thus still on the road. To realize the aim of PUVMP to get these vehicles off the road, there needs to be a mandatory scrapping and recycling program. In order to implement such a program, in turn, there needs to be the development of recycling facilities across the country where scrapping and recycling of old jeepneys can take place. Work may begin with a survey of the potential of leveraging existing facilities versus developing new ones and looking for opportunities for cooperation with the private sector. One potential source of support for this work may be the Japan funded ACE project on circular economy, which UNDP is implementing. As part of this program, DOTr will need to make scrapping and recycling mandatory of those who receive discounted bank loans and subsidies under PUVMP for the purchase of new jeepneys. PUVMP may also include development of an M&E mechanism to ensure compliance.
Who: For main work in developing PUVMP 2.0: DOTr with input from OTC, LTFRB, DTI and others involved in monitoring (e.g. DOST, DOE, EVAP). Possibly, GEF-UNIDO-DTI project. For scrapping/ recycling program: Same parties and, possibly, cooperation with private sector and Japan/UNDP ACE Project.
When: Jan. – Feb. 2024, design of PUVMP 2.0; March – Sept. 2024, piloting PUVMP 2.0 and development of traditional jeepney scrapping/ recycling program. Oct. – Dec. 2024, selection of GCF accredited partner and preparation of GCF application. Initiation of scrapping/ recycling program.
6. Develop concrete plan and timeline/ "exit strategy" for EV related training regulations (TRs) in the pipeline for TESDA (pure battery EV technician, EV battery technician, EV charging station technician, and hybrid vehicle technician). Ensure exit strategy is in place so that there are responsible parties and a viable, clear path to adoption of all 4 TRs (or of one umbrella TR with 4 sub-specialties) within 1.5 years post-project. Perhaps, seek out other funding partners to speed up the process using the methodology of accelerated preparation demonstrated by LCUTS: Responsible parties should be identified. Prior to financial close, LCUTS may find another donor project or funder that might be interested to carry on this work (e.g. GEF-UNIDO-DTI project or DOE or CAMPI, which is an organization of private car companies in Philippines, largely headed by Toyota and Nissan) so that experts can be hired quickly as needed to speed up the process.[44]
Who: TESDA and LCUTS to develop the timeline and plan for developing the four TRs. TESDA and organization willing to fund consultants to develop the TRs and curricula (e.g. UNIDO project, DOE, CAMPI, etc.) for implementation.
When: Planning period: Dec. 2023. Implementation: Jan. 2024 to June 2025

[43] According to a reviewer of a draft version of this report, DOE has continued to emphasize, at various meetings, its commitment to support the rollout of charging stations.

[44] Findings indicate that DOE funded preparation of a pure battery EV technician CS and curriculum for e-jeepneys and e-buses in 2021 (though the effort lacked TESDA's required skills mapping and functional analysis). CAMPI funded some initial work on hybrid technician CS back in 2015 or so (but it was stalled at the functional analysis stage).

Recommendations for Building on, Sustaining, and Filling the Gaps for LCUTS – Part II: Public Transport and LCT More Generally
7. Develop and get signed a DOTr Notice listing key progress made by the LCUTS project and specific follow-ups that DOTr, OTC, and LTFRB will engage in post-project including: (i) Continue monitoring 40+ e-jeepneys related to Incentive Program; (ii) continue providing reports related to e-jeepneys (such as on monitoring results) to jeepney TC/Os on distribution list; (iii) develop and enforce regulations requiring public transport jeepneys to use AFCS; (iv) resuscitate draft agreement with DOE to provide them info on e-jeepneys purchased under PUVMP so that DOE can provide/ facilitate provision of charging stations; (v) develop PUVMP 2.0 once Incentive Program monitoring provides data needed to rationalize e-jeepney subsidy (PUVMP 2.0 should enforce requirements of AFCS, monitoring, and traditional jeepney scrapping, and might be piloted and then GCF funding pursued); (vi) promote development of integrated city public transport plans (so that bus, jeepney, and tricycle routes do not overlap) that are tailored to each region and its resources; (vii) continue to support with budget allocations and high-level encouragement build-out of the bottom-up bike lane proposals developed under LCUTS (but with enhanced integration) to achieve implementation in at least five LGUs; and (viii) finalize work to get LCT JMC signed, with the addition of provision for regional LCT committees, and replicated out to the regional level where region and city-specific LCT planning, such as of vehicle type suitable to each region, can be carried out.
Who: DOTr, OTC, and LTFRB.
When: Dec. 2023 – Jan. 2024, then, ongoing implementation
8. Pilot improved planning of urban public transport routes and vehicle types, addressing current shortcomings so that planning for routes of buses, jeepneys, and trikes are done in an integrated way such that each route is assigned the most appropriate vehicle type, rather than multiple vehicle types. Similarly, when considering options of electric versus ICE, versus alternative fuel vehicles, consider the situation of various locales (e.g. electricity price and natural resources) to develop region-specific public transport plans. Integrate "green routes" that will feature only EVs (e-buses or e-jeepneys) for public transport into the planning work. As part of this, promote the development of regional LCT committees to carry out LCT planning under the proposed national LCT JMC: In theory, city route planning should already choose the optimal vehicle type, but in practice, separate plans are done for four-wheelers and up (e.g. buses, jeepneys) and for trikes. And there is overlap in routes plied by jeepneys and buses. Given the large size of urban populations in the Philippines, it is likely that rationalization among vehicle types would lead to more buses and fewer jeepneys than at present. Yet, due to social issues, the change should be gradual and improved planning work must take the need for gradual transition into consideration. This work might be incorporated into the design of UNDP's upcoming GEF Sustainable Cities project as a public transport planning component.
Who: LTFRB, DOTr, OTC, DILG, selected pilot cities and regions, planning consultants, and, possibly, UNDP-GEF upcoming Sustainable Cities project.
When: Jan. 2024 – Jan. 2025 for pilot planning and setting up of regional LCT committees and then ongoing for implementation of routes, replication, and other regional LCT planning.
9. Building on commitments at the project's Sustainability Workshop, work with the project's four pilot LGUs, so that comprehensive set of LCT measures are incorporated into existing plans or key plans in their pipelines that will be adopted soon. Develop nationwide LGU contact list to promote various LCT ideas and knowledge products to LGUs nationwide. Post on a website LCT training modules prepared by NCTS, for example, and provide link to those on the LGU contact list. Determine institution will maintain the LCT LGU website and communications with LGUs. Through dissemination, encourage the setting up of permanent LGU LCT committees, more integrated planning of public transport routes (e.g. so bus and jeepney routes don't overlap), designation of "green routes" over which only LC public transport vehicles can traverse, and development of bike lanes, more pedestrian friendly streets, and, potentially, permanent (7 days a week) pedestrian streets (with a focus on mobility aspects over street activities).
Who: Four pilot LGUs to get comprehensive set of LCT measures incorporated into existing or key pipeline plans; LGUs nationwide; possibly, upcoming UNDP-GEF Sustainable Cities Project an cycling associations, DILG's Urban Action Program

When: Dec. 2023 to Jan., 2024. And then ongoing, especially 2025 and beyond if upcoming Sustainable Cities Project takes this up
10. On future projects, improve turnaround time within UNDP CO of brief project articles to a few days for an approval and carry out press liaison to get project concepts and achievements widely cited in the media. Assess current framework for CO involvement in project communications to ensure it is helping rather than shutting down project's communications outreach: (i) Institute maximum 5-day turnaround on communications related emails and institute mechanism to address failure to respond. (ii) Allow project team to issue clearance for non-sensitive items that adhere to UNDP Philippines Communications Team guidelines. This may include social media postings. Involvement of UNDP CO should only be required for identified sensitive topics. (iii) If UNDP CO will still need to clear substantial volume of project communications items, reassess/ ensure human resources within CO are adequate to respond quickly (maximum 5 day turnaround for emails and for review and approval of short articles, perhaps maximum 10 days for review and approval of longer items).
Who: UNDP CO senior management (RR, DRR), UNDP CO Communications Team, UNDP CO Climate Action Team Lead and Program Analyst, the press, and similar persons for other projects.
When: Starting by Dec. 2023 and ongoing
Recommendations for UNDP and/ or DOTr on Implementation and Facilitation thereof
11. Given the widespread use of demos in UNDP-GEF projects and the frequent challenges and delays faced by projects in (a) designing demos that have replication/ scale-up potential and (b) designing demo financing / procurement mechanisms that meet UNDP's requirements, the NCE team should prepare an easy reference booklet on demo design and implementation. The booklet should cover models/ examples of types of demos that have good replication or scale-up potential. It should also explain what kinds of means for investing GEF project funds into the demos are acceptable/ allowed by UNDP, given different types of partners, such as city government, private sector etc. (This booklet may address CCM demos generally, but also have a specific section on sustainable transport demos.) The booklet may include demo success stories as well. LCUTS faced a lot of delays in, first, not having a good model for a demo that could stimulate replication/ scale-up and then, later, faced challenges/ delays in getting the model proposed approved due to concerns about using GEF funds to support the private sector and providing the funds towards partial purchase amount of vehicles.
Who: UNDP NCE Team to prepare booklet; UNDP COs, UNDP-GEF project designers and implementers for review/ learning
When: Dec. 2023 – May 2024 for booklet preparation and ongoing for updates; ongoing for review/ learning
12. UNDP NCE Team should provide guidance, including a written booklet, to COs so that they are clear on: (i) The nature of project strategy and results-based management of UNDP-GEF projects and (ii) rules and recommendations on reallocation of funds designated as "INV" in the approved GEF CER. The NCE Team should consult GEF on GEF's definition of "INV" funds and their requirements for shifting "INV" funds to "TA" funds once project is operational. COs should understand that GEF-approved projects should be highly focused on achieving targeted outcomes and indicator targets and do not normally change their outcomes. Given the high level of challenge of GEF projects, there is not much room for incorporation of ad hoc activities, particularly costly ones. If there is a need for strategy adjustment, then the project framework must be revisited and any changes must be made in a transparent and well-documented way. In project design, INV funds should be allocated only to areas defined as INV. And, funds should not later be reallocated from INV to TA unless it is confirmed that GEF allows for this. This means that any decision not to implement project demos needs to be thoroughly and transparently discussed, documented, and approved.
Who: UNDP NCE team, UNDP Philippines CO – persons involved in overseeing design and implementation of GEF projects
When: Dec. 2023 – May 2024 for booklet preparation and GEF liaison; ongoing for updates and capacity building of CO staff and project teams
13. UNDP Philippines CO, building on the challenges of LCUTS implementation, should conduct more due diligence on and negotiation with potential partners for each project at the pre-concept stage to determine whether the partner will be able and willing to execute proposed projects successfully. (This will be different than standard

HACT assessment.) Due diligence will include gathering intelligence on partner performance on other donor projects. In addition, UNDP may assess: availability of permanent staff to work with (rather than high turnover contract staff); officers potentially responsible for the project not being overloaded with other projects and having interest in the project at hand; and agency being good fit for the topic at hand. In cases where the agency is a good fit thematically, but lacks needed track record and capacity to implement, UNDP may choose a stronger partner as IP, but make the good-fit-thematically agency an advisor to the project. Within the public transport arena, DOTr remains the best fit thematically, though challenges suggest DOTr may better cooperate with UNDP projects as an advisor than IP. That is, good thematic fit alone is not strong enough to determine the partner. LTFRB, under DOTr, is said to have a higher ratio of long-term staff and also has regional offices, so could be very suitable for projects that work with LGUs, were there to be a way to work more directly with LTFRB. DOTr may want to consider developing some divisions or offices that have long-term staff and thus could work better with donors and perhaps have more focus on their projects. It may wish to develop monitored criteria for the NPD, such as for the time the NPD will be required to put into the project, mandatory attendance at relevant meetings, etc.
Who: UNDP Philippines CO, DOTr
When: ongoing
14. Give more attention to design of project indicators so that they are not ambiguous. Offer guidelines on issue of whether indicators should require clear attribution to project or not. Ideally, indicators will be designed and assessed to reflect influence of project, thus facilitating results-based management. Past practices of assessing indicator achievements blind to whether these may be attributed to the project should be abandoned in favor of methodologies that focus on results due to the project. Further, if project design and indicators seem outdated at inception, the opportunity of revision at inception should be taken more seriously to thoroughly align activities and aims with what IP partner is doing and with what will be effective in the current environment: NCE should strongly consider developing written guidelines for indicator design. One problem, as experienced with LCUTS and some other projects, is that it is not always clear what indicators refer to. For example, when "entities" are referred to, it's not always clear which categories of entities are targeted. Footnotes, etc., may help with clarifying design. Likewise, how the designers come up with the baseline values indicated should be clearly explained by footnotes or other means. Another challenge is the conundrum of "global" indicators (e.g. situation for the whole country) versus indicators that require attribution of the project itself. On the one hand, ambitious projects hope to change the whole country, particularly in a nascent industry, yet this is often not possible to achieve in a way that is visible by the time of the end of a four of five-year project. Recent information suggests that, for beneficiary indicators at least, GEF is shifting more to a "direct attribution" approach. And, based on results-based management, indicators are only useful in assessing project progress if links in attribution to achieved indicator values can be identified. Alternatively, indicator assessment, in some cases, could offer the global value and also state which part of that can be verified to be due to the project. This may highlight whether the project contribution has been significant towards developing the trends it intended to contribute to or if the project, in the end, has only "been along for the ride."
Who: UNDP NCE (prepare guidelines), UNDP CO and project teams (for re-esign at inception), UNDP-GEF project designers, UNDP-GEF project evaluators
When: Dec. 2023 to May 2024 for preparation of guidelines, and then ongoing for review/ study/ use
15. For design of policy components of UNDP-GEF projects, UNDP Philippines CO should assess its strategy given what a project might achieve in 3 to 5 years and what kinds of outputs may offer the most impact and the most strategic result. Since brand new policies and standards at the national level might not be achieved on the time-scale of a project, an alternative indicator of progress may be needed for such efforts. At the same time, merely commenting on the draft policies of others in an ad hoc and limited way may not represent a significant enough contribution/ impact to project targets to justify a "policy outcome." Perhaps, in some cases, the project role could emphasize lobbying or holding a legislative conference to push for adoption of existing pipeline policies. Alternatively, national plans and department orders, as easier to achieve on project timescales, might be pursued. Or, efforts may shift to local level policies and standards. In that case, however, the project should ensure these items are drafted interactively with the LGU or region. For the LCUTS Project, while there were some good contributions to policy and standards (EVIDA, Green Routes Criteria), it seems the project was pulled in many

different directions, such as by Project Board recommendations for policies to comment upon, and further that the level of project input adopted in most national-level policies and standards in which it participated was relatively low.
Who: UNDP Philippines CO, project design consultants, IPs
When: Ongoing
16. As UNDP learns from LCUTS and pursues a city-centered strategy in some future projects, it may consider some recommended options. It may have a field technical associate or manager in each pilot city, a strategy that a number of interviews indicate is one of the best things LCUTS did. It is recommended UNDP consider giving these persons a title with more perceived authority than "field technical assistant," so they have more leverage to do their jobs. Further, UNDP may wish to consider a decentralized PMU. Depending on number of staff, the field technical advisors might also double as component managers if they have those capabilities. In this scenario, the PM, M&E, and admin staff may be based in Manila, but other staff will be in the field where they can better leverage face-to-face interaction. An alternative or something to do in addition is to ensure that the project has a strong champion in each local government.
Who: UNDP CO and partners. Perhaps, UNDP-GEF Sustainable Cities Project
When: Dec. 2023 and ongoing.

Annex 1. Terminal Evaluation Interviews - Realized Mission Itinerary and Persons Consulted

Note 1: This annex combines the mission itinerary and persons consulted. There were visits to two cities, one to Iloilo and one to Baguio. The purpose of these visits was mainly to achieve face-to-face interaction, as no demonstrations were yet deployed on the ground at the time of the mission. The rest of the mission was carried out virtually.

Note 2: The TE Team methodology depends heavily on consultations with both project implementers and project beneficiaries. Consultations were carried out in two main phases, two weeks in late April/ early May 2023 and then during the month of June, 2023. The first phase was led by the National Consultant, as the International Consultant had not formally come on board and included face-to-face meetings and online meetings. The online meetings during this first phase were video-recorded with knowledge of the interviewee. The second phase was led by the International Consultant and was comprised mostly of online meetings only. There were also a few "email interviews". These online meetings were not video recorded. Preparation of confidential meeting notes (shared only within the TE Team) were an important aspect of the methodology.

Note 3: In total 76 interviews (or 71 if not including "email interviews") were conducted, which is quite high for terminal evaluations.

1. Face-to-Face Consultations in Late April/ Early May Conducted by National Consultant, with visits to Iloilo and Baguio

Organization and Person(s) Met
May 1, 2023 – Iloilo
1. Aerostar 1 MPC: Mr. Francisco Llenos, Chair; Vicente Quilino, General Manager; Star 8: Mr. Julio Soriaso
2. Calumpang Iloilo Transport Service Cooperative (CITSCO): Edwin Escamos, Manager
May 2, 2023 – Iloilo
3. Iloilo Transport Service Cooperative (ITRANSCO): Neila Puno, General Manager
4. LCUTS Field Technical Assistant: Alfredo Carballo
5. Iloilo City Planning and Development Office: Josen Roni Penalosa
6. Iloilo City Planning and Development Office: Keith Camena
7. Land Transportation Franchising Regulatory Board Region VI: Attorney Joscet Buyco-Abellar
May 3, 2023 – Baguio
8. City Planning and Sustainable Development Office, Baguio City: Ar. Donna Tabangin
9. City Planning and Sustainable Development Office, Baguio City: Engr. Jan Borillo
10. City Disaster Risk Reduction and Management Office, Baguio City: Antonette Annaban
May 4, 2023 – Baguio
11. Cordillera Basic Sectors Transport Cooperative, Baguio City: Jude Wal, Chair; Engr. Ivan Shane Regaspi, Technical Officer; Benedicto Faroden, Board of Directors (BOD), Severine Martin (BOD); Melvin Santos; (BOD); Mr. Ruby Dungong (BOD)
12. Loakan Jitney Transport Cooperative: Ruben Balagot, General Manager; Joseph Cuilan, Indigenous Peoples' Chairperson; Clarice Ablasi, Secretary Irisan Transport Cooperative: Anert Bangsael, Chair
13. Dalan ni Taltalak- LCT Consortium: Engr. Jasmin Madayag
14. LCT Focal Point of Baguio City Government: Engr. Thea Camiring
15. LCT Field Technical Consultant, Baguio City: Marjorie Balay-as
May 5, 2023 – Baguio
16. City Mayor, Baguio: Mayor Benjie Magalong

2. Online Consultations in Late April/ Early May Conducted by National Consultant

Organization and Person(s) Met
April 27, 2023
1. LCUTS PMU: Raisa Salvador, PM; Jose Cua, Policy Support Officer; Elijah Go Tian, Capacity Development Officer; Rishnney Roque, Private Sector Development Officer; Marikris de Guzman, M&E Officer
2. SYSTRA (firm preparing transport cooperative business plans for the project): Firm preparing business plans for the project (4 persons in attendance): (i) Ian Edward Medenilla, Manager Project Development Group (team lead for assignment); (ii) Rhiza Castillo, Business Development Specialist; (iii) Maria Katherine Tablada, Project Development Specialist (project assistant for assignment); (iv) Sidney Gil, Market Researcher (research, coordination, and write-ups for assignment)
3. CHRG (firm conducting techno-economic analysis and design of charging stations project). Team members and role in LCUTS assignment: Leyo Tayo, Project Leader; Janel, Project Manager – manages team and prepares techno-economic study of feasibility; Jak, Project Development Officer – administrative tasks; Janine, Engineer – handles all data, processes it, visualization/ presentation; Mark Arnel Domingo – EVCS design of solar and electrical systems
4. National Transport Specialist – Mark Tacderas (responsible for EV test run and earlier work for project)
April 28, 2023
5. DOTr Road Transport Division of Planning Department: Mr. Lemar Jimenez, OIC; Carl Buzon, Project Development Group; Jessica Torres, Project Development Group
6. DOTr: Road Transport and Infrastructure Department: Erika Magpayo, Attorney
7. DOST: Philippine Council for Industry, Energy, and Emerging Technology Research and Development, Enrico Paringit, Executive Director
8. DOE: Patrick Aquino, Director
9. University of Philippines National Center for Transportation Studies (firm conducting training for and facilitation preparation of LCT plans for the four pilot cities): Involved staff on call and role in assignment: Sandy Mae Gaspay, Planning and Strategic Support Consultant; Sheila Javier, strategic and planning support for assignment; Mel Eden, Project Technical Staff Person
10. UNDP Program Analyst: Gwyneth Palmos
May 2, 2023
11. LCUTS Gender Equality Social Inclusion (GESI) Specialist: Reina Olivar
May 8, 2023
12. Pasig City Transportation Development and Management Office, Mrs. Karen Crisostomo, consultant, and Vhanz, focal person of e-mobility project
13. Pasig Green City Transport Multipurpose Cooperative, Darwin Mora, General Manager
May 9, 2023
14. LCT Training Specialist Neil Lopez
15. Tojo Motors Corporation, Evan Quinay, COO
16. Santa Rosa City Planning and Development Office: Mr. Vergel L. Maaghop, Project Observation Officer, Mr. Gary Abadines, Mr. Ermin Lucino (tbc)
17. Santa Rosa City Engineering Office and City Environment and Natural Resources Office, Ms. Amor Salandanan; Mr. Boris Valeroso
May 10, 2023
18. Pasig City Cooperative Development Office, OIC Ms. Donna Cruz
19. LCT Santa Rosa Field Technical Assistant, Mark Alcala
20. LCT Pasig Field Technical Assistant, Angelica Camacho
May 11, 2023
21. Star 8 Green Technology Corporation, Head of Sales and After Sales: Jay Carandang

3. Meetings with UNDP and some Project Team Members Together

Attendance by IC and NC indicated in parentheses

Date	Organization/ Persons Met
May 11, 2023	1. UNDP CO Program Analyst, Gwyneth Palmos, LCUTS Project Manager Raisa Salvador, LCUTS M&E Officer Marikris de Guzman (IC and NC)
May 24, 2023	2. UNDP CO Program Analyst, Gwyneth Palmos, UNDP CO M&E Officer Katherine Ivy Custodio, LCUTS Project Manager Raisa Salvador, LCUTS M&E Officer Marikris de Guzman (IC and NC)
June 28, 2023	3. LCUTS STA Angel Aparicio, UNDP CO Program Analyst, Gwyneth Palmos, , LCUTS Project Manager Raisa Salvador, LCUTS M&E Officer Marikris de Guzman (IC)

4. Meetings Led by International Consultant (all online)

Many responded to follow up questions by email as well.

Attendance by IC and NC indicated in parentheses.

Date	Organizations and Persons Met
June 1, 2023	1. Former LCUTS Component 1 Lead: Mr. J. Mikhail Nacino (IC)
June 1, 2023	2. Former LCUTS Component 3 Lead: Maria Isabela Corpuz (IC)
June 1, 2023	3. LCUTS Component 2 Lead: Elijah Go Tian (IC, NC)
June 1, 2023	4. Recently Former LCUTS Component 1 Lead: Jose Alfonso Cua (IC, NC)
June 2, 2023	5. LCUTS Pasig Field Technical Assistant (Former) – Angelica Camacho (IC, NC)
June 2, 2023	6. LCUTS Baguio Field Technical Consultant – Marjorie Balay-as (IC, NC)
June 2, 2023	7. LCUTS Iloilo Field Technical Assistant – Alfredo Carballo (IC, NC)
June 5, 2023	8. LCUTS Project Manager - Raisa Salvador (IC, NC)
June 5, 2023	9. LCUTS Component 3 Lead – Rishnney Roque (IC, NC)
June 5, 2023	10. Former Component 2 Lead, Jennifer Sabianan (IC, NC)
June 5, 2023	11. Monitoring and Evaluation Officer, Marikris de Guzman (IC, NC)
June 6, 2023	12. Component 3 Research Associate, Sarah Arrojado (IC, NC)
June 6, 2023	13. Component 2 Research Associate, Joel Bienne Valderrama (IC, NC)
June 6, 2023	14. Field Technical Assistant- Santa Rosa City, Mark Alcala (IC, NC)
June 6, 2023	15. Communications Consultant to LCUTS Project, Ms. Dianne Badillo (IC, NC)
June 7, 2023	16. Component 1 Research Associate, LCUTS Project, Joanna Lyn Munda (IC, NC)
June 7, 2023	17. Department of Trade and Investment (DTI), DTI Innovation and Collaboration Division: Mr. Karl Pacolor, Chief, also associated with "CARS" Program (IC, NC at first, but internet issues that day)
June 7, 2023	18. Global Electric Transport ("GET"): Mr. Francisco Endriga, COO (IC)
June 7, 2023	19. Electric Vehicle Association of the Philippines (EVAP): Mr. Jose Bienvenido Biona, Executive Director (IC)
June 8, 2023	20. Barangay Sumilang Council, Pasig City: Ms. Irma Ramos Gomez (Maii Ramos Gomez) (IC)
June 9, 2023	21. TESDA (Technical Education and Skills Development Authority): Ms. Katherine Amor Aguilar-Zarsaidias (Assistant Executive Director/ Chief of Technical Education and Skills Development); Ms. Maui Dulce (manager of Planning Department's Office of Labor Market Information Division); Mr. Yancy Tolentino (Technical Staff, Labor Market Information Division) (IC)
June 9, 2023	22. Regional Technical Advisor, Bangkok Regional Hub, Bahtiyar Kurt (IC)
June 13, 2023	23. LTFRB and PB: Engineer Riza Marie Paches (IC)
June 14, 2023	24. AVP/Department Head, Program Management Department: Land Bank of the Philippines: Mr. Ronaldo Averion (IC)

June 14, 2023	25. National Economic and Development Authority (NEDA): Mr. Roderick Planta, Assistant Secretary, Investment Programming Group (IC)
June 16, 2023	26. UNDP CO Team Leader, Climate Action Program Team: Floradema Eleazar (IC)
June 16, 2023	27. UNDP CO Deputy Resident Representative: Edwine Carrie (IC)
June 16, 2023	28. Department of Environment and Natural Resources, Assisted and Special Projects Services: Al Orolfo, Director (IC)
June 16, 2023	29. Development Bank of the Philippines, Program Development and Management Department. Raquel Anzures, Assistant Vice President (IC)
June 26, 2023	30. LCUTS Senior Technical Advisor (STA), Prof. Angel Aparicio (IC)
Nov. 1, 2023	31. LCUTS RTA Raisa Salvador and LCUTS M&E Officer Marikris de Guzman

5. Email Interviews

For these, the interviewee responded in writing to questions sent via email by the IC. Exchanges were in late June and early July 2023. Some responded to many follow up questions as well.

Person Consulted and Role
1. Former LCUTS Project Manager: Mario Tecero
2. Former LCUTS Capacity Development Officer: Rachel Basas
3. Former LCUTS M&E Officer: Karis Vehnel Fonte
4. Former LCUTS Private Sector Development Officer: Melinda Gabuya
5. Mid-Term Reviewer of LCUTS: Roland Wong (International Consultant)

Annex 2. Organizations and Persons Interviewed, Organized by Type of Organization

A2-1. Transport Cooperatives

City	Cooperative	Persons Interviewed
Iloilo	1. Aerostar 1 MPC	Francisco Llenos, Chair Vicente Quilino, General Manager
	2. Calumpang Iloilo Transport Service Cooperative (CITSCO)	Edwin Escamos, Manager
	3. Iloilo Transport Service Cooperative (ITRANSCO)	Neila Puno, General Manager
Baguio	4. Cordillera Basic Sectors Transport Cooperative, Baguio City	Jude Wal, Chair; Engr. Ivan Shane Regaspi, Technical Officer; Benedicto Faroden, Board of Directors (BOD), Severine Martin (BOD); Melvin Santos; (BOD); Ruby Dungong (BOD)
	5. Loakan Jitney Transport Cooperative (*met in same meeting as Irisan, below*)	Ruben Balagot, General Manager; Joseph Cuilan, Indigenous Peoples' Chairperson; Clarice Ablasi, Secretary
	6. Irisan Transport Cooperative	Anert Bangsael, Chair
Pasig	7. Pasig Green City Transport Multipurpose Cooperative	Darwin Mora, General Manager

A2-2. LGU (City) Departments/ Officials

LGU	Department	Persons Interviewed
Iloilo	1. Iloilo City Planning and Development Office	Josen Roni Penalosa
		Keith Camena
Baguio	2. City Planning and Sustainable Development Office, Baguio City	Ar. Donna Tabangin
		Engr. Jan Borillo
	3. City Disaster Risk Reduction and Management Office, Baguio City	Antonette Annaban
	4. LCT Focal Point of Baguio City Government	Engr. Thea Camiring
	5. City Mayor, Baguio	Mayor Benjie Magalong
Pasig	6. Pasig City Transportation Development and Management Office	Karen Crisostomo, consultant, and Vhanz, focal person of e-mobility project
	7. Pasig City Cooperative Development Office	Donna Cruz, OIC
Santa Rosa	8. Santa Rosa City Planning and Development Office	Vergel L. Maaghop, Project Observation Officer, Gary Abadines, Ermin Lucino (tbc)
	9. Santa Rosa City Engineering Office and City Environment and Natural Resources Office	Amor Salandanan; Boris Valeroso

A2-3. Other Local Organizations/ Partners in Project Pilot LGUs

Organization	Person Interviewed
1. Dalan ni Taltalak- LCT Consortium (*Consortium of three universities cooperating in LCT*)	Engr. Jasmin Madayag
2. Barangay Sumilang Council, Pasig City	Irma Ramos Gomez (Maii Ramos Gomez) (*organizes open streets activity on Sundays*)

A2-4. Manufacturers and Suppliers of E-Jeepneys (also Industry Association)

Manufacturer	Persons Interviewed
1. Star 8 Green Technology Corporation	Jay Carandang, Head of Sales and After Sales
	Julio Soriaso (*met with Iloilo transport cooperative in Iloilo*)
2. Tojo Motors Corporation	Evan Quinay, COO
3. Global Electric Transport ("GET")	Francisco Endriga, COO
4. Electric Vehicle Association of the Philippines (EVAP)	Jose Bienvenido Biona, Executive Director

A2-5. Government Financial Institutions/ Development Banks

Bank	Persons Interviewed
Land Bank of the Philippines	Ronaldo Averion, AVP/Department Head, Program Management Department
Development Bank of the Philippines	Raquel Anzures, Assistant Vice President, Program Development and Management Department

A2-6. National Government Agencies/ Officials

Agency	Officials Interviewed
1. DOTr Road Transport Division of Planning Department	Mr. Lemar Jimenez, OIC; Carl Buzon, Project Development Group; Jessica Torres, Project Development Group
2. DOTr: Land Transport and Infrastructure Department	Erika Magpayo, Attorney
3. Land Transportation Franchising Regulatory Board (LTFRB, which is under DOTr)	Engineer Riza Marie Paches
	Attorney Joscet Buyco-Abellar (LTFRB Region VI, *met while in Iloilo*)
4. DOST: Philippine Council for Industry, Energy, and Emerging Technology Research and Development	Enrico Paringit, Executive Director
5. DOE	Patrick Aquino, Director
6. Department of Trade and Investment (DTI), DTI Innovation and Collaboration Division	Karl Pacolor, Chief, also associated with "CARS" Program
7. National Economic and Development Authority (NEDA)	Roderick Planta, Assistant Secretary, Investment Programming Group
8. Department of Environment and Natural Resources	Al Orolfo, Director, Assisted and Special Projects Services
9. TESDA (Technical Education and Skills Development Authority)	Ms. Katherine Amor Aguilar-Zarsaidias (Assistant Executive Director/ Chief of Technical Education and Skills Development); Ms. Maui Dulce (manager of Planning Department's Office of Labor Market Information Division); Mr. Yancy Tolentino (Technical Staff, Labor Market Information Division)

A2-7. UNDP

Office	Persons Interviewed
1. UNDP Philippines Country Office	Gwyneth Palmos, Program Analyst
	Floradema Eleazar, Team Leader, Climate Action Program Team
	Edwine Carrie, Deputy Resident Representative
	Katherine Ivy Custodio, Monitoring and Evaluation Officer
2. UNDP Bangkok Regional Hub (BRH)	Bahtiyar Kurt, Regional Technical Advisor

A2-8. LCUTS Project Team – Current or Very Recent (onboard for at least part of May 2023)

Role	Name
1. Project Manager	Raisa Salvador
2. Monitoring and Evaluation Officer	Marikris de Guzman
Field Technical Assistants/ Consultants	
3. Baguio Field Technical Consultant	Marjorie Balay-as
4. Iloilo Field Technical Assistant	Alfredo Carballo
5. Pasig Field Technical Assistant	Angelica Camacho (*recently left project*)
6. Santa Rosa Field Technical Assistant	Mark Alcala (*recently left project*)
Component Leads and Research Associates	
7. Component 1 (Policy) Lead (*had also served as OIC*)	Jose Alfonso Cua (*recently left project*)
8. Component 1 Research Associate	Joanna Lyn Munda
9. Component 2 (Capacity Development) Lead	Elijah Go Tian
10. Component 2 Research Associate	Joel Bienne Valderrama (*recently left project*)
11. Component 3 (Private Sector Development) Lead	Rishnney Roque
12 .Component 3 Research Associate	Sarah Arrojado

A2-9. Former LCUTS Project Team

Role	Name
1. Former Project Manager	Mario Tecero
2. Former M&E Officer	Karis Vehnel Fonte
3. Former Component 3 Lead and OIC	Maria Isabela Corpuz
4. Former Component 3 Lead	Melinda Gabuya (*1st to hold position*)
5. Former Component 1 Lead	J. Mikhail Nacino
6. Former Component 2 Lead	Jennifer Sabianan
7. Former Component 2 Lead	Rachel Basas (*1st to hold position*)

A2-10. Individual Consultants Retained by LCUTS

Role	Persons Interviewed
1. Senior Technical Advisor (STA)	Prof. Angel Aparicio
2. LCT Training Specialist (working with TESDA on assessing skills demand, competency standard, and curriculum)	Neil Lopez
3. National Transport Specialist (responsible for EV test runs and earlier work for project)	Mark Tacderas
4. Communications Consultant/ Officer	Dianne Badillo
5. Gender Equality Social Inclusion (GESI) Specialist	Reina Olivar
6. Mid-term Reviewer (International Consultant)	Roland Wong

A2-11. Contractors (Firms) to LCUTS

Firm	Persons Interviewed
1. SYSTRA (firm preparing transport cooperative business plans for the project)	(i) Ian Edward Medenilla, Manager, Project Development Group (team lead for assignment); (ii) Rhiza Castilla, Business Development Specialist; (iii) Maria Katherine Tablada, Project Development Specialist (project assistant for assignment); (iv) Sidney Gil, Market Researcher (research, coordination, and write-ups for assignment)
2. CHRG (firm conducting techno-economic analysis and design of charging stations project)	Team members and role in LCUTS assignment: Leyo Tayo, Project Leader; Janel, Project Manager – manages team and prepares techno-economic study of feasibility; Jak, Project Development Officer – administrative tasks; Janine, Engineer – handles all data, processes it, visualization/ presentation; Mark Arnel Domingo – EVCS design of solar and electrical systems
3. University of Philippines National Center for Transportation Studies (firm conducting training for and facilitation of preparation of LCT plans for the four pilot cities)	Involved staff on call and role in assignment: Sandy Mae Gaspay, Planning and Strategic Support Consultant; Sheila Javier, strategic and planning support for assignment; Mel Eden, Project Technical Staff Person

Annex 3. Documents Reviewed

A3-1. Documents Reviewed in Detail prior to Draft TE Report Submission

1. Demonstration on the Shift to Electric Vehicles in Urban Transport Services - CONCEPT NOTE ON LCUTS DEMOS
2. Project Extension Request Form, Jan. 2023
3. Letter from Baguio City Mayor to UNDP Resident Representative (request for no-cost extension), April 26, 2023
4. CEO Endorsement Request ("CER," submitted June 2, 2016 and circulated to GEF Council August 31, 2016) *Promotion of Low Carbon Urban Transport Systems in the Philippines*
5. Project Document of *Promotion of Low Carbon Urban Transport Systems in the Philippines* (signed in October and November 2017)
6. Project Identification Form ("PIF," submitted March 14, 2013) *Promotion of Low Carbon Urban Transport Systems in the Philippines*
7. CEO Endorsement Request ("CER," submitted June 2, 2016) *Promotion of Low Carbon Urban Transport Systems in the Philippines*
8. Inception Workshop Report (Jan. 8, 2019) – Draft, *Promotion of Low Carbon Urban Transport Systems in the Philippines* [Note: Inception Workshop held Dec. 10-12, 2018]
9. UNDP Social And Environment Screening Procedure for the project (reviewed as part of ProDoc)
10. Mid-Term Review of UNDP-GEF Project, *Promotion of Low Carbon Urban Transport Systems in the Philippines*, February 2021, Mr. Roland Wong, International MTR Consultant, and Mr. Felicisimo David Jr., National MTR Consultant
11a. 2019 Project Implementation Review: Urban Transport (for project *Promotion of Low Carbon Urban Transport Systems in the Philippines*)
11b. 2020 Project Implementation Review
11c. 2021 Project Implementation Review
11d. 2022 Project Implementation Review
12. Local Project Appraisal Committee Meeting Notes, January 16, 2017
13a. 1st Project Board Meeting Notes, Feb. 14, 2019
13b. 2nd Project Board Meeting Notes, Aug. 23, 2019
13c. 3rd Project Board Meetings Notes, Nov. 28, 2019
13d. 4th Project Board Meeting Notes, Sept. 10, 2020
13e. 5th Project Board Meeting Notes, Dec. 17, 2020
13f. 6th Project Board Meeting Notes, May 20, 2021
13g. 7th Project Board Meeting Notes, Oct. 14, 2021
13h. 8th Project Board Meeting Notes, Dec. 7, 2022
13i. 9th Project Board Meeting Notes, Jan. 20, 2023
13j. 10th Project Board Meeting Notes, April 5, 2023
14. Management Response to Mid-Term Review
15. GEF Tracking Tool (CCM) at ProDoc submission
16. CDRs: 2018, 2019, 2020, 2021, 2022
17. Co-Financing Details
18. Summary list of meetings and workshops
19. Spreadsheet showing content from project recommendations that were eventually incorporated into final versions of national policies and standards
20. EVIDA (adopted 2022)
21. EVIDA IRR (adopted 2023)
22. CREVI (issued 2023)
23. LTO Consolidated Guidelines on the Classification, Registration, and Operation of All Kinds of Electric Vehicles (2021)

24. EOs on formation of LCT committees for 3 pilot cities
25. EO for Pasig on Trike cooperative TWG
25. EO for TOD in Baguio, guidelines for TOD in Iloilo and Iloilo response letter
27. Project audit report for 2020 (by BDO)
28. Jan. – Sept., 2020 spot check report (by PWC)

A3-2. Additional Documents Reviewed prior to Draft TE Report Submission

29. Annual Progress Reports: 2019, 2020, 2021, and 2022
30. Quarterly Progress Reports: Q3 2019, Q1 Q2 and Q3 2020, Q1 Q2 and Q3 2021, Q1 Q2 and Q3 2022, and Q1 2023
31. Annual Work Plans: 2019, 2020, 2021, 2022, and 2023
32. Project outputs of consultants (29 items)
33. Project outputs of firms (4 items)
34. UNDP Country Program Document

A3-3. Documents Reviewed in November 2023 prior to Final TE Report Submission

35. CDR for first half of 2023
36. Co-financing spreadsheet provided by PMU
37. Spreadsheet on Incentive Program Vehicles
38. Spreadsheet on status of project articles submitted to UNDP CO
39. PPTs on business plans
40. Additional materials related to Component 1 (including CREVI as of May 4, 2023; policy and regulatory specialist inception report and second deliverable; transport specialist LPTRP report, inputs to government legislation on low carbon transport, green routes selection and framework; Iloilo LPTRP)
41. Investment Forum Briefer
42. Updated EV Test Run Reports
43. Incentive Program Monitoring Log Sheet
44. DOTr order on increasing PUVMP subsidy for e-jeepneys and Euro IV and above jeepneys
45. Re-Entry Action Plans of Pilot Cities
46. Modules for LCT Planning Training for Pilot LGUs (13 draft modules)
47. Articles and publications released by project

Annex 4. Rating Scales

(Based on Guidance for TE of UNDP-GEF Projects)

Ratings for Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight, Execution, Relevance
6: Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency
5: Satisfactory (S): There were only minor shortcomings
4: Moderately Satisfactory (MS): There were moderate shortcomings
3. Moderately Unsatisfactory (MU): The project had significant shortcomings
2. Unsatisfactory (U): There were major shortcomings in the achievement of project objectives in terms of relevance, effectiveness, or efficiency
1. Highly Unsatisfactory (HU): The project had severe shortcomings

Sustainability
4. Likely (L): negligible risks to sustainability
3. Moderately Likely (ML): moderate risks
2. Moderately Unlikely (MU): significant risks
1. Unlikely (U): severe risks

Annex 5. Evaluation Matrix

The evaluation matrix provides not only the evaluation questions, but also indicators used to evaluate them and sources and methodology to assess the indicators. The evaluation matrix is organized by key evaluation areas, such as relevance, effectiveness, etc. The questions inserted are drawn from the Master Interview Question List, which is provided in Annex 6. Yet, given the great extent of questions listed in some of Annex 6's sub-sections (especially effectiveness), the volume of questions listed here is reduced here for manageability.

Exhibit A5-1. Evaluation Matrix

Evaluation Criteria Questions	Indicators	Sources	Methodology
Relevance			
1. How does the aim and design of the project to promote low carbon urban transport systems align with needs on-the-ground and national priorities?	The project aims and results have synergies to address local issues, such as local pollution problems, local traffic congestion problems, and a lack of good public transport generally. The project fits with national priorities as reflected in the text of key plans and policies, such as NDC, NCCAP, and new national policies, such as EVIDA.	LGU stakeholders Key plans and policies of the government related to transport and GHG ERs	Consultations Identification of documents and desk review of them
2. When looking at the interventions of the project in the policy/regulatory space, was there a need for project funding? Or would most initiatives have occurred anyway, without the support of the project?	The project stimulated the development of new policies and regulations. The project provided critical inputs to allow for the realization of new policies and regulations. The project provided inputs that make the policies and regulations more impactful in terms of LCT than they would have been in the absence of the project's involvement.	Government stakeholders, project draft documents As above As above	Consultations, identification of relevant documents and desk review of them
3. In the LGU space in which the project operates, what was the progress in LCUTS on-the-ground when the project began to be involved with the cities? Did they already have e-jeepneys and e-buses deployed in public transport? Did they have transport plans that addressed LCUTS? Did the activities of the project in the LGU replicate what was done before? Or did it carry out work in new areas that have meaningful results for the city?	There were no e-jeepneys nor e-buses in partner LGUs prior to the project demos. There were no plans promoting LCT in the partner LGUs prior to project support. Project interventions provided new inputs/ new results to the LGU partners	LGU stakeholders LGU stakeholders and prior transport plans of LGUs LGU stakeholders	Consultations and desk review of prior transport plans of partner LGUs
4. In terms of deployment of low carbon vehicles and charging stations, what is the baseline situation for each at present? Are solar PV charging stations relevant at present for wide-spread replication or are they not cost competitive? PIRs have indicated that the project played a role in the	There were no solar PV charging stations in the country at the time of project demo deployment or these did not provide sufficient data on their viability. The project had a major impact on PUVMP so that most of the 389 e-jeepneys to be deployed would not	Stakeholders, such as DOE Reports on EV charging stations in the Philippines Government stakeholders, project team	Consultations, identification of relevant reports and desk review Consultations

deployment of 389 e-jeepneys supported by PUVMP. What need did the project address to achieve this deployment? Would the deployment have happened in the absence of the project?	have been deployed without the project.		
5. In the training space, how relevant is the design and implementation? What was the baseline situation with regard to EV related training? Is there a true need for this kind of training?	EV related technician training did not exist prior to the project. There is a shortage of EV technicians to address market demand.	Stakeholders with expertise in training area and EV area Private sector stakeholders and industry associations	Consultation Consultation
6. Does the project directly and adequately address the needs of beneficiaries at local and regional levels? Does it consider potential unintentional negative effects on other groups (such as small e-jeepney providers)?	Project design and implementation considers key needs of targeted beneficiaries. Project design and implementation considers measures to prevent negative impacts on other groups.	ProDoc, stakeholder expression of their needs, stakeholder expression of negative impacts of LCUTS	Desk review, consultations
Effectiveness			
1. Objective: Overall, since active implementation of the project began in July 2019, has there been significant progress in creating an enabling environment for low carbon urban transport systems? In what aspects? Are any of these due to the project, or would they have occurred without the interventions of the project?	The enabling environment for LCUTS has clearly improved via policies/ regulations, LGU capabilities and LCT plans, and activeness of public transport companies and investors – AND these improvements are shown to be due in significant part to the project.	Government, LGU, and private sector stakeholders LGU transport plans Data on LCUT vehicle deployment	Consultations Identification of relevant information and review
2. Outcome 1: Overall, in the policy and regulatory space related to low-carbon urban transport, what changes have you seen since July 2019. Which changes were truly a result of the project and would not have happened without the project? Did the project take the lead in initiating any of these policies or regulations? Or instead, did it always just offer feedback on policies/ regulations initiated by others?	There are several new policies, regulations, and standards adopted and enforced that promote LCUTS; and the project either initiated these items, made significant contribution to their adoption, or provided significant inputs (that were accepted) that promote LCUTS	Government stakeholders Documents provided by project showing project inputs to policies Final policies	Consultations Request of documents and document review
3. Outcome 2. Overall, what progress has been made in the LGUs in LCUTSs due to the project? In particular, have LCT plans and programs been adopted by the LGUs?	LGUs exhibit mindset and activity change in terms of LCUTS that resulted from interactions with project. LGUs have adopted LCT plans and are implementing them and these plans were facilitated by the project.	LGU government stakeholders LGU LCT plans	Consultations Request for documents and document review
4. Has the project facilitated increased private sector participation in deployment and commercialization of LCT? In terms of operators of public transport? In terms of manufacturers active in the Philippines? What is the evidence that the project played a role?	Operators of public transport have begun to increase their adoption of LCT vehicles and evidence shows this is because of influence of project. Manufacturers began to increase their activity related to LCT vehicle production in the Philippines and evidence shows this is because of influence of the project.	Public transport operators, data on vehicles deployed for public transport Manufactures of LCT vehicles, articles in the press	Consultations, data acquisition and analysis Consultations, article search and review

5. Outcome 3.2. Is there increased private sector investing in LCT as compared to July 2019? What role did the project play? Are business plans developed by the project being used?	Investment by the private sector in LCT has been stimulated by the project. Business plans developed by the project are being actively used and are resulting in increased deployment of LCT vehicles.	Private sector, data on vehicles deployed and manufacturing investment Private sector/ business plan beneficiaries	Consultations, data acquisition and review
6. Regarding targeted outcomes and outputs, as well as indicator targets, for those not achieved, what were the reasons?	Design or implementation factors or other barriers (such as outside factors) are identified as reasons that targeted outcomes or outputs were not achieved.	UNDP, PMU, other stakeholders PIRs, MTR, annual and quarterly reports	Consultations Document review
Efficiency			
1. The CER designates that the project will allocate USD1,086,776 to INV or investment, yet only USD300,000 is now targeted for the demos. The ProDoc suggests USD750,000 going to equipment. Can you explain the gaps? Do you think that, in the current scenario in the Philippines, it is more important to spend funds on TA than on demo investment?	Strong justification is provided for shifting funds from INV to TA or project team compensation. While investment in the demos may have been reduced, the change in landscape justifies this reduction and the demos, though smaller in number, are highly impactful through associated studies and/ or through involving segments of operators not previously involved in LCUT.	PMU team members, DOTr, LGUs Additional information on Outcome 3.2 spending	Consultation Review of total spent on equipment and breakdown of equipment
2. Project team expenditures have become quite high and the number of project team members is also very high. What is the reason for this? Can this be justified in terms of results? Is this typical of UNDP-GEF projects in the Philippines? Are most of the staff members actually carrying out consultant/ contractor type TA activities, or are they managing consultants and contractors?	Project team members are shown in large part to be carrying out TA activities that may otherwise have been carried out by consultants, but are doing so at a lower cost and with high quality.	PMU team members explanation of their work, outputs of work by PMU team members	Consultation, review of outputs
3. What is the high level breakdown of expenditures between major project activity areas? (This may be answered by proving a template and asking the PMU to fill it out.)	Breakdown of expenditures shows that major activity areas were carried out at costs that are quite market competitive.	Major activity level expenditure breakdown (template provided by TE Team and filled in by PMU)	Review/ assessment of major activity level expenditure breakdown
4. Overall, this is a project with about USD2.64 million in GEF funding. Do the results seem to you to be worth the investment? Which results are most cost-effective in your view?	The GEF's investment of USD2.64 million is confirmed to have results that have stimulated several times that amount in LCT investment.	Private sector, LGUs, data on EV adoption in public transport	Consultations, data review
5. For the demos, how is the project ensuring that it is getting best value for cost? (For the charging stations? For the EVs?)	The cost of the project demo e-Jeepneys and solar PV charging stations represent very competitive pricing for quality product.	Data on cost of demos Expert opinion, market information, international comparison	PMU Consultation, online research
Sustainability			
1. For the policy, standards, guidelines, and regulations that the project has supported, what is the outlook for sustainability, for these to contribute positively to LCT into	LCT policies in which project support was critical were adopted. LCT policies in which project support was critical are being implemented	Government stakeholders, policy documents	Consultations, document review

the future?	LCT policies in which project support was critical, but that are not adopted have a clear path forward in the adoption pipeline		
2. What about the capacity and awareness work in the LGUs and the route rationalization work? How likely are benefits to extend beyond project close?	LGU stakeholders are knowledgeable and enthusiastic about LCT Route rationalization work supported by the project in the LGUs and that has strong LCT aspects is already being used	LGU stakeholders, documents on routes	Consultations, document request and review
3. As for the business plans and demonstrations, will they have benefit beyond project close? How?	Business plans are being used or have clear pathway to use and increasing the adoption of LCT. The demos will provide data that is unavailable at present, but that will convince more parties to adopt LCT	Private sector Private sector, LGUs	Consultations
Gender Equity			
1. How did the project support gender equality and empowerment?	The project took concerted steps to ensure women received a strong share of opportunities from project trainings and to ensure that women will in the future receive strong opportunity for technician training	Documents on design of training events Design of training programs and plans for recruiting students	Desk review of documents on project events and programs provided by PMU
2. What does the data show about proportion of women at project events?	The project took concerted steps to ensure women were 50% of workshop attendees	Data on attendees at workshops	Desk review of data – calculation of share of attendees that are women
3. How did the project aim to ensure women get jobs in LCT? And that they are safe on public transport?	The project has incorporated measures in policies drafted and in programs designed to ensure women get equal opportunity for LCT jobs. It has also incorporated measures n LCT plans that emphasize safety for women on public transport.	LCT policies drafted LGU LCT plans prepared	Desk review of policies and plans
Impact			
1. Do you see the project's achievements in the policy area having a long-term impact on the environment for and development of LCT in the Philippines? Which policies/ regulations in particular may have such an impact and why?	The project has initiated or greatly influenced the design of adopted policies that are assessed to have a long-term, major impact on the deployment of LCT vehicles and systems in the Philippines	Government stakeholders, private sector Text of adopted policies	Consultation Policy review (desk review)
2. Do you see the project's achievements in the LGU and capacity and awareness areas having long-term impact towards the development of LCT? How?	The partner LGUs have already taken actions as a result of cooperation with the project that is assessed to have a long-term major impact on the deployment of LCT vehicles and domains in their cities	LGU stakeholders Local policy and planning documents	Consultations Identification and request for documents/ desk review of documents
3. What about the project's business plans and demos? Do you see them as having the potential for game-changing, long-term impact in the LCT space in the Philippines? How?	Business plans are adopted by stakeholders and projected to have a major impact on how they do business and particularly their investment in the LCT space	Private sector stakeholders Business plans	Consultation Desk review
4. How likely is it that the project	The project has made substantial	Consultant May 2023	Desk review

will contribute to the objective level targets of GHG ERs, employment, and increased number of persons using LCUTS?	contributions to direct GHG ERs, increased employment, and increased ridership of LCUTS. Further, evidence shows these will be further replicated on an ongoing basis.	indicator assessment report LGUs, DOTr, and other stakeholders knowledgeable about the situation	 Consultations

Annex 6. Master Interview Guide, Organized by Evaluation Criteria.

Below is a draft master interview guide outlining the various different open-ended questions that may comprise qualitative stakeholder consultations. For each stakeholder, only those queries of relevance to the stakeholder will be asked. Depending on their answers, the consultation may then expand into additional queries as relevant. The interview guide is developed based on the requirements for UNDP-GEF evaluations as well as experience in carrying out such evaluations. It is organized according to the standard criteria areas of relevance, effectiveness, efficiency, sustainability, gender equality and other cross-cutting issues, and impact.

A6-1. Relevance

Relevance is the extent to which the project's work is aligned with beneficiary needs, country needs, and global priorities. The TE will consider relevance of the project as designed and as implemented. Questions to be ask will encompass whether the project activities as designed and implemented were really needed, whether the results obtained would have occurred without the project, and whether what the project is designed to do or has done is different than what has already been achieved. In this regard, some specific questions might be:

1. How does the aim and design of the project to promote low carbon urban transport systems align with needs on-the-ground and national priorities? Are there local pollution problems, local traffic congestion problems, and a lack of good public transport generally that the project's efforts are helping to address? How does the project fit with national priorities as reflected in key plans or policies?
2. When looking at the interventions of the project in the policy/regulatory space, was there a need for project funding? Or would most initiatives have occurred anyway, without the support of the project?
3. In the LGU space in which the project operates, what was the progress in LCUTS on-the-ground when the project began to be involved with its partner cities? Did they already have e-jeepneys and e-buses deployed in public transport? Did they have transport plans that addressed LCUTS? Did the activities of the project in the LGU replicate what was done before there? Or did it carry out work in new areas that have meaningful results for the city?
4. In terms of deployment of low carbon vehicles and charging stations, what is the baseline situation for each at present? Are solar PV charging stations relevant at present for wide-spread replication or are they not cost competitive? PIRs have indicated that the project played a role in the deployment of 389 e-jeepneys supported by PUVMP. What need did the project address to achieve this deployment? Would the deployment have happened in the absence of the project?
5. In the training space, how relevant is the project's design and implementation? What was the baseline situation with regard to EV related training before the project became active in this area? Is there a true need for this kind of training?

A6-2. Effectiveness

Effectiveness is the extent to which the project's targeted results were achieved and the extent to which they were achieved in a way that has merit --- is useful. The effectiveness assessment of the TE will be the most extensive among those of the key criteria reviewed in this section. The TE will consider the objective statement and each of the four outcome statements as priorities and ask whether the target represented by the statements was achieved. It will also look at progress towards the project indicators and towards each of the project outputs.

Some specific questions that will be asked are:

1a. Objective: Overall, since active implementation of the project began in July 2019, has there been significant progress in creating an enabling environment for low carbon urban transport systems? In what aspects? Are any of these due to the project, or would they have occurred without the interventions of the project?
1b. What is the progress towards the objective level indicator targets (general impression also useful) and what is role of project in this progress: (i) direct GHG ERs over the lifetime of equipment installed by project (baseline 16,054 tons CO2, target 69,013 tons CO2); (ii) persons employed in LCT sector (baseline 50, target 222); (iii) persons using new LCT transport options daily (baseline 6,500, target 25% increase per year).

2. Outcome 1: Overall, in the policy and regulatory space related to low-carbon urban transport, what changes have you seen since July 2019. Which changes were truly a result of the project and would not have happened without the project? Did the project take the lead in initiating any of these policies or regulations? Or instead, did it always just offer feedback on policies/ regulations initiated by others?
2b. What is the progress towards Outcome 1 indicator targets and what is the evidence? (i) Number of newly issued policies? [baseline zero, 4 targeted] (ii) Number of standards promulgated? [baseline zero, 3 targeted] (iii) Was executive order for interagency cooperation on LCTS approved?
3a. Output 1.1: What was the baseline situation for each of the following policies/ programs and what specifically did the project contribute? Was the contribution significant in terms of what the policy or program does? And are the policies themselves important or impactful? What level of approval is/ was required for them to go into effect? EVIDA, EVIDA IRRs, PUVMP (including not only vehicle deployment but also route planning, and industry consolidation)?
3b. We heard that there is a policy that may require a mandated share of EVs for government, transit companies, etc. Which policy is this? What progress is there? Did the project contribute?
3c. What is the status of CREVI (Comprehensive Roadmap for the Electric Vehicle Industry)? What did the project contribute? Did the project support a Low Carbon Transport Master Plan as intended?
3d. What did the project contribute to the following: Policy Framework on Guidelines for the Development of EV Charging Stations (DOE); LTO's Administrative Order No. 2021-039 Consolidated Guidelines in the Classification, Registration and Operation of All Types of Electric Motor Vehicles (issued May 11, 2021 and claimed as a success of the project); executive orders issued by partner cities to institutionalize the coordination mechanism for LCT in their respective jurisdictions? Was project instrumental? How meaningful/ impactful for each item? Are these adopted and implemented?
3e. Which standards work did the project support? How instrumental was the project? Did the project support DTI and DOTR on standards for components and spare parts for modern PUVs, guidelines for LGUs on supportive infrastructure, guidelines for low carbon fleet operations, facility managers, and manufacturers? What about Standardization Circular (SC) 29 for crafting standards for Class 4 vehicles? What is this about and how did the project support it? What about standards on public utility vehicles (mentioned in 2022 PIR)?
3f. Similarly, what is role of project in and meaningfulness of the following as raised in the 2020 PIR: Implementing Rules and Regulations for the Energy Efficiency and Labeling, National Energy Policy and Regulatory Framework for the Use of Electric Vehicles and the Establishment of Electric Charging Stations, Policy Guidelines and Regulatory Framework on the Development, Establishment, Operation and Maintenance of Electric Vehicles and EV Charging Stations relative to RA 11285, Promotion of Fiscal and Non-Fiscal Incentives for Electric Vehicle?
3g. Similar questions for: the proposed Motor Vehicle Road Users Tax (MVRUT) (Bill No. 6136), proposed Public Utility Vehicle (PUV) Modernization Act, Philippine Bicycles Act or Safe Pathways Act.

3h. Planned with DTI: technical and commercial assessment of leveraging laterite deposits for EV battery production, including policy recommendations for developing local EV battery industry. Did it happen? Project's role?
3i. Integration of gender equality and social inclusion (GESI) into national transport policies with LCT focus. Did this happen?
3j. Energy efficiency standards for eco-PUVs and EVs: Did project support this? What was the project's role and what is the status?
4. Output 1.2: Joint Memorandum Circular for Creation of Interagency Coordination on LCT: Status? Meaningfulness?
5. Output 1.3: DOTRs strategy action plan for LCT: Did project draft this? What is the status?
6: Output 1.4: Did the product support guidelines for local government units on the approval of related supportive infrastructures (e.g., charging station locations, right-of-way) as intended?
7: Output 1.5: Did the project support "approved and enforced low carbon vehicle operators and manufacturers guidelines" as intended? What is the status?

8a. Outcome 2. Overall, what progress has been made in the LGUs in LCUTSs due to the project? In particular, have LCT plans and programs bene adopted?
8b. What is the progress towards Outcome 2 targets? What role did the project play? (Rough impression also useful.) (i) number of cities adopting low carbon plans and programs (baseline 1, target 4); (ii) number of institutions certified to carry out low carbon transport technician training (baseline zero, target 2)
9. Output 2.1. What progress has been made at the local level for coordinated policy making and planning for LCT? What progress has been made at the local level in terms of access to modern planning tools, registration, and licensing, including database of EV vehicles?
10. Output 2.2. What has the project does in the area of awareness and advocacy? How is the impact of this work measured? What has the impact been? (e.g. number of people reached, evidence of changes in awareness) Will there be an end of project video?
11. Output 2.3. How many Centers of Excellence have been established? What do they do? How effective are they? What is the project's role? How are these centers financially sustained? How were the locations and partners chosen?
12. Output 2.4. Has there been an increase in skilled local technicians in areas related to LCT? How did the project influence this?

13a. Outcome 3.1. Has the project facilitated increased private sector participation in deployment and commercialization of LCT? In terms of operators of public transport? In terms of manufacturers of LCT vehicles that are active in the Philippines? What is the evidence that the project played a role?
13b. What is the progress towards Outcome 3.1 indicator targets? (i) Number of entities involved in deployment and commercialization of LCT (baseline 3, target 5). For this indicator, discuss both operators of public transport and manufacturers. Did the project play a role in any increases? (ii) Number of bankable business plans, supported by the Project (baseline 0, target 2).
14. Output 3.1.1. What has the project done in public transport route rationalization? How has this supported LCT? How is this different from studies done before project by World Bank and JICA?
15. Output 3.1.2. Did project develop standard procedures for on-road and laboratory tests of new vehicle-fuel technologies? How will these be used in the future?
16. Output 3.1.3. Did project play a role in EV charging protocol and standardization?

17a. Outcome 3.2. Is there increased private sector investing in LCT as compared to July 2019? What role did the project play?
17b. What progress has been made towards Outcome 3.2 targets? (i) Number of additional investors in LCT (baseline 0, target 3). Is any of this due to the project, if so how? (ii) cumulative investment in low carbon vehicle projects (baseline USD7.5 M, target USD20 M). Is any of this due to project, if so how?

18. Output 3.2.1. Please discuss status of business plans developed by project. Have these been used? How? What is their impact?
19. Output 3.2.2. Please discuss the solar PV EV charging stations targeted. Will these be replicable or are their costs too high to be competitive with grid based charging? Are there other such charging stations already in Philippines? How are the project charging stations going to be different from what exists already?
20. Output 3.2.3. Please discuss how the e-jeepney deployment will make a difference when already 389 such vehicles were deployed in 2021 under PUVMP? Is it the associated studies that will make this small demo worthwhile? Or the segment of public transport operators supported? Why are there no buses included? We understand that large buses provide more efficiency in the long run than small buses and jeepneys. Why isn't the project, then, focused on encouraging large e-buses? And why did the project drop its involvement in AGT as described as a demo in the ProDoc?

A6-3. Efficiency

Efficiency is the extent to which the resources and inputs to the project (particularly funds, but also expertise and time, etc.) are cost-effectively used to generate meaningful results. For the TE, the team will look at expenditure data to answer questions, though may also ask some related questions in consultations.

Some specific questions that will be addressed either via data review or consultation are:

1a. Overall, what is the breakdown in expenditures between major categories such as project team, TA, and investment/ equipment? (This may be answered by looking at expenditures.)
1b. The CER designates that the project will allocate USD1,086,776 to INV or investment, yet only USD300,000 is now targeted for the demos. The ProDoc suggests USD750,000 going to equipment. Can you explain the gaps? Do you think that in the current scenario in the Philippines it is more important to spend funds on TA than on demo investment?
2. Project team expenditures have become quite high and the number of project team members is also very high relatively to what we've seen on other UNDP-GEF projects with this scale of GEF funding or even much more funding. What is the reason for this? Can this be justified in terms of results? Is this typical of UNDP-GEF projects in the Philippines? Are most of the staff members actually carrying out consultant/ contractor type TA activities, or are they managing consultants and contractors (and thus carrying out project management roles)?
3. What is the high-level breakdown of expenditures between major project activity areas? (This may be answered by the TE Team providing a template and asking the PMU to fill it out.)
4. Overall, this is a project with about USD2.64 million in GEF funding. Do the results seem to you to be worth the investment? Which results are most cost-effective in your view?
5. For the demos, how is the project ensuring that it is getting best value for cost? (For the charging stations? For the EVs?)

A6-4. Sustainability

Sustainability addresses the likelihood that positive results will continue after project close. Results might be sustainable by virtue of how they were designed (e.g. legislation that is adopted and well-enforced before project close) or they might require follow up/ exist strategy to ensure sustainability (e.g. funding for Center of Excellence to continue work post-project).

Sustainability questions that may be asked as part of the TE are:

1. For the policy, standards, guidelines, and regulations that the project has supported (per queries/ discussion on Effectiveness above), what is the outlook for sustainability --- for these to contribute positively to LCT into the future?
2. What about the capacity and awareness work in the LGUs and the route rationalization work? How likely are benefits to extend beyond project close?
3. As for the business plans and demonstrations, will they yield benefits beyond project close? How?
4. What are the main challenges to sustainability? Will there be financial challenges? What is the risk that needed funding to make results sustainable is not available? What about socio-political risks? Is it true that there is some public sentiment against LCT? How on-board are policy makers with LCUTS? What are the institutional and governance risks to sustainability of project results? Is the inter-agency LCT mechanism going to help? Finally, what about environmental risks, such as battery disposal?

A6-5. Gender Equality and other Cross-Cutting Issues

Gender equality and other cross-cutting issues will be incorporated into the questions and analysis. The aim is for the project to have a positive impact on equality and empowerment of women and other disadvantaged groups, such as the disabled and the poor. In this regard some questions might be:

1a. How did the project support gender equality and women's empowerment?
1b. What does the data show about proportion of women at project events? (This may be answered by review of data on attendees.)
1c. How did the project aim to ensure women get jobs in LCT? And that they are safe on public transport?
1d. Was an incorporation of gender into policies supported by the project achieved?
2. Similarly, did the project take any actions to support the situation of the poor? The disabled? The elderly?

A6-6. Impact

The assessment of impact looks at how and whether the project's results will contribute towards the long-term impact envisioned in the project design. This overlaps, to some extent, with the project objective and objective indictors, particularly questions 1a and 1b under 4-2, "Effectiveness." Further questions that might be posed are as follows:

1. Do you see the project's achievements in the policy area having a long-term impact on the environment for and development of LCT in the Philippines? Which policies/ regulations, in particular, may have such a long-term positive impact and why?
2. Do you see the project's achievements in the LGU and capacity and awareness areas having long-term impact towards the development of LCT? How?
3. What about the project's business plans and demos? Do you see them as having the potential for game-changing, long-term impact in the LCT space in the Philippines? How?

Annex 7. Evaluation Consultant Agreement Form

UNEG Code of Conduct for Evaluators/ Midterm Review Consultants

Evaluators/Consultants:
1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated and did not carry out the project's Mid-Term Review.

International Terminal Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:
Name of Consultant: Eugenia Katsigris

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at ___Dallas, Texas, USA__ *(Place)* on _____May 28, 2023_____ *(Date)*
Signature: __Eugenia Katsigris (*electronic signature*)_____

Annex 8. TE Report Clearance Form

Terminal Evaluation Report for *(Promotion of Low Carbon Urban Transport Systems in the Philippines (Philippines LCUTS Project), UNDP PIMS ID 5304*)

Reviewed and Cleared By:

Commissioning Unit (M&E Focal Point)
Name: _____
Signature: _____ Date: _____

Regional Technical Advisor (Nature, Climate and Energy)
Name: _____
Signature: _____ Date: _____

Annex 9. Terms of Reference for Philippines LCUTS TE Assignment

Note: Not including Annexes

International Consultant for the Terminal Evaluation the Promotion of Low Carbon Urban Transport Systems in the Philippines (LCT) Project

1. INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP-supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the *full-sized* project titled *Promotion of Low Carbon Urban Transport Systems in the Philippines (PIMS #5304)* implemented through the *Department of Transportation (DOTr)*. The project started on the *16th of November 2017* and is in its *5th* year of implementation. The TE process must follow the guidance outlined in the document 'Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects'.

2. PROJECT BACKGROUND AND CONTEXT

The project was designed to create an enabling environment for the commercialization of low carbon urban transport systems (e.g., electric and hybrid vehicles) in the Philippines. The project aims to do this through 1) effective enforcement of policies and support provided for the promotion of low carbon modes of transport; 2) adopting and implementing low carbon transport plans and/or programs in major cities; 3) increasing private sector participation in the widespread deployment and commercialization of low carbon transport systems; and 4) increasing private sector investment in low carbon transport systems. The project is being implemented through the Department of Transportation under a National Implementation Modality.

3. TE PURPOSE

The TE report will assess the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments.

The findings shall be acted upon by UNDP, DoTr, and other relevant government agencies and stakeholders. The findings and any other relevant lessons and recommendations is expected to contribute to the internal programming of UNDP and to existing and emerging national policy considerations, including but not limited to the Electric Vehicle Industry Development Act (EVIDA), the Nationally Determined Contributions (NDCs), and other relevant and emerging policies and considerations such as energy transition and other sustainable development policy trajectories.

4. TE APPROACH & METHODOLOGY

The TE report must provide evidence-based information that is credible, reliable, and useful.

The TE team, composed of 1 international and 1 national consultant, will review all relevant sources of information including documents prepared during the preparation phase (i.e., PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team will review the baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted

to the GEF at the CEO endorsement and midterm stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the Regional Technical Advisor, direct beneficiaries, and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to executing agencies, senior officials and task team/component leaders, key experts and consultants in the subject area, Project Board, project beneficiaries, academia, local government and CSOs, etc. Additionally, the TE team is expected to conduct field missions to *the Philippines*, including the following project sites*:*

UNDP Philippines Country Office: 15th Floor, North Tower, Rockwell Business Center Sheridan, United corner Sheridan Streets, Barangay Highway Hills, Mandaluyong City;

Department of Transportation Office: The Columbia Tower, Brgy. Wack-wack, Ortigas Avenue, Mandaluyong City/ Apo Court Along Sergio St., Clark Freeport Zone, Pampanga;

Project pilot cities of Baguio, Sta. Rosa, Iloilo, and Pasig.

The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, as well as other cross-cutting issues and SDGs are incorporated into the TE report.

The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Inception Report and be fully discussed and agreed between UNDP, stakeholders, and the TE team.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

5. DETAILED SCOPE OF THE TE

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects. *(*The scope of the TE should detail and include aspects of the project to be covered by the TE, such as the time frame, and the primary issues of concern to users that the TE needs to address.)

The Findings section of the TE report will cover the topics listed below. A full outline of the TE report's content is provided in ToR Annex C.

The asterisk "(*)" indicates criteria for which a rating is required.

Findings

i. Project Design/Formulation

- National priorities and country driven-ness
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Standards (Safeguards)
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks
- Lessons from other relevant projects (e.g. same focal area) incorporated into project design
- Planned stakeholder participation
- Linkages between project and other interventions within the sector
- Management arrangements

ii. Project Implementation

- Adaptive management (changes to the project design and project outputs during implementation)
- Actual stakeholder participation and partnership arrangements
- Project Finance and Co-finance
- Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)
- Implementing Agency (UNDP) (*) and Executing Agency (*), overall project oversight/implementation and execution (*)
- Risk Management, including Social and Environmental Standards (Safeguards)

iii. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (*), Effectiveness (*), Efficiency (*) and overall project outcome (*)
- Sustainability: financial (*), socio-political (*), institutional framework and governance (*), environmental (*), overall likelihood of sustainability (*)
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

iv. Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.
- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses, and results of the project, respond to key evaluation questions, and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.

- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to incorporate gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown below:

ToR Table 2: Evaluation Ratings Table for *Promotion of Low Carbon Urban Transport Systems in the Philippines*

Monitoring & Evaluation (M&E)	Rating[45]
M&E design at entry	
M&E Plan Implementation	
Overall Quality of M&E	
Implementation & Execution	Rating
Quality of UNDP Implementation/Oversight	
Quality of Implementing Partner Execution	
Overall quality of Implementation/Execution	
Assessment of Outcomes	Rating
Relevance	
Effectiveness	
Efficiency	
Overall Project Outcome Rating	
Sustainability	Rating
Financial resources	
Socio-political/economic	
Institutional framework and governance	
Environmental	
Overall Likelihood of Sustainability	

6. TIMEFRAME

The total duration of the TE will be approximately *45 working days* between *27 March 2023 to 16 May 2023*. The tentative TE timeframe is as follows:

Timeframe	Activity
March – May 2023	Selection of TE team
April to May 2023	Preparation period for TE team (handover of documentation)
April to May 2023 *(4 days)*	Document review and preparation of TE Inception Report

[45] Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight & Execution, Relevance are rated on a 6-point scale: 6=Highly Satisfactory (HS), 5=Satisfactory (S), 4=Moderately Satisfactory (MS), 3=Moderately Unsatisfactory (MU), 2=Unsatisfactory (U), 1=Highly Unsatisfactory (HU). Sustainability is rated on a 4-point scale: 4=Likely (L), 3=Moderately Likely (ML), 2=Moderately Unlikely (MU), 1=Unlikely (U)

May 2023 *(2 days)*	Finalization and Validation of TE Inception Report; latest start of TE mission
May to July 2023 *(15 days)*	TE mission: stakeholder meetings, interviews, field visits, etc.
July 2023	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
June to July 2023 *(10 days)*	Preparation of draft TE report
1-15 July 2023	Circulation of draft TE report for comments
16-31 July 2023 *(4 days)*	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report
August 2023	Preparation and Issuance of Management Response
31 July 2023	Expected date of full TE completion
September to October 2023 *10 days*	Follow-up TE; mission, stakeholder meetings, presentation
October 2023	Concluding Stakeholder Workshop (optional)
15 October 2023	Updated TE report and presentation of findings

Options for site visits should be provided in the TE Inception Report.

7. TE DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	31 May 2023	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	first week of July 2023	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report (using guidelines on report content in ToR Annex C) with annexes	1 July 2023	TE team submits to Commissioning Unit; reviewed by RTA, Project Coordinating Unit, GEF OFP
4	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report (See template in ToR Annex H)	31 July 2023	TE team submits both documents to the Commissioning Unit
5	Updated TE report	Conducted follow-up TE and finalized report	15 October 2023	TE team submits both documents to the Commissioning Unit

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.[46]

8. TE ARRANGEMENTS

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is the UNDP Philippines Country Office through the Programme Analyst of the Climate Action Programme Team and RBM Analyst of the Results and Quality Team.

The Commissioning Unit will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

An Evaluation Reference Group (ERG) shall be formed composed of principal representatives from project stakeholders (government partners, donor, representatives from the Project Board) that will perform an advisory role throughout the process. The ERG shall ensure that evaluation standards as provided by the United Nations Evaluation Group (UNEG) are adhered to, including safeguarding transparency and independence; advise on the relevance and appropriateness of questions; and support and provide input into the development of the management responses and key actions.

9. SCOPE OF WORK

A team of two independent evaluators will conduct the TE – one team leader (international, with experience and exposure to projects and evaluations in other regions) and one team expert (national).

The International Consultant will be working with a National Consultant and will lead TE team and will be mainly responsible for initiating and managing the TE process and leading the overall design and writing of the TE report, maintaining the integrity and independence of the process in accordance with the UNDP-GEF guidelines.

The International Consultant will be supported by the team leader/ national consultant and serve as the subject matter expert at the national level. S/he will assess emerging trends with respect to regulatory frameworks, budget allocations, capacity building, and work with the Project Team in developing the TE itinerary, among others. S/he should have a strong background on the subject and will mainly be responsible for studying the dynamics among stakeholders and how it affects project performance, progress and results achievement, and potential development pathways for the country, highlighting gains, uncovering gaps, and proposing appropriate corrective measures that the project can take.

The evaluator(s) cannot have participated in the project preparation, formulation and/or implementation (including the writing of the project document), must not have conducted this project's Mid-Term Review and should not have a conflict of interest with the project's related activities.

10. CRITERIA FOR SELECTION OF THE BEST OFFER AND QUALIFICATIONS OF SUCCESSFUL CANDIDATE

The Offers received will be evaluated using a combined scoring method - where technical proposal will be weighted 70 points and combined with the price offer, which will be weighted 30 points.

[46] Access at: http://web.undp.org/evaluation/guideline/section-6.shtml

The CV will be reviewed using the criteria below. Only offerors who will obtain a minimum of 70% or 49 out of 70 obtainable points will be shortlisted and considered for evaluation of financial proposal.

Education

- Master's degree in transportation studies, environment, economics, statistics, social sciences, development studies, engineering, management, or other closely related field or other closely related field;
  (14 points for Master's, 20 points for PhD)

Experience

- At least 5 years relevant experience with results-based management evaluation methodologies; application of SMART indicators and reconstructing or validating baseline scenarios; remote evaluation and project evaluation/review experiences within the United Nations system will be considered an asset
  (11 points for 5 years of experience, additional point for each additional year; maximum of 15 points)

- At least 3 years of specific experience in conducting gender-sensitive evaluations/analyses, or other specific gender-related work in the thematic areas mentioned above;
  (7 points for 3 years of experience, additional point for each additional year; maximum of 10 points)

- At least 5 years of relevant experience and demonstrated competence in adaptive management, as applied to climate change, energy, infrastructure, transport, and/or technology (i.e. climate change mitigation, decarbonization/emissions reduction, technology incubation and transfer, commercialization, market development, and sustainability in relation to the transportation sector)
  (11 points for 5 years of experience, additional point for each additional year; maximum of 15 points)

- Experience working in at least 5 evaluations in the Philippines; Experience in project evaluation/review with at least 2 GEF projects or projects within the UN system
  (7 points for 5 evaluations, additional point for each additional evaluation; Additional 2 points for every UN or GEF evaluation; maximum of 10 points)

Language

- Fluency in written and spoken English and Filipino (pass/fail)

11. EVALUATOR ETHICS

The TE team will be held to the highest ethical standards and is required to sign a code of conduct upon acceptance of the assignment. This evaluation will be conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The evaluator must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The evaluator must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

12. DURATION OF WORK AND DUTY STATION

Duty station is Home-based with travel, as required. Primary mode of working will be telecommuting. Should there be any travel, the mission would be agreed with the designated authorities in advance and would be arranged and paid for separately by UNDP.

The expected duration of the assignment is **45 person-days** between 16 May 2023 and 31 October 2023, unless revised in a mutually agreed upon timetable between the Consultant and UNDP.

In light of the COVID-19 pandemic, all work and travel of the Individual consultant shall be done within the guidelines and protocols set by the local and national government. Field work, trainings, meetings, and coordination shall be done in compliance with community quarantine policies.

13. SCOPE OF PRICE PROPOSAL AND SCHEDULE OF PAYMENT

The Contractor should send the financial proposal based on a lump-sum amount for the delivery of the outputs identified below. The total amount quoted shall be **"all inclusive"** (**professional daily fees X number of days, communications, etc**.) that could possibly be incurred by the Contractor should be factored into the final amount submitted in the proposal. Travel, as deemed relevant by UNDP and compliant with government guidelines on community quarantine, will be arranged and paid for by UNDP and should not be included in the financial proposal.

Medical/health insurance must be purchased by the individual at his/her own expense, and upon award of contract, the Contractor must be ready to submit proof of insurance valid during contract duration

The contract price will be fixed **output-based price**. Any deviations from the output and timeline will be agreed upon between the Contractor and UNDP.

Payments will be done upon satisfactory completion of the delivery by target due dates. Outputs will be certified by the Commissioning Unit prior to release of payments.

- 20% payment upon satisfactory delivery of the final TE Inception Report and approval by the Commissioning Unit
- 40% payment upon satisfactory delivery of the draft TE report to the Commissioning Unit
- 40% payment upon satisfactory delivery of the final TE report and approval by the Commissioning Unit and RTA (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail

Criteria for issuing the final payment of 40%[47]:

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e. text has not been cut & pasted from other TE reports).
- The Audit Trail includes responses to and justification for each comment listed.

[47] The Commissioning Unit is obligated to issue payments to the TE team as soon as the terms under the ToR are fulfilled. If there is an ongoing discussion regarding the quality and completeness of the final deliverables that cannot be resolved between the Commissioning Unit and the TE team, the Regional M&E Advisor and Vertical Fund Directorate will be consulted. If needed, the Commissioning Unit's senior management, Procurement Services Unit and Legal Support Office will be notified as well so that a decision can be made about whether or not to withhold payment of any amounts that may be due to the evaluator(s), suspend or terminate the contract and/or remove the individual contractor from any applicable rosters. See the UNDP Individual Contract Policy for further details: https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Individual%20Contract_Individual%20Contract%20Policy.docx&action=default

14. APPLICATION PROCESS[48]

Recommended Presentation of Proposal:

a) **Letter of Confirmation of Interest and Availability** using the template[49] provided by UNDP;
b) **CV** and a **Personal History Form** (P11 form[50]);
c) Brief description **of approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
d) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

15. TOR ANNEXES (*Not included here, but included in original TOR.*)

- ToR Annex A: Project Logical/Results Framework
- ToR Annex B: Project Information Package to be reviewed by TE team
- ToR Annex C: Content of the TE report
- ToR Annex D: Evaluation Criteria Matrix template
- ToR Annex E: UNEG Code of Conduct for Evaluators
- ToR Annex F: TE Rating Scales
- ToR Annex G: TE Report Clearance Form
- ToR Annex H: TE Audit Trail

16. APPROVALS

This TOR is endorsed by:

ANNELI R. LONTOC, CESO I
OIC - Undersecretary for Road Transport and Infrastructure
Date:

This TOR is approved by:

FLORADEMA C. ELEAZAR
Team Leader, Climate Action Programme Team, UNDP
Date:

[48] Engagement of evaluators should be done in line with guidelines for hiring consultants in the POPP https://popp.undp.org/SitePages/POPPRoot.aspx

[49] https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx

[50] http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

Annex 10. Section 8. Findings on Project Results Part IV: Results Overall / Synthesis (*Note: Section 8 has been moved to Annex 10 due to report length limitations.*)

This section synthesizes the findings on results from individual outcomes as discussed in Sections 5, 6, and 7 and also provides other analysis of results as required by UNDP's guidelines for TEs of GEF projects.

8.1 Progress towards objective and expected outcomes

This sub-section addresses progress towards objective and expected outcomes via the color-coded "results table" typically used in MTRs, which UNDP has requested also be included in this TE report. The table assesses progress towards each indicator and also provides discussion on progress towards the objective and outcome, considering both the indicators and the objective and outcome statements themselves. Prior to preparation of this table, there was significant discussion with UNDP and the PMU. The author feels strongly that to make the indicator assessment useful, the principles of RBM (results based management) should be applied. This requires that it be determined what results are directly attributable to the project, including both primary direct and, when relevant, secondary direct with a causality factor. While UNDP-GEF projects sometimes state some indicators "globally," meaning to be evaluated for the whole country, this is only a meaningful measure of project results if the project has done things that will have had country-wide impact by EOP. Most projects in most sectors cannot expect to change the country in four to six years. The author recognizes that taking a more conservative approach in "giving credit" for indicator progress will result in lower numbers for the project, so that over-challenging targets vis-à-vis direct results are noted and more "credit" in the color coding may be given than would be implied by the target.

Discussion of outcome achievement: In terms of outcome achievement, please see justification of ratings in the far right column Exhibit 8-1 and also the brief assessment of progress towards the outcome statements included in Exhibits 5-6, 6-4, and 7-4. Overall, while policies are not necessarily yet enforced, they are adopted, so that good progress is seen towards the Outcome 1 statement. And, as for Outcome 3 statements, the stimulation of the e-jeepney industry/ market by the Incentive Program and the rolling out of new e-jeepneys on the road show clear progress towards the outcome statements. Outcome 2 is the weakest in terms of progress towards the outcome statement, as "adopted plans and programs" are required. The project does not seem to be moving in the direction of that achievement, though it has provided training for planning and, at its EOP Sustainability Workshop, aimed to get commitments from LGUs for implementation of LCT plans developed. In general, Outcome 2 implementation could have been more strategic in terms of identifying measurable goals that were to be achieved.

Exhibits 5-6, 6-4, and 7-4 also show the progress towards outputs as originally designed. Findings are that a number of outputs were abandoned or not fully pursued. Adjustment of outputs is allowed in GEF projects, but overall outcome aims should be the same. Project progress has seemed somewhat chaotic at times in jumping from one thing to another. For future projects, it may be important to consider replacing deleted outputs with new ones that still promote the same outcome and to ensure that activities are in line with the logical structure.

Key items that affected outcome achievement were the Covid-19 pandemic, IP lack of attention to the project, and the general challenge and political nature of public transport projects. On top of this, however, the project seemed to be quite challenged staying focused. And, there seem to have been forces pushing it off track/ in various directions. At times, outputs were not achieved because a decision was made not to pursue them. At others, there seemed to be a problem of the project following through. One

challenge is that, for quite some time, there were different views held on whether the project should deploy e-jeepneys, which is laid out in the ProDoc. And, such deployment was blocked by UNDP. It is difficult to ascertain if the delay that occurred in deployment was necessary so that transport cooperatives could recover financially from the pandemic or if it was misguided due to emphasis on other priorities. As has been noted elsewhere, however, to be handled properly, such a major change (as cancelling plans for e-jeepney deployment) should have been transparently discussed with the Project Board; and there should have been documented explanation of the justification and proposed alternative. Or, if the problem was that there was no good model for deploying the e-jeepneys, there should have been outreach to expertise within UNDP for advice on potential deployment models.

Exhibit 8-1. LCUTS Project Progress towards Results Table (Indicators and Objective/ Outcomes)

Color key of progress towards indicator targets: green=good progress/ achievement of target; yellow=partial progress; red=no or little progress Colors intermediate to the above indicate intermediate levels of progress: orange=intermediate between yellow and red; light green=intermediate between green and yellow. The objective and outcome ratings are based not only on progress toward indicator targets but also on overall assessment of progress towards the objective and outcome statements.

Note: Indicator assessments leave some room for interpretation. According to the principles of results based management, this evaluation emphasizes achievements due to the project, so that some results will be lower than if estimating the situation of the country as a whole (or a larger sector as a whole, etc.). This may lead to more yellow in the table than green, but the assessment is more meaningful. Ratings are not based on these colors, but on what the project achieved and whether it is considered substantial and impactful or not, given the time and resources used.

Strategy	Indicator	Baseline	End of Project Target	Indicator Value at EOP (or expected not too long thereafter)	Objective or Outcome Rating and Justification for Rating
Objective: To create an enabling environment for the commercial-ization of low carbon urban transport systems (e.g., electric and hybrid vehicles) in the Philippines	Incremental direct GHG emissions reduced due to Project over technology life time (tCO2eq)	16,054 t CO2eq [Note: since this is "due to project" baseline should be 0.0]	69,013 t CO2eq [Note: Increment is 52,959 t CO2eq, but methodology overestimates. Footnote indicates increment is from 56 EVs and 40 jeepneys, or say 65 e-jeepneys. According to method derived from MTR method, that would be 23,010 tCO2eq as increment]	4,248 t CO2eq lifetime minimum based on 12 vehicles attributed to Incentive Program or its influence –more may emerge. Aerostar's new 10 don't count as influenced by project and neither do GenSan's new 5. If GET were to deploy 200 by EOP (or soon thereafter) with 20% causality of project, then 40 more ("direct secondary") raises it to 18,408 tCO2eq[51] or 80% of the proposed revised target. [Note: Deployment cities for 375 e-jeepneys deployed in public transport prior to Incentive Program mostly got first vehicle before project became active. The exceptions (Iloilo (first vehicles 2021) and Makilala (first vehicles 2020-2021)) both also confirmed to be not attributable to project	**S-**: Justification: This pioneering project has faced a lot of challenges, including: Covid-19 which disproportionately affects the public transport sector; high turnover in staff; and a very limited level of IP involvement for much of the project. Furthermore, from experience, public transport projects are especially difficult. Considering this, the project had some exciting successes. Data shows that most of the 375 e-jeepneys on the road in public transport prior to project's Incentive Program were first deployed in the cities they are in in 2018, 2019 and early 2020. (Exceptions are 10 in Iloilo and 3 in Malikala.) That is, after what looked like a good start, the public transport e-jeepney market/ industry mostly shut down. Findings and stakeholder confirmation suggest the project's Incentive Program has played an important role in the current resurgence in the market (2 new TCs and 2-3 new suppliers involved) and the development of new e-jeepney models by suppliers. While national level policy contributions were comprised mainly of commenting on the drafts of others, the project made significant contributions to EVIDA and a small team affiliated with the project advised the senator drafting the bill. The project also developed DOTr's now-adopted *Green Routes Guidelines*. It also prepared a multi-city, bottom-up Bike Lane "Masterplan". DOTr has promoted the plan and it is
	Number of people gainfully employed in low carbon transport sector	50 people	At least 222 people [Note: Increment of 172] PRF footnote: implies focus on charging stations and public transport vehicles	[Expect 1 charging station installed by project and at least 12 vehicles attributable to project]. Following footnote, assume 4 persons employed per jeepney and 4 per charging station: Increment of 52. If we assume 200 GET vehicles by EOP or soon after and 20% causality, then employment rises to 212 or 95% of target.	

[51] Methodology draws from MTR which uses 5.5 km/l for diesel jeepney, 200 to 300 km/ day, 250-300 days per year, 2.557 kg CO2/liter diesel, yields emission in range of 345-615 t CO2eq per 15 year lifetime – author uses the average of 480 t CO2eq. For e-jeepney, author uses 4.14 km/kWh as found for Star 8's 2019 model in Iloilo, which is 0.227 kWh/km (as compared to 0.29 used in MTR), which yields a range (assuming same km/day range and days/ yr range) of 90-163 tCO2eq per 15 year lifetime or 126 t CO2eq average. Thus, average lifetime GHG ER per e-jeepney is 480-126=354 tCO2eq. GET test run in Baguio had much lower km/kWh, but for simplicity (and that the km/liter for diesel vehicles in Baguio is not available), this one value is used.

	Number of daily users of new transport options using low carbon transport systems	6,500	At least 20% increase per year (about 7,800 additional if using simple, and not compound, annual growth rate)	From the test run reports are taken 3 daily average riderships of 138 and 94 on routes in Baguio and 93 on a route in Iloilo. The average is 105. Assuming, as above, 12 e-jeepneys attributed to the project, the increment of daily riders is 1,260. If we assume 200 more e-jeepneys from GET at 20% causality, the increment rises to 5,460, or 70% of the target.	considered likely that some of the LGUs involved (e.g. perhaps 7 or so) will implement some of it. There have been around 54 awareness and other meetings held by the project, but work was not strategic enough to move towards the target of adopted LCT plans. Work with TESDA, while not achieving a TR, did achieve a revised CS with the TESDA-required skills mapping and functional analysis. Through adaptive management, the work incorporated the much needed harmonizing of previous efforts to set the CS on the path to becoming a TR.
Outcome 1: Policy support for the promotion of low carbon modes of transport	Number of issued policies that support the promotion of low-carbon transport by Year 3	0	4 (2 each of developed and revised with low carbon transport provisions)	4.5 (using partial counting of those where contribution is small or item not that meaningful): (i) EVIDA=1 good content contribution and good discussion group with author in Senate. (ii) EVIDA IRR + DOE Charging Station Guidelines + DOTr EV Classification = 1 (limited input in final); (iii) 3 recent DOE items=1 (limited input); (iv) EO for Pasig Trike Cooperative Committee (1/2 – meaningful, but simple to draft); (v) EO for LCT committee for Baguio, Ilolo, and Santa Rosa (1/2 – may not survive project except perhaps in Baguio); (vi) ½ for Baguio ordinance for research and innovation (project did not assist with drafting but ensured that LCT was added to the scope of this ordinance)	**S-:** Justification: Outcome 1 work has had some successes, but in many cases has struggled to have a significant impact in the policy and standards area at the national level due to it often taking on the role of commenter, which results in achievements that are not typically that impressive. Yet, it has had enough stand-out successes to be considered effective: (1) multi-pronged contribution to EVIDA (content including green routes, DOTr capacity building of jeepney cooperatives, and DOST funding of transport studies by state universities; small group meetings with the senator authoring the legislation; and representing DOTr at formulation meetings); (2) Green Routes Guidelines; and (3) bottom up bike lane study across 20+ LGUs with training – partial implementation possible in about 7 LGUs. Contributions to other claimed national level achievements seem minimal or are unknown. Some local level policies or standards may be impactful (Pasig Trike TWG, which was drafted by the project, and Baguio research and innovation ordinance, which due to project added inclusion of LCT). Others that may be less impactful include EOs for setting up LCT committees in 3 LGUs to implement the project. (These typically disappear after the project, though Baguio's might sustain.) The potential impact of the TOD standards draft for Baguio and adopted as an EO are unclear, though the standards are written somewhat generally. The draft JMC for setting up an interagency LCT Committee has been circulated by DOTr for comment, but only two agencies (DOE and DILG) have responded. The fate of this JMC post-project is unclear.
	Number of standards promulgated for low-carbon vehicles by Year 3	0	3 (1 newly developed for each of e-jeepneys, hybrid buses, and AGT)	2 1/3: Green routes guidelines now part of DOTr's Omnibus Guidelines is strong contribution=1; two DOTr standards on fuel efficiency = 1 (project contribution unclear); EO TOD standard for Baguio= 1/3 (simple and impact unclear)	
	Executive Order for interagency coordination on low-carbon transport system approved	0	1	0 Instead of an EO, a JMC is being pursued. The JMC has been drafted and circulated by DOTr to agencies that might sign it. So far, only DOE and DILG have provided comments.	

	and adopted by EOP				
Outcome 2: Adopted and implemented low carbon transport plans and/or programs in major cities	Number of cities capacitated by adopting and implement-ing low carbon transport plans and programs	1	at least 4	0. All four LGUs underwent 10 days of half-day trainings on LCT planning and developed a re-entry action plan. Earlier, Baguio did an "integration" workshop about integrating LCT into plans. Some isolated LCT measures ("Open Streets" in Santa Rosa and "Streets for Kids" in Baguio) have gotten budget allocations or are likely to get these soon, but there is no formal adoption of the LCT re-entry action plans nor comprehensive incorporation of their LCT measures into existing plans. The project aimed to get a commitment from the LGUs for adoption/ implementation at its EOP Sustainability Workshop	**MS+:** Justification: While individual items have been carried out well, strategic approach to ensure that the results contribute to the targeted outcome, outputs, and indicators was somewhat lacking. The capacity building workshops/ conferences/ trainings have some successes and highly appreciated items. The investment forum (Jan. 2023), officially a part of Outcome 3, and prior meeting with transport cooperatives and manufacturers are seen as impactful in promoting e-jeepney deployment. The two fleet management workshops for transport cooperatives are seen as meeting high in-demand needs. The "Streets for Kids" and" Open Streets" workshops have both stimulated budget allocations or likely ones (the former in Baguio, the latter expected in Santa Rosa). The planning work, however, is not seen as that effective as it did not result in adopted plans and did not integrate with plans that are in the cities' pipelines. (Laudably, however, the project at its EOP Sustainability Workshop aimed to get a commitment for LGU implementation of plans developed through the training.) And, the awareness and outreach work (aside from the workshops/ events) was weak overall – there was no organized, periodic outreach to jeepney cooperatives, something that could have benefited the aims of the project greatly. Further, the project had stopped using its website by the time of the TE. Its communication efforts (articles drafted after events) got lost in the approval shuffle at UNDP CO. There was some improvement in the situation closer to EOP, when two articles were published on the UNDP website, the project was allowed to use its Facebook page again, and a few publications were prepared. The LCT university consortium in Baguio has already taken up support of the city and may conduct meaningful work related to local priorities in the future. The development of EV related technician training standards and curriculum achieved a revised CS, but did not have enough time to develop a TR as targeted. Its adaptive management to harmonize previous efforts and get the work on track towards a TESDA TR is applauded. Yet, no clear plan for exit strategy to ensure the TR is eventually achieved after project close was identified. Further there are two other areas designated by TESDA for TRs: charging station technician and EV battery
	Number of institutions certified to conduct low carbon vehicle technician training	0	at least 2	0: TESDA work achieved harmonization and expansion of existing EV technician CS and carried out the TESDA required skills mapping and functional analysis. There was also a training of trainers. Yet, the TR was not achieved and there is a lack of exit strategy (unless one was adopted at the EOP Sustainability Workshop) to ensure work builds on the CS to eventually achieve the TR. Institutions did not "register" a program to train for TR certification as the TR was not achieved.	

					technician. An exit strategy for each is needed to ensure the TRs are developed in a timely fashion.
Outcome 3.1: Increased private sector participation in the widespread deployment and commercializa-tion of low carbon transport	Number of entities involved in deployment and commercial-ization of low carbon transport systems by EOP.	3 Interpret-ed as suppliers of e-jeepneys to public transport market (Star 8, Tojo, and maybe PHUV which has left market but is not known to have supplied public transport)	5 (an increase of 2)	4-5. Prior to project's Incentive Program, Star 8 and Tojo Motors were already supplying the public transport e-jeepney market. After and as a result of the project's Incentive Program, Durabuilt and China Six Eleven also entered this market. GET, which has a large pipeline of public transport e-jeepney purchase orders may enter the market soon. *RBM interpretation requires at least some link to the project*	**S** Justification: The strongest result so far is that the Incentive Program has contributed to re-stimulation of e-jeepney market, following a stagnant period in the market/ industry since mid-2020. Two cooperatives that did not have e-jeepneys before have purchased some and two additional suppliers have entered the e-jeepney public transport market (with a few additional ones considering entry). New models from suppliers are in the approval pipeline and, under project influence, DOTr may be speeding up approval. At least 12 e-jeepneys purchases may be attributed to the project. Also, GET is said to have developed a huge pipeline of 900 purchase orders for public transport e-jeepneys, many now with applications at the bank for loans. There may be some causality from the project (≈20%), as it helped highlight GET as the only supplier to "pass" the Baguio test run. And, GET participated in all ten project board meetings and may have participated in the smaller group EVIDA meetings, getting exposure to the public transport industry, which it is just now shifting into, and its regulators. Other Outcome 3 results are more mixed. The business plan work was slow to yield any results and in the end did not focus as squarely on e-jeepneys as expected, but did suggest alternative income streams to help pay for the e-jeepneys. And the test run was not done in a way that results could be shared with transport cooperatives in writing. Yet, it did stimulate interest in Baguio and even the Iloilo results (though the test run was of a vehicle already on the road there) are said to have inspired some confidence. Lastly, the charging stations are an important step forward in adding more charging stations on the ground. Originally 3 were planned, but 2 were cancelled due to land issues. Deployment locations targeted might have been more strategic. For example, since Pasig is likely to deploy more EVCSs with or without project help (and already has four), it may have made more sense to support Baguio with charging stations. At the same time, it is realized that the project would like to distribute benefits to its partner cities evenly.
	Number of bankable business plans, supported by the Project, completed and funded by Year 3	0	2	2: The evaluator has seen powerpoints about the two business plans but was not provided with the business plans themselves. The plans were expected to focus more squarely on e-jeepneys. Instead, they emphasize alternative income generation methods such as ads or selling parking in cooperative garages as a means to generate funds for modernized jeepneys.	
Outcome 3.2: Increased private sector investment in low carbon transport	Number of additional investors who invested in low carbon transport solutions facilitated by the Project by EOP.	0	3	At least 2 and maybe more: Irisan in Baguio (Incentive Program winner) and CITSCO in Iloilo (influenced by project, which originally was to provide it with a charging station). There may be others influenced by Incentive Program. And if GET is able to, say, help 10 new cooperatives launch, then, by causality of 20%, 2 could be attributed to project	

	Cumulative investment in new low carbon vehicle projects by EOP	Approx. USD7.5 M	Approx. USD20 M (target for increment is USD12.5 M) For RBM considering only that investment attributable to project recognizing target might then be lower	Minimum of USD780,000 up to perhaps USD3.4 million. At least 12 e-jeepneys attributable to project at USD65,000 each will be USD780,000. If GET were to successfully deploy 200 of the 900 in its pipeline and project has 20% causality that will be 40 more bringing total to USD3.4 M	

8.2 Relevance

In assessing relevance, the evaluator considers if the project is really needed and if it is achieving results that would not have been achieved in its absence. Relevance considers beneficiary needs, country needs, global priorities, and partner and donor policies. Relevance for the project overall encompasses a number of items discussed below. This report in Sections 5.7, 6.5, and 7.5 has already assessed relevance on an outcome by outcome basis. The assessment of overall relevance considers the outcome-by-outcome assessments as well as the cross-cutting relevance topics discussed below.[52] Exhibit 8-2 collates the outcome relevance ratings and provides the overall relevance rating.

Exhibit 8-2. Relevance Ratings (Relevance of Results)

Outcome 1	Outcome 2	Outcome 3	Project Overall
S: Policies and standards in support of EVs, EVs in public transport, EVCS and LCT that the project worked on are generally needed and in line with government priorities.	**S-**: In general, trainings relevant to needs; and TESDA work is highly relevant and needed. Challenge is that training work as needed did not sufficiently respond to local situation to the extent necessary to ensure adopted LCT plans and programs. Most LGUs have other plans they are prioritizing and would have benefited from assistance incorporating LCT into those plans and in some cases preparing those plans (e.g. urban mobility plan in Iloilo).	**S**: All four activities are highly relevant, though relevance of some as implemented could have been improved. Incentive Program highly relevant in re-invigorating the e-jeepney market (along with EVIDA and pandemic rebound). Yet, TCs, to be convinced of the attractiveness of e-jeepneys, need to see evidence of technical viability (test runs) and financial viability (business plans). And more e-jeepneys deployed (and hopefully monitored as this report highly recommends) will also help to convince them. And, lack of charging stations is a barrier to deployment. Test runs seemed academic and results were not distributed to TCs in writing. Charging station deployment could have focused more on locations of maximal impact.	**S**: Project is highly relevant to national priorities, UNDP priorities, and GEF priorities. There was extensive stakeholder engagement, though better work could have been done in understanding stakeholder needs in detail. In the case of jeepney cooperatives, there was a need to provide them information, such as how to consolidate and how to assess the e-jeepney opportunity. And, more in-depth exchange with LGUs was needed, engaging them to participate in policy or standard drafting and understanding their planning needs and situation better so as to design planning support that would result in actual incorporation of LCT measures into plans that are soon thereafter adopted.

The subsequent sub-sub-sections of Sub-section 8.2 address relevance topics required by UNDP-GEF TE guidelines and that cut across the project's outcomes.

Alignment with national priorities:

Alignment with national development priorities: The LCUTS Project is highly aligned with national priorities. Its objective ("to create an enabling environment for the commercialization of low carbon urban transport systems (e.g., electric and hybrid vehicles) in the Philippines") fits both with national development priorities at the time of design and those that came to be during its implementation. At the time of design, related policies, programs, and issuances include: Climate Change Act of 2009, First National Communications (which recognizes transport as the most significant energy-related source of GHG emissions, over 35% of total), Second National Communications (stresses stimulating private-sector

[52] In this case "cross-cutting" refers to cutting across outcomes.

investment in low carbon transport), Clean Air Act of 1999 (highlights need to shift to low carbon transport), National Framework Strategy on Climate Change, National Climate Change Action Plan, Philippine Development Plan (2011-2016), and National Framework Strategy on Climate Change (2010-2022) (incorporates National Environmentally Sustainable Transport (EST) Strategy and the NIP on Environment Improvement in Transport Sector). In 2018, the same year the project was launched, the Government launched its Public Utility Vehicle Modernization Program (PUVMP). One of the major aspects of this program is the replacement of old polluting and low efficiency jeepneys with cleaner more efficient Euro IV (and above) units and electric units. The program also calls for consolidation of independent jeepney owners/ drivers into cooperatives with larger fleets. So, the project focus on deploying e-jeepneys is conceptually quite in line with this program. At the same time, some stakeholders suggest the project could have garnered more attention from its IP, DOTr, had its activities been even more closely aligned with the activities of government programs, presumably including PUVMP. For future projects, an adjustment to be more in line with newly issued programs may be considered. In the case of PUVMP, it is understood the program's design actually calls for some of the things this report is recommending, such as monitoring of deployed vehicles and use of AFCSs, but that in practice have not been implemented. Thus, the LCUTS Project might have served as a demonstration of how to implement PUVMP more ideally. Also, during the lifetime of the project (and, in part, due to project efforts), EVIDA (which is said to have stagnated in the pipeline for ten or more years) was revived, revised, and adopted, thus making the project with its original intended emphasis on EVs, even more relevant than before.

Responsiveness to changes in the country: Overall, the project did its best to respond to political, legal, economic, and institutional changes in the country. Yet, these did present challenges. Changes in national administration has been a challenge to the project. Some stakeholders suggest that the project was of less interest to the administration coming to power in 2016 than the one in power during the main part of design work and that this explains some of the shift in focus away from EVs. The Covid-19 pandemic presented a huge challenge, as public transport projects are disproportionately affected by the situation. The project shifted its capacity building to online or hybrid online connection with the PMU and in-person events in partner cities. One of the biggest political concerns that arose was pushback against the PUVMP by independent jeepney owners, who protested as a group in March 2023. According to sources, their concerns were heard and the deadline to consolidate was extended by six months to December 2023. One way in which the project could have made itself more relevant to the challenges would have been to develop a means of sharing information with a large group of jeepney cooperatives (and remaining independent jeepney operators) in the country. There have been complaints that the government asks them to make changes but does not build their capacity to do so. The LCUTS Project could have done a better job filling this gap as such communications (e.g. fleet management suggestions, financial benefits of e-jeepneys, etc.) would have also supported the project objective as well. At the same time, it is recognized that there are sensitivities with the industry and this may explain the hesitancy of UNDP to move forward on some items in a highly visible way.

Alignment to national and local strategies to advance gender equality: Women in the Philippines have equal rights under the constitution; and there are also a number of special laws that include promotion of gender equality. The project in its design aimed to provide equal capacity development and employment opportunities to women. It also emphasized ensuring the safety of women in public transport situations. In practice, the project achieved substantial participation of women in workshops. There were 869 person attendances by women at project events, which is 40% of the total. (Some persons may have attended more than one event and in that situation are counted more than once.) The project held four GESI (gender equality and social inclusion) workshops and, among others, these were attended by those from the jeepney cooperative sector, a particularly male sector. While it cannot be claimed the workshops created an instant change in perspective, this kind of exposure reaching a traditionally male sector is considered a good first step. The project also hired a gender consultant who prepared a gender strategy. Yet, aside from the GESI workshops, it was not found that this strategy was implemented.

Alignment with UNDP and GEF strategic priorities:

Alignment with UNDP strategic priorities: The project in concept and implementation is highly aligned with certain of UNDP's strategic priorities: Review of the UNDP Country Program Document (CPD) for the Philippines for 2019-2023 shows that LCUT's activities, as implemented, are aligned with the CPD's output 2.2 "Enabling policies, private sector engagement, monitoring, reporting and verification systems strengthened to help the country meet its commitments to the Paris Climate Agreement," including both sub-output 2.2.1 ("Extent to which low emission and climate-resilient development targets are reflected in: (a) National plans, strategies and budgets; (b) Local development plans, strategies and budgets; (c) Private sector business plans and strategies") and sub-output 2.2.2 ("Number of public and private entities making investments in low emission solutions and schemes through UNDP support.") For 2.2.1, the project has impacted national policies (e.g. EVIDA), which in turn have impacted national plans (e.g. CREVI). As for local development plans, the project design aims to impact these and training on LCT planning has been provided, but work needs to be more targeted in the remaining time to project close for local plans to newly reflect LCT aspects. As for private sector business plans and strategies, the project's business plan work aims to affect these, though the work is behind schedule and needs to move forward. As for the CPD's sub-output 2.2.2, this target is similar to the target for the 3rd indicator of LCUTS's Outcome 3. Assuming current Incentive Program plans are realized, the increment to the indicator due to the project can be assessed as at least two entities (at least two TCs are investing in e-jeepneys that would not have done so in the absence of the project).

Reviewing UNDP's latest Strategic Plan, 2022-2025, the strategy is summarized by three directions of change, six signature solutions, and three enablers ("3x6x3"). For the directions of change, LCUTS supports "structural transformation" by supporting PUVMP and its consolidation of the jeepney industry and "building resilience" by enabling the nation in its climate change mitigation work. As for the signature solutions, those in the energy and environment pillars of UNDP's "development offer" are most relevant. As for enablers, the most relevant is "development financing" which includes working with government and the private sector. LCUTS has done both and the project is mobilizing additional government bank loans (beyond business as usual) and the more active involvement of e-jeepney suppliers in the sector.

As for CPAP, of those items listed in the ProDoc, the CPAP outcome and output "By 2018, strengthen national and local resilience towards threats, shocks, disasters and climate change - Increased capacities of key duty bearers to provide an enabling environment for claim holders' improved access to an enhanced natural resources base, sustainable energy and a cleaner environment" are most relevant.

For UNDAF, the most relevant output listed in the ProDoc is: "Sub-Outcome 4.3 Environment and Natural Resources Conservation and Protection: By 2018, capacities of national and local government officials and communities to conserve and sustainably manage the country's environment and natural resources, including biodiversity and sustainable energy sources will be enhanced."

Among the SDGs, (a) affordable and clean energy and (b) sustainable cities and communities, are most relevant.

Alignment with GEF strategic programming: As documented in the CER, the project design is aligned with GEF Focal Area CCM-4 and the following focal area outcomes and associated outputs: "Outcome 4.1 Sustainable transport and urban policy and regulatory frameworks adopted and implemented. Output 4.1 Cities adopting low carbon programs." "Outcome 4.2 Increased investment in less-GHG intensive transport and urban systems. Output 4.2 Investment Mobilized and Output 4.3 Energy Savings Achieved." As for GEF CCM Outcome 4.1, the project actively supported sustainable transport policies

and regulatory frameworks, some of which (such as EVIDA and Green Routes Guidelines) were adopted. In the case of Output 4.1, city adoption of low carbon programs is targeted in the design, but complete plans and programs were not adopted due to the project, only isolated allocations for special topics ("Streets for Kids" and "Open Streets") was achieved. This is an area of work that might be enhanced in the remaining months of the project. As for Outcome 4.2, increased investment and its associated outputs, LCUTS's Incentive Program has pipeline investments that are almost certain to be mobilized by EOP (see fourth indicator of Outcome 3 in Exhibit 8-1); and these will result in energy savings and GHG ERs (first objective indicator in Exhibit 8-1).

Contribution to Theory of Change for relevant country program outcome: The Country Program Document (2019-2023) does not refer to a theory of change. Yet, we can see that a three pronged strategy of (1) policy for LCT, (2) capacity building for local LCT plans, and (3) investment mobilization in the e-jeepney area is intended to create positive synergies for replication of the investment mobilization. The CPD implies a slightly different three-pronged strategy: (a) national plans, strategies, and budgets, (b) local development plans, strategies, and budgets, and (c) private sector business plans and strategies. The project's work on business plans will be important in this regard (per c). Further it would be helpful if the project is successful in impacting local development plans (b) in a way that encourages e-jeepneys and their monitoring, such as through local designation of green routes.

Stakeholder engagement:

Participation of relevant stakeholders: The project's capacity building and events (of which there were 54) were the primary means of engaging stakeholders, though the Incentive Program has also played a critical role in engaging and raising awareness of TCs. The author finds that certain workshops involving the TCs were especially effective, such as the fleet management workshops in 2022 and the Investment Forum in 2023. The project also engaged local government and national-level government personnel. There was further some participation by NGOs and, in the case of GESI workshops, advocacy groups. For "Streets for Kids" and "Open Streets" events, children, an underrepresented group at such events, and local communities/ neighborhoods ("barangays") were included.

Needs and interest of relevant groups addressed: Despite engaging a lot of stakeholders, a weakness of the project is that it did not always go the extra mile in developing its engagement strategy based on a clear understanding of needs an inputs. This seems to particularly be the case with regard to the LGUs. While there was extensive training in the planning area (and some baseline assessment beforehand), this work could have had much greater impact had it been much more intimately integrated with the plans the LGUs actually have and need to update or are at present working on. As an example, despite having finished the NCTS planning training, Iloilo is now quite anxious to get support from the project for its urban mobility plan. Further, the project did not sufficiently acknowledge and address the fact that the jeepney transport cooperatives are the project's top target audience. The e-jeepney test run report is quite technical/ academic and not in a good format for e-jeepney operators; and there are no plans to distribute results to the TCs. As recommended in this report, it seems the project should have had a contact list of jeepney TCs and provided them updates and information on topics where they have a need, such as fleet management, financial benefits of e-jeepneys, etc.

In-depth consultation as a means of addressing needs of diverse groups: The author finds that a number of project initiatives used in-depth consultation as input to plans or other actions. In particular, the GESI workshops gathered input of a diverse group to come up with a GESI plan. The business plan work included consultation with several TCs and then in-depth consultation with the two groups to receive business plan support. And, the initial work for a TESDA training CS (or TR) and curriculum, known as "skills mapping," included interviews with those in the industry to determine what skills are needed and with what demand. In retrospect, in-depth consultation with jeepney cooperatives to design a project

communications program for them would have been desirable. The point has been made by a number of stakeholders that the cooperatives do not feel prepared for the modernization program ("PUVMP") as they have not received the training and information needed to address requirements. Had the LCUTS Project had a broad contact list of TCs and developed easy to understand material on different topics, benefits nationwide may have accrued. For the LGUs, in-depth consultation to really understand needs may have been a way to avoid the lack of integration of the project's LCT planning work in actual plans. And, ideally, draft policies and standards, such as TOD, should be the result of extensive consultations with the LGU and fully reflect their input. That may be a way to achieve local level policies and standards that will be used.

Relevance and complementarity with other initiatives: The project would have done well to draw from the experience and lessons learned of other sustainable transport UNDP-GEF projects that have deployed vehicles. The project was stuck for a long-time with the idea that it would not procure vehicles (though procurement was written into the ProDoc) as there was no good plan of how to do so. A reference to other such projects in UNDP's portfolio might have led the way earlier, as at least some other transport projects have almost certainly worked with the private sector and provided subsidies to them. At the same time, it must be recognized that the pandemic and need for a period for the TCs to recover financially afterward may also have slowed down action. On parallel projects, sources indicate a number of other parallel EV-related donor initiatives, including a World Bank project and an EU supported initiative, the latter actually providing charging stations to Pasig before LCUTS was able to, In addition, there is a recently launched UNIDO-GEF EV project working with DTI. The author did not detect much interaction between these projects. (A reviewer of the draft version of this report indicates recent interaction with the UNIDO-GEF project.) Such interaction may have created synergies. Also, for projects that will continue after LCUTS, such as the UNIDO-GEF project, a closer relationship may have facilitated a handover of some key activities from LCUTS that could be carried on by the ongoing project (if of interest to them), like the TESDA TRs that the project will not have time to fully achieve. Some stakeholders indicated that other EV projects, starting after LCUTS, passed the project by and deployed vehicles and/or installed charging stations, while LCUTS seemed to struggle internally, such as with arguments that it should not invest in EVs although this was a key part of project design.

8.3 Effectiveness

Effectiveness is the extent to which objectives/ outcomes have been achieved or are expected to be achieved. It is also an assessment of whether what was achieved is worthwhile/ useful. Exhibit 8-3 shows the effectiveness ratings of each outcome and the project overall. Sections 5.8, 6.7, and 7.6 provide an assessment of effectiveness for each outcome, respectively. Each of Exhibits 5-5, 6-4, and 7-4 summarizes assessment of progress towards the respective outcome statement and associated outputs. Exhibit 8-1, earlier in this section, provides an assessment of progress towards indicator targets and also overall assessment on the effectiveness of each outcome.

Exhibit 8-3. Effectiveness Ratings (Effectiveness of Results)

Outcome 1	Outcome 2	Outcome 3	Project Overall
S-: Strong achievements are EVIDA input and meetings, Green Route Guidelines, and bottom-up bike lane plans and related training for LGUs (though the plans are patchwork from LGU to LGU and need improvement). Aside from these, while many national-level policies and standards are claimed, project struggled to have much impact at national level with these due to its role of commenter. At local level, a few items appear strong/ sustainable, the Pasig Trike TWG EO and Baguio's Research and Innovation Ordinance. (The latter was not prepared by the project, but the project successfully encouraged the addition of LCT to the Ordinance.) Other local level policy/ standards work has less clear sustainability/ impact. The JMC for an interagency LCT committee is still being circulated by DOTr to other agencies for comment. It is not clear if work on this will continue post-project or not.	**MS+**: Extensive stakeholder engagement across 54 workshops and meetings. Fleet management and Investment Forum for TCs (the latter officially part of Outcome 3) considered especially effective. LGUs have allocated budget after "Streets for Kids" (Baguio) and likely after "Open Streets" (Santa Rosa) workshops. Baguio-based university consortium on LCT supported. On current path, planning work will not result in adopted plans with LCT measures. Work with TESDA by adaptive management is harmonizing previous efforts towards TR for EV technician, though will only achieve an improved CS rather than a TR by EOP. An exit strategy to ensure the TR is achieved, along with TRs for charging station technician and EV battery technician, is needed.	**S**: Strongest result is that Incentive Program has played key role (along with EVIDA and pandemic recovery) in relaunching stagnant public transport e-jeepney market. Project Incentive Program directly responsible for 2 TCs acquiring e-jeepneys for first time and 2 additional suppliers entering public transport e-jeepney market. Project has also stimulated suppliers to deploy new models. Test runs stimulated interest, though work is somewhat academic and without plans for dissemination to TCs, the project's key audience. Business plan work was slow in delivery and, in the end, focused on alternative income streams, rather than focusing squarely on e-jeepneys. Charging station deployment is in the works, though land issues have reduced the targeted number of stations from 3 to 1. Also, LGU selection for the charging stations might have considered that Pasig already has four stations and is likely to deploy ten more with or without project.	**S-**: The project has had some good successes, such as contributions to EVIDA, drafting of Green Routes Guidelines (now adopted), bottom up bike lane plans and training, many workshops and conferences, a critical impact on revitalization of the e-jeepney market, etc. Yet, in some cases, it is missing key pieces needed for sustainable results. Some activities were implemented without enough attention to how to ensure they are meaningful. Getting KM pieces out to a listing of TCs, for example, would have been a way to have impact, as would targeting LGU support on the specific plans into which they would like to incorporate LCT. And, given that the monitoring of Incentive Program e-jeepneys may be the most important potential contribution of the project, more attention should have been paid to the parameters to be monitored and exit strategy for post-project monitoring.

The subsequent sub-sub-sections of Sub-section 8.3 address effectiveness topics required by UNDP-GEF TE guidelines and that cut across the project's outcomes.

Contribution towards UNDP, GEF, and national priorities: The project shows good evidence of contributing to UNDP, GEF, and country priorities, many of which were reviewed above in Section 8.2, "Relevance." In terms of specific achievements that contribute to UNDP targets, the CPD indicators may be most relevant. For CPD sub-output 2.2.1, the project has contributed to the development of EVIDA. CREVI, which is a roadmap for EVIDA, reflects some limited contribution from the project, including the suggestion to extend targets out to 2040. Thus, CREVI might count as a national plan/ strategy that includes low-emission targets. For sub-output 2.2.2, there are at least two private entities (e-jeepney cooperatives) that due to the influence of the project have newly invested in e-jeepneys.

In terms of GEF targeted outputs in Focal Area CCM-4 (sustainable transport), there is contribution to the GEF target of investment mobilized in less-GHG intensive transport and urban systems (Output 4.2). This is at minimum (when considering only investment attributable to the project's influence) expected to be USD780,000, but it may be later found to be more if it is found that more Incentive Program applicants that did not win adopt e-jeepneys anyway (and would not have done so in the absence of the project). GEF CCM's Output 4.3 on energy savings achieved is also supported through the lesser energy used by these e-jeepneys. GEF CCM's Outcome 4.1 on the adoption and implementation of sustainable transport and urban policy is supported by some national level achievements such as EVIDA. It's only output, Output 4.1 ("cities adopting low carbon programs"), though targeted in LCUTS design, has not been well met, as has been discussed. There was a need for more focused local LCT plan support beyond the training to make this happen.

In terms of national priorities, the GHG ERs expected to be achieved by the project support the Philippines' climate change policies and plans and its National Communications. Probably the most direct support of project achievements is to PUVMP. This is because the LCUTS Project has contributed to reinvigorating the stagnant public transport e-jeepney market with its Incentive Program and other activities and has had an influence on suppliers developing new e-jeepney models. At the same time, the project needed a more effective monitoring plan in terms of parameters monitored and sustainability of the monitoring program. This, along with potentially AFCSs to do that monitoring, would be further support of PUVMP, which has the aim of monitoring but has not delivered consistent results in the monitoring area. And, the work of the project in the e-jeepney deployment area also supports EVIDA, the development of which, in turn, the project had a role in supporting.

Factors contributing to achievement or non-achievement of outcomes and outputs: This project really struggled to deliver due a number of factors. First, it should be acknowledged that public transport donor projects are notoriously challenging in terms of achieving results. The sector has a lot of different stakeholders to coordinate and work with and a lot political interests. Without strong political will, it can be difficult to achieve aims. Second, the Covid-19 pandemic led to lockdown and closure of public transport and then lessened ridership for a period when it was opened back up. This hit the jeepney operators hard, so they may have been hesitant to pursue bank loans for new vehicles under PUVMP. Third, as many stakeholders noted, high PMU staff turnover was a key factor hobbling the project. Yet, the evaluation found that this was not a root cause, but instead a damaging result of other implementation problems. These root causes made it difficult for staff to realize their potential, so they felt frustrated and moved on. One particularly problematic factor was the capacity of the IP to give attention to the project in a consistent way. The IP itself had high turnover (most staff are not permanent). Further, persons put in charge of LCUTS had many other projects in their portfolio and many other responsibilities and did not give the project the attention it needed. There was also the challenge that the project lacked EV experts, which may have hampered its ability to be seen as an authority by interested cooperatives and government officials. Lastly, this project suffered from a variety of forces pulling and pushing it in various directions.

Instead of having a clear plan based on the ProDoc, the project seemed "open" to and "unprotected" from these influences. An example is that the deployment of e-jeepneys as designed in the ProDoc was consistently blocked until Oct. 2022 (about 5 years into the project), but the issue was not addressed in a highly transparent way with well-documented and detailed explanations that could be discussed and addressed. Shortly after the MTR evaluator (final report Feb. 2021) recommended that the project focus on deploying e-jeepneys, the project signed a USD145,000 contract for the bottom-up bike lane study and training, which, while considered somewhat positively, doesn't really fit clearly anywhere in the project's logical framework. In short, there was a lack of adherence to project aims and a lack of recognition that a good UNDP-GEF project is carried out according to a logical framework.

In terms of factors helping with the project's achievement, there are a few key ones to be noted. First, the hiring of an international STA was a critical factor in turning around the problem that no e-jeepneys had been deployed. The STA recommended a partial incentive program and, from that point on, the idea to deploy e-jeepneys was finally accepted. There were challenges of implementing it in UNDP's environment, as some issues were raised; and the program eventually changed to its current form. Staffing, which had often been partial earlier in the project was in its last year or so ramped up to a full team and even supplemented with more persons than designed, though the total number of staff members dropped significantly again close to EOP. Lastly, support from the IP on certain items has contributed to some successes, particularly the fast-tracking of certificates of compliance for the new models of e-jeepney suppliers.

Actual results delivered compared to outcomes/ outputs as designed: There are a number of aspects in which the results differ from what was targeted by the outcome and output statements and their intended content. In particular, the ProDoc intended a number of vehicles that could claim direct attribution to the project, which might, judging from a footnote to the GHG ER targets be around 65 e-jeepneys. Yet, in the activity descriptions, the target is 15 to 20. So far, it seems as though the project will achieve at least 12 e-jeepneys directly attributable to the project. Had it been able to deploy earlier in the project, the project might have achieved more replication, which may be what the larger target was referring to. Another example is that the project design intended that the project design and conduct route rationalization studies and recommend existing and new routes that could be designated for low carbon public transport vehicles (i.e. EVs) only. While there may have been some initial earlier support, it was said not to be sufficient for the task at hand and not to continue for long. Lastly, as has been emphasized elsewhere, the project in practice has targeted training on LCT planning and preparation of some draft plans, but does not seem to have a strategy to get LCT measures into adopted plans, which is a main aim of Outcome 2. (As noted, it's laudable that the project's EOP Sustainability Workshop will aim to get commitments from the pilot LGUs for implementation of LCT plans supported by the project.)

Areas of greatest and fewest achievements and contributing factors: The project has now had strong activity throughout its three outcome areas. Yet, the policy area and the private sector area seem to be heading for the greatest achievement, while the capacity building area lags. This may be somewhat related to the nature of capacity building. It may be easy to end up holding many wonderful workshops and these may be having an impact on people, but it is difficult to measure unless you are doing a training program and develop a test to measure how much people have learned. In this case, the project design (and the outcome statement itself) called for adopted LCT plans and programs. Yet, the project focused more on workshops and trainings and not on how this target could actually be achieved. Interestingly, some of the pilot LGUs have separate planning efforts related to LCT underway and one, Iloilo, even asked for assistance (on its urban mobility plan). It probably would have been more effective (in terms of targeted result) for the USD100,000 budget that went to NCTS for standardized training to go instead to more tailored support for each of the four LGUs (USD25,000 each), based on what plans they have already or in the pipeline and what is needed to get LCT measures into these plans. Outcome 2 also lags because of the slowness of moving the TESDA training TR and curriculum forward, such that only a

revised CS was achieved in the end. While this is in principle unrelated to the planning problem, it may also reflect the tendency to prioritize workshops and meetings (which may have less challenge) and ignoring initiatives selected for their potential impact post-project. (Several stakeholders suggested that having an EV technician TR would be impactful.)

Extent to which results have been or will be achieved, including GHG ERs, and considering key factors that influenced results: More detailed review of results and achievement of targets is provided in Sections 5, 6, and 7, as well as in Section 8.1. Here the focus will be on GHG ERs. The GHG ERs that will be achieved with the twelve vehicles likely to be deployed with strong attribution of the project will be roughly 4,248 t CO2eq over their 15-year lifetime. While this is far less than the increment of 52,959 t CO2eq indicated in the ProDoc, the methodology used in the ProDoc overestimates the GHG ERs as compared with other methods, probably due to overoptimistic assumptions. The evaluation uses the methodology /assumptions in the MTR, though updates the figure for km/kWh using the EV test run data for Star 8 in Iloilo. Applying this same method to the estimated target number of e-jeepneys (65) reduces it to 23,010 t CO2eq. Further, there's a chance that more than 12 vehicles will be deployed that are attributable to the project, either through more influence than is known now of those who applied to the Incentive Program or if GET is able to deploy a significant portion of its massive 900 vehicle purchase order pipeline (and if it is determined some degree of causality for these GET deployments may be attributed to the project). It is also noted that the project document targets just 15 to 20 vehicles deployed with partial GEF subsidy.

Factors influencing the results likely to be achieved in this area are late deployment of vehicles, structure of the Incentive Program, and winners selected. An earlier deployment of vehicles may have enabled some replication and/or follow-up purchases from those supported. The Incentive Program was originally meant to be a partial subsidy for e-jeepney purchase – perhaps 20%. Had that been the case, the available funds might have been spread across more cooperatives and might have yielded more vehicles. In the Program's current form, UNDP must provide whole vehicles to the winners, though the winners are to purchase their own set of "multiplier vehicles" (two or more e-jeepneys to match each project provided e-jeepney). Three winners of the Incentive Program have been selected. One of them, Aerostar, will match two UNDP-provided e-jeepneys with ten e-jeepneys it is purchasing via bank loan. Yet, findings confirm that Aerostar, which already has ten e-jeepneys, would have bought these additional ten anyway. Therefore, they cannot be attributed to the project. Had the project selected a cooperative that did not already have a purchase plan in mind before encountering the project, attribution for all vehicles would have been possible. Another of the three "winners" is a transport cooperative in General Santos City, where some of the earliest e-jeepney deployment occurred (starting in 2018). For this reason, it is believed the associated "multiplier" e-jeepneys were already planned and similarly cannot be attributed to the project.

Constraining factors (e.g. socio-economic and political): A few constraining factors are worth mentioning. First, UNDP generally carries out nationally implemented (NIM) projects in the Philippines, typically working with one main government partner per project, the IP. An associated challenge with regard to IP cooperation is changes in the presidential administration. When a new administration comes on board, staff that are political appointees change. They have different views on what comprises a worthwhile project and, typically, may have a tendency to undervalue development projects originated with a prior administration. Further, when there is a recent or upcoming change in administration, it may be difficult to get an executive order signed. (The project had as one of its targets an executive order for an interagency LCT committee at the national level.) Given changes in administration, one stakeholder even recommended that UNDP tries to time its projects so that the administration that designs the project is also the one that implements it. This might be possible, since the administrations last for six years, but in practice it would be difficult to implement. Still, perhaps it could be a consideration for certain projects such as this one that have a lot of political sensitivities. Another key sensitivity is discontent in the

jeepney public transport sector for the PUVMP, which requires consolidation into cooperatives and retiring of old jeepneys with replacement by Euro IV jeepneys or e-jeepneys. Just in March 2023, there were protests against PUVMP. This may give the project some challenges, as UNDP may wish not to antagonize stakeholders with support of PUVMP. At the same time, most that were consulted about this topic feel that information provided by the project to TCs would be most welcomed.

Alternative strategies that might have been more effective in achieving targeted objectives: A couple of alternative strategies for deploying the e-jeepneys and achieving project targets were discussed: (1) In one model, the project would seek to form relationships with TCs that already have e-jeepneys on the road and monitor the performance of the e-jeepneys (especially financial viability as compared to Euro IV). If the results were positive, they could be disseminated to other TCs. These other TCs might have thus been encouraged to purchase their own e-jeepneys. (2) One stakeholder pointed out that there are many applications with the government banks for e-jeepney purchase that are stalled. The stakeholder indicated that there are even e-jeepneys delivered that cannot be driven because the loans had not gone through. The stakeholder suggested that the project funds allocated for e-jeepneys might be used to speed up the loan process, perhaps by reducing the total loan amount with partial subsidy. This plan seems attractive, though it's not clear whether reducing the total loan amount would speed up loan processing. According to one source, the banks are not requiring collateral other than the e-jeepney itself. The decision whether to fund, then, is based upon whether the route can bring the revenues needed to service the loan. Thus, a major roadblock for some loans has been lack of approved LPTRP for the associated LGU. (3) The author believes a larger amount of funds targeted at the Incentive Program could have increased its effectiveness and the number of e-jeepneys directly attributable to the project. In the end, only USD300,000 of a USD2.6 million project will be allocated for the e-jeepneys, though the CER indicates INV funds of over USD1 M (which presumably would cover both e-jeepneys and charging stations). Further, the project might have, with more allocated for the e-jeepneys conducted a nationwide program, advertising with jeepney operators through a database of contact information developed. (4) Lastly, the project might have been able to carry out an Incentive Program in which partial subsidies rather than full vehicles are provided. This might have increased the total number of vehicles or at least the total number of cooperatives involved. Still, the Incentive Program as implemented is now known to have been a factor in re-stimulating a stagnant e-jeepney market. This implies that the "monitoring only" strategy (no investment in e-jeepneys, as in item 1 of this paragraph) may not have been as effective as a widely publicized program with a "prize."

Gender and human-rights based approach:

Extent of contribution to gender equity and human-rights based approach: As noted, the project had a 40% proportion of women, on average, of the attendees of its 54 events. Women accounted for 869 person-attendees (which may include double counting of those who attended multiple events). The project also held 4 GESI workshops, in particular exposing the traditionally male dominated jeepney sector to these concepts. One interesting area where the project achieved inclusion of typically under-represented persons in decision-making about city planning related to transport is the "Streets for Kids" event in Baguio. This was held with school children whose school had a street area inconvenient for walking. The children prepared designs that were expanded upon and now have budget for implementation.

Extent to which gender responsive and human-rights based approach incorporated into design and implementation: The project design discusses how the project will be gender responsive, including issues like proportion of women at meetings, increase in women employed in transit (such as in the role of driver), and increase in safety and convenience aspects for women and disabled using public transit. Further, the project had a GESI consultant who organized the GESI events and came up with an action plan after stakeholder consultation at these events. Yet, the evaluation did not elucidate any evidence of implementation of this plan.

8.4 Efficiency

Efficiency as used in this evaluation refers to how economically resources/ inputs (e.g. funds, expertise, time, etc.) are converted into results. In this report, the term cost effectiveness is used to refer to how economically funds are used and is the aspect of efficiency that gets the greatest emphasis. Discussions of efficiency by outcome are found in sub-sections 5.9, 6.8, and 7.7. Each of those sections includes estimated expenditures to date in major activity areas and other line item areas. The tables that show these estimated expenditures are Exhibits 5-6, 6-5 and 7-5. Outcome-by-outcome ratings for efficiency are aggregated in Exhibit 8-4, which also shows the project's overall efficiency rating. The sub-section then provides the fourth table in the aforementioned series, which is a breakdown of main expenditure areas in the project management component (Exhibit 8-5). It next offers a pie chart showing the breakdown of project expenditures by major areas (Exhibit 8-6).

Exhibit 8-4. Efficiency Ratings (Cost Effectiveness)

Outcome 1	Outcome 2	Outcome 3	Project Overall
S-: While some achievements are strong, other work is less impactful. In some ways, it seems the project worked on whatever it could, whereas more focused effort and larger contribution per initiative may have been more cost effective. Project team salaries at USD202,875 is largest line item. While viewed somewhat positively, the bottom up bike lane study and training at USD145,000 is deemed somewhat costly as no or few site visits and no in-person workshops conducted.	**S-:** Cost effectiveness is variable across activities. Workshop and meeting work, with 54 events, facilitated by the team seems cost effective (team salaries charged to outcome are USD88,170). Yet, planning work with contract of around USD100,000 that did not lead to targeted result (LCT plans adopted) seems inefficient. TESDA work at a cost of just USD53,000 seems efficient, since progress was made towards the EV technician TR, even though that aim was not reached.	**S-**: Expenditure of USD321,750 on e-jeepneys seems efficient given the positive impact on the e-jeepey pipeline.[53] Yet, there are weaknesses, such as USD45,000 to 50,000 spent on consultants earlier in the project, the results of which are not obvious. According to one source, the business acceleration specialist came up with a plan to cooperate with private sector entities, but this was decided against by the CO with concerns of allying too closely with specific private sector entities. The business plans are another area where cost effectiveness is unclear. These plans do not focus squarely on e-jeepneys, but instead propose other income generation methods (e.g. ads) for the jeepney cooperatives. (Associated expenditure for business plans was around USD150,000.)	**S-:** Overall rating reflects the individual outcome ratings. There are strong areas in efficiency, such as the USD321,750 spent on the Incentive Program. Yet, there are other areas in which funds do not seem as economically spent, such as consultants under Outcome 3, for which the benefit is not known, or for the USD100,000 NCTS training contract under Outcome 2, where targeted results ("adopted LCT plans and programs") are not on track to be met. While viewed positively, bottom-up bike lane study at USD145,000 with no or few site visits and no in-person workshops deemed somewhat costly.

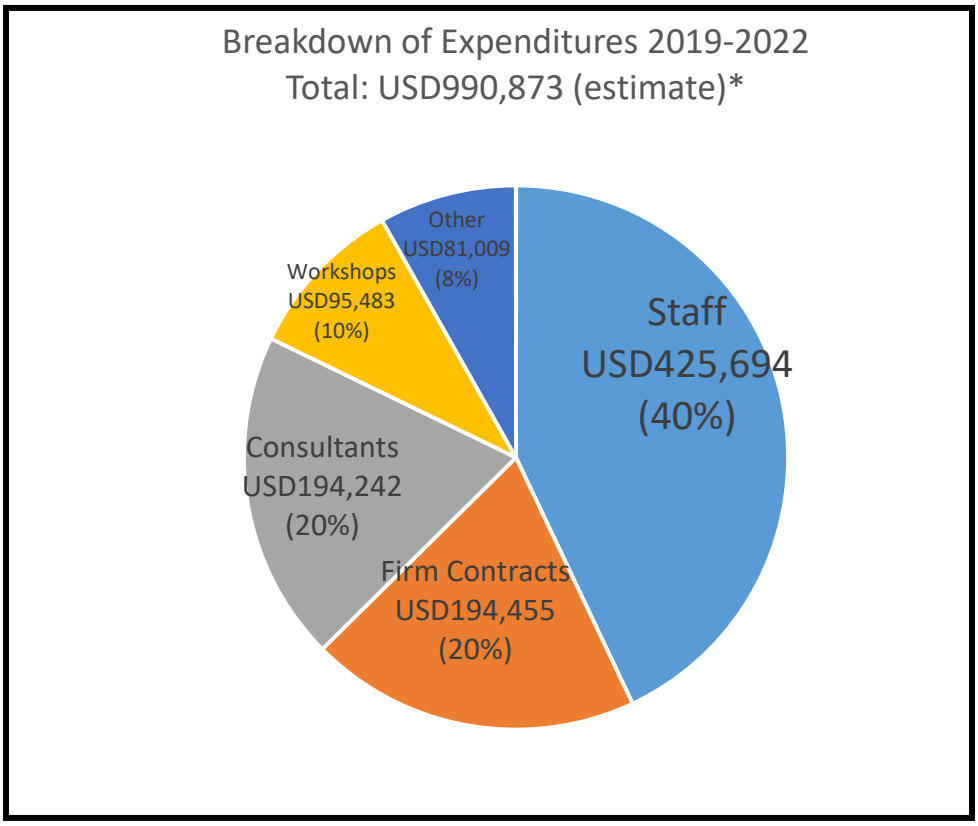
[53]A reviewer of this reports indicates the project earlier sought even greater efficiency in the deployment of demo e-jeepneys by use of government funds under the PUV Modernization Program to carry out an initiative similar to the project's Incentive Program. According to the reviewer, given lack of enough budget allocation for the PUVMP, this plan was abandoned. Despite extensive consultations, the Evaluator did not hear about this earlier plan for e-jeepney deployment until receiving this comment in the late stages of revisions to this report, so cannot neither validate it nor provide further information on it.

Exhibit 8-5 Project Management Rough Break Down by Expenditure Type
Note: This table is fourth in a series along with breakdowns for each of the outcomes provided earlier as Exhibit 5-6, 6-5, and 7-5.
USD, 2018 – 2022 (2023 not included)

Activity or Item	Expenditure to date	Total contract if relevant
Project Team (portion of full-time team member salaries charged to component)	78,407	---
Workshops charged to Component ("Learning Expense")	2,381	---
Domestic Travel	1,901	---
Total (*compares to CDR 2018-2022 total of 113,279, so about USD30,000 under --- perhaps some categories of expenditure were left out of this table that are large enough to make this difference)*	**82,689**	**---**

Exhibit 8-6 shows a rough breakdown of expenditures for 2019 to 2022. This is before most of the equipment for the project was purchased and before some of the amounts for the large firm contracts had been mostly expended. Nevertheless, it nicely illustrates how, up to this point, at least, staffing makes up 40% of the expenditures, which is an extremely large share. Of course, it is important to recognize that, in this project, the staff were carrying out a lot of the work that might normally be outsourced, particularly policy work in Component 1 and workshop work in Component 2. By project financial close, however, it is estimated that only 19% will have been spent on equipment; and the other two major categories – staffing and consultants+firm contracts will still dominate.

Exhibit 8-6



*The reason the total and other amounts are estimates is that they are based only on amounts for which the author could determine the specific type of expenditure area (e.g. staff, contracts, workshops, etc.) from the contract list and certain line items in the CDRs. The total of USD990,873 is less by about USD25,000 than the total GEF expenditures indicated by the CDRs by

end of 2022 (which is USD 1,015,943). Please see Exhibits 5-6, 6-5, and 7-5 to see the basis upon which the amounts in this figure are calculated.

The subsequent sub-sub-sections of Sub-section 8.4 address efficiency topics required by UNDP-GEF TE guidelines and that cut across the project's outcomes.

Resource Allocation and Cost Effectiveness

Efficient and economical use of financial and human resources? Assessment of cost-effectiveness of use of financial resources is discussed, by outcome, in sub-sections 5.9, 6.8, and 7.7. The overall finding is that some activities appear cost effective, but some do not. For example, there is some early work of consultants for which reports remain, but no impact whatsoever is known of. One of those consultants developed the idea of cooperation between private sector entities and the project, but a decision was made by UNDP not to pursue that due to concerns of allying with specific private sector entities. Another example is the LGU LCT planning training. Findings suggest stronger results for the money would have been achieved with more tailored, focused support for each LGU considering which plans they already have or have in the pipeline and working on incorporating LCT measures into those and getting the plan adopted. One way that GEF funds are leveraged in UNDP NIM projects can be through time contributions of the IP's team. In the case of DOTr, however, given the heavy load of projects handled by the IP's team, they were not able to contribute as much time as other partners in the past have. This may be an important consideration in designing future projects – considering what kind of time allocation of staff the IP will make in order to better leverage funds. At the same time, had LCUTS been adjusted to be more fully in sync with PUVMP, the resulting synergies may have meant more leverage of DOTr's time towards project results.

Completion of activities and meeting or exceeding expected outcomes? LCT project has certainly struggled to complete activities and has gotten two extensions as a result. The first extension was for 18 months and the second, for 6 more months, thus totaling 2 years extension on a 4-year project. There have been many challenges, particularly the Covid-19 pandemic, but, at the same time, the project has struggled to deliver certain items in a timely fashion apart from these external issues. With the second extension, the project will be able to deploy its targeted e-jeepneys and one of the targeted charging stations, as well as make substantial progress towards the TESDA training targets and the TC business plans. The project has not met or exceeded the GHG ER targets, but did make some good progress towards these. Further, its contribution in revitalizing the e-jeepney market could (especially if outreach to TCs nationwide is pursued) contribute to replication and scale-up down the line.

Comparison of and time effectiveness to that of similar projects: Public transport projects are notoriously difficult, because they deal with issues of political will and many different players are involved. In the author's experience, even ones that are well-managed may substantially underperform designed targets. Thus, although the project has faced many challenges, it does not seem to have underperformed the average of such projects. Of course, time effectiveness has been weak and, thus, the need for two extensions. Yet, overall, this is a public transport project that is expected to have some significant impacts.

Integration of gender equity and human rights: The project did take advantage of the opportunity to integrate gender equity and human rights through its GESI workshop. It hired a GESI consultant who developed an action plan. While the project did not make strong progress in integrating gender equity and human rights into the e-jeepney sector (aside from TCs attending the GESI workshops), it addressed these items in different ways. For example, children are an underrepresented group in urban planning and it held a workshop in which children designed some changes to the street near their school. And, the project

also reached out to barangays, which may host open streets. Open streets, in turn, provide an entertainment and social opportunity for all income brackets.

Extent to which allocation of resources to targeted groups takes into account the need to prioritize those most marginalized: Opportunities for addressing the marginalized were greatest with regard to pedestrian related activities. In addition to holding "Open Streets" workshops in Pasig and Santa Rosa, the project supported Pasig in another workshop that emphasized issues of accessibility to streets. Activities focusing on jeepney TCs also address a group considered somewhat marginalized – jeepney drivers. And, within the sector, the project aimed to support both the TCs that were doing well and those that were facing more challenges.

Project Management and Timeliness

Extent to which project extension could have been avoided: Because Covid disproportionately affected the public transport sector and proposed targets of work (the TCs) took some time to recover financially, given its late start, the project may not have been able to avoid extension and still deploy e-jeepneys. Yet, had the project started in a timely fashion, the situation may have been different. The ProDoc was signed in November 2017. Had the project been able to launch quickly, it could have had two full years of activity, including with demos launched by the time the pandemic hit. Of course, the pandemic would have still stalled monitoring and follow-up work, so one year of extension (rather than two) might have been necessary. Since the project had an 18 months extension first and then got another 6 months, the question arises as to whether the project could have avoided the second extension. While the answer is not entirely clear, there were about 4 months lost in the process of getting approval and changing plans for the Incentive Program. Had this and other items like it gone more smoothly, the time needed for completion may have been less. And looking back earlier, considering that the MTR Management Response was prepared in March 2021 (acknowledging the recommendation to deploy e-jeepney demos) and there was no action on the e-jeepney demos until October 2022, when the STA came on board, it seems there could have been room to avoid the additional extension.

Efficiency of project management structure as outlined in the ProDoc: Interestingly, the ProDoc called for the three component leads to come from DOTr (component 1) and DOST and DOE (components 2 and 3). These would have been co-financed positions, so would have been quite good leverage of GEF funds if the plan would have been viable in practice. Yet, government officials may not have the time to take on these roles. In practice, DOTr was the IP; and the other agencies deferred to DOTr. This concept of joint management of the project was lost, which is unfortunate as DOST and DOE are strong and proactive in the EV field and could have offered good support in that way. At the same time, the project management structure that evolved, with a project manager and three component leads for substantive work, was fairly effective when all posts were filled at one point, closer to the project's end. Earlier in the project, posts were often empty and there was also a loss of staff near project close. Another efficient aspect was to have field technical assistants posted in each of the partner pilot cities.

Timeliness: Timeliness of delivery of project activities and even procurement items has been a challenge. It may be that project staff are overburdened, but another challenge is responsiveness of government. The project contacted TESDA early on and no progress was made. In 2023, better progress was made. It may be that, with EVIDA, TESDA (which is mentioned in EVIDA) feels more responsibility in the EV related training areas than before. Yet, given that another group prepared an EV technician CS in 2021 (that is now posted on TESDA's website), the delay in execution of the technician training aspect of the project might be more likely attributable to internal issues of the project.

Extent to which M&E systems ensured effective and efficient project management: While project reporting has been quite regular and strong, one challenge for M&E systems to keep the project on track

is that the indicators were ambiguous and, as stated, do not necessarily represent achievements of the project. For future projects, it is suggested that a results based management approach is used (so that indicators really represent what the project has achieved) and all indicators are well-understood by the team, thus providing some guidance of how to focus efforts.

8.5 Overall Outcome

A summary of outcome ratings across components and the overall outcome rating are given in Exhibit 8-7 below.

Exhibit 8-7. Overall Assessment of Outcomes

Assessment of Outcomes	Rating
Relevance	S = 5
Effectiveness	S - = 4.75
Efficiency	S - = 4.75
Overall Project Outcome Rating	**S - = 4.75**

Note: Required method to compute overall project outcome rating: (i) If relevance rating is in the unsatisfactory range then overall project outcome rating must be in that range as well. (ii) Overall outcome rating cannot be higher than the effectiveness rating. (iii) Overall outcome rating cannot be higher than the average of the effectiveness and efficiency ratings.

8.6 Sustainability

Sustainability is (a) the likelihood of continuation of positive effects of the project after it has ended and (b) the potential for scale-up, replication, or otherwise building upon and expanding results. Sustainability of the specific results of each outcome has been addressed in sub-sections 5.10, 6.9, 7.8 by asking the general question of whether the results will continue to have a positive effect after project close. This more simple approach is based on the nature of the results. The ratings given in this way were "L" (likely) for Outcome 1 (because EVIDA, Green Routes Criteria, etc. have been adopted and are likely to continue to have an effect); "ML" (moderately likely) for Outcome 2 (as the sustainability of incomplete work towards training regulations is less certain and because the project did not achieve the adopted LCT plans at the LGU level, only achieving training and plans that were not adopted); and "L" for Outcome 3 (because the Incentive Program and other activities have had a tangible effect in reinvigorating the market and stimulating suppliers to launch new models). This sub-section looks at sustainability of the project as a whole in terms of four areas that pose a risk to sustainability: financial aspects, socio-political, institutional, and environmental. The findings are summarized at the end of the sub-section in Exhibit 8-8.

Financial sustainability: The financial sustainability of the key project result of e-jeepney deployment will depend on the financial viability of such deployment. Some stakeholders claim that e-jeepneys are financially more attractive (when considering up-front costs, charging or fuel, and maintenance and repairs) than Euro IV diesel jeepneys. If this is true and the project can verify via monitoring and business plan work and disseminate findings to a large number of TCs, financial sustainability may be ensured. If, however, this turns out not to be true, then a larger subsidy level may be required. Many countries have provided larger subsidies to EVs to promote them, so this would not be unheard of. Yet, stakeholders at the time of TE consultations explained that DOTr had continued to maintain a "technology neutral" stance vis-à-vis subsidies in its modernization program, meaning both diesel jeepneys and e-jeepneys got the same 160,000 peso subsidy each.[54] The government banks will loan the remainder of the cost with low interest loan. The government loan availability should continue. At the same time, some suggest the Philippines may want to consider applying for a GCF project to fund an e-jeepney specific program.

[54] A revision to the subsidy levels in PUVMP has been issued and now the subsidy for Class II e-jeepneys and Euro IV or higher diesel jeepneys is 280,000 pesos.

Currently, one challenge with the government bank financing is that loan approvals tend to be very slow. While it is said that no collateral is required (the e-jeepneys serve as the collateral), some suspect there may be challenges for poorly financed cooperatives. Yet, in many cases it is the lack of the associated LGU's approved LPTRP that delays bank loans, as the banks do not want to loan to a jeepney cooperative only to find that later an LPTRP comes out that, for example, replaces the cooperative's jeepney route with a bus-only route. Thus, approval/ adoption of LPTRPs in more LGUs will create a better environment for continued financing of e-jeepneys. One possibility considered is that private sector banks may also get involved. Yet, because their interest rates are high, the potential does not look too promising. One follow up step for DOTr that could come out of project monitoring results is to determine whether e-jeepneys require a higher subsidy to be viable. (The subsidy for Class II modern jeepneys of all types has recently been raised to 280,000 pesos.) Currently, the price of e-jeepneys is significantly higher than that of Euro IV jeepneys. Financial sustainability is considered ML, but post-project monitoring, if it shows financial attractiveness of e-jeepneys, may improve sustainability.

Social and political sustainability: Social and political factors present a risk to the ongoing increased deployment of e-jeepneys as targeted by the project. First, as noted, there has been serious resistance among jeepney owners against PUVMP, which requires them to consolidate and upgrade their vehicles. This culminated in protests in March 2023, though seems to have calmed down when, in response, the government delayed the deadline for consolidation into cooperatives from June 2023 to Dec. 2023. And, it is also possible that the next administration will have less support for electrification of public transport than the current one. At the same time, stakeholders point out that social and political factors can be quite positive in terms of promoting low carbon public transport. They indicate that public transport, air quality, and traffic generally are quite bad in the Philippines; and there is thus social pressure for a solution that politicians will respond to.

Stakeholder ownership is good in some areas, but needs to be improved in others. The project has achieved a good degree of stakeholder ownership at the level of national officials and e-jeepney suppliers, who have been quite engaged through the Project Board and other opportunities. Where the project may have fallen short is lack of an outreach program to jeepney operators nationwide. This could be used to get information to these key stakeholders on e-jeepneys and their benefits, as well as general information on fleet management, etc. As for the LGUs, while there is some positive response, it looks as though planning work will not be sustainable in terms of incorporating LCT into adopted plans. And, some feedback suggests the project did not provide a consistent plan of action to the LGUs and in this way they do not see a role for themselves in sustaining results. In short, the message and aims of the project were not that clear to them.

To date, there is no evidence of documentation of lessons learned by the project. It would have been worthwhile for the project to take advantage of opportunities to create information products, such as of monitoring of the demos, and get these distributed to jeepney operators. There are probably other knowledge products that need to be prepared and shared with the jeepney operators. The project had a website earlier, but it is no longer active.

Gender results include 40% of meeting and workshop participants on average being women. They also include GESI workshops put on for four LGUs with attendance of the traditionally male jeepney sector. The main nature of these gender results are in capacity built. While this may have a long-term impact on beneficiaries, there are no results for which long-term impact could be easily measured.

Social and political sustainability is considered ML. This might have been higher had the project developing an emailing list of jeepney cooperatives and kept them informed of findings and potential of e-jeepneys.

Institutional framework and governance sustainability: The project contributed to progress in policies and standards supportive of e-jeepney deployment and, to a lesser extent, LCT, thus reducing some related risks to sustainability. EVIDA, to which the project made strong contributions, and Green Routes Guidelines, drafted in full by the project, both contribute to the sustainability of e-jeepney deployment over time. An interagency committee under EVIDA has been set up (this happened independent of the project), so will allow for the ongoing update of CREVI, the roadmap associated with EVIDA. The project has a target for an executive order for an interagency LCT committee and has revised its plan to target a JMC for such a committee instead. It's not clear if the JMC will be signed by all parties by EOP. On the other hand, active transport (a big part of LCT aside from EVs) has found its way into institutions, as DOTr has an active transport team (though this is not attributed to the project).

The project has not yet put in place the systems/ organization needed to continue project work and knowledge transfer after its close. In particular, it is recommended that before financial close, plans be confirmed for monitoring be conducted on the project's e-jeepneys for a least one year. As recommended earlier, the parameters monitored need to be improved. Another area that needs institutional support post project is the three TESDA training regulations that it was determined TESDA would pursue as a result of the skills mapping work of the project. The work on the EV technician TR may be transferred to other donor EV projects, such as the GEF-UNIDO-DTI project, for follow-up if they are interested.

The project seemed to identify some champions to promote LCT, especially e-jeepneys, though might have done some more work on this with its Incentive Program winners. So far, one of the best champions of the project has been the mayor of Baguio, who has been very supportive of project inputs. Further, the project in its workshops, particularly its e-jeepney Investment Forum, has promoted the first cooperative in General Santos City to procure e-jeepneys. This cooperative could continue to play a role in promoting the benefits of e-jeepneys. The project has also worked closely with Iloilo's Aerostar, which had, in 2022, procured 10 e-jeepneys and now will procure 12 more (2 via project incentive grant and 10 via bank loan). Aerostar can clearly be developed into a champion for e-jeepneys and hopefully will provide monitoring data for all 22 of its e-jeepneys and utilize AFCS in doing so.

The project aimed at its EOP sustainability workshop to propose means of sustaining and building upon project results. Interestingly, one stakeholder has raised how important it is, given the very critical area of focus of the project, that there be a plan for "what next?" This report is also suggesting that DOTr prepare a departmental notice that documents the many recommended actions to take after project close, such as e-jeepney monitoring, dissemination of results to as many jeepney operators as possible, etc.

In terms of future governance and institutional changes, the project has mostly responded to these by supporting the development and adoption of policies and standards. Further, its work in market development with the private sector is something that can endure changes in government. Yet, it's not clear whether, at the local level, project training in the LCT planning area will be incorporated into future plans. Lastly, institutional changes proposed by the project are not known to have addressed gender and human rights concerns. These terms are not included in the draft JMC, for example, but might be added.

Overall, the project's institutional framework and governance sustainability is considered ML.

Environmental sustainability: In general, LCT is an environmentally oriented project, so its environmental benefits in reducing local air pollution and GHG emissions are mostly positive. A few environmental risks, however, emerge. A key issue that needs to be addressed to ensure the benefits of e-jeepney adoption (and thus of the project's efforts) is the disposal of old, traditional jeepneys after acquisition of new jeepneys (either e-jeepney or Euro IV) via PUMP. Currently, the old jeepneys are said to show up on the roads in other applications. DOTr may want to tighten up requirements for scrapping

the old jeepney (when a cooperative receives a subsidy and low interest loan) and work with DOST and DTI to develop recycling facilities.

A few other issues are worth considering with regard to environmental sustainability: Issues of battery or battery cell reuse/ recycling for e-jeepneys may need to be addressed. Clear directions how to reuse or recycle such items should be made and disseminated. Second, the issue of source of electricity of the power that charges the e-jeepney may be paid attention to. DOE's policy is to promote solar powered charging stations is of interest in this regard.

Environmental sustainability is rated L-.

Exhibit 8-8. Philippine LCUTS Sustainability Ratings

Note: See Annex 4 for explanation of ratings

Financial Sustainability	Socio-Political Sustainability	Institutional Sustainability	Environmental Sustainability
ML = 3	ML = 3	ML = 3	L- = 3.75
In theory, government bank loans should support acquisition of e-jeepneys. Better info on financial returns needed to determine whether subsidy is adequate. Lack of approved LPTRPs in many LGUs hinders bank loans. GCF program suggested by some to provide financing.	Strong public concern for the challenges of public transport and traffic generally in the Philippines is a positive on the socio-political side. Recent protests of the jeepney operators and their lack of access to capacity building are risks.	Project has done well to support policies that will support sustainability of efforts, such as EVIDA and Green Routes Guidelines. Yet there is a need for institutions in place t monitor the e-jeepneys and carry on in-progress work of the project, such as the JMC.	Project is mainly a positive on the environmental side. Biggest environmental risk is that traditional jeepneys once replaced via PUVMP still stay on the road.
Sustainability Overall: ML = 3			

8.7 Country Ownership

Please see sub-section 8.2 on Relevance, sub-sub section on "Alignment with National Priorities." As that sub-sub-section explains, the LCUTS project is aligned with many national policies, plans, etc. that existed at the time of project design. And, since then (or towards the end of the design period), the country launched PUVMP in 2017. This is the national initiative that the project is most in line with, as PUVMP requires modernization of jeepneys to either Euro IV (or higher) diesel jeepney or e-jeepney. And, in 2022, the country (with some good support from the project) enacted EVIDA, followed by EVIDA IRRs and, in 2023, a first version of CREVI (the EV roadmap) was prepared.

Country ownership on the day-to-day project implementation level, however, was mixed. The project attracted good interest from key Project Board members working in the EV sector, such as DOE, DTI, DOST, and private sector entities. And some even referred to the Project Board as an important platform for discussions on the EV sector. Yet, with regards to its key national partner and IP, DOTr, ownership was found by many to be lacking. Many explanations were offered, for example: (a) This was a project of the previous administration, so the new one was not interested. (b) The Road Transport Team is extremely busy as they have so many projects and this is a small one. (c) DOTr has mostly contract staff and turnover is too high to provide consistent support. (d) DOTr doesn't have that much interest in EVs as it is apart from their main business (in contrast to DOE and DTI, which do have that interest). In fact, the DOTr office that was supposed to coordinate with the project did have some overlap as it also had responsibility for PUVMP. So, in that sense, the fit should have been good. Yet, PUVMP is a large program; and the project was not really closely in sync with what it was doing. One stakeholder

commented that if the project was designed more in line with government programs, it could have gotten their attention and done more. In retrospect, after the launching of PUVMP, the project might have been adjusted to fit better with the larger program. One stakeholder relatedly mentioned the issue of "coherence with the timing of existing programs/activities of the government which could have otherwise resulted in impactful project implementation." The example given was the time for developing LGU LPTRPs (and thus also the opportunity to advise on green routes). It seems that the project began to help with LPTRPs, but stopped with Covid and then became behind schedule – it was then too late to assist for that cycle of LPTRPs.

There are some examples of country ownership for specific items. DOTr's Active Transport Office seems interested in the bottom-up bike lane plans, has allocated budget to it, and visited (at the secretary level) the three metro areas involved for a formal handover of the plans.

8.8 Gender Equality and Women's Empowerment

Gender has been discussed under Sub-section 8.2 (in the sub-sub-section on Alignment to national and local strategies to advance gender equality) and in sub-section 8.3 (in the sub-sub-section on Gender).

To recap the highlights, the project put some concerted efforts into addressing gender equality and social inclusion. It achieved a 40% representation of women at project events, which translates into 869 person attendances at these events by women (will include double counting of those who attended more than one event). While the project also aimed to create equal employment opportunities for women in the transport sector, this was not found in the policies supported and the author did not see it realized in action. Yet, the other notable result in gender of the project was to hold a GESI workshop in each of the four pilot cities with jeepney operators, among others, in attendance. The project had a GESI consultant who, based on inputs at the GESI workshops prepared a gender action plan. Yet, no evidence was found that the action plan was being implemented. In sum, the project contributed to gender equity and women's empowerment, particularly through its GESI workshops, but at a moderate level. For capacity building, it is difficult to measure whether the impacts will be long-term or not, but learning is important; and the project exposed a group (jeepney cooperatives) that is typically not exposed to such training. On the gender results effectiveness scale (GRES), the project achieved "gender targeted" in efforts to include women in equal numbers to men. It made some progress towards "gender responsive" in the content of the GESI workshops and its action plan, but did not implement the action plan.

8.9 Cross-cutting Issues

Positive or negative effects on local populations: LCUTS's aim to promote low carbon transport has the win-win impact of reducing local air pollution. Thus, the successes of LCUTS in deploying low carbon transport offer positive effects on the local population. The active transport segment of the project may also have positive effects on health (more cycling) and socialization (open streets). Job creation so far is not that substantial and is mainly comprised of those that will work at the charging stations. If the industry were to grow, however, more jobs will be created related to charging stations, manufacturing, and maintenance and repair. For the last, the project is paving the way by developing a CS and curriculum in the pure battery EV technician area, which will hopefully eventually become a TR.

Conformance with priorities in key UNDP country program documents: Findings suggest the project as designed and as realized has good synergies with UNDP country program documents. Please see Sub-section 8.2 Relevance (sub-sub-section on Alignment with UNDP and GEF strategic priorities) and Sub-section 8.3 Effectiveness (sub-sub-section on Contribution towards UNDP, GEF, and national priorities). In particular, the project results contribute to the CPD. For the CPD's sub-output 2.2.1, the project

achievements may contribute one point for a national plan/strategy that includes low-emission targets via CREVI which is the roadmap for EVIDA, the latter to which the project made good contributions. For Sub-output 2.2.2, two points might be added for the at least two private entities (jeepney cooperatives) that due to the project are expected for the first time to invest in e-jeepneys.

Contribution to climate change mitigation: All three project outcomes contribute towards this aim. The third outcome does this directly by deploying e-jeepneys and solar PV charging stations. The first outcome does this by influencing policy related to EVs and LCT. The second does this by increasing capacity related to LCT planning, e-jeepneys, and other topics.

Extent to which women, persons with disabilities, and other marginalized groups benefit: The project's contributions towards gender equality are covered in sub-section 8.8 above (Gender Equality and Women's Empowerment). Of course, many marginalized groups may benefit from improved public transport. It is often the poor who lack their own vehicle and take public transport. Upgrading from traditional jeepneys to modern jeepneys with air conditioning can improve their situation. The project also supported an event in Pasig on "inclusive streets" that addressed how to make streets more accommodating to such groups. Finally, many jeepney drivers might be considered as a group socially marginalized, with poor working conditions, low salaries and income not guaranteed through regular contracts. By its role in promoting the upgrading of vehicles, the project may contribute to improvement in their working conditions (i.e. nicer, more modern vehicles).

Poverty reduction and sustaining livelihoods aspect: As noted above, the project results contribute some new jobs and the general contribution to the growth of the industry may create more. At the same time, the modernization of the jeepney sector is a major challenge, because jeepenys are the livelihood of some individual jeepney owners/ drivers. Thus, an orderly transition that does not dislocate people is important. In this regard, the project's support of jeepney cooperatives in areas such as fleet management may have been helpful and it may be useful to document the content and share with a wider group of jeepney operators nationwide.

Contribution to a human rights-based approach: The project supported a human rights-based approach via some of its activities. One example is "Streets for Kids," whereby children, who usually don't have much of a say in city planning were able to design an upgrade to the street area near their school to make it more walkable. (Also see sub-sub-section above "Extent to which women, persons with disabilities, and other marginalized groups benefit.")

8.10 GEF Additionality

Because LCUTS was approved prior to December 2018, an additionality analysis is not required. Yet, a brief discussion is included here. In terms of types of additionality, the project provides specific environmental additionality, by resulting in GHG ERs that would not happen in the absence of the project. Those are linked to at least 12 e-jeepneys that are expected to be deployed by EOP that would not have been deployed in the absence of the project and to the one solar PV charging stations that is expected to be deployed by project financial close. Legal regulatory additionality is also perceived in that the project provided input to EVIDA such that EVIDA includes green routes requirements and in that the project designed Green Routes Guidelines adopted by DOTr in their Omnibus Guidelines. The project did not achieve institutional additionality, but there are hopes that the draft LCT JMC to promote an inter-agency LCT committee may continue to be pursued by DOTr post-project.

In terms of incremental reasoning, the author would suggest in the future that this project and others focus more on incremental reasoning in assessing achievements. A problem is that the PRF for this project did not, for some indicators, specify that targets were to be achieved via influence of the project. As a result,

the team was doing some work to gather information on nationwide numbers without regard to whether the project was the reason for achievements. The author suggests for optimal results based management in the future, projects adopt a "project attribution" criteria to their indicators when possible. In terms of sustainability, some items, such as policy, are sustainable and others, such as draft plans for LGUs that are not adopted, are not. Please see Section 8.2 on sustainability and each of the sustainability sections related to the respective outcomes. (These are sub-sections 5.10, 6.9, 7.8.)

8.11 Catalytic/Replication Effect

In reviewing the catalytic role of the project, while it did not have time to achieve replication or scaling up, the project was able to achieve demonstration which may be replicated in the future. Feedback suggests that the project did contribute to revitalization of the sector via its Incentive Program. This is occurring after over three years of relative dormancy in the sector, when only two new cities were added to those with e-jeepneys in public transport.

Lessons: The biggest lesson for UNDP-GEF transport projects is that teams sometimes struggle in coming up with a public transport demonstration model. As such, it would be useful for UNDP's NCE Team to provide a booklet of generic demo designs that are considered both suitable for stimulating scale-up and that fit UNDP requirements. If the project had deployed its e-jeepneys earlier, it would have had more time to follow up afterwards, disseminate results, and stimulate replication.

Exit strategy: This report has made some suggestions for improving the sustainability of project results through measures that may be taken either by the project before financial close or by partners after financial close. In particular, if the project is to institute extended monitoring of the e-jeepneys, it needs to find an organization to take over coordination after financial close. And, if there will be an ongoing outreach/ communications program with jeepney cooperatives, then there will also be a need for another organization to follow up with the jeepney operators on an ongoing basis after project close. According to a reviewer of a draft version of this report, there is a plan to document and disseminate the project's lessons learned before EOP and similarly come up with a sustainability plan before EOP.

8.12 Progress to Impact

LCUTS has some potential to create long-term impact towards the adoption of e-jeepneys, promotion of EVs generally, and perhaps towards LCT planning. And these results will, in turn, lead to GHG ERs. To really leverage the demo e-jeepneys, their results need to be measured ("monitoring") and disseminated, especially to jeepney operators. Policy work of the project also supports long-term impact, as it creates an enabling environment for low-carbon vehicles, especially EVs. In that regard, project contributions to EVIDA and project drafting of the Green Routes Guidelines are very important. In terms of causal links towards impact, the project's Incentive Program has been very important in stimulating interest in e-jeepneys and encouraging suppliers to pursue certificates of compliance for new models. This, in turn, has led to the procurement of new e-jeepneys for public transport that should be on the road soon. For long-term impact, as discussed, it is hoped that the demos themselves, combined with monitoring of them, which is then disseminated, will lead to continued replication and thus long-term impact. Another type of long-term impact that might be achieved is the availability of training programs registered with the government (TESDA) for pure battery EV technician. Achievement of this, however, will require that efforts to advance the CS to a TR are taken up post-project. Risks to long-term impact are included in sub-section 8.6 on sustainability. Financial viability of e-jeepneys as compared to Euro IV jeepneys still needs to be worked out, for example, and e-jeepneys may require a higher subsidy depending on results.