



**Kementerian Koordinator Bidang Kemaritiman dan Investasi
Republik Indonesia**

Accelerating The Development of Green Supply Chain

**H.E. Luhut Binsar Pandjaitan Coordinating Minister of
Maritime and Investment Affairs**

21 August 2024





Golden Indonesia 2045: Bringing Indonesia Out of the Middle-Income Trap, Becoming the 4th Largest Economic Power in the World

Key Objectives of Golden Indonesia 2045

1

Per Capita Income Equivalent to Developed Countries



2

Extreme Poverty to 0% and Reduced Inequality



3

Increased International Leadership Involvement



4

Enhancing Human Resources Competitiveness



5

Reducing GHG Emissions Intensity Towards Net Zero Emissions

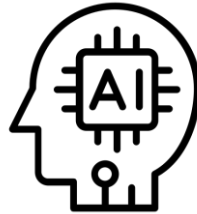


To Realize Golden Indonesia 2045, Indonesia Needs to Face Various Challenges That Require Immediate Anticipation



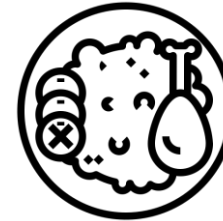
Geopolitical Fragmentation and Economic Competition

Globalization is shifting towards **inward-looking policies**, leading to **competing blocs**



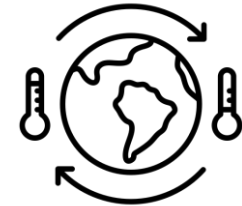
Digital Disruption and Artificial Intelligence

AI changes life and work, posing **job loss** and **cybersecurity risks**



Food Security

Food demand will rise as the population grows, **doubling land needs**



Climate Change-Energy Transition

Energy transition to address **climate problems**, **improve health**, **enhance energy security**, and **create jobs**

Energy Transition Must Be Implemented to Mitigate Climate Change, Ensure Energy Resilience, and Sustain Economic Growth



Maintaining economic growth by leveraging the energy transition



Ensuring affordable energy availability for the public



Protecting public health and the environment




Just energy transition is needed considering the three aspects above







Indonesia Needs To Develop Green Industry Of The Future To Retain Its Energy Exporter Status and Sustain Its Energy Industries

2023 – Fossil Fuels Exports

Future – Renewables and RE Supply Chain

	Exports volume	Exports value
 Coal	518 Mn Ton	43 Bn USD
 Pipeline gas	181 Mn MMBTU	8 Bn USD
 LNG	474 Mn MMBTU	

Exports to be developed	
 Green electricity	 Biofuel (e.g. SAF)
 Solar PV	 BESS
 Hydrogen fuel	Etc.

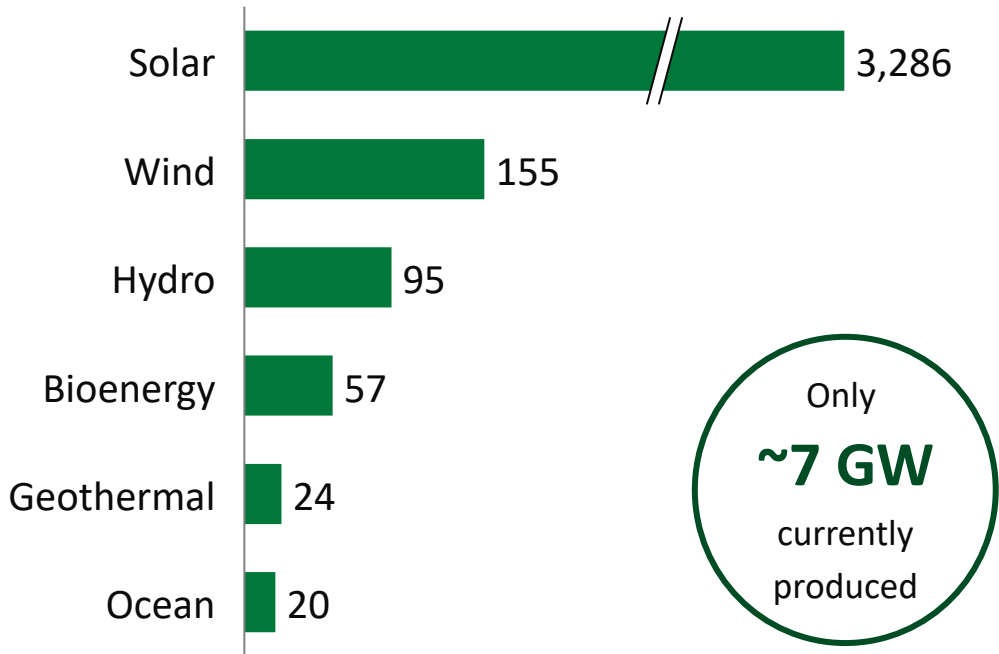


With 3,6k GW Worth of Renewable Energy, Indonesia Can Be The Green Energy Export Hub of ASEAN

Indonesia has a huge potentials of renewable energy generation

Indonesia as actively forming energy partnership for cross border electricity trade, especially RE

RE Potential (GW)



Indonesia will support the ASEAN Power Grid Vision



Singapore: ~2 GW_{ac} cross-border **green power exports** from Batam, powered by solar energy (Singapore-Indonesia RE Partnership)



Malaysia (Sarawak-Sabah): Cross-border electricity trade from West Kalimantan



Papua New Guinea: Cross-border power exports from Skouw Papua, starting 5 MW

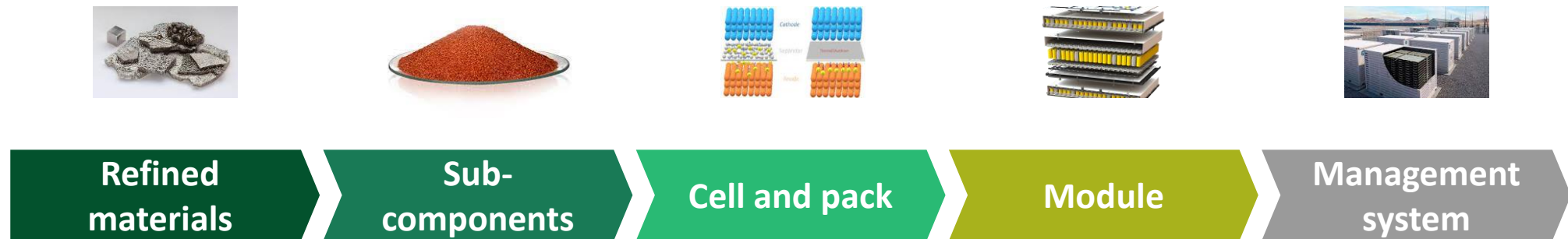
Indonesia Needs to Expand the Domestic Value Chain for Solar PV and BESS to Fully Use Its Renewable Potential



Solar PV value chain



BESS value chain



MoU on Renewable Energy Cooperation with Singapore Has Been Agreed for Investment in Green Manufacturing Industry Development and Electricity Trading



The MoU on Renewable Energy Cooperation Indonesia Singapore was signed on March 16, 2023



Leadership Retreat: President Joko Widodo and PM Lee Hsien Loong

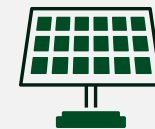


MoU G2G: Coordinating Minister Luhut Pandjaitan and Senior Minister Teo Chee Hean

The two countries will facilitate investment and cooperation:



Upstream to downstream renewable energy manufacturing capabilities and industries in Indonesia, including but not limited to the development of solar panels (PV) and battery energy storage systems (BESS)



Solar panel farms and BESS to supply renewable energy to Indonesia and for **green electricity export** and where possible hydrogen and ammonia to Singapore using **solar panels and BESS produced in Indonesia**



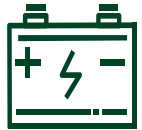





The **renewable energy industry** within **Green Corridor projects** (including industrial estate and smart city investments) in Indonesia is estimated to attract more than USD 50 billion **foreign direct investment** and create **tens of thousands of jobs**

Through Collaboration with Singapore, Indonesia Has Attracted Investments in Green Power Exports and Solar Farm and BESS Supply Chain



Preliminary

Industry	 <p>Power developer (PLTS)</p>	 <p>Solar PV Manufacturers</p>	 <p>Battery and Inverter Producers</p>
Supplier			
Investment	<p>USD 30-50 Billion</p>	<p>~USD 1,7 Billion</p>	<p>~USD 1,0 Billion</p>

The capacity that will be built by 2035:
 2 GWac = 11 GWp panel + 21 GWh battery



Green jobs as the substitute of job lost from fossil industry transition

Potential addition of 3.3 GWac



Indonesia Will Host Indonesia Sustainability Forum 2024, A Forum for Nations and Business to Collaborate in Accelerating Global Energy Transition

Snapshot from ISF 2023

Gol seeks to elevate ISF 2024 to be an Indonesia ‘International’ Sustainability Forum



ISF 2024 will be held on 5th– 6th Sept, with side events starting on 4th Sept

- 2 weeks before **UNGA 79th** in New York
- 9 weeks before **COP 29** in Azerbaijan



250+ speakers & 5000+ participants from government, business, academia, to philanthropy



20+ topics in sustainability, decarbonization and climate actions

ISF main & side events



Plenary Session



Thematic Session



Round-table Session



Workshop Session



Philanthropy forum



MoU Signing

Indonesia welcomes partnership to improve understanding and collaboration in key decarbonization solutions through ISF events



The Indonesia International Sustainability Forum 2024 is now open for participant registration!



REGISTER NOW

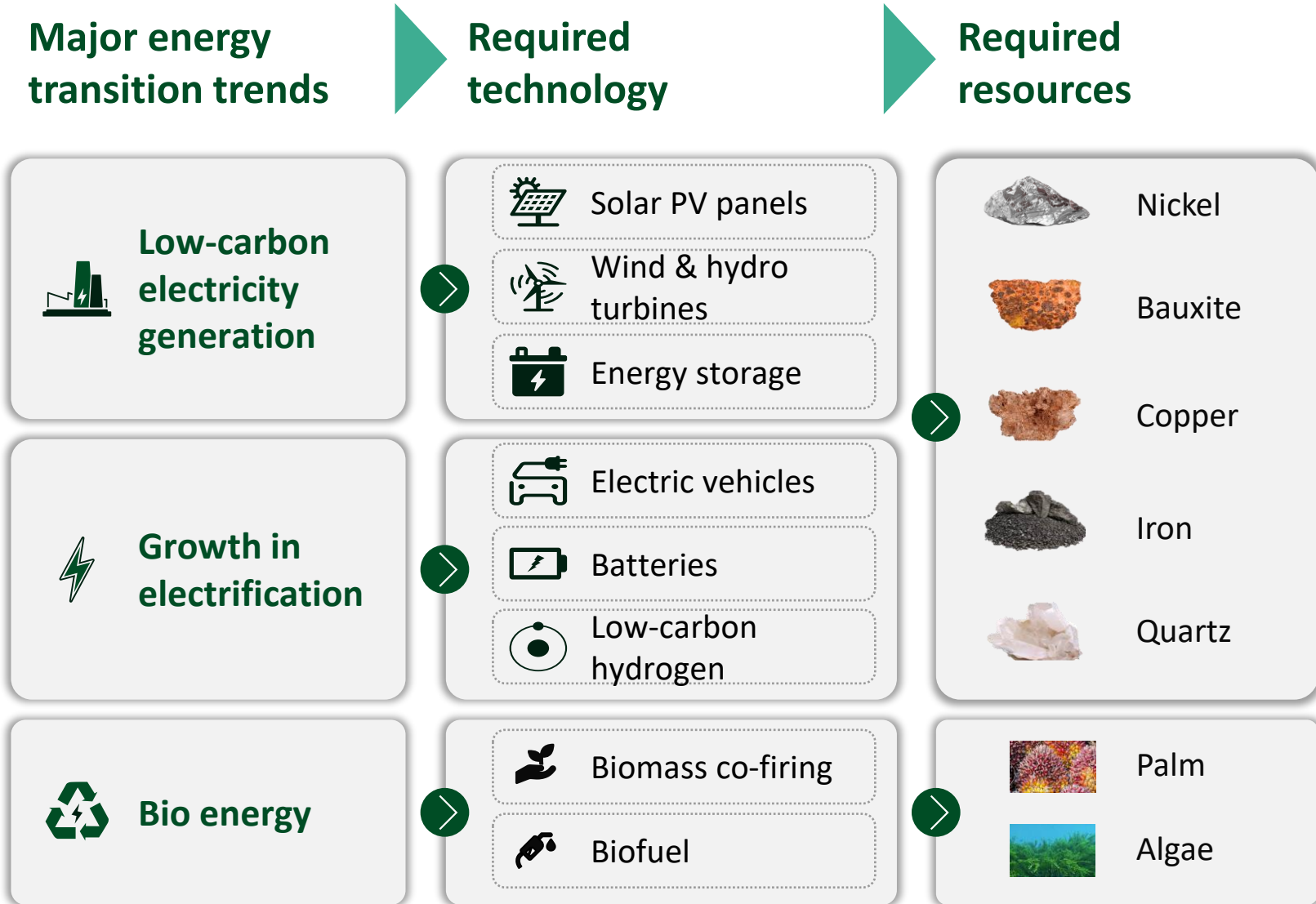




Thank You



Indonesia's Rich Natural Resource Deposits Enable Industrialization To Complement The World's Energy Transition Needs



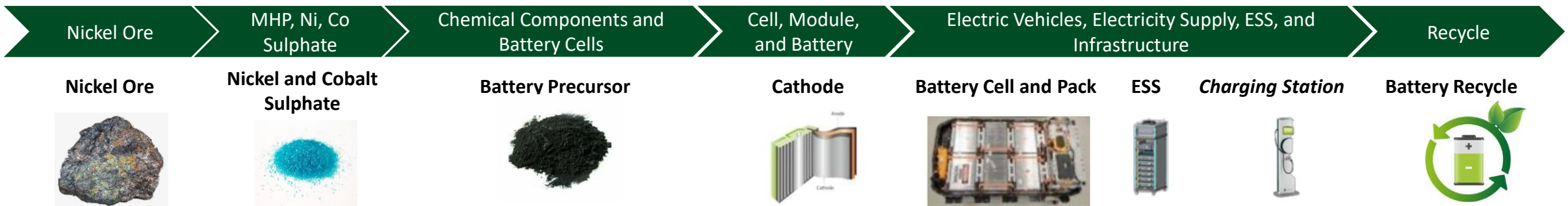
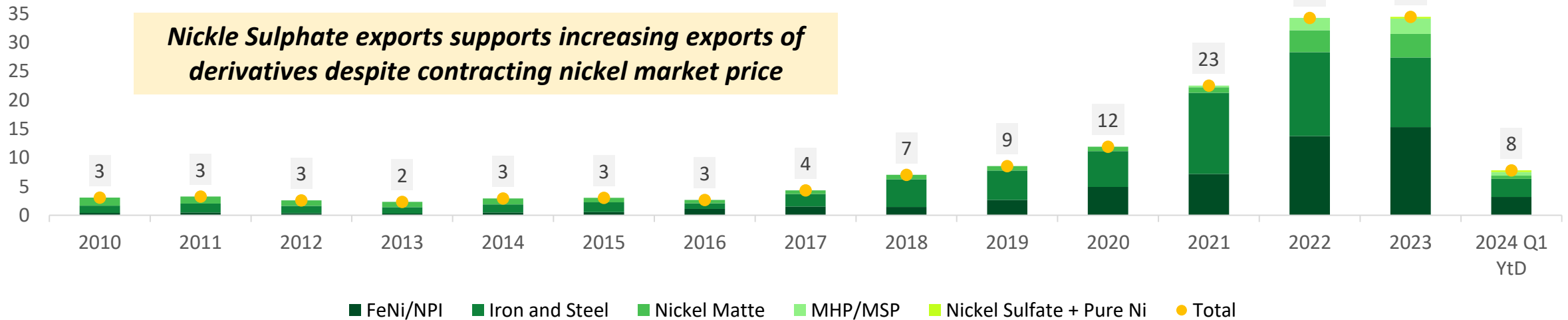
Abundant resources for low carbon economy

-  **3,686 GW of potential RE¹**
-  **World's biggest nickel reserves**
-  **World's 2nd biggest tin reserves**
-  **6th biggest bauxite reserves**
-  **7th biggest copper reserves**

Through Downstreaming, Indonesia Is Industrializing, Transforming Its Economy from Raw Commodities to High Value Industries



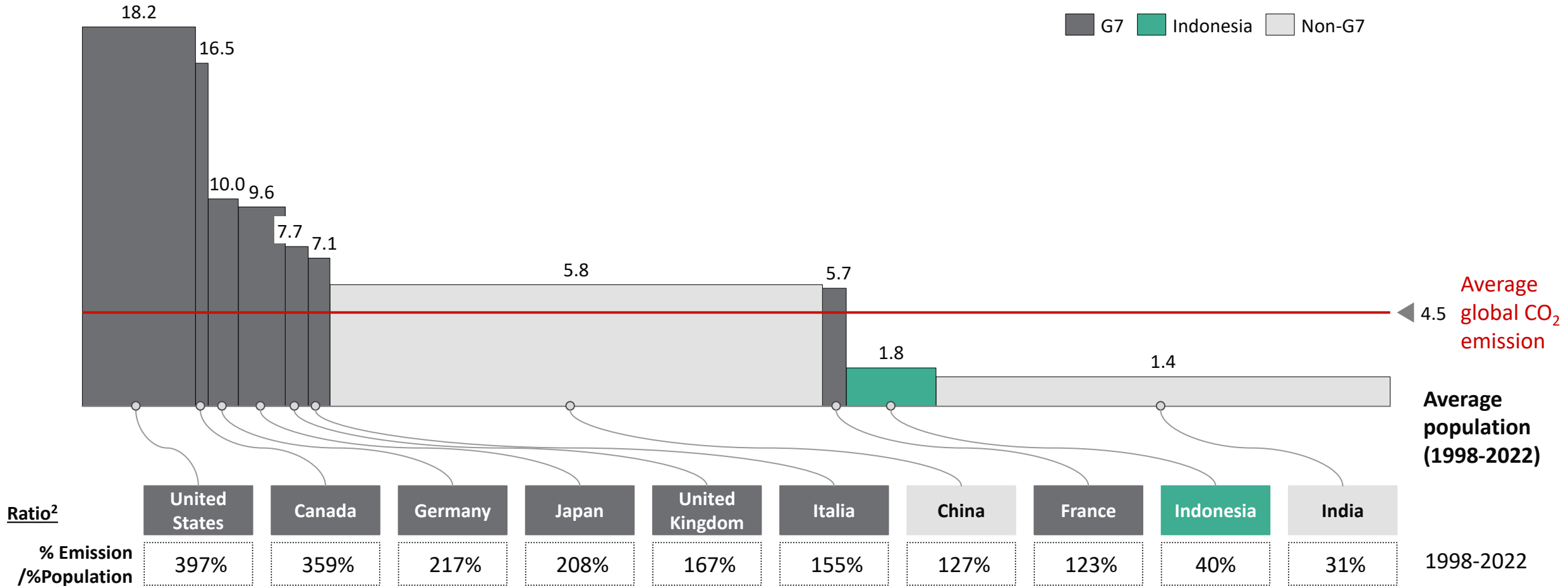
Export of Indonesian Nickel Derivative Products
(USD Billion)





8 Largest Economies or 30% of The World's Population, Contribute to ~54% of Total Greenhouse Gas Emissions Since Kyoto

CO₂ emissions per capita¹ (1998-2022) after Kyoto Protocol
(Ton/person/year)

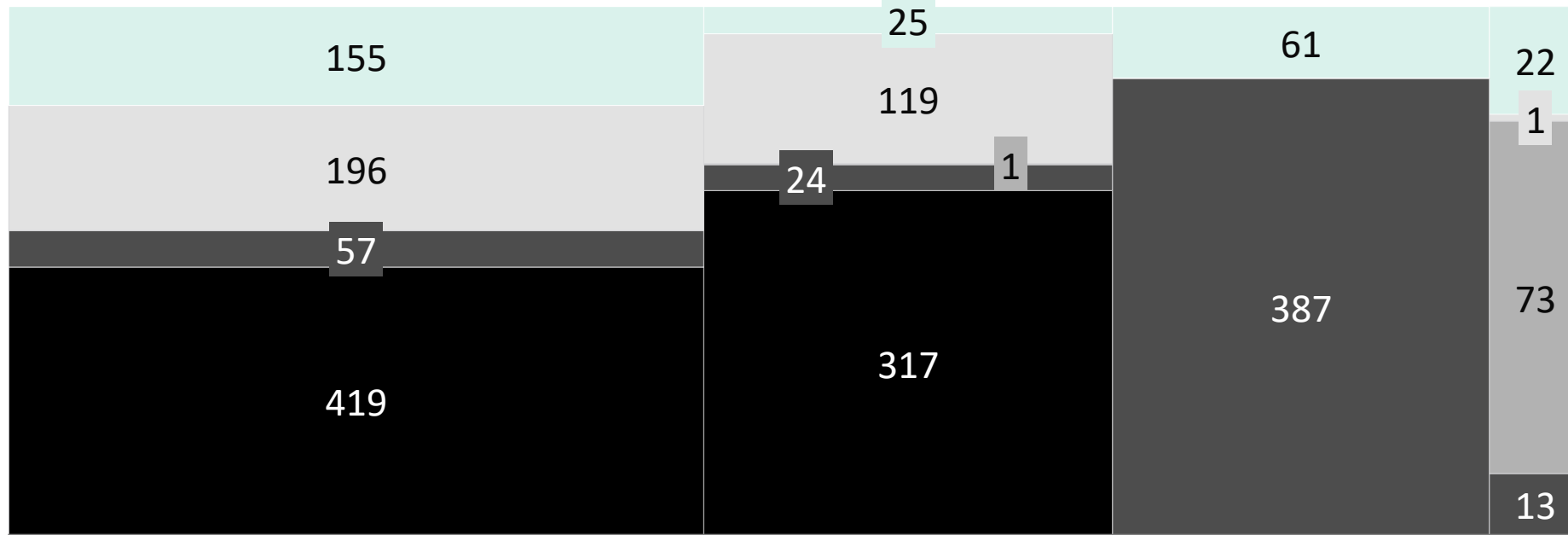


1. Average population 1998-2022; 2. Contribution ratio of emission or GDP to population
Source: World Bank, Our World in Data



Fossil Make Up 86% of Energy Consumption, with ~3/4 Consisting of Coal for Electricity, Petrol for Transport, and Coal for Industry

Primary energy consumption¹ by sector 2023 (Mn BoE²)



Shares of energy source

Non Fossil	14%
Natural gas	17%
LPG	4%
Petroleum	26%
Coal	39%

Electricity

Industry

Transport

Building³

Total primary	826 (44%)	485 (26%)	448 (24%)	110 (6%)	1.870 (100%)
Fossil	671 (36%)	461 (25%)	388 (21%)	87 (5%)	1.607 (86%)
Non Fossil	155 (8%)	25 (1%)	61 (3%)	22 (1%)	263 (14%)

Indirect fossil from electricity⁴

302 (37%)

523 (63%)

1. HEESI Chapter 5 for consumption per end-user sector; for energy consumption, power generation is derived from the difference between the total primary energy supply (Table 3.1) and the total primary energy consumption of the end-user sector; Biogasoil is assumed to comprise 70% fossil volume and 30% non-fossil volume; 2. Barrel Oil Equivalent; 3. Residential, Commercial, and other sector; 4. Reallocation of fossil energy consumption from electricity generation to end-sector; Electricity consumption in Mn BoE for end sector: industry 70, transportation 0.2, buildings 114