OVERVIEW OF INDONESIA’S ELECTRIC VEHICLE (EV) POLICY
By: Stania Puspawardhani

Track 2: Doubling Progress in Energy Efficiency by 2030
Session 2.4: Energy Efficiency in Transport and Cities

ASIA CLEAN ENERGY FORUM 2024
Thursday, 6 June at 11:00 AM - 12:30 PM (GMT+8)
Indonesia plays crucial role in electric vehicle supply chain, with its nickel reserves of 21 million metric tons, constituting approximately a quarter of the world's nickel reserves. To actively participate in the future of electric vehicles, Indonesia requires investments in technology, human resources, renewable energy, and infrastructure.
## Indonesia’s EV Industry Roadmap

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
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<tbody>
<tr>
<td>Battery Cell Production</td>
<td>LiB and NiMH Cylinder Type Cell</td>
<td>&gt;95% Inverter Efficiency (High Frequency HFET)</td>
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<tr>
<td>Battery Material</td>
<td>HPAL Smelter</td>
<td>Nickel Sulfate &amp; Cobalt Sulfate</td>
<td>Cathode &amp; Anode Materials</td>
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<tr>
<td>Four-Wheeled Vehicle Domestic Component Level</td>
<td>Minimal 30%</td>
<td>Minimal 40%</td>
<td>Minimal 60%</td>
<td>Minimal 80%</td>
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<td>Public Passenger Vehicle</td>
<td>CBU</td>
<td>CKD</td>
<td>IKD</td>
<td>Part by Part</td>
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<td>Bus and Truck (Heavy Duty Vehicle)</td>
<td>CKD</td>
<td>IKD</td>
<td>Part by Part</td>
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<td>Private Passenger Vehicle (Light Commercial Vehicle)</td>
<td>CBU</td>
<td>CKD</td>
<td>IKD</td>
<td>Part by Part</td>
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<tr>
<td>Two-Wheeled Vehicle Domestic Component Level</td>
<td>Minimal 40%</td>
<td>Minimal 60%</td>
<td>Minimal 80%</td>
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<tr>
<td>Motorcycle</td>
<td>CBU</td>
<td>CKD</td>
<td>IKD</td>
<td>Part by Part</td>
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<td>End of Life Recycling</td>
<td>Recycling of Secondary Battery (NiMH &amp; LiB)</td>
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To support the accelerated adoption of electric vehicles, the Government has prepared a road map for the electric vehicle industry through Minister of Industry Regulation No. 6 of 2022.

This roadmap provides opportunities for investment and collaboration in the EV industry.

Source: Ministry of Industry Regulation No. 6 Year 2022
INDONESIA EV POLICY

UMBRELLA LAW

PRESIDENTIAL REGULATION NO. 55 / 2019 on ACCELERATING PROGRAMS OF BATTERY ELECTRIC VEHICLES

Revised into: PRESIDENTIAL REGULATIONS No. 79 / 2023 on REVISION OF PRES REG NO. 55/2019
→ Synergizing Central Government & Local Government to enhance EV ecosystem.

ECOSYSTEM SUPPORT

MINISTER FOR ENERGY AND MINERAL RESOURCES REGULATION No. 13 / 2020 on PROVISION OF INFRASTRUCTURE OF CHARGING STATIONS FOR BATTERY-POWERED ELECTRIC VEHICLES FOR ROAD TRANSPORTATION

ADOPTION AS GOV’T VEHICLES

Presidential Instruction No. 7 / 2022 on the Use of Battery Electric Vehicle (BEV) as Operational Service Vehicles for Government Agencies.
INDONESIA EV POLICY (2)

CONVERSION

Regulation of the Minister for Energy and Mineral Resources No. 3 / 2023 concerning General Guidelines for Government Assistance in the Conversion Program of Fuel Motorbikes to Battery-Based Electric Motorcycles

SUB-NATIONAL LEVEL

BALI GOVERNOR REGULATION No. 48 / 2019 on the Use of BEV

BALI REGIONAL ACTION PLAN FOR THE ACCELERATION OF BATTERY ELECTRIC VEHICLES 2022 – 2026 (launched 26 Jan 2023)

INCENTIVES

10 INCENTIVES SO FAR, COVERING:

Despite having a higher upfront cost, EVs already have a lower total cost of ownership than comparable ICEVs.

- Despite their higher upfront cost, EVs have a lower TCO than their ICEV equivalent. The lower TCO is mainly due to significantly lower maintenance fees and fuel costs. In addition, several incentives provided by the government, such as the reduction/exemption of vehicle title transfer fee (BBNKB) and tax, also play a role in further lowering EVs' TCO. In the 2W market, the conversion program could further reduce the TCO of E2W.

Source: IESR Indonesia Electric Vehicle Outlook 2023: Electrifying Transport Sector: Tracking Indonesia EV Industries and Ecosystem Readiness

Adoption of electric vehicles are targeted to continue to increase until 2030. This increase is expected to increase energy security and reduce GHG emissions in the transportation sector.
REGULATORY CHALLENGES AND POTENTIAL SOLUTIONS

Through Presidential Instruction (INPRES) No. 7 of 2022, the President has directed all leaders of the Indonesian government to expedite the adoption of electric vehicles as replacements for current official vehicles, in accordance with their respective duties and authorities.

The challenges encountered in implementing Battery Electric Vehicles (BEV) are as follows:

- The uneven availability of charging infrastructure persists in many regions across Indonesia.
- The price of BEV remains relatively higher compared to conventional fuel-powered vehicles.
- The supporting infrastructure for BEV components is still notably limited in most regions across Indonesia.

Source: CNBC, 2021
HEAVY-DUTY VEHICLES - BUS ELECTRICITY PLAN: STUDY CASE JAKARTA

Target Elektrifikasi Transjakarta

- **2023**: +100 EV bus (2.3%)
- **2024**: +532 EV bus (13.5%)
- **2025**: +1050 EV bus (32%)
- **2027**: +1581 EV Bus (50%)
- **2030**: EV Bus (100%)

**2023**
- **100** Single Bus EV
- **+500** Articulated Bus EV
- **+12** Retrofitting to EV Articulated, Single, & Medium Bus Prototype

**2024**
- **+20** Medium Bus EV Prototype
- **+50** Medium Bus EV
- **+100** Single Bus EV
- **+350** (R) Single Bus EV
- **+180** (R) Medium Bus EV

**2025**
- **50%** of all operational buses are electric
- **Total 2,631 EV Bus**

**2027**
- **100%** of all operational buses are electric

Source: TransJakarta Operational Director Presentation at CORE Indonesia Seminar, 14 March 2024
Barriers to EVs Adoption in Indonesia

- Difficult to Find Public Charging Stations: 70
- Expensive Price: 60
- Limited Driving Distance: 50
- Difficult battery replacement: 40
- Long Charging Duration: 30
- Performance and Safety: 20
- Lack of Model and Choice: 10
- Others: 0

Source: IESR (2023)

The limited availability of public electric vehicle charging stations and high prices are the main obstacles to the adoption of electric vehicles in Indonesia.

Expanding the network of public charging stations and providing attractive incentives to both consumers and producers is crucial to overcome the challenges.
THANK YOU

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