# **Philippine Country Experience**

### Forging inclusive roadmaps for paratransit modernisation and electrification

Transport and Climate Change Week, Berlin 14 September 2023, 11:30 – 13:30



On behalf of



Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (2BIE)

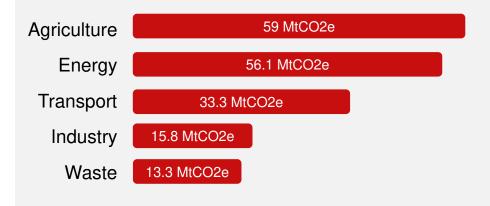
of the Federal Republic of Germany

# **Country Context: About the Philippines**



- Country Population (2022): 115.6 M
- Metro Manila Population: 13.4 M
- GDP per capita: PHP 198k or EUR 3258

### Top 5 Sources of GHG Emissions in PH



Sources: World Bank, Philippine Statistics Authority, CAIT Climate Data Explorer via Climate Watch



### **№** National Target

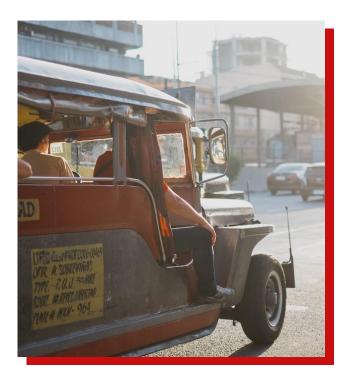


Philippine commitment (2.71% unconditional and **72.29% conditional**) of projected cumulative GHG emission reduction and avoidance from a BAU scenario of **3,340.3** MtCO2e emissions from **2020-2030** (target to reduce to **835** MtCO2e)

### Salient Features of the NDC

- 1. Aspirational Peaking
- 2. Climate Change Adaptation
- 3. International cooperation & market and non-market mechanism
- 4. Circular Economy
- 5. Traditional knowledge, education and public awareness

### **Existing Paratransit Challenges**



- Industry is highly **fragmented** and often **individualized**
- Limited financial literacy
- Not subsidized
- No fleet renewal
- On-street competition with small-scale vehicles

(e.g. minibuses)

### **Public Utility Vehicle Modernization Program**



Full study: The Jeepney+ NAMA: Transforming Public Transport in the Philippines

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Reforming the public transport system, including the jeepney sector, has been on the political agenda since decades <b>but never materialized</b> due to various factors:			
Social Function	Most important mode of urban transport in the Philippines: Social Service & Fills out a gap of missing mass-transport options		
Outdated Technology	Safety and Comfort issues, Highly inefficient technology -> high fuel consumption and high emissions -> massive health impacts Low service quality -> mode of last resort -> modal share shift		
Outdated Operations	Inefficient operations due to lack of proper investments on assets and compensation for drivers + poor driving + competition on the street -> poor service quality & congestion		
Outdated Regulation	Outdated franchising system: highly fragmented market Competition in the market rather than for the market & impossible to monitor or regulate market		
Government Capacity	Resource pressures on government capacity for planning, monitoring, and regulation		
Lack of Data	Lack of understanding the sector		

# **Results of Early Evaluation Study**

AVERAGE	TRADITIONAL JEEPNEY	MODERN ROUTES	AVERAGE CHANGE
Daily operating hours	14hrs	19 hours	36.00%
Vehicle utilization	127km	150km Diesel Jeepney (90km Electric Jeepney)	18.00%
Days of operation per week	5.6 days	6 days	7.00%
Staff per vehicle/day	1 driver	2 drivers, 1.5 conductors	350.00%
Staff earnings/day	PHP 650 (EUR 10.7)	600 + benefits	~
Vehicle capacity	20 seat (16-24 seat)	30 max (22-24 seated)	50.00%
Fuel Economy	5.9 km/l	5.2 km/l	-12.00%
Fuel economy per passenger/km	111 km/l	156 km/l	41.00%
Daily ridership Pax/day/unit	300 pax	460 pax (Euro IV Jeep 300-750) (EJeepney 200-250)	53.00%

Full study: Reforming the (semi-)informal minibus system in the Philippines: The 'Public Utility Vehicle Modernization Program' Early Route Evaluation

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### **Fleet Financing**

Php 15.6 B (EUR 257 M)	Loan approvals for <b>7,128</b> PUV units	F
Php 729 M (EUR 12 M)	Equity subsidy released for <b>4,659</b> PUV units	
Php 133.3 M (EUR 2.2 M)	Equity subsidy released for <b>313</b> PUV units	
Php 63.8 M (EUR 1 M)	Equity subsidy in reserved application for <b>178</b> units	

#### FINANCING INSTITUTIONS



and other private financing institutions



#### **Commercial Performance**

- · Majority of operators positive about commercial performance
- · Commercial return on both diesel and electric jeepney seen to be strongly positive over life of investment
- Healthy NPV on investment and IRR >50%

#### **Contributary Factors**

- · Larger vehicles
- Higher utilization rate
- · Low capital investment requirement and preferential finance
- · Benefits of operational and fleet management

#### A change of perspective on investment required

- · Vehicles covering operating costs and amortization during repayment period for majority of operators
- More significant returns made post repayment period, enabling operators with a longer term vision to achieve strong commercial performance

### Flectrification Plans: Industry Goals

- $\checkmark\,$  Increase the utilization of EVs in the domestic market
- ✓ Deploy a sufficient number of EV charging points across the country between 2023 and 2040
- ✓ Position the Philippine EV industry to become a producer and exporter of EVs by 2040
- ✓ Promote sustainable economic growth and just e-mobility transition by protecting employment in the automotive industry and providing capacity-building activities and EV-specific transition programs
- Support research and development in battery research, and EVCS technology
- ✓ Digitalization to spur technological innovations and strengthen the competitiveness of the local EV industry



### Flectrification Plans: CREVI Projected Results

Projected Results of the CREVI on Cumulative EV and EVCs inventory by 2040

#### **BUSINESS-AS-USUAL SCENARIO**

At least ten percent (10%) EV fleet\* by 2040

	<b>Short term</b> (2023-2028)	<b>Medium term</b> (2029-2034)	<b>Long term</b> (2035-2040)	Grand Total
EV Targets	311,700	580,500	850,100	1,744,400
EVCS	7,400	14,000	20,300	41,700

#### CLEAN ENERGY SCENARIO

At least fifty percent (50%) EV fleet\* by 2040

	<b>Short term</b> (2023-2028)	<b>Medium term</b> (2029-2034)	Long term (2035-2040)	Grand Total
EV Targets	2,454,200	1,851,500	2,001,600	6,306,480
EVCS	65,000	42,000	40,000	147,000

\*EV share from the total projected vehicle fleet

# **Upcoming Project: TRANSCEND**

Activities under the Transformative Actions for Climate and Ecological Protection and Development project include:

- ✓ Providing **policy advice** at the national level to consolidate and develop financing mechanisms for public transport
- ✓ Liaising with operators and manufacturers to identify further barriers and challenges in the implementation of sustainable public transport measures.
- Collaborating with a national financial institution to develop a curriculum for financial training of cooperatives, specifically focused on accessing and accounting loans for modern vehicles
- ✓ Conduct a train-the-trainer program based on the developed curriculum



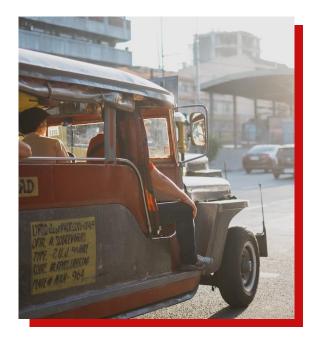


# **Upcoming Project: TRANSCEND**

Activities under the Transformative Actions for Climate and Ecological Protection and Development project include:

- ✓ Review the PUV Modernization program
- Conduct an international review of public transport fleet decarbonization in cities.
- ✓ Develop an electrification roadmap for public transport in the Philippines
- Provide support to the Department of Environment and Natural Resources (DENR) in reforming regulations for the modernization of old vehicles





# Thank you! Patricia Mariano, Chief Advisor (PH), Urban-Act

patricia.mariano@giz.de