CAP 1 FINANCIAL

Electric Vehicle Industry in Indonesia: Focusing on Electric Motorcycles

26th August 2023

Thuy An Nguyen

Agenda

Overview

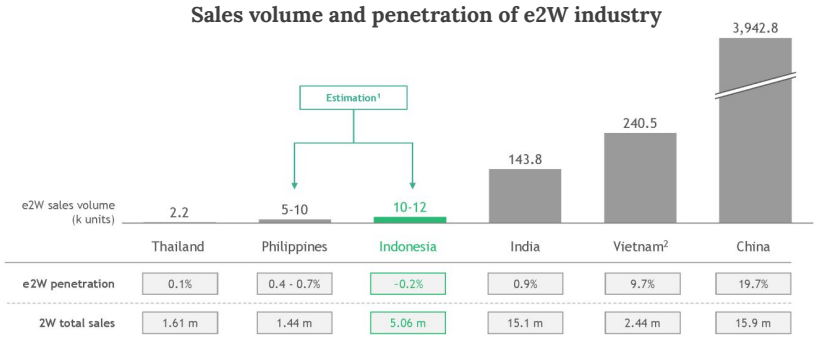
Ecosystem

Competitive Landscape

Investment thesis

Introduction

Electric Vehicle Industry



Sources: BCG analysis

The Indonesian Motorcycles market – the third largest in the World; however the **E-motorcyles (E2W vehicles) market stills in the beginning stage** (only accounts for 0.2 percent in Indonesia's total motorcycle market)

Electric Vehicle Impact

1. **New economic value creation** via E2W Industry (~$ 11.4b in new annual economic value in 2030)

2. **EVs avoid GHG emissions** with an annual CO2 emissions reduction of 0.48 tons per vehicle per year)

3. **Industry development** offers a pathway to unlock up to **215,000 jobs by 2030**

Trends and Developments

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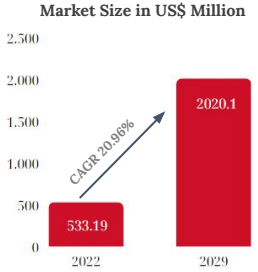
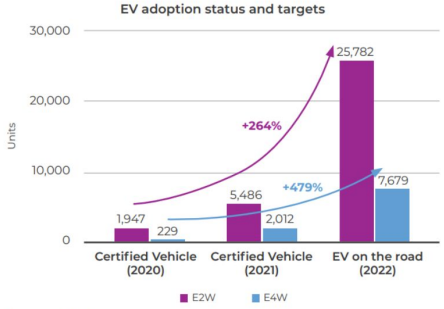
Current Readiness Status of Electric Vehicles

EV Adoption in Indonesia

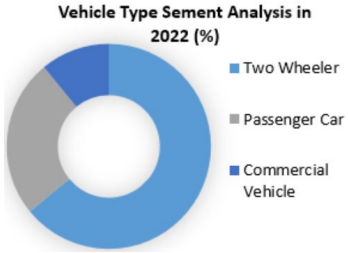


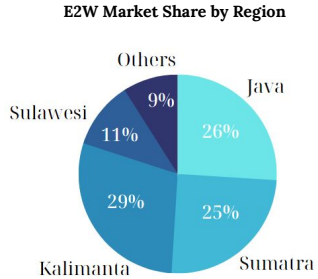


Source: IESR analysis

Current trend of electric motorcycle segment

Electric two-wheeler market





Sources: MoT, MEMR

Key Takeaways

EV adoption has been increasing in recent years

Indonesia has ambitious intentions to become a prominent player in the EV sector, **with a $17 billion road map**

The Indonesian electric vehicle market is still in its beginnings

Despite such a huge growth in 2022, **the EV adoption rate is still far from the target of Indonesia's NDC**

Big islands are potential markets for E2W motorcycle

The market is mainly distributed **across main 4 islands** with **CAGR predicted at 15.2%**

Source: IESR analysis

Indonesia : EV adoption is hampered by a lack of infrastructure, high upfront costs, and low performance

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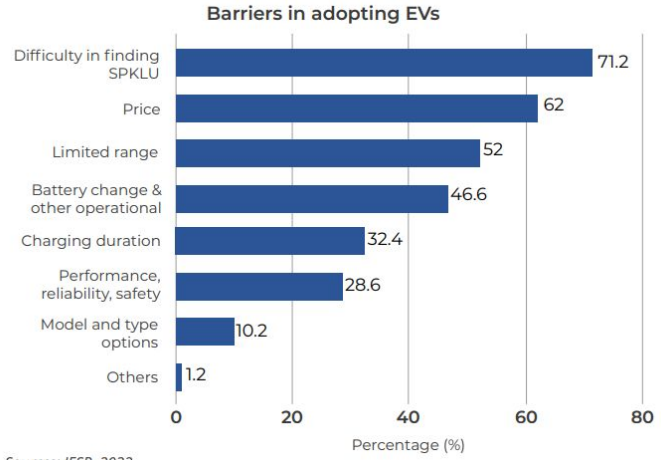
Slow adoption in E2W, especially E-motorcyles



Sources: IESR, 2022

Insight by Product

- E-scooters hold the largest share in the Indonesian market
- **E-motorcycles are anticipated to witness the fastest growth during the forecast period.** (32,000 electric motorcycles, Oct 22)

There is a solid need for **E2W vehicles**

However, the lack of Public Electric Vehicle Charging Station (SPBKLU) & high prices mainly led to the **slow adoption of converted E2W**, especially E-motorcyles

Stasiun Pengisian Kendaraan Listrik Umum
(Re: Public Electric Vehicle Charging Station)

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Electric Vehicles (EV) Policies & Regulations In Indonesia

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Regulations

- Acceleration of the BEV's Program for Road Transportation
- Sales Tax for EV
- EV Charging Infrastructure
- Conversion to BEV
- BEV in Industrial Company

Required Licenses

- Type Approval
- Business Lincense
- Environmental Impact Analysis (Amdal)

Policies to support EVs

Policy clusters		Policy	4W + 2W	4W only	Ministries in charge
Demand	End-user financial incentives	• Lower risk weight of 75% for loans for EV purchasing (compared to 100% for other industries)			Financial Services Authority
	End-user tax incentives	• Luxury goods tax reduction for EVs - 0% for BEV/ FCEV if local content requirement met			Presidential decree; Ministry of Finance
	Preferential access	• Exemption from road restrictions • Parking fee discount			Presidential decree
Supply	Manufacturer financial incentives	• Lower risk weight of 75% for loans for EV value chain activities (compared to standard 100%) and exemption from maximum credit limit if guaranteed by BUMN			Financial Services Authority
	Manufacturer tax incentives	• CIT holiday (up to 20 years) for investment in EV industry • Import duty exemption on SKD kits for EV			Presidential decree; Ministry of Finance
	Regulatory hurdle reduction	• Government grants free access to government owned BEV-related technology to EV players			Presidential decree
	Capabilities building	• Tax deduction of up to 300% of costs incurred in R&D, technological innovation activities and industrial vocation • Professional certification for battery industry			Presidential decree
Infra. & enablers	Sales & emission regulations				
	Charging network support	• Discounted rate for home power capacity upgrade & special electric price rates up to 30% for home charging • 35% - 50% discount on electricity rates given to SPKLU business • Ease of SPKLU licensing (simplified process steps)			Minst. of Energy & Mineral Resources; State Electric Company
	Industry standardization	• Setting up product certification & technical standards for EV industry (standards for EV charging infra. in place)			Minst. of Energy & Mineral Resources; Ministry of Investment; Presidential decree

Source: Presidential decree; Ministry of Finance; Ministry of Energy & Mineral Resources; Ministry of Investment; PLN; OJK

Indonesian | Ecosystem and Infrastructure

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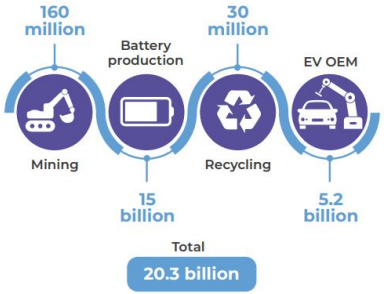
Natural resources advantage

- **Indonesia is the only EV manufacturing country** that has the **main raw material resource** for EV, which helps **REDUCING**

25% final battery price

Total EV supply chain investment (USD)

- **The domestic EV supply chains are not fully integrated yet**



20 billion USD

has been invested across the whole supply chains

BUT several battery producers and recycling factories **will not be operational until at least 2025**

Source: Rigel Capital (2022) & IBC (2021)

CASE STUDY

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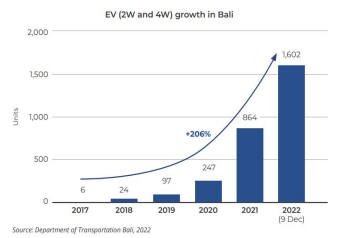
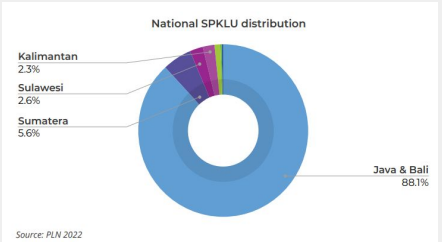
Rapid growth of EV in Bali as a result of an intensive campaign and a supportive ecosystem

Bali's ecosystem facilitates the development of converted EV through integrate supply chain investment & SPBKLU





Key takeaway

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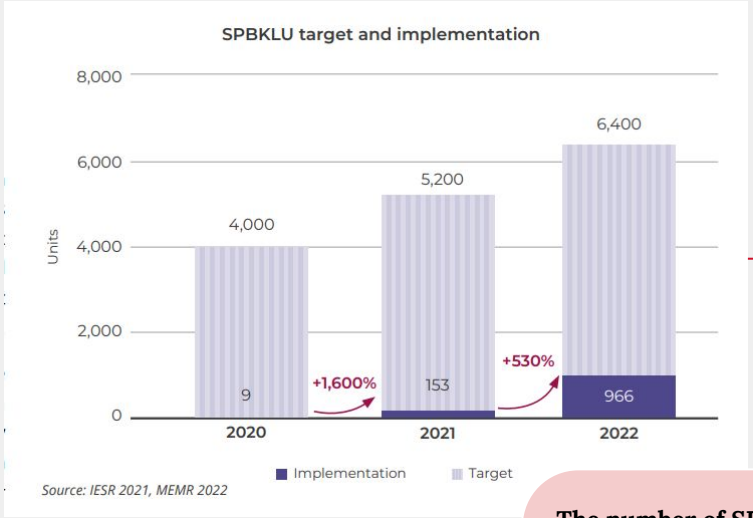
Prioritizing battery manufacturing, EV infrastructure, and EV investment integration could empower E2W industry growth.

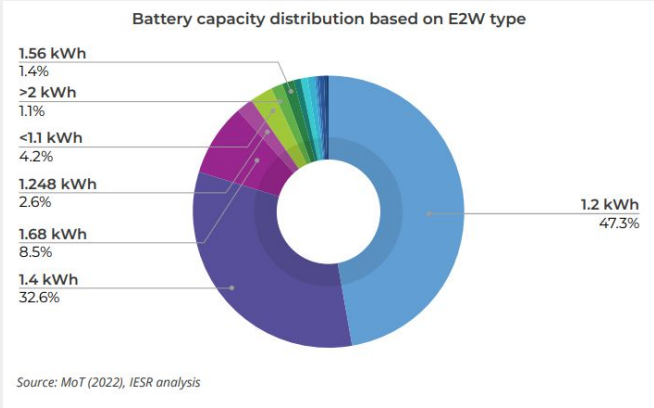
Source: PLN 2022, IESR 2021

SPBKLU Implementation



The number of SPBKLUs in 2022 has increased by five-fold compared to the previous year

However, **battery standardization** could **be imposed** to reduce the need for SPBKLU overextension and increase SPBKLU utilization rate



- Currently, battery swapping stations **focus on 1.2 kWh and 1.44 kWh batteries.**
- These capacities are used by most E2Ws, especially **E-motorcycles**

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Competitive Landscape in electric motorcycles

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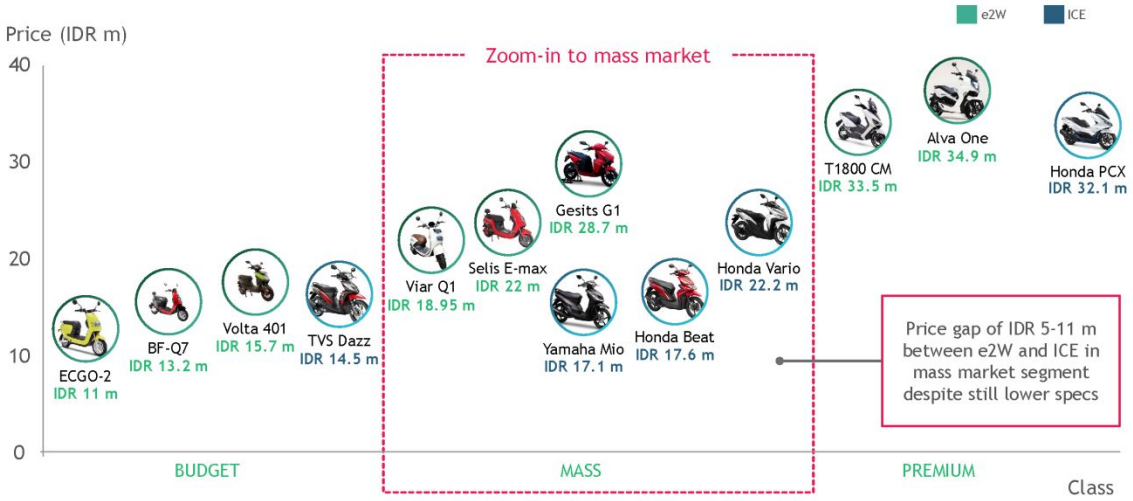
Indonesia E2W Key Players



- **BMW AG**
- **DFSK Motors**
- **Honda Motor Co., Ltd.**
- **Isuzu Motors Limited**
- **Mazda**
- **Mitsubishi Motors Corporation**
- **Nissan Motor**
- **Suzuki Motor Corporation**
- **Toyota Motor Corporation**
- **Wuling Motor (SGMW Motors)**
- **Mercedes Benz**
- **Tesla**

Key takeaways

- **Diverse Market Players:**
  Diverse range of players, including both local manufacturers and international brands
- **Price Points**
  Strategically targeting different price points, with options for budget-conscious consumers
- **Participation in Government Initiatives**
  Initiatives aimed at promoting electric motorcycles, aligning with the **national goals for sustainability**

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Investment Thesis

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Top-down investment thesis

Fueling early-stage E-motorbike startups in Indonesia, our venture capital focus **aligns with sustainable transportation**. Leveraging Indonesia's policies and resource strength for **competitive battery pricing**, we're poised to accelerate E-motorcycle adoption to **set the stage for rapid growth in big islands**

Investment Goals

Strategically position ourselves as **a leading investor** in the **burgeoning electric motorbike (E-motorbike) Indonesian market**

- Funding **early-stage startups** aligned with sustainable transportation trends
- Foster the growth of this transformative industry
- Contribute to the nation's commitment to cleaner mobility solutions

Key notes :

- Indonesia is a **hyper-localized market**
- There are risks in **Costs, Potential Returns, and Losses** (Initial Investment, Potential Returns, and unforeseen disruptions)

Viability of the Investment

Growing Demand for E-Motorbikes

Government Policies

Resource Advantage

Potential Downsides and risks

Charging Infrastructure

The nascent charging infrastructure for E-motorbikes could impact adoption rates

Regulatory Uncertainty

Shifts in government policies or regulations could influence investment conditions and market dynamics

Competition

Pressures profit margins and necessitating strong market differentiation