MEMAN Webinar:

THEME: Driving Nigeria's E-Mobility Vision: Policy Direction and Industrial Readiness

15th August, 2025

Current Industry Realities

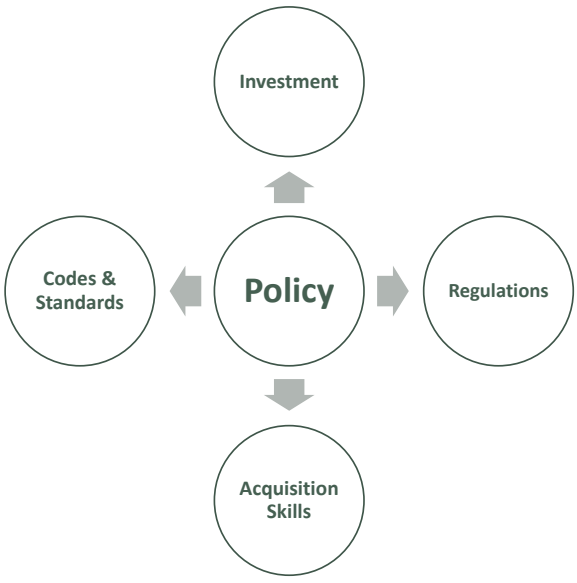
- Fast growing adoption of e-mobility (last-mile vehicles);
- Limited charging infrastructure and technical knowhow;
- Fragmented market with compatibility challenges;
- Emerging regulatory framework.

Policy Direction

Nigerian Automotive Industry Development Plan, 2023

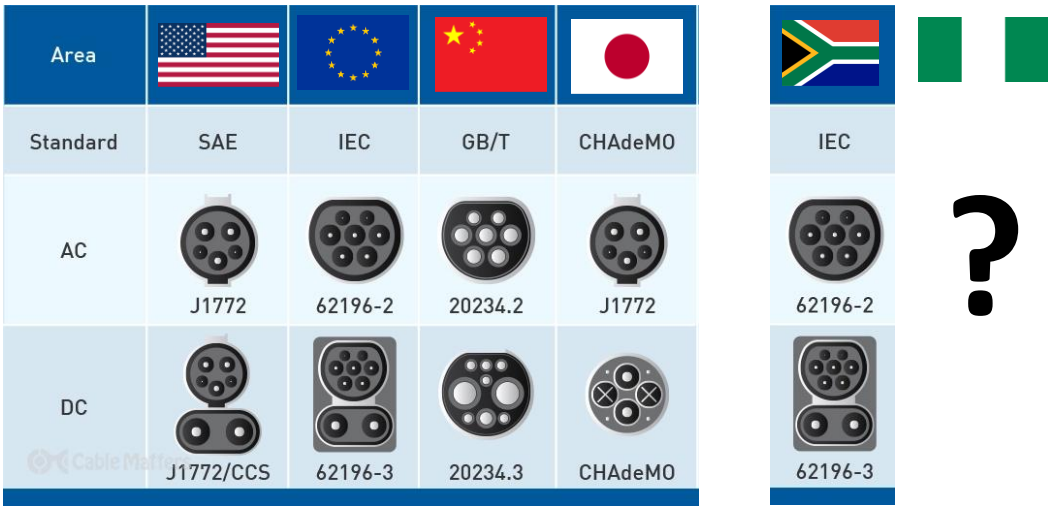
30% of local production of EV by 2033:

- 2-Wheelers
- 3-Wheelers
- 4-Wheelers



Industry Readiness

Current Industry Realities – Connector Specification



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Standards are urgently needed to:

- boost investors confidence;
- prevent market fragmentation;
- ensure consumer confidence;
- enable interoperability across all EV types;
- ensure reliability, safety of users and infrastructure.

Standards Development Process

- Stakeholders Consultation;
- Formation of National Technical Committee (NTC);
- Need Assessment;
- Review of available international standards to establish suitable specifications for local industry.

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E-mobility Standardization Efforts

Webinar:

Standardizing the Nigerian Electric Mobility Ecosystem for Safety, Reliability and Interoperability

Date: 30th July, 2025, **Time:** 11:00 a.m.

Link to webinar presentations and recording: https://drive.google.com/drive/folders/1qMxoFVRLtpn73acx9CRHEt1rosECbFu9?usp=sharing.

Charging Infrastructure Standards

National Specification for Electric Vehicle Charging Station

- Safety requirements
- Communication system
- Charge control system
- Payment system

E-mobility Standardization Efforts

- **IEC/TC 69** - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks;
- **ISO/TC 22 /SC37** - Electrically propelled vehicles;
- African Electrotechnical Standardization Commission (AFSEC) **(ATC 69)**.

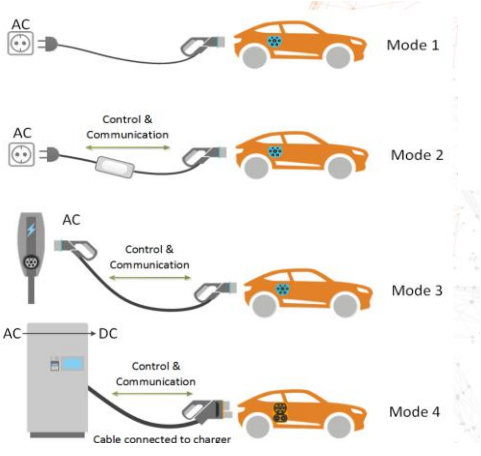
Charging Infrastructure Standards

IEC 61851-1 - EV conductive charging systems

Mode 1: Non - dedicated Outlet
Mode 2: Non - dedicated Outlet with in-cable protection
Mode 3: Dedicated Outlet
Mode 4: DC Connection

Connector Types Under Consideration

- Type 2 (Mennekes): Three-phase AC charging
- CCS 2: Combined Charging System for DC fast charging
- CHAdeMO: Alternative DC charging protocol



IEC/TC 69

Shock protection: Light Electric Vehicles

IEC 61851 - 3 Series

Protection against shock by double or reinforced insulation.

IEC 61851 - 25

DC EV supply equipment where protection relies on electric separation

- Characteristics and Operating conditions
- Specification of the connection between the DC EV supply equipment and the EV
- Requirements for electrical safety for the DC EV supply equipment

Grid integration and other infrastructure support standards

- Load management
- Integration of renewable energy sources
- Inter-city travel support
- Integration of rural areas
- Safety specification for home charging

CALL FOR EXPERTS

NATIONAL TECHNICAL COMMITTEE

Industry Experts/ Technicians	Consumer Groups	Academia/ Research Inst.	Development Partners	Dealers/SMEs
EV Charging Station Operators	Regulator/ Govt. Agencies	NGOs	Labour	Manufacturers

National Technical Committee on E-Mobility Standards

Responsibilities:

- Identify priority standards for the Nigerian market;
- Develop codes & standards to address peculiar industry needs;
- Adopt international standards for use in Nigeria;
- Contribute to international standardization activities;
- Provide funding and logistics support to run the committee activities.

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Thank You.

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