

Country	Indonesia
Request ID#	2019000043
Title	Supporting Jakarta's transition to e-mobility
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Proponent	Sri Haryati Economic and Financial Assistant, the Provincial Secretary, Provincial Government of DKI Jakarta, Indonesia Email: sriharyati7771@gmail.com ; bioperekonomianjakarta@jakarta.go.id

Summary of the CTCN technical assistance

The summary should provide a brief description of the problem (barrier to climate technology deployment) and how the technical assistance will address it (brief summary of outputs and activities). Please also briefly indicate national actors involved and the anticipated timeline. Please note this summary will be used for public communication purposes so it is important that it is well written. (maximum 1250 characters including spaces)

As the capital and largest city of Indonesia, Jakarta is facing a range of urban transport challenges including severe traffic congestion, air pollution, and high fuel consumption. To address these problems, the Government of Jakarta has made investments in its public transport system, including a Bus Rapid Transit System with 13 trunk routes with a total ridership per day reaching 0.8 million. Jakarta also has 2 Mass Rapid Transit lines with expansion underway. Efforts are already ongoing to connect inter-city and intra-city rail and integrate to the existing comprehensive bus system which will be significant to make urban transport more environment friendly.

Though the increasing volume and quality of public transport can alleviate the city's air pollutant and GHG emissions problems to a certain extent, a faster transition to electric mobility is required to meet its growing emissions from the transport sector. Air pollution is one of the key challenges along with congestion in the city. On bad days, Jakarta can find itself top of the list of the most polluted cities in the world. Further, the City of Jakarta contributes about 15% of GHG emissions of Indonesia, of which the Transport sector is a significant contributor. Thus, there is urgent need to decarbonize the transport sector.

Hence, the objective of this Technical Assistance is to support the Government of Jakarta, and the TransJakarta, a parastatal bus operator, in mainstreaming e-mobility in Indonesia, and particularly the deployment of electric buses in Jakarta.

To meet these objectives, the Technical Assistance (TA) will:

1. Review and identify policy requirements and actions required by Government of Jakarta and Government of Indonesia to facilitate the deployment of e-buses and related infrastructure;

2. Prepare an investment plan, business model, and public procurement documents for deployment of e-buses and other electric vehicles for government use in 2020;
3. Assess the feasibility of charging solutions using renewable energy-based electricity

Outputs and activities:

All the activities and outputs of this TA are as outlined below:

Output 1: Policy requirements and actions required by the Government of Indonesia and Jakarta to facilitate the deployment of e-buses and related infrastructure;

- Activity 1.1: Consolidate and review transport plans and policies relevant for Jakarta, including environmental and fiscal policies for vehicles and fuels in Indonesia
- Activity 1.2: Review and analyze transport data for TransJakarta, the feeder services (including angkots), 2-wheelers, the MRT and LRT plans, and current urban development plans for Jakarta, and identify recommendations to increase levels of service of TransJakarta, MRT, and other public transport modes.
- Activity 1.3: Convene a stakeholder consultation workshop with relevant national government agencies and other stakeholders to present the results of the policy review and identify policy options for implementing electric mobility both at national and local scales.
- Activity 1.4: Coordinate with relevant national government agencies and other stakeholders to develop policies in implementing electric mobility both in national and local scale.

Output 2: Investment plan and business model; and public procurement plans and documents for the acquisition and deployment of electric buses and other electric vehicles for government use

- Activity 2.1: Prepare tenders for e-bus procurement and provide relevant training in the management of assessment of tenders
- Activity 2.2: Develop an investment plan and/or business model for Transjakarta and potential operators for electric buses for inclusion in future funding proposals
- Activity 2.3: Develop technical input for green public procurement policy for sustainable transport
- Activity 2.4: Conduct consultations with relevant stakeholders on the tenders and business cases to finalize the tenders and synthesize recommendations based on the learnings, feedback and best global practices on the procurement of sustainable transport.

Output 3: Feasibility of charging solutions using renewable energy-based electricity

- Activity 3.1: Develop comprehensive study and plan for public and private charging infrastructure for Jakarta (and specifically for TransJakarta e-buses), including renewable-powered charging for all public transport modes
- Activity 3.2: Develop incentives to increase the share of renewable energy in the electricity mix for e-vehicle charging facilities;
- Activity 3.3: Prepare tender designed to integrate solar roofs on existing TransJakarta and/or MRT assets
- Activity 3.4: Conduct consultations with relevant stakeholders on the tenders and business cases to finalize the tenders and synthesize recommendations based on the learnings, feedback and best global practices on the procurement of renewable energy-based charging infrastructure.

While ensuring close coordination with the ongoing and past initiatives in the country, the outcomes and activities of the proposed TA will be aligned with the priorities of Indonesia's relevant ministries and other key stakeholders.
The project is expected to take place over the course of 18 months.

Agreement:


(If possible, please use electronic signatures in Microsoft Word file format)

**National Designated Entity to the UNFCCC
Technology Mechanism**

Name: Ruandha Agung Sugardiman
Title: Director General for Climate Change,
Ministry of Environment and Forestry,
Indonesia

Date:

Signature:

21/01/2020


Proponent (signature of the Proponent is optional)

Name:

Title:

Date:

Signature:

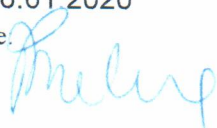
UNFCCC Climate Technology Centre and Network (CTCN)

Name: Rose Mwebaza

Title: CTCN Director

Date: 20.01.2020

Signature:



1. Background and context

Please provide a brief description of the background and context for the CTCN Response Plan. Please include national and sectoral information using recognized and publicly available sources. (maximum 2500 characters including spaces).

National context

Indonesia, the largest archipelagic country with more than 17,500 islands, is the fourth biggest population in the world, with 261 million inhabitants. It is also the largest economy in Southeast Asia, with a Gross Domestic Product of \$933 billion.

Jakarta, the country's capital, is one of the megacities in the world facing transport-related challenges like severe traffic congestion, air pollution, and high fuel consumption. Central government's investment on transport increased three times between 2010-2016¹, to cope with increasing demands. The Government of Jakarta established a Bus Rapid Transit System,

¹ Source: World Bank (2018): <https://blogs.worldbank.org/transport/how-can-indonesia-achieve-more-sustainable-transport-system>

TransJakarta, with 13 trunk routes now serving a daily ridership reaching 0.8 million. The city also opened Mass Rapid Transit lines with ongoing expansion. Efforts also exist to integrate its railway system to the current bus system to increase the modal share of public transportation.

Despite the above efforts, outdated technologies prevail in Jakarta's transport sector leading to challenges in addressing its growing air pollutants and GHG emissions. CNG buses were introduced as part of the TransJakarta fleet to address the urban air pollution, however the uptake has been slow. Though the increasing volume and quality of public transport can provide a temporary solution, a wider adoption of zero-tailpipe emission technologies is needed to keep up with growing emissions in Jakarta.

Transportation is a key contributor to the GHG emissions in Indonesia. The City of Jakarta contributes about 15% of greenhouse gas (GHG) emissions of Indonesia, of which the Transport sector is a significant contributor. In meeting Indonesia's commitment to the Paris Agreement, the Government of Jakarta is committed to promoting electric mobility as a strategy for Jakarta to leapfrog to zero-emissions tailpipe technology and reduce air pollutants and CO₂ emissions.

Indonesia's Nationally Determined Contributions (NDC) describes an unconditional greenhouse gas (GHG) emissions reduction target of 29% and a conditional 41% reduction by 2030 compared to business-as-usual projected emissions. In 2005, Jakarta emitted 35 million tons of CO₂e, compared to 2.1 billion tons of CO₂e throughout Indonesia. The emission is projected to increase to 113.94 million tons CO₂e by 2030 (Jakarta Environmental Agency 2005). Of this, about 25% emissions come from the Transport sector.

In this context, the project aims to demonstrate the impact of electric buses as part of TransJakarta and to mainstream e-mobility at large in Jakarta and the rest of the country.

Global context

Electric mobility allows shifting away from fossil fuels and provides an effective measure to address air pollution in urban areas and decarbonize the transport sector as the share of renewable in electricity increases. Electric vehicle technology has matured, and a shift is already underway in developed countries, some even has announced banning conventional fossil-fuelled vehicles in several cities. Many developing countries have set ambitious targets for scaling up e-vehicle use in a bid to reduce their dependency on fuel imports.

The Paris Declaration on Electro-Mobility and Climate Change and Call to Action, announced at COP21, expresses the ambition to achieve 100 million electric cars and 400 million electric two-wheelers on the road by 2030. The IEA 2°C scenario (2DS) calls for one third more EVs than these targets, and the Beyond 2°C scenario (B2DS) considers that they would need to be doubled and coupled with significant decarbonisation strategies in the power sector to deliver deep reductions of well-to-wheel GHG emission from transport.

There is a growing momentum around the awareness and interest in the use of electric vehicles in Indonesia though the efforts are at premature stages. The use of E-buses was piloted in Bali; there are already 10 electric buses being piloted. Work on charging infrastructure is also ongoing in Jakarta for 2 wheelers. In December 2017, there were at least 1,300 electric recharging stations

(SPLU*) available nationwide which spread across 24 cities, of which 71% of them (924 recharging stations were in the Greater Jakarta area. The President's office is working on a Government decree to promote the transition to e-vehicles. The Decree is expected to be published by February 2019. Further the government has set a target of 2.1 electric 2 wheelers by 2025.

2. Problem statement

Founded on the national and sectoral context as detailed in the section above, please include a brief problem statement clarifying the main problems and barriers for climate change mitigation and/or adaptation in terms of climate technologies that the CTCN Response Plan will address and overcome. (maximum 1250 characters including spaces).

So far, numerous barriers have been identified to hinder the uptake of electric mobility in Jakarta. These barriers can be categorized as following: 1) Lack of information; 2) Policy and planning barrier 3) Institutional capacity barrier; and 4) Investment and market barrier.

- Lack of information – Consumers, policy makers and vehicle manufacturers are not fully aware of the environmental and economic benefits of electric mobility. In many middle and low-income countries introducing low-emission transport is still perceived as an expensive policy measure which are not adapted to local conditions. On the contrary long-term benefits of using low-emission vehicles from reduced energy use, CO₂ and air pollutant emissions are often out shadowed.
- Policy and planning barrier – Currently there are no national-level policies on electric mobility. Many low and middle-income countries have no dedicated fiscal or regulatory policies in place to incentivize the uptake of cleaner fuels and vehicles. On the contrary, many countries still subsidize petroleum fuels or have disadvantageous fiscal policies in place, which complicate for example the import of electric vehicles.
- Institutional capacity barrier – Decision makers in government lack the capacity to develop national electric mobility projects. The development of policies to foster the uptake of low-emission mobility most often includes stakeholders from various ministries and requires thorough analysis and understanding of the national transport sector. There is a whole suite of options to incentivise low-emission vehicles and a tailored set of interventions needs to be developed based on the national preconditions. Decision makers need technical support during all stages of low-emission transport policy development.
- Economic and market barrier – Private sector participation needs to be encouraged while limiting the role of state-owned enterprises to nurture a competitive market. All sources of financing electric mobility projects need to be untapped. This includes the set-up of new business models which involves cross border actions between all stakeholders to spread the needed investment as well as the economic risk.

**Technical Assistance Response Plan –
Terms of Reference**

Activity 1.1: Formulation of i) Detailed work plan, ii) Monitoring and evaluation plan, iii) CTCN Impact Description, iv) Closure and Data Collection report.	Project manager, 5 days				2,800	
Output 2: Policy requirements and actions required by Government of Jakarta and Government of Indonesia to facilitate the deployment of e-buses and related infrastructure						
Activity 2.1: Consolidate and review transport plans and policies relevant for Jakarta, including environmental and fiscal policies for vehicles and fuels in Indonesia	Project manager, 5 days Transport specialist, 15 days Researcher 20 days				13,300	
Activity 2.2: Review and analyze transport data for TransJakarta, the feeder services (including angkots), 2-wheelers, the MRT and LRT plans, and current urban development plans for Jakarta, and identify recommendations to increase levels of service of TransJakarta, MRT, and other public transport modes.	Project manager, 5 days Transport specialist, 30 days Researcher 30 days				21,400	

**Technical Assistance Response Plan –
Terms of Reference**

<p>Activity 2.3 Coordinate with relevant national government agencies and other stakeholders to develop policies in implementing electric mobility both in national and local scale. Prepare draft policies or policy amendments to remove barriers and support electric mobility both at national and local scales and present the policy options to relevant national government agencies.</p>	<p>Project manager, 10 days Transport specialist, 20 days Researcher 50 days =25,200</p>		<p><i>Meaning venue, meeting package - 200 persons</i> <i>=15,500</i></p>		<p>40,700</p>	
<p>Output 3: Investment plan and business model; and public procurement plans and documents for the acquisition and deployment of electric buses and other electric vehicles for government use</p>						
<p>Activity 3.1: Prepare tenders for e-bus procurement and provide relevant training in the management of assessment of tenders</p>	<p>Project manager, 5 days Transport specialist, 20 days International consultant (e-mobility expert), 5 days</p>				<p>14,100</p>	

**Technical Assistance Response Plan –
Terms of Reference**

<p>Activity 3.2 Develop an investment plan and/or business model for Transjakarta and potential operators for electric buses for inclusion in future funding proposals</p>	<p>Project manager, 5 days Transport specialist, 20 days International consultant (e-mobility expert), 5 days</p>				<p>14,100</p>	
<p>Activity 3.3 Develop technical input for green public procurement policy for sustainable transport</p> <p>Conduct consultations with relevant stakeholders on the tenders and business cases to finalize the tenders and synthesize recommendations based on the learnings, feedback and best global practices on the procurement of sustainable transport.</p>	<p>Project manager, 10 days Transport specialist, 15 days International consultant (e-mobility expert), 5 days</p>				<p>43,200</p>	
<p>Output 4: Feasibility study on charging stations using renewable energy-based electricity and solar systems on buses and bus/MRT stations for charging</p>						
<p>Activity 4.1 Develop comprehensive study and plan for public and private charging infrastructure for</p>	<p>Project manager, 20 days Transport specialist, 30 days</p>				<p>39,400</p>	

**Technical Assistance Response Plan –
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<p>Jakarta, including options for sourcing renewable based electricity for all public transport modes</p>	<p>International consultant (e-mobility expert), 10 days International consultant (energy expert), 20 days</p>					
<p>Activity 4.2 Develop incentive model to increase the share of renewable energy in the electricity mix for e-vehicle charging facilities;</p>	<p>Project manager, 10 days Transport specialist, 15 days International consultant (e-mobility expert), 10 days</p>				<p>16,900</p>	
<p>Activity 4.3 Prepare tender designed to integrate solar roofs on existing TransJakarta and/or MRT assets Conduct consultations with relevant stakeholders on the tenders and business cases to finalize the tenders and synthesize recommendations based on the learnings, feedback and best global practices on the procurement of renewable</p>	<p>International consultant (energy expert), 20 days</p>		<p>\</p>		<p>11,200</p>	

**Technical Assistance Response Plan –
Terms of Reference**

energy-based charging infrastructure.						
Overheads (office space, In-house printing, telephone etc)					20,000	
Estimated range of costing for the entire Response Plan					243,300	

5. Profile and experience of experts

Based on the required Human Resources identified in section 4 (Resources required and itemized budget) please provide a description of the required profile of all involved experts for the implementation of the CTCN Response Plan.

Experts required	Brief description of required profile
<i>Please use the same titles for all experts as applied in section 4.</i>	<i>Please provide a short description of expertise and experience needed (education, sectors of expertise, years of experience, country experience, language requirements, etc.).</i>
Coordinator – transport expert	<ul style="list-style-type: none"> • Bachelor’s Degree, or equivalent, in Transport/Civil Engineering, Urban Planning, Economics, or other related fields • At least 5 years of project management experience with a focus on sustainable mobility is required • Experience in developing policy documents and developing transport/climate mitigation projects is required • Excellent oral and written communication skills in English is essential
Energy and Transportation expert (national)	<ul style="list-style-type: none"> • Master's Degree, or equivalent, in Transport/Civil Engineering, Energy Economics and/or Urban Planning or other related fields is required • Relevant professional experience in the transport or energy sector, including development and implementation of transport/energy efficiency projects in Indonesia is required • Experience in climate finance is highly desirable • Excellent oral and written communication skills in English is essential
Transport expert (international)	<ul style="list-style-type: none"> • Master's Degree, or equivalent, in Transport/Civil Engineering, Urban Planning or other related fields • At least 10 years of experience in sustainable mobility is required • Experience in climate finance is required • Experience in developing policy documents and developing transport/climate mitigation projects is required • Excellent oral and written communication skills in English is essential
Gender Expert	<ul style="list-style-type: none"> • Understanding and demonstrated ability of gender considerations in transportation sector and related areas

**Technical Assistance Response Plan –
Terms of Reference**

- The Gender Expert shall have proficiency in reading, writing and speaking English and must be able to communicate with stakeholders effectively.

6. Intended contribution to impact over time

Please provide a brief description of the intended contribution to impact over time of the outcome and outputs provided by this technical assistance on resilience to climate change and/or carbon abatement. To the extent possible, please quantify the intended impact contribution, for example by indicated estimated number of people potentially impacted over time, GDP contribution of the focus sector, carbon emissions by the focus sector, etc. This intended contribution to impact is what will happen if the objective (as articulated in section 3) is met. Please ensure relevant complementarity with text in sections 7 to 12. (maximum 1250 characters including spaces)

This Technical Assistance (TA) aims to demonstrate the impact of electric buses as part of TransJakarta and to mainstream e-mobility at large in Jakarta and the rest of the country.

This TA will support the Government of Indonesia in meeting its international to the Paris Agreement. In meeting Indonesia's commitment to the Paris Agreement, the Government of Jakarta is committed to promoting electric mobility as a strategy for Jakarta to leapfrog to zero-emission tailpipe technology and reduce air pollutants and CO₂ emissions. The City of Jakarta contributes about 15% of greenhouse gas (GHG) emissions of Indonesia, of which the Transport sector is a significant contributor.

In 2005, Jakarta emitted 35 million tons of CO₂e, compared to 2.1 billion tons of CO₂e throughout Indonesia. The emission is projected to increase to 113.94 million tons CO₂e by 2030 (Jakarta Environmental Agency 2005). Of this, about 25% emissions come from the Transport sector. Indonesia's Nationally Determined Contributions (NDC) describes an unconditional greenhouse gas (GHG) emissions reduction target of 29% and a conditional 41% reduction by 2030 compared to business-as-usual projected emissions.

The Technical Assistance of CTCN will contribute to mitigation of GHG emissions from the road transport sector as well as improvement in energy security through promotion of clean and more efficient vehicles in Indonesia. A national e-mobility policy for Indonesia, an output under this TA, will contribute to creating conditions for a wide adoption of electric vehicle technologies and electric buses in particular in Indonesia. The incremental effects arising from the support provided under this TA will be able to extend the integrated, sustainable and low-emission concept to the transport system in Indonesia.

7. Relevance to NDCs and other national priorities

Please identify relevance and contribution from the technical assistance to the Nationally Intended Contributions (NDC) and other relevant national prioritized efforts (TNAs, TAPs, NAPs, NAMAs, etc.). (maximum 2500 characters including spaces)

Relevance to NDCs

Indonesia's Intended Nationally Determined Contribution (INDC) proposed an unconditional greenhouse gas (GHG) emissions reduction target of 29% and a conditional 41% reduction by 2030 compared to business-as-usual projected emissions.

In 2005, Jakarta emitted 35 million tons of CO₂e, compared to 2.1 billion tons of CO₂e throughout Indonesia. The emission is projected to increase to 113.94 million tons CO₂e by 2030 (Jakarta Environmental Agency 2005). Of this, about 25% emissions come from the Transport sector.

Relevance to national priorities

The Government of Jakarta has, as stated above, has taken steps to enhance the public transport system to reduce air pollution and GHG emissions from the urban transport sector. The city is also working on last mile integration of public transport with better cycling and walking infrastructure to increase public transport use. Major national initiatives on sustainable cities including National Urban Development Policy and Strategy 2015-2025 and Green Cities programme shows that the Government of the Republic of Indonesia (GOI) is committed to making its cities more sustainable.

The below policies are some of the key initiatives and provisions related to electric mobility in Indonesia:

- The President's office is working on a Government decree to promote the transition to e-vehicles. The Decree is expected to be published by February 2019. Further the government has set a target of 2.1 electric 2 wheelers by 2025.
- Jakarta MRT (Mass Rapid Transit): Phase 1 of the project was officially opened on 24 March 2019. It operates 285 trips daily from 5 AM until midnight, with 5 minutes headway. A second line is expected to be in place by 2024.
- National Urban Development Policy and Strategy 2015-2025: This is being implemented by the National Development Planning Agency (Bappenas) to have urban areas meet national service standards by 2025, achieve smart, green and liveable cities by 2035, and attaining sustainable urban development by 2045. Within this the Government has launched a Green Cities programme, which has eight components. The remaining five, which includes Green Transport a key component of green sustainable cities, are under the responsibility of other ministries, i.e. the Ministry of Environment and Forestry, Ministry of Energy and Mineral Resources, etc.
- Indonesia's five-year plan for 2020-2024 (Rencana Pembangunan Jangka Menengah-Panjang or RPJMN, 2020-2024): The Ministry of National Development Planning (BAPPENAS) released its low carbon development plan, containing three long-term (2045) emission pathways as part of this five-year plan.
- Indonesia's National Energy Policy (NEP): This includes a target to increase renewable energy to 23% of total primary energy supply (TPES) by 2025 and 31% by 2050.

8. Anticipated follow up activities after this technical assistance is completed:

*Please describe the expected **future use** of the outputs and deliveries produced by this technical assistance, after the CTCN implementation is completed, towards contributing to the anticipated impacts over time articulated in section 6. For example, what **organizations or stakeholders** will use the outputs of the technical assistance after it is completed, for what purpose, at what scale and scope the outputs and deliveries will be applied, when and what will be the next steps undertaken, etc. (maximum 2500 characters including spaces)*

It is envisaged that incremental effects of the activities under this TA will be able to extend the integrated, sustainable and low emissions concept to the urban transport system in Indonesia by providing Indonesia opportunities to gain experience in electric vehicles and relevant infrastructure

along the strategic points of Indonesia.

Beyond the scope of this Technical Assistance, recommendations arising from the activities will become important input for subsequent investments and initiatives on sustainable transport at large. The promotion of investments in electric vehicles and adequate infrastructure, coupled with the integration with Indonesia’s renewable energy will contribute to further reducing CO2 emissions and air pollution in Jakarta.

In particular, this TA will provide detailed technical analysis on electric vehicles and its charging infrastructure as well as the guidelines for public procurement of electric mobility technologies, which will be highly relevant for the government entities which will be making decisions related to investments in public transport.

Lessons learned from this TA can be a good case study for other major cities in Indonesia which can provide a good basis for upscaling efforts throughout the countries as other municipal governments in Indonesia are faced with similar challenges including air pollution and increasing GHG emissions from the road transport sector.

Beyond that, one of the major hubs in Southeast Asia, accelerated introduction of electric mobility in Jakarta will also contribute to increasing the market share of electric vehicles in the region.

9. Gender and co-benefits:

Imbedded in design of the activities:	<p><i>A gender mainstreaming analysis is mandatory to include for all technical assistances. A gender expert will be assigned to carry out an assessment and evaluation regarding gender mainstreaming during the implementation of the TA.</i></p> <p><i>In addition, please describe all support to gender aspects, women’s equality and other co-benefits embedded into the Response Plan (please include a reference to the actual activities and outputs as described in section 3).</i></p> <p>Transportation networks are one of the most important elements of a country’s infrastructure, and they are key to reducing poverty and promoting equality. In low-income countries, gender differences in mobility needs are very pronounced, requiring gender sensitive policy responses².</p> <p>In many countries, women are highly under-represented in decision-making with majority of the transport sector being managed and operated by men. A disruptive market change to cleaner and more efficient vehicles presents an opportunity to address this unequal distribution by increasing women’s participation in the transport sector and provide socio-economic opportunities in new businesses and business models as drivers, charging solution providers, fleet operators etc.</p> <p>This transition will also contribute to reducing the negative public health implications from vehicles for women and children, which are more vulnerable to the impact of air pollution than men.</p>
Gender and co-benefits intended	<p><i>Please describe all gender aspects, women’s equality and other co-benefits expected as a result of the CTCN technical assistance.</i></p>

² UNEP-DTI (2015). Gender Sensitive Transport Planning for Cities in India

as result of the activities:	<p>Outcomes of this TA will make a number of direct and indirect contributions to addressing gender aspects of Indonesia’s transport sector. Making urban mobility sustainable should consider the needs of different users and thereby offering equal levels of access to transport services to all different social groups. The need to adopt a gender-sensitive perspective is emerging as a challenging and impending task for urban mobility policy makers and planners.</p> <p>A core part of Output 2 will be a review of national mobility policies. This exercise can help Indonesia to understand gender disparities in Indonesia’s mobility policies and can serve as a guidance for future policy developments to inform gender-specific e-mobility policies.</p> <p>Ultimately, Output 3, by fostering the uptake of electric mobility in TransJakarta, this TA will contribute to improving the service of public transport at large in Jakarta. Women suffer from significantly lower income than men with poor access to labour market, will thus in particular benefit from more efficient mobility services in terms of increased access to employment, markets, education and health services, but also to the caretaking and household responsibilities that the majority of women hold.</p>
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10. Main in-country stakeholders in implementation of the technical assistance activities:

Using the table below, please list and describe the role of in-country stakeholders, participants and beneficiaries who will be involved in or directly consulted during implementation of the assistance.

In country stakeholder	Role in implementation of the technical assistance
National Designated Entity	Provide overall coordination
Ministry of Finance	Implement and advise on fuel economy and energy efficiency fiscal measures and instruments
Ministry of Public Works and Housing	Implement and advise as related to Green Design and Planning, Green Open Space, Green Community.
Ministry of Transportation	Implement and advise on e-mobility policies and vehicle registration policies
Ministry of Energy and Mineral Resources	Advise on power provisions for electric vehicle charging infrastructure
BSN - National Standardization Agency of Indonesia	Advise on national standards and procurement guidelines for electric vehicles
Ministry of Environment and Forestry	Implement and advise on policies on climate change mitigation in the road transport sector and urban air quality

11. SDG Contributions:

Instructions: Please complete the grey section below for a maximum of three SDGs that will be advanced through this TA. A complete list of SDGs and their targets is available here:

<https://sustainabledevelopment.un.org/partnership/register/>.

Goal	Sustainable Development Goal	Direct contribution from CTCN TA (1 sentence for top 1-3 SDGs)
1	End poverty in all its forms everywhere	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	
3	Ensure healthy lives and promote well-being for all at all ages	

4	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	
5	Achieve gender equality and empower all women and girls	Gender specialist will be hired under this TA to explore ways to improve women representation and participation in the public transport sector of Jakarta.
6	Ensure availability and sustainable management of water and sanitation for all	
7	Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)	
	7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services	
	7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix	
	7.3 - By 2030, double the global rate of improvement in energy efficiency	This TA will develop supportive policies to mainstream electric vehicles that can improve overall energy efficiency in transport
	7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	
	7.b - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	The long-term impacts of this TA will bring the population in Jakarta both economic and health benefits.
12	Ensure sustainable consumption and production patterns	
13	Take urgent action to combat climate change and its impacts	This technical assistance will assist Indonesia in tackling their high dependence on fossil fuel for transportation
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	
	13.2 - Integrate climate change measures into national policies, strategies and planning	
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	
	13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	
	13.b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

12. Classification of technical assistance:

Please indicate primary type of technical assistance. Optional: If desired, indicate secondary type of technical assistance.

<i>Please tick off the relevant boxes below</i>	<i>Primary</i>	<i>Secondary</i>
<input type="checkbox"/> 1. Decision-making tools and/or information provision	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 2. Sectoral roadmaps and strategies	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 3. Recommendations for law, policy and regulations	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 4. Financing facilitation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 5. Private sector engagement and market creation	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 6. Research and development of technologies	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7. Feasibility of technology options	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 8. Piloting and deployment of technologies in local conditions	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 9. Technology identification and prioritisation	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please note that all CTCN technical assistance contributes to strengthening the capacity of in country actors.

13. Monitoring and Evaluation process

Upon contracting of the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. The monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by the (i) NDE about overall satisfaction level with the technical assistance service provided; (ii) the Lead Implementer about the knowledge and learning gained through delivery of technical assistance; and (iii) the CTCN Director about timeliness and appropriateness of the delivery of the activities and outputs.

