

A Green Recovery: Accelerating Energy Transition & Reducing End-to-End Emission

Glasgow, 3 November, 2021

CONFIDENTIAL AND PROPRIETARY. Any use of this material without specific permission of PT Pertamina is strictly prohibited. Should not be reproduced or redistributed to any other person.





Iman Rachman

Director of Strategy,
Portfolio, and New
Venture

PT Pertamina (Persero)

Summary

Iman Rachman is the Director of Strategy, Portfolio, and New Venture of PT Pertamina Persero, Indonesia's largest corporation with ~ US\$ 70 billion of assets and a Global Fortune 500 company.

Iman was a CEO, CFO, Director of Investment Banking with more than 23 years experience in energy, port, asset management, and investment bank corporations.

Professional Experience

- Director of Strategy, Portfolio, and New Venture, PT Pertamina (Persero) – 2020 - Present
- Chief Executive Officer, PT Perusahaan Pengelola Aset (Persero) – 2019 – 2020
- Chief Financial Officer, PT Pelabuhan Indonesia III – 2018 - 2019
- Chief Financial Officer, PT Pelabuhan Indonesia II - 2016 - 2018
- Director of Investment Banking, PT Mandiri Sekuritas – 2003 - 2016

Education

- MBA Finance, Leeds University Business School
- Bachelor of Economy, Padjajaran University

Pertamina's Commitment to Sustainability

Our commitment is driven by the awareness to not compromising the ability of future generations in meeting their needs

Pertamina Sustainability Policy

“PERTAMINA’s ambition is to be a leading and reputable Global Energy Company and to be recognized as:

Environmentally Friendly Company

Socially Responsible Company

Good Governance Company”

Pertamina Sustainability Committee

Chairperson : President Director & CEO

Members :

1. Strategy, Portfolio & New Ventures Director
2. Finance Director
3. Logistics & Infrastructure Director

Adherence to International Standards on Sustainability Practices

Non-Exhaustive

Guiding Principles



17 Goals



National Determined Contribution



International Labor Organization



Climate Related Financial Disclosure

Participation to International Initiatives



Disclosure Standards



International Best Practices in Operation

ISO 14001:2015	Environmental Management
ISO 45001:2018	Occupational Health and Safety
ISO 50001:2018	Energy Management
ISO 37001:2016	Anti Bribery Management System
ISO 27001:2013	Information Security Management Systems
ISO 26000:2010	Social Responsibility



ESG Performance



RATED

28.1

ESG RISK RATING

MEDIUM RISK

Rank 15 out of 251¹ /
7th Percentile in
Oil & Gas Industry













49/100

WBA RANK

Climate & Energy
Oil & Gas

Pertamina's ESG Strategy & Long-term Target

Our sustainability strategy is translated into 10 Sustainability Focuses, each aligned with SDGs and having its primary target

	Focus	SDGs	Primary Target
Environmental	 1. Addressing climate change	7, 13	30% of emission reduction in 2030 (vs 2010 baseline)
	 2. Reducing environmental footprint	7, 13	Beyond compliance Water & Waste management
	 3. Protecting biodiversity	14,15	Net positive impact on biodiversity
Social	 4. Health and safety	3, 8	Zero accidents, Zero Fatalities
	 5. Prevention of major accidents	3, 12, 14,15	Zero loss of primary containment, No major accidents
	 6. Employee recruiting, development & retention	5, 8	Aim for below 5% employee turnover, Zero harassment
	 7. Innovation and research	8, 9	Completion of low-carbon research and innovations
	 8. Community engagement and impact	1,4,7,14,15	Improve community based access to energy in Indonesia
Governance	 9. Cyber security	16	Zero cyber attacks
	 10. Corporate Ethics	16	Zero tolerance on Fraud and Corruption

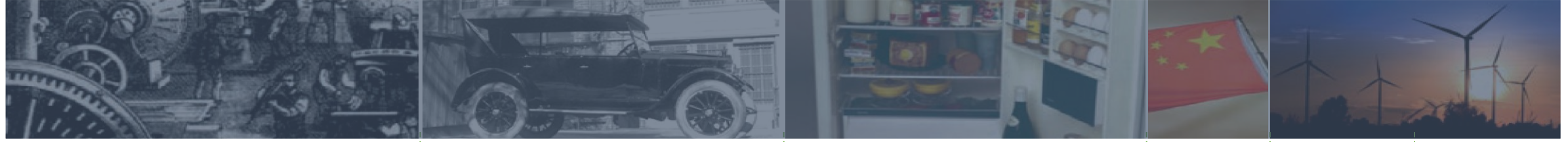
Energy Global Mega-trend

Global oil demand could peak by 2030s, due to New & Renewable Energy Growth in Energy Mixed

Global primary energy demand

Million terajoules (TJ)

Renewables Fossil fuels



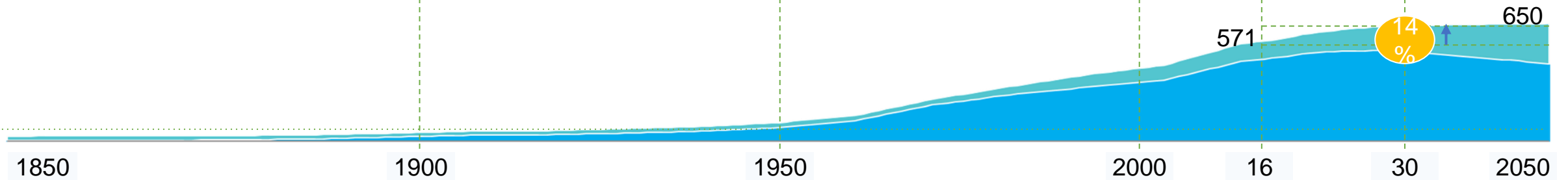
Industrialization economic, most of energy utilize biomass as main sources

Rapid growth in **global transportation**, accelerated by coal and oil utilization

Rapid **welfare** development like never before

Industrialization
Growth in China

Rapid **New and Renewable Energy** growth in Global



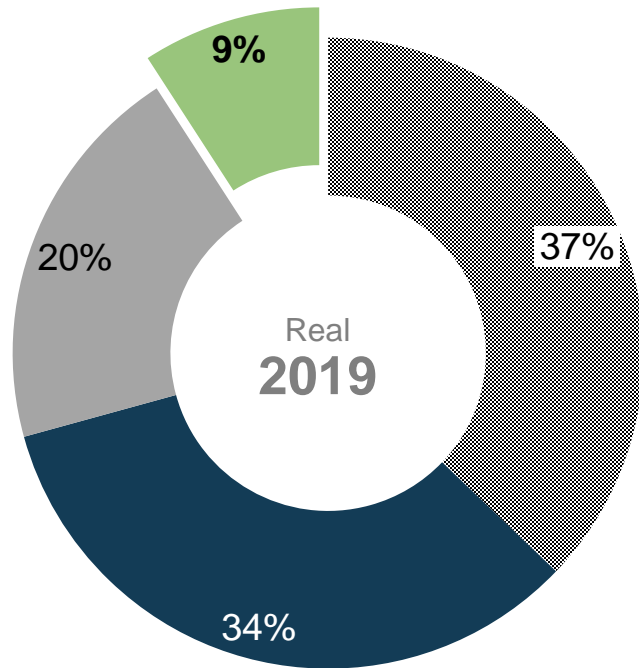
Fossil Fuel Demand CAGR, %



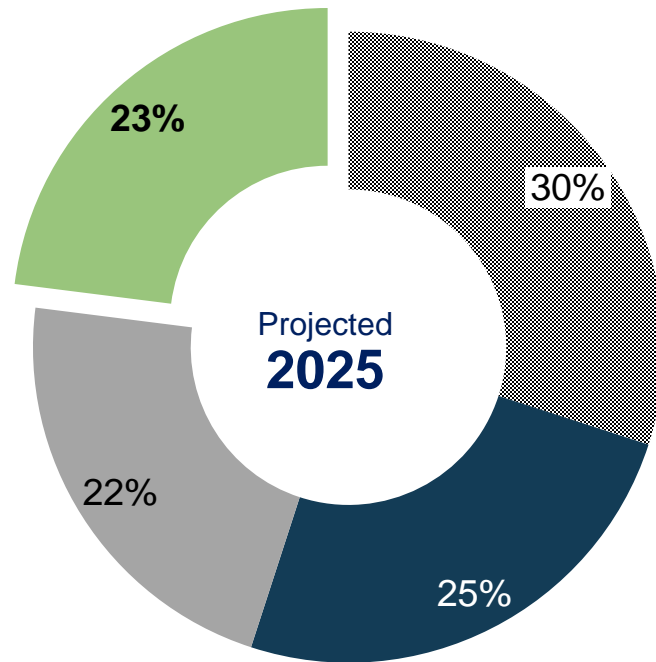
National Energy Strategy has targeted to increase New & Renewable Energy mix to 23% in 2025 and 31% in 2050

National Energy Grand Strategy – Achievement (2019) & Target (2025 & 2050)

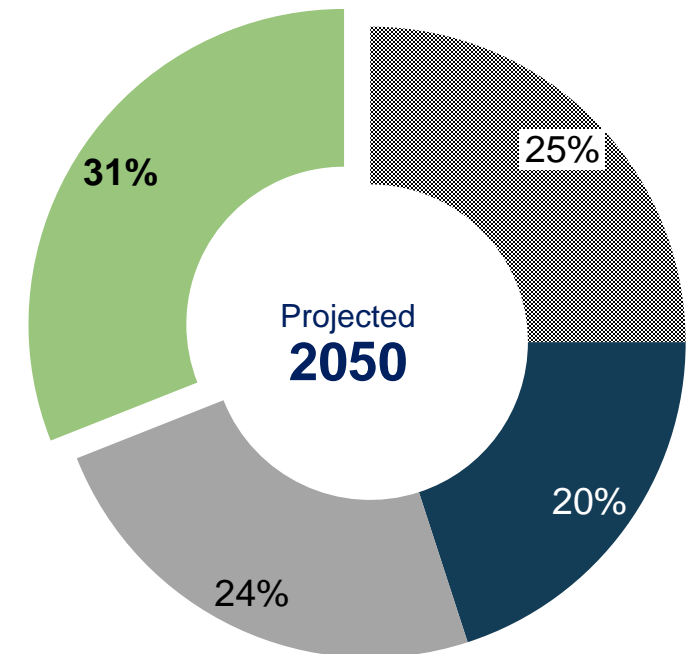
Indonesia energy demand projection in Indonesia will grow at 2.1% per annum until 2050



Energy Consumption = 0.8 TOE/cap.
 Electricity Consumption = 1084 Kwh/cap.
 Total Generator Capacity = 69.7 GW



Energy Consumption = 1.4 TOE/cap.
 Electricity Consumption = 2500 Kwh/cap.

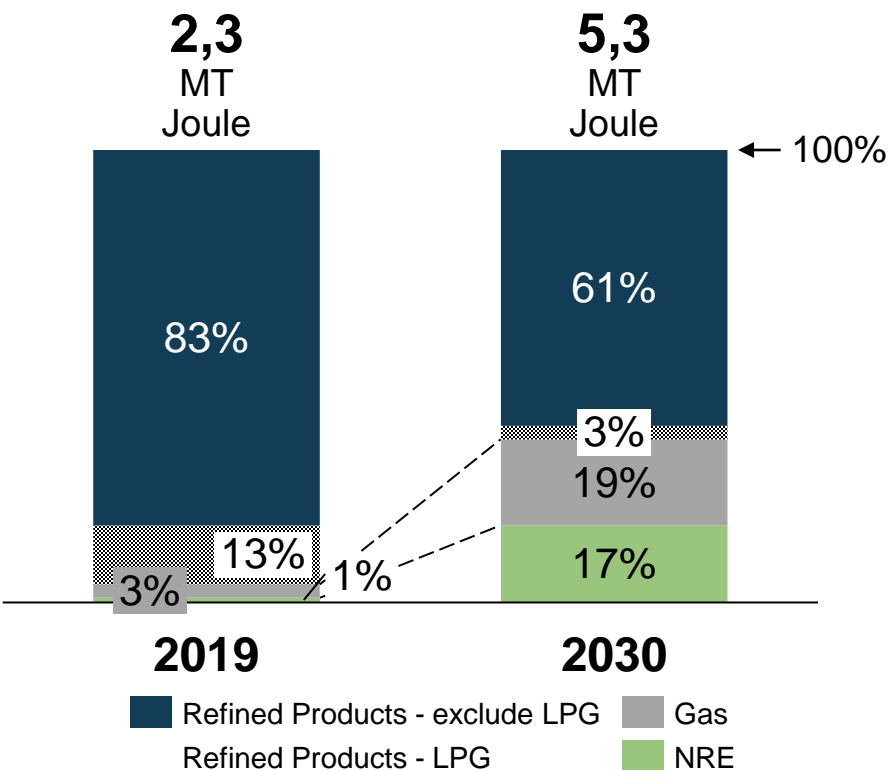


Energy Consumption = 3.2 TOE/cap.
 Electricity Consumption = 7000 Kwh/cap.
 Total Generator Capacity = 443.1 GW

Coal ■ Oil ■ Gas ■ NRE

Pertamina allocates CAPEX of 9% for New and Renewable Energy, higher than the average IOC of 4.3%. Pertamina's commitment is in line with efforts to use domestic resources to supply domestic energy towards green development and decarbonization

Pertamina Energy Mix



Investment Strategy

Total Capex US\$92 Billion

Based on Pertamina Long Term Plan 2020 – 2024



Upstream

\$64 Billion

70%



Downstream

\$20 Billion

22%



Gas & NRE

\$8 Bn

9%

Average Investment IOC in NRE = 4.3%*

Pertamina has reduced 27.08% emission in 2020 for supporting Indonesia's Nationally Determined Contribution (NDC)

End-to-end GHG emission reduction achieved 2010-2020

Flare Gas Utilization
Upstream and Refinery
utilized for own use fuel and for gas supply to customer

4.8%

Pertamina's
Emission Reduction
Achievement
2010 - 2020

10.5%

Energy Efficiency
Upstream, Refinery and PGE
waste heat recovery in upstream & refinery,
other energy efficiency initiatives in
geothermal activities

27.08%

VS

National 1st NDC¹⁾ target in 2020

26%

and

Updated NDC²⁾ target in 2030

29%

Fuel Gasification
Upstream
Switching liquid base fuel to gas fuel

0.3%

4.5%

Other Activities
Upstream and Refinery
Commercialization CO₂ venting to customer
in upstream, other process optimization in
geothermal activities

To drive new & renewable energy growth in Indonesia energy mix, Pertamina develop several projects and activities to expand **green energy portfolio**...

Pertamina's New & Renewables Energy Portfolio



1 Geothermal

Capacity enhancement from 672 MW in 2020 to 1003 MW in 2026



2 Hydrogen

Pertamina has started the initiatives for utilization of green hydrogen in Indonesia which will use electricity from Pertamina's geothermal field with total potential 8.600 kilo gram hydrogen per day



3 EV Battery & Energy Storage System

Participate in Indonesia Battery Company Joint Venture with battery production target in 2022 with 0.2 GWh capacity to 140 GWh in 2029. Develop EV battery ecosystem including swapping & charging business



4 Green Refinery

Construction Green refinery with capacity of 100 KBPD in 2025



5 Bio-energy

Generator capacity enhancement in 2026, consist of: Biomass/Biogas 153 MW, Bio blending Gasoil & gasoline, Bio-crude from algae and ethanol 50 KTPA on stream in 2025



6 Circular Carbon Economy

Pertamina plan to apply Circular Carbon Economy in several area:
 Recycle : Biomass, Biogas
 Reduce : Solar PV, EV, LNG Bunkering
 Reuse : CO2 for EOR and methanol



7 Other New & Renewable Energy

- DME with capacity 5200 KTPA on stream 2025
- Generator capacity enhancement in 2020 – 2026:
 - Solar PV 4 – 910 MW
 - Bayu 225 MW (2024)
 - Hydro 200 – 400 MW

Thank

