



High-Level 15th Regional Environmentally Sustainable Transport Forum in Asia

# IMPLEMENTING LOW CARBON MOBILITY INITIATIVES

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# Malaysia making big strides through policies to achieve net zero emission - decarbonising transportation and energy transition are critical part



## Current state:

- 2nd biggest GHG emitter under Energy sector (25%)
- Largest energy user (38%)

Source: Biennial Update Report 4



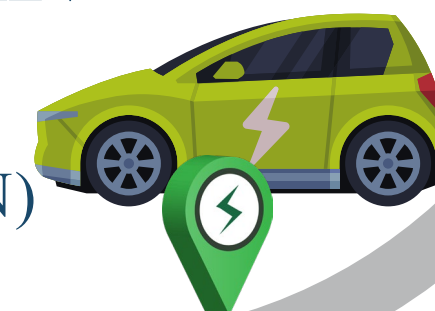
## Goals:

- Reduce (GHG) emission intensity by 45% (based GDP) in 2030
- Net zero emissions as early as 2050



## Key Targets:

- 15% TIV in 2030; 38% EV Share by 2040; 80% xEV in 2050
- 10,000 chargers by 2025 (LCMB)
- B30 - alternative fuel for heavy transport (DTN)
- 40% mode share by 2030; 50% by 2040



# Empower and Inspire: Leadership in climate action plays a pivotal role in driving positive change



PEMIKIRAN BAHARU  
**Utusan  
Malaysia**

Hib  
Glam

TERKINI NASIONAL EKONOMI RINGGIT LUAR NEGARA

Sasaran karbon sifar bersih seawal 2050

## Malaysia's prime minister pledges economic shift away from fossil fuels

The government is also pledging US\$430 million for "marginally bankable" energy transition projects and accelerating the launch of a renewable energy exchange for cross-border trade, both part of its new energy transition roadmap.



## Nik Nazmi: Govt eager to explore potential of green hydrogen as alternative fuel

By Bernama - August 28, 2023 @ 3:12pm



STIMES NEWS BUSINESS LIFE & TIMES SPORTS WORLD NST PODCAST NS

## Malaysia on right track to transition to renewable energy - Nik Nazmi

By Bernama - March 10, 2023 @ 10:47am



## Nik Nazmi: Malaysia to install 10,000 EV charging points by 2025

By Bernama - August 28, 2023 @ 3:12pm



## Tengku Zafrul: Govt looking into strong policies to ramp up Malaysia's EV sector

By Bernama - August 28, 2023 @ 3:12pm



MALAYSIA

## Anthony Loke: Sustainable, environmentally-friendly vehicles set to transform logistics sector

By Bernama - August 28, 2023 @ 3:12pm

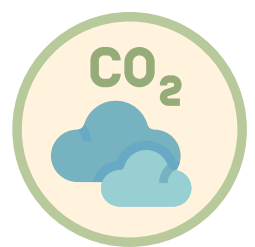


## 2024 Budget: Putrajaya to have EVs as official vehicles

By Adib Povera, Nuradzimmah Daim, Nor Ain Mohamed Radhi, AMALIA AZMI - October 13, 2023 @ 6:41pm



# Low Carbon Mobility Blueprint 2021 - 2030 (LCMB) - dedicated, concerted, and all-encompassing action plans to decarbonise land transport



Estimated GHG Emission Reduction (million tonnes CO<sub>2</sub> eq)

↓ 165



Estimated Energy Consumption Reduction (ktoe)

↓ 51,000

## Realising Low Carbon Mobility for the Land Transport Sector Through Reducing Greenhouse Gas Emissions and Energy Consumption by 2030

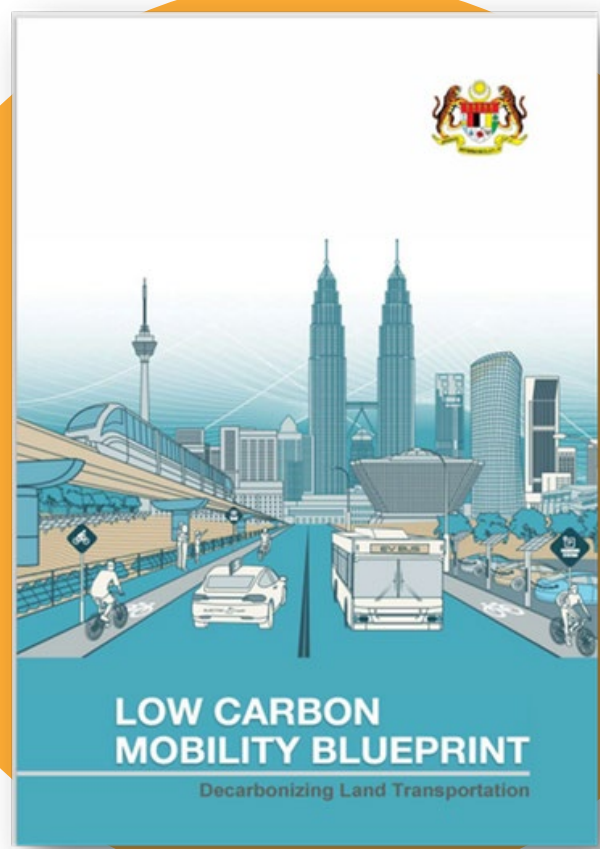
### 6 Strategic Actions

- 1 Strengthening institutional framework
- 2 Government-led initiatives
- 3 Facilitating conducive economic instruments
- 4 R&D, Technology nurturing and commercialisation
- 5 Capacity, skills and knowledge development
- 6 Consumer communication

### Focus Areas

A	B	C	D
<b>Improving Vehicle Energy Efficiency</b> 	<b>Electric Mobility Adoption</b> 	<b>Alternative Fuel Adoption</b> 	<b>Mode Shift</b> 
<b>2 Strategies</b> 10 Action Plans Emission rating for VTA, Vehicle End-of-Life, Eco-driving & Green Logistics	<b>1 Strategy</b> 13 Action Plans Electric vehicles, electric buses & electric motorcycles	<b>2 Strategies</b> 5 Action Plans Biodiesel & Industrial Ecosystem Growth	<b>5 Strategies</b> 17 Action Plans Public Transport, TOD, Traffic Flow, Active and Micro Mobility & Rail for Freight Transport

# 10 LCMB quick wins place bold and transformative course of actions to mainstream low carbon mobility agenda



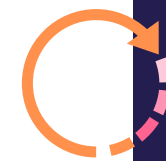
Vehicle exhaust emission rating as part of VTA requirements & Fuel Emission labelling at point of sales



Eco Driving Modules & Programmes



Vehicle End of Life Policies Options



Fuel Economy Baseline for Heavy Duty Vehicles



Corporate Average Fuel Economy & Carbon Emission Vehicle Scheme



National Green Logistics Programme



Government Green Vehicle Procurement for EV Fleet



4 FOCUS AREAS

10 STRATEGIES

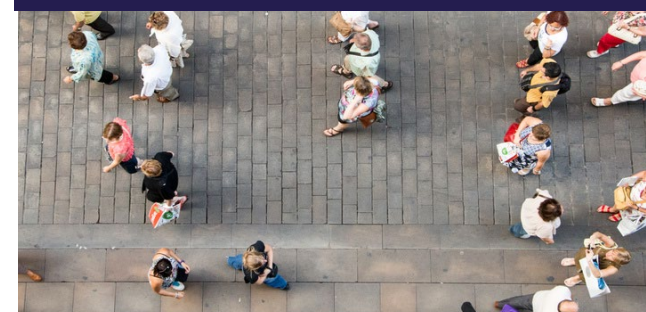
45 ACTION PLANS



Congestion Charges Policy Options



First-and-Last Mile Connectivity Guideline



Personal Mobility Device and Bicycles Usage on the Road



Legend:



Completed



In progress



In the pipeline

# GEF 7 - Accelerating the Adoption of Smart Climate Transport (AASCT) highlights collaboration with key stakeholders to support electric mobility adoption



## International Partners



## Lead Ministry



Ministry of Natural Resources,  
Environment and Climate Change

## Executing Entity



1



Developing of Guidelines and Standards for Renewable Energy - based Smart Charging and Harmonization of Electric Vehicle Supply Equipment

2



Study on Mode Shift from Road to Rail for Malaysia, including Mode Shift Incentive Scheme

3



Electric Vehicle and Sustainable Battery Ecosystem and Value Chain Roadmap

4



Proof of Value for EV Inter-operability Center (EVIC): Vehicle to Infrastructure (V2I) in Cyberjaya

5



Solar Smart Electric Bus Charging Demonstration at Iskandar Rapid Transit (IRT) in Skudai, Johor

6



Solar Smart Electric Bus Charging Demonstration at Kuching Metro Electric City Bus, Demak Laut Industrial Park, Kuching, Sarawak

7



Development of EV Battery Repurposing and Recycling Value-Chain and Demonstration Project on Remanufacturing of EV Battery

8



Electric Motorcycle Battery Swapping Technology Demonstrations

# Green Mobility is geared across all spectrum, at all levels - federal government, state, industry, local authorities



Expansion of Public Transport Line (MRT Circle Line, LRT3, ECRL, RTS, HSR, IRT), and Bus Electrification (Prasarana, MRTCorp etc)



Hydrogen Powered Kuching Urban Transportation System



Mobile Hydrogen Refueling Station Pilot (PETRONAS-UMW- MGTC-MOSTI-NMB)



Traffic Management (congestion charge, car-free day, mode shift to public transport etc) and vehicle end of life procedures (e.g. DBKL)



Mandate and Phase in of Diesel Euro 5 (Implemented) and Petrol Euro 5 (Upcoming)



Corporate Fleet Electrification



Expansion of Public Charging Infra

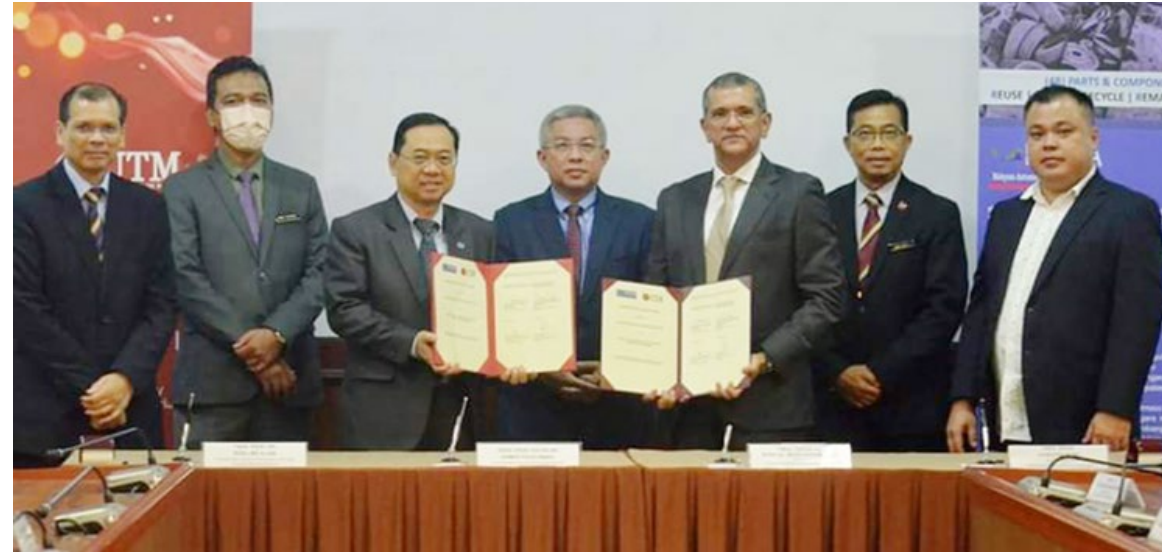


National Regulatory Ground Test for micromobility (MOT-JPJ-MIROS-Futurise -MBSA)



Authorised Automotive Treatment Facility (AATF) - proper segregation for reuse, recycling or recovery and final disposal (DOE & Industry e.g Car Medic)

# Leveraging Synergy and Extending Societal Reach through Collaborations with Universities and Civil Societies



UTM (representing the End-of-Life Vehicle Research consortium) has signed MOU with Malaysia Automotive Recyclers Association (MAARA) to promote academic collaboration, research and technology development in the field of ELV.



NanoMalaysia are collaborating with participating universities (EduCity Iskandar, UTHM, UTM, UNITEN) for Campuses for Local Electric Vehicle Expeditious Roll-out (CLEVER). CLEVER is an innovation and regulatory sandbox that uses campuses as testing ground



“Keretapi Sarong” - a trending and attractive initiative that has indirect impact in promoting public transport ridership among youths



Beam Mobility has partnered with several Malaysian universities to promote use of e-scooters at university campuses across the country, with support by URBANICE Malaysia.



Many associations/clubs involved in promoting/educate the society on EV



An aerial photograph of a complex highway interchange with multiple overpasses and ramps, surrounded by greenery and buildings.

# 3

## KEY TAKEAWAYS

1

Leadership in climate action is imperative for wider resonance

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2

Low carbon mobility agenda needs to be holistic - beyond 4 wheelers, and electrification

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3

Quadruple helix collaboration maximises the impact towards the greater agenda - net zero

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MALAYSIAN GREEN TECHNOLOGY AND  
CLIMATE CHANGE CORPORATION



# Thank You

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