

POLICY AND REGULATORY FRAMEWORK IN E2&3W

BY

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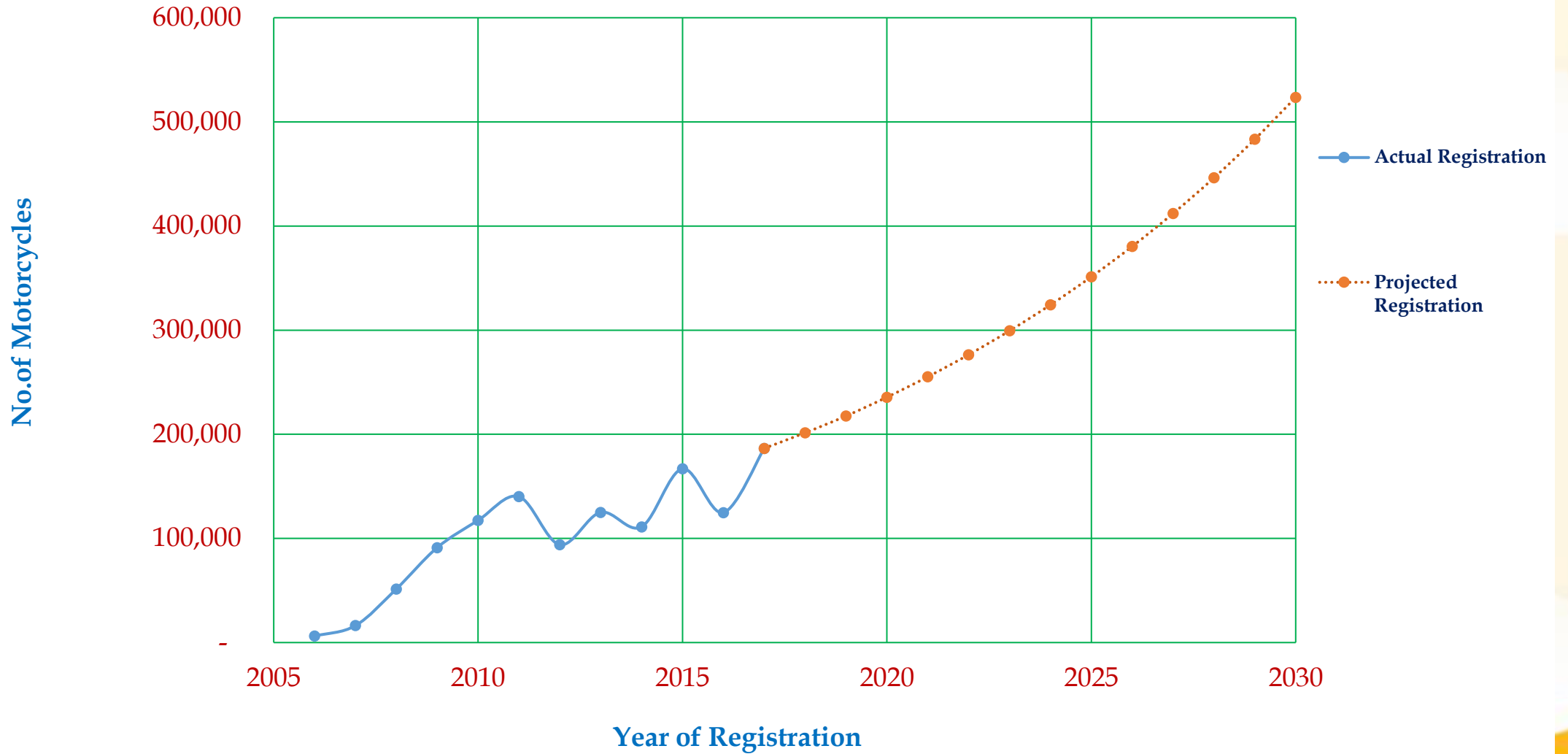
Energy & Petroleum Regulatory Authority

9th – 12th October 2023

Bangkok, Thailand



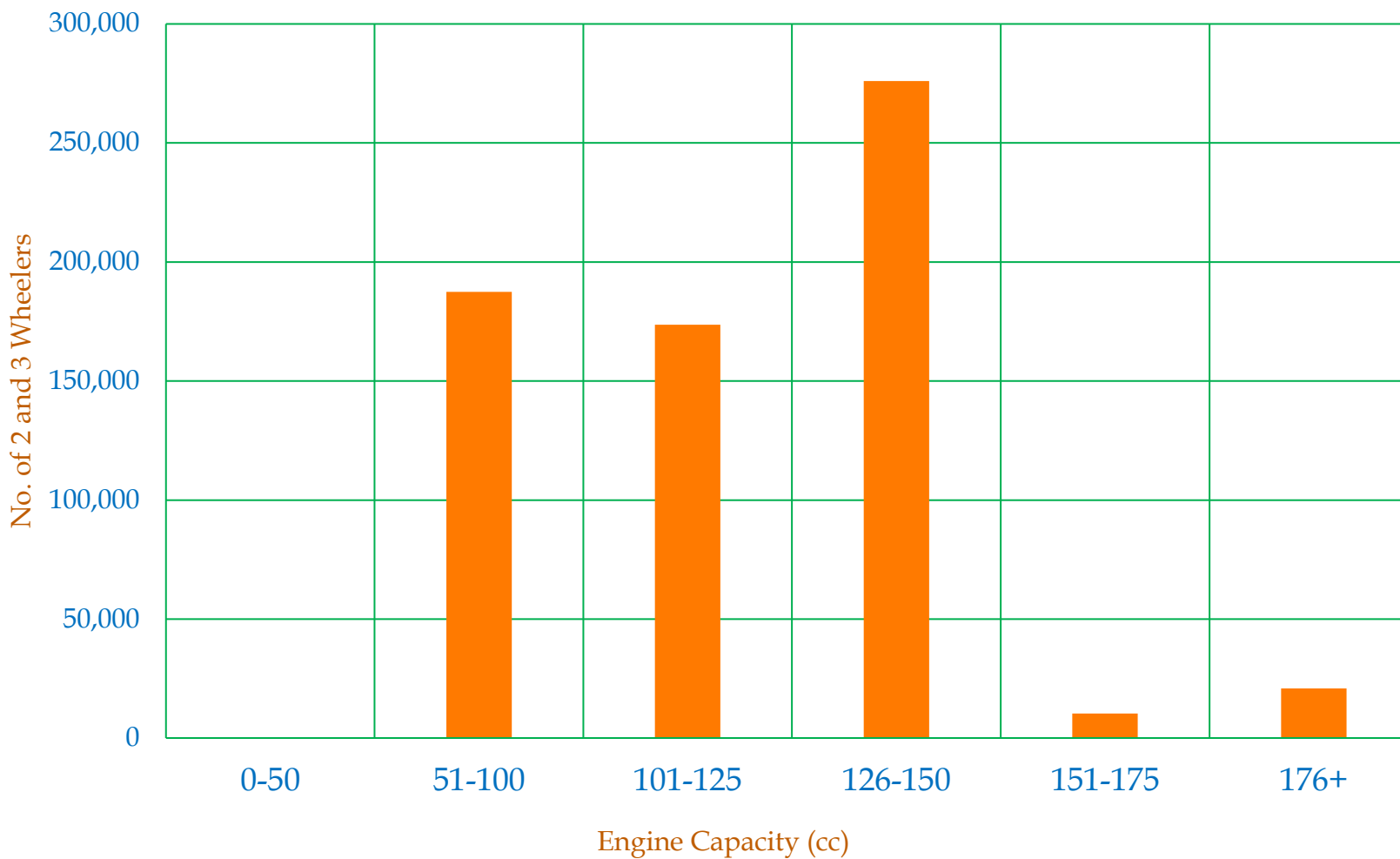
Compounded Annual Growth Rate (CAGR) of 8.31% for period 2006-2022



Characterization by Engine Capacity in Numbers

| Engine Capacity (cc) | No. of 2 and 3 Wheelers | Percentage (%) |
|----------------------|-------------------------|----------------|
| 0-50 | 320 | 0.05 |
| 51-100 | 187,382 | 28.03 |
| 101-125 | 173,668 | 25.98 |
| 126-150 | 275,959 | 41.28 |
| 151-175 | 10,378 | 1.55 |
| 176+ | 20,865 | 3.12 |
| TOTAL | 668,572 | 100.00 |

Characterization by Engine Capacity



Characterization by Emissions

| Year | gCO ₂ /km | No. of Motorcycles | Cumulative gCO ₂ /km | Annual CO ₂ (Tonnes) |
|------|----------------------|--------------------|---------------------------------|---------------------------------|
| 2005 | 62.67 | 1,695 | 106,226 | 3,314 |
| 2007 | 59.22 | 8,013 | 474,530 | 14,805 |
| 2009 | 60.90 | 64,312 | 3,916,601 | 122,198 |
| 2011 | 57.97 | 138,551 | 8,031,801 | 250,592 |
| 2013 | 59.41 | 127,645 | 7,583,389 | 236,602 |
| 2015 | 59.32 | 137,455 | 8,153,831 | 254,399 |
| 2017 | 58.65 | 190,901 | 11,196,344 | 349,326 |
| 2022 | 61.46 | 260,435 | 15,151,756 | 457,654 |

POLICY & REGULATORY SPACE IN E2&3W

GLOBAL CONTEXT

In line with the Paris (COP21) climate goals - 22% of global vehicle sales could be electric by 2025 and 35% by 2030.

NATIONAL CONTEXT

Target – Achieve 5% vehicles registration being electric by 2025 (*National Energy Efficiency and Conservation Strategy, 2020*)

GOVERNMENT AGENDA

The Bottom-Up Economic Transformation Plan 2022-2027 (BETA) - Plan to construct 1,000 electric vehicle charging stations. 700 in urban areas and 300 along highways.

✓ Fiscal Incentives –

- Reduction in excise duty from **20%** to **10%** for full EVs
- Electric vehicle exemption from Value Added Tax (VAT)
- Excise duty exemption for locally assembled motorcycles
- Electric vehicle batteries exemption from both VAT and import duty, as well as Completely Knocked Down (CKD) and Semi Knocked Down (SKD) corporate tax reduction to 15%

✓ Financial Incentives-

- **Waivers** on different types of fees for electric vehicles and motorcycles including parking, toll, registration, and permitting fees
- **Vehicle swapping/scrappage schemes** could be introduced to encourage internal combustion engine (ICE) vehicle owners to trade in their vehicles in exchange for a discount or waiver of fees on electric vehicles

✓ Electricity tariff Reviews for EVs (**KShs 16/kWh** and **KShs 8/kWh** during peak and off-peak hours respectively)

✓ Cheaper than LPG Autogas?

- ✓ Development of National Electric Mobility Policy, Strategy, Legislations and Regulations to promote growth and development of e-mobility – Standards, reviews of existing policies
- ✓ Infrastructure Development – MOUs with TotalEnergies for installation of charging/battery swapping stations
- ✓ Dedication of priority lanes for EVs – BRTs
- ✓ Conversion of existing units already in place – Retrofitting
- ✓ Labelling – E2&3W to be labelled with stickers to show range, battery capacity, safety information
- ✓ Dedicated desk/yard for registration of E2&3W at National Registration Centres
- ✓ Creation of awareness
- ✓ A new draft of the building code - 5% of their parking spaces to electric vehicles
- ✓ Publicly procure vehicles - ZEVs

- Details on requirements for Public Charging Infrastructure (charger type, connectors, Rated Voltage)
- Private Charging Requirements
- Battery Swapping Requirements
- Installation Documentation, Warranty and Insurances
- Location of charging stations (i.e. one charging station per 25km on both roads and should be at least 3km by 3km in a grid area)
- Signage, Markings and Accessibility
- Tariff compliance
- Charging Price and Payment method – fixing prices , display price per kWh, per minute or per session
- Smart functionality
- Communication, Data Privacy and Security

Thank You

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