



Land transport feasibility study in Vanuatu

Policy Briefs for Vehicle Emission and Fuel Standards. Support for the implementation of the standards

GEF8 E-mobility Project Proposal

Andres Toro,
Climate Finance Advisor - Vanuatu

Sept 12, 2024

GGGI MEMBER STATES & COUNTRIES OF OPERATION



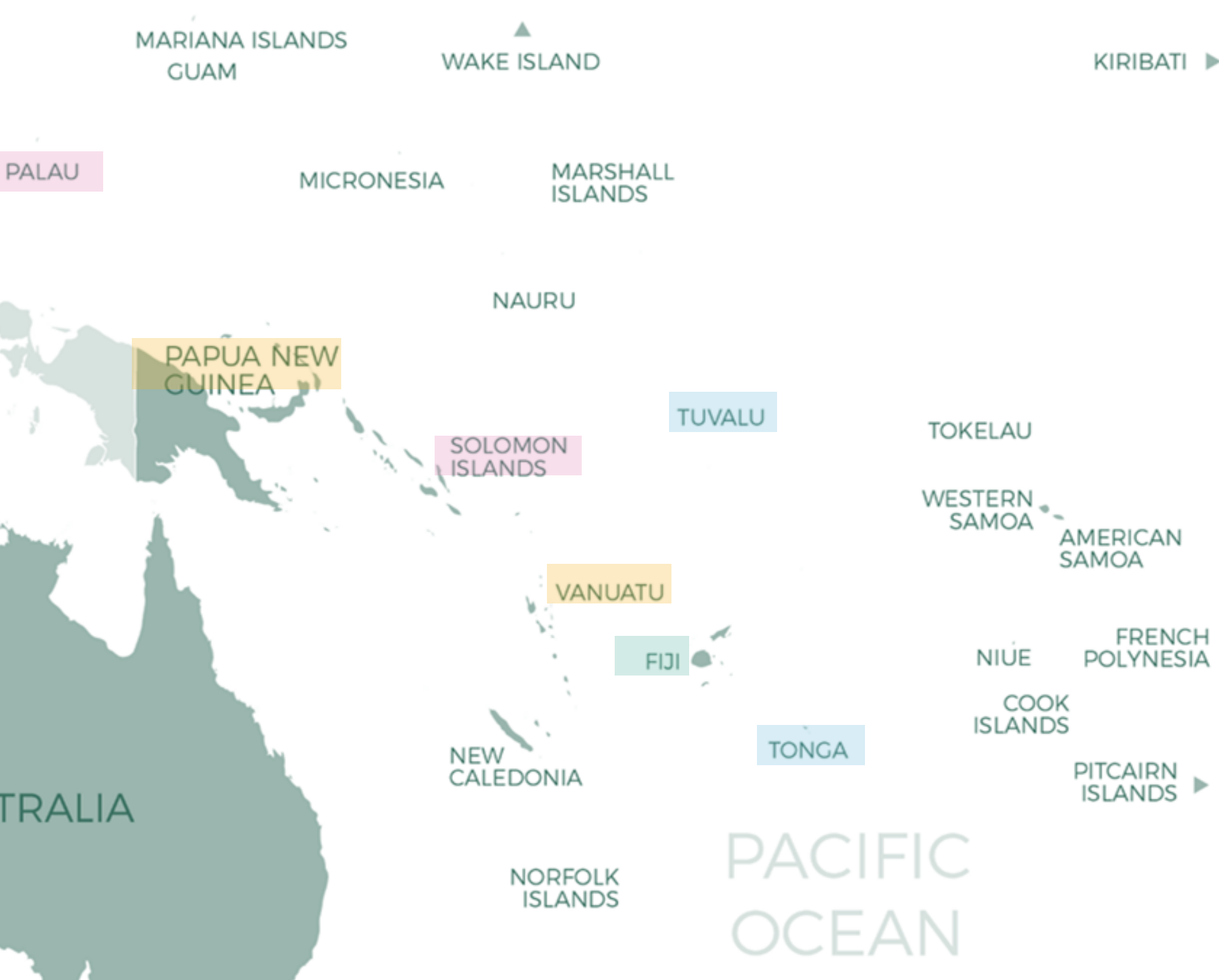
Electric Mobility:

The Pacific Island Countries Context

- Transport responsible for an estimated **75% of the region's use of petroleum products and polluting emissions.**
- Reliance on high-cost fuel imports and second-hand vehicles.
- E-mobility projects, **build on existing strategies** and necessary to **meet policy targets.**
- Aging fleets, especially in public transport – avoiding lock-in to polluting technologies.
- Pilots needed for **proof of concept**, building required **skill sets** and **trust** in technology.
- E-mobility is only **one part of an overall package** of measures to meet sustainable transport goals.
- Needs to be **implemented alongside non-motorized transport and public transport measures** to be most effective.



GGGI recent/ongoing projects/studies in the PICs Region



Tonga:

- ✓ Economic Analysis of Electric Vehicles
- ✓ & Charging Location for Initial Uptake

Fiji:

- ✓ Study on Route Prioritization for Phasing in of Electric Buses;
- ✓ GCF Concept Note for E-Bus Financing Scheme;
- ✓ TOR for Transport Decarbonisation Implementation Strategy
- ✓ FDB EV Loan Product Development
- ✓ GEF E-Mobility Project Proposal

Palau:

- ✓ GEF E-Mobility Project Proposal

Vanuatu:

- ✓ Policy Briefs for Vehicle Emission and Fuel standards; Support for the implementation of the standards;
- ✓ GEF E-Mobility Project Proposal

Solomon Islands:

- ✓ NDC Investment Plan – Land Transport, RE & Forestry;
- ✓ GEF E-Mobility Project Proposal

PNG:

- ✓ Promoting Electric Mobility in Papua New Guinea (GCF Readiness)

Tuvalu:

- ✓ Study on Electric Motorbikes
- ✓ GEF E-Mobility Project Proposal

ELECTRIC MOBILITY OPTIONS FOR ROAD TRANSPORT



#lastmile



GEF8 E-mobility Project Proposal

Support to the acceleration of sustainable land transport and the introduction of electric mobility in Vanuatu

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Vanuatu: Project Context

Emission Data:

- 2016-2017, the energy and transport sectors contributed **28%** and **14.5%**, respectively on average, of total GHG emissions
- **Land transportation** contributes 83% of total transport sector fuel consumption (and GHG emissions) and consumes about 50% of all petroleum products imported into Vanuatu

Transport Patterns:

- 85% household members – use public transport (main means)
- 7% household members – use private transport
- 9% household members (mostly rural areas) – use other means of transport (walking, horse, tractor, etc.)

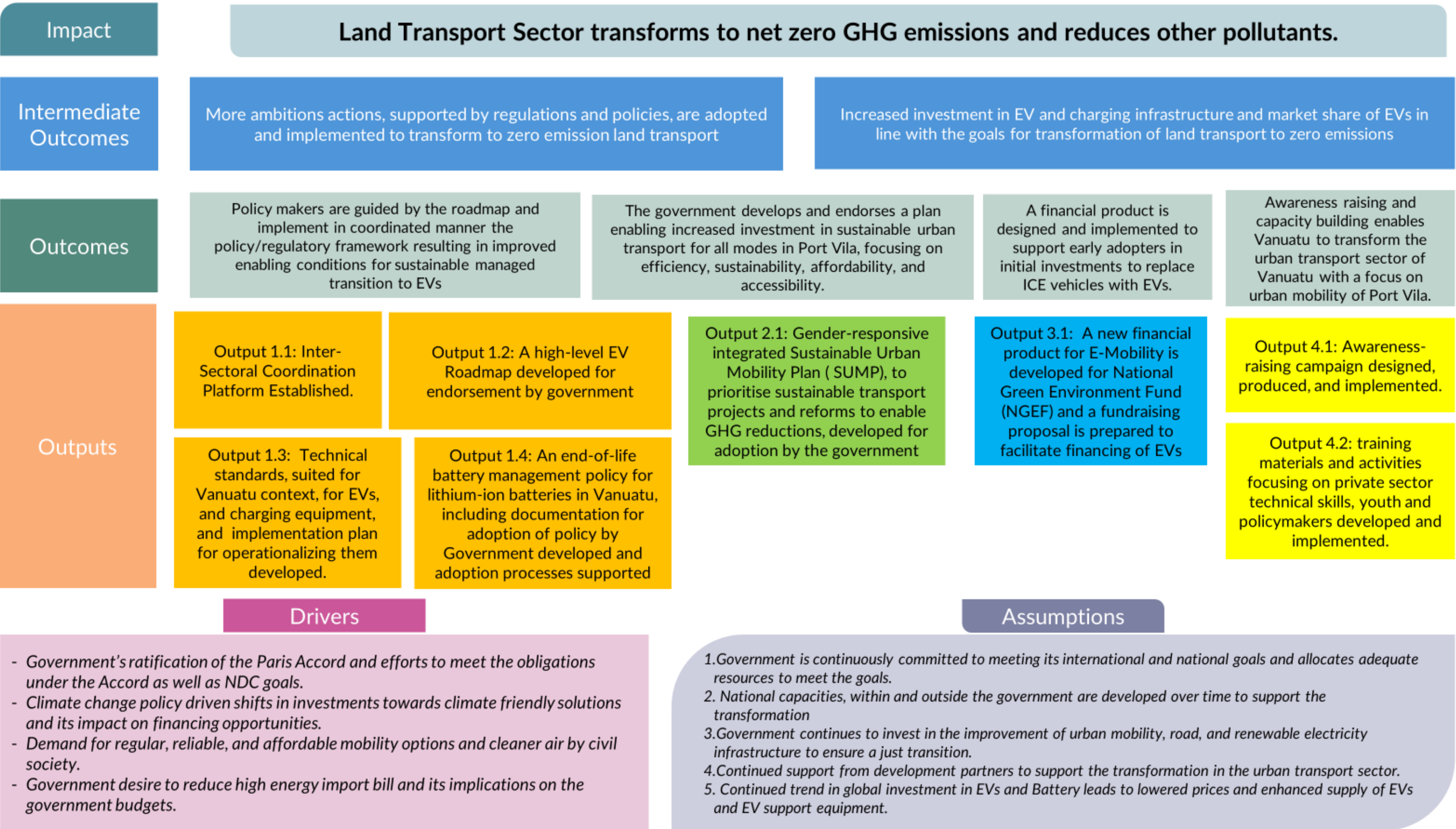
Electricity Production:

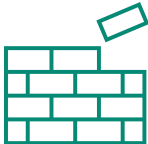
- Total installed capacity of approximately 37 GW with a rate of electrification of 89%.
- 78.7% of total electricity produced in 2020 used Diesel Generator
- peak demand in Vanuatu is estimated at 14.2MW

Electricity Consumption:

- 89% have access to grid/mini-grid electricity or renewable energy-based own-generation, and
- Only 11% of households lack access to electricity

VANUATU GEF8 Proposal - ToC



Timeline	
Preparation of GEF CEO Document:	Final full draft by End of March 2024 ✓
Quality Review by UNEP, GGGI and Endorsement Process by Government of Vanuatu:	April – May 2024 ✓
Submission to GEF Secretariat for Review and Clearance:	Mid June 2024 ✓
Approval by GEF Secretariat for consideration of GEF Council: (this includes review from GEF Secretariat and replies by UNEP, GGGI and the Ministry)	July to October 2024 
Approval by GEF Council:	Mid December 2024
GEF CEO Endorsement:	December 2024
Implementation Start Period:	First quarter 2025 (36 Months)

Project Budget: \$871,560

Key Targets and Framework

Policy	Relevance
Transport	
National Environment Policy and Implementation Plan (NEPIP)	<ul style="list-style-type: none"> • Sustainable conservation, development, and management of the environment • Targets on the establishment of vehicle emission standards and compliance with standards (25% of registered vehicles to comply by 2025)
Low Emissions Development Strategy (LEDS)	<ul style="list-style-type: none"> • Development of a national transport sector policy • Coordination of e-mobility pilots. • Introduction of vehicle and fuel efficiency standards. • Industry skills development and capacity building within the electric transport sector
Revised and Enhanced Nationally Determined Contribution (NDC)	<ul style="list-style-type: none"> • Reduce GHG emissions from the transport sector by 10% below Business as Usual (BAU); • By 2030: Increase share of Electric Vehicles: 10% of total public buses; 10% of government fleet as EV; 1,000 electric two-wheelers/three-wheelers; • Mileage and Emission Standards for Vehicles.
Energy	
The National Sustainable Development Plan (NSDP) 2016-2030	<ul style="list-style-type: none"> • Increased access to safe, reliable, and affordable modern energy • Provision of equitable and affordable access to efficient transport in rural and urban areas
The National Energy Road Map (NERM) 2016-2030	<ul style="list-style-type: none"> • Increase the proportion of electricity generated from RE to 100% by 2030; and, • Improve transport (land and marine) energy efficiency by 10% over the BAU by 2030.

Project Rational: Challenges



Policy, Institutional, and Regulatory:

- Absence of clear policy direction, regulation, and coordination.
- Absence of a leading agency or coordinating entity for the transport sector.
- Current Port Vila public transport system, lacks planning document for urban mobility and public transport.
- **A clear roadmap or strategy for introducing electric vehicles** is absent.
- Insufficient regulations and standards for vehicle quality, efficiency, and imported EVs/e-bikes,
- Lack of regulatory framework - proper collection and recycling of e-waste and end-of-life EVs and batteries.
- Limited of data collection and management for evidence-based planning (e.g. ridership numbers, km driven, and passenger/km).



Financial:

- High cost of electric vehicles (EVs) compared to traditional vehicles (ICE), particularly second-hand imports.
- Lack of a special EV charging tariff.
- High cost of charging infrastructure – necessitates partnerships.
- Banking sector lacks a comprehensive understanding of EVs - absence of special loan/financing packages for their adoption.

Project Rational: Challenges



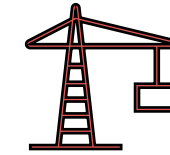
Capacity and Awareness:

- Limited experience in designing policies, regulations, and standards for a transition to the decarbonization of the land transport sector.
- Little awareness of the benefits of low/zero emission transport options.
- Limited capacity for operating and maintaining EVs – very new technology to Vanuatu compared to ICEs.



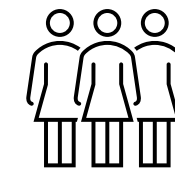
Energy Transition:

- Roof-top solar system costs can be prohibitive.
- No legislation for a **feed-in tariff** system to encourage roof-top solar investments, potentially enabling individual homes, government institutions, and the private sector to promote EV charging.
- High electricity tariffs.



Infrastructure:

- The development of infrastructure and charging stations for electric vehicles (EVs) must be negotiated with concessionary.
- Lack of well-developed road infrastructure, especially outside urban areas, results in the use of off-road 4x4 vehicles despite the higher price compared to smaller cars.



Gender and Transport

- 70-80% of market **vendors using public transport** in Port Vila are women; high transport costs impede their economic activities.
- Transport costs account for **16% of household expenses**, influencing school attendance for both boys and girls.
- High incidence of violence against women in public transport, with reports of women fleeing moving vehicles to avoid harassment.

Gender and Transport Context Challenges

Safety and Accessibility Identification as key Challenges

1. Safety a key challenge for women using public transportation:

- ✓ Girls do not want to travel alone; don't feel safe in public transports especially at night
- ✓ Sexual harassment, being held against will in public transport

2. Women have less access to transportation:

- ✓ UNICEF's 2022 report - Gender in the Pacific reveals that adolescent boys in the Pacific have more access to transport than girls due to gender norms and vocational employment.
- ✓ 1 in 5 married girls in Vanuatu lacks freedom of movement due to inadequate road infrastructure, resulting in minimal land transport and children often walking to school.

3. Women's participation in the transport sector remains weak:

- ✓ Cultural barriers and lack of road and transport rules hinder women's participation in the transport sector, with 26.5% of businesses in Vanuatu classified as transport and storage, and female participation at 6.6% and 2.3% in urban and rural areas.

4. Public transportation structure in Port Vila heightens risks for women in two key areas:

- ✓ The Public Land Transport Authority (PLTA) manages Vanuatu's public bus system, which is privately owned and operates 'minibuses' for around 10 people, with no fixed schedule.

5. Price:

- ✓ Port Vila faces congestion due to high bus numbers, resulting in thin revenue and drivers struggling.
- ✓ Rising fuel prices and lobbying for increased fares disproportionately affect women, girls, and other vulnerable groups

6. Regulation:

- ✓ The PLTA regulates public buses in Port Vila but lacks monitoring and reporting systems for unprofessional conduct. This raises risks for vulnerable groups and minimizes positive effects on education, economy, and health.
- ✓ The Public Land Transport Act 2015 requires training but lacks data on its impact.

Gender and Transport Context – Opportunities

How will this benefit women



Economically:

- ✓ Improving safety, affordability, accessibility, and efficiency of public transportation in Port Vila can help 70-80% of women, market vendors, access their economic livelihoods with fewer barriers and lower costs.

Education:

- ✓ Education rates vary by gender, but transport costs, a significant factor in attendance, account for 16% of household expenditure. Income poverty and inadequate road infrastructure contribute to school dropouts, necessitating fair transport prices.

Health:

- ✓ Vanuatu faces high violence against women and girls, particularly in public transportation. This affects their health, education, and livelihoods. Increased regulations in training and monitoring can help reduce these challenges.

Thank you!



Ministry of Climate Change
Namba 2 Area, PMB 9054, Port Vila
Vanuatu

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