

Augmenting Progress in Climate Action and Business Growth: A Point of View from Pertamina, Indonesia's Energy Global Player

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President Director & CEO – PT Pertamina (Persero)



Summary

Nicke is President Director & CEO of Indonesia's giant State Owned Oil & Gas company, Pertamina. With Over 34,000 employees and \$41.5 billion in revenues, Pertamina is the only one Indonesia's Company ranked in a Fortune Global 500.

With a various experiences in several State Owned Enterprises, Nicke now has committed around \$68 billion investment for the next 5 years in an ambitious vision to ensure the Availability, Accessibility, Affordability, Acceptability, and Sustainability of energy in the Country.

Professional Experience

- Human Capital Director → President Director & CEO – PT. Pertamina (Persero); 2017 – Present
- Business Director → Corporate Plan & RNE Director → Strategic Procurement & RNE Director – PT. PLN (Persero); 2014 – 2017
- President Director – PT. Mega Eltra; 2014
- Engineer → Project Control Manager → Dept. Head → Division Head → VP → Business Director – PT. Rekayasa Industri; 1991 - 2014

Awards

- The Most Powerful Women International – Fortune (Rank 17th) – 2021
- UN Women 2021 Indonesia WEPS Awards – Leadership Commitment – 2021
- The Most Powerful Women International – Forbes (Rank 25th) – 2020

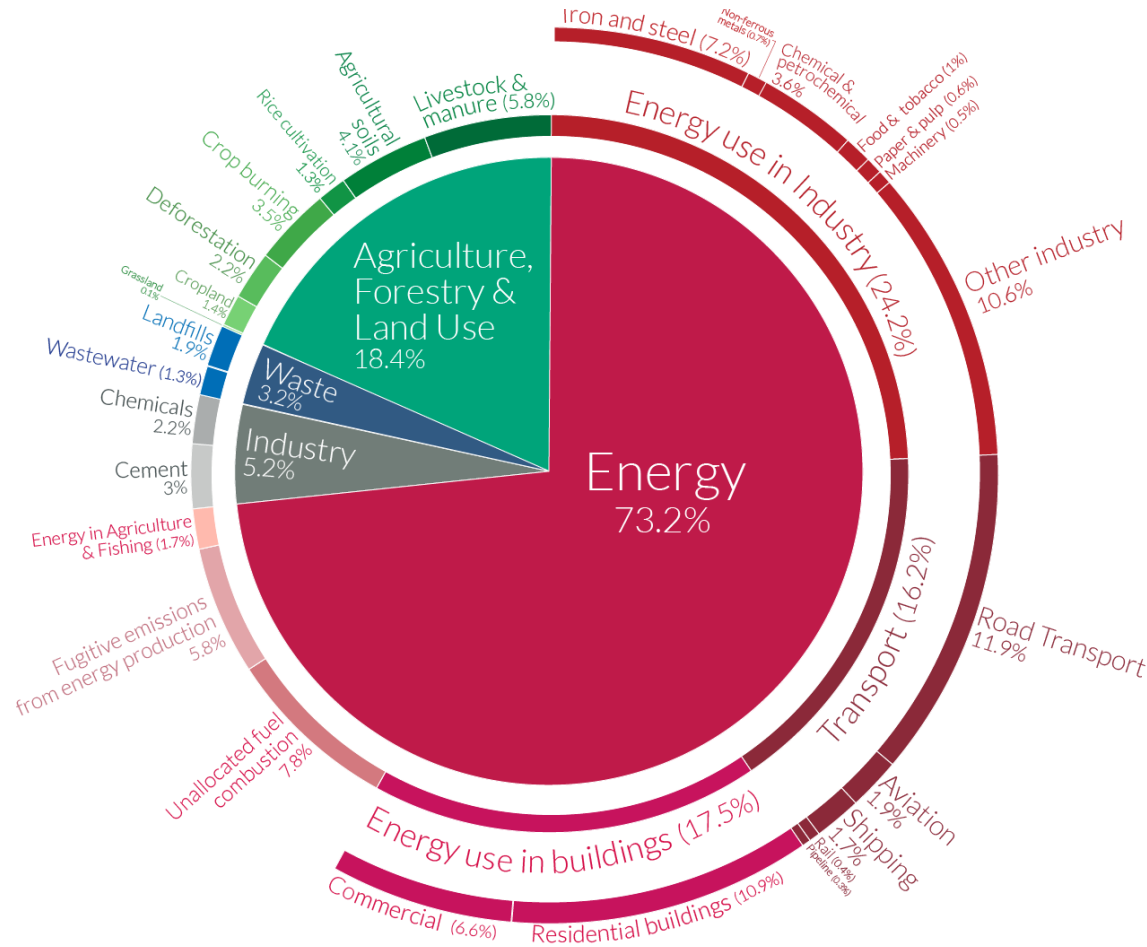


Greenhouse Gases (GHG) Inventory

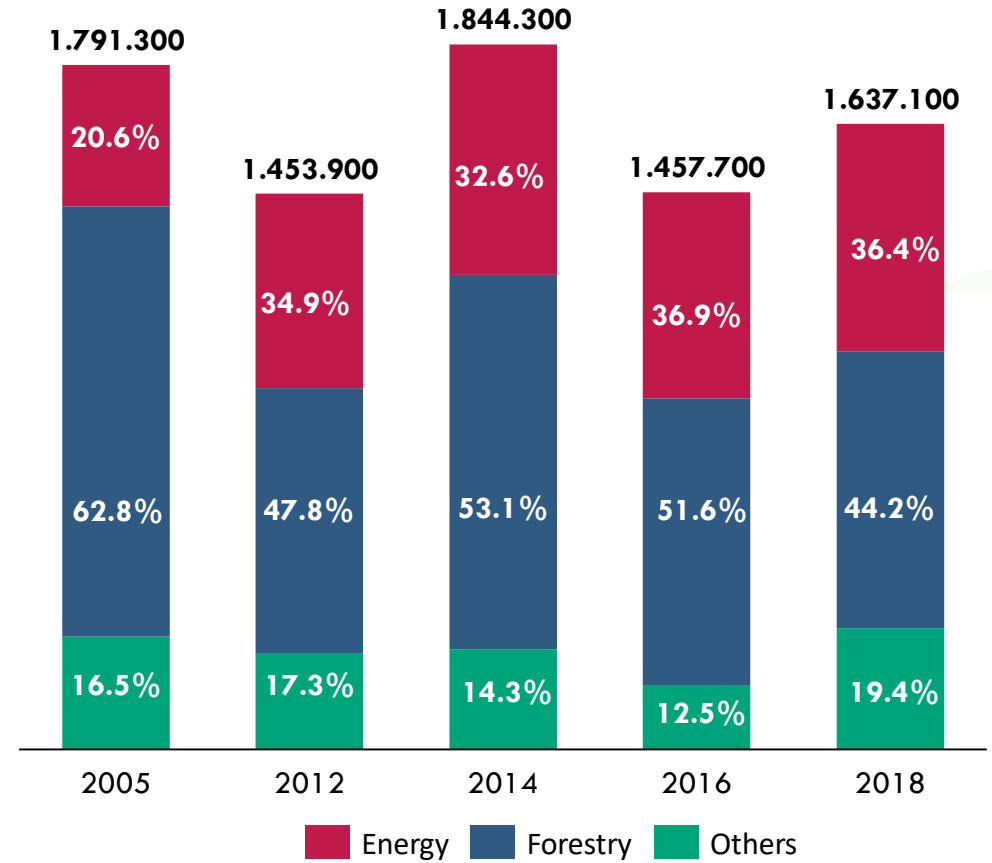
The energy sector plays an important role in the world's GHG Inventory, but less than 20% of energy is related to transportation, aviation and shipping.

Global Greenhouse Gas Emissions by Sector

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO₂eq



National Greenhouse Gas Emissions by Sector



Others: Waste, Agriculture, Industri & Penggunaan Produk (IPPU)

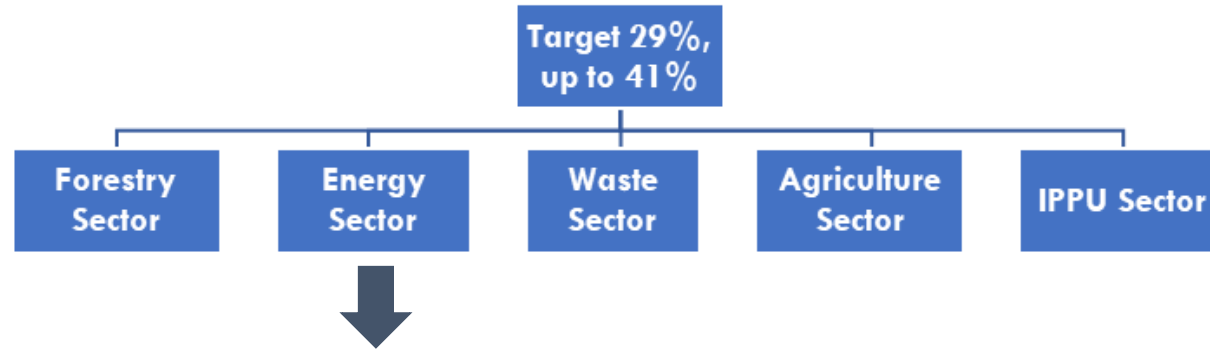
Source: Indonesia's aspiration & plan: LTS-CCR 2050; Lap. IGRK 2019, Ministry of Environment & Forestry of The Republic of Indonesia

OurWorldinData.org – Research and data to make progress against the world's largest problems.
Source: Climate Watch, the World Resources Institute (2020).

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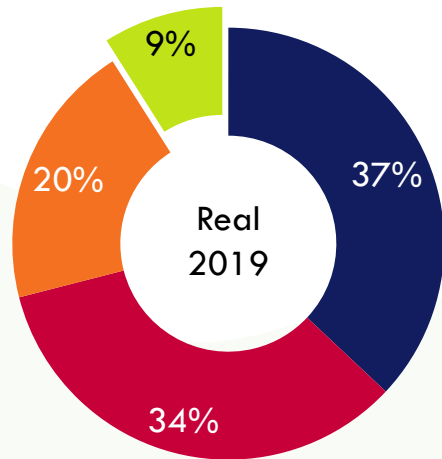
Nationally Determined Contribution (NDC) Target

From the NDC Target that has been set by the Government, the energy sector is then translated into the National Energy Grand Strategy

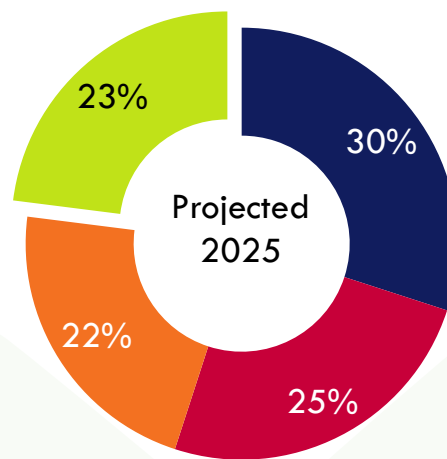


National Energy Grand Strategy – Achievement (2019) & Target (2025 & 2050)

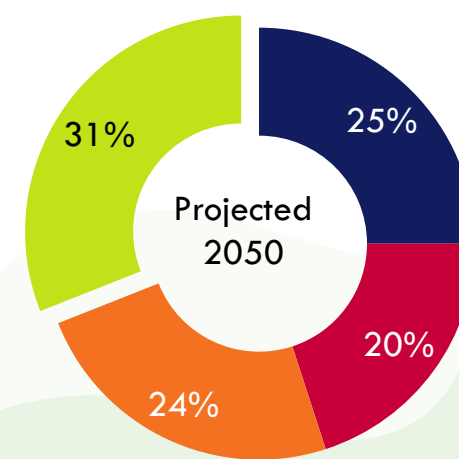
Indonesia energy demand projection in Indonesia will grow at 2.1% annum until 2050



Energy Consumption : 0.8 TOE/cap
Electricity Consumption : 1,084 kWh/cap
Total Generator Capacity : 69.7 GW



Energy Consumption : 1.4 TOE/cap
Electricity Consumption : 2,500 kWh/cap



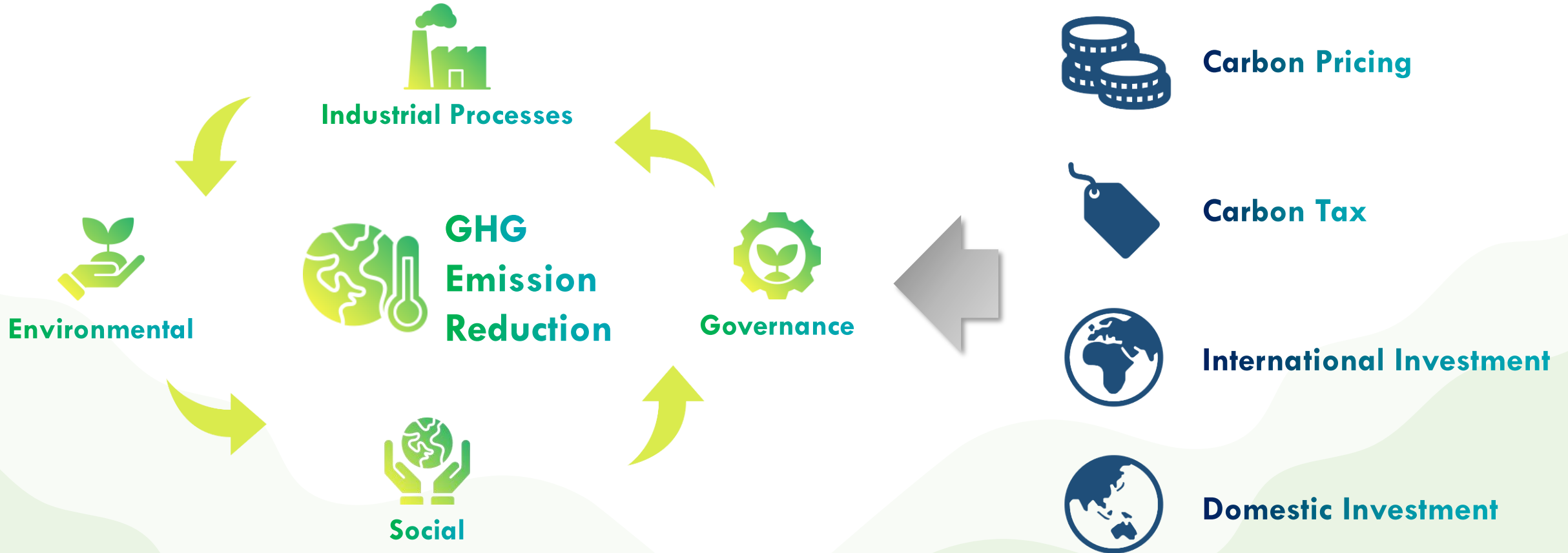
Energy Consumption : 3.2 TOE/cap
Electricity Consumption : 7,000 kWh/cap
Total Generator Capacity : 443.1 GW



NDC Target source: Indonesia's aspiration & plan: LTS-CCR 2050; Lap. IGRK 2019, Ministry of Environment & Forestry of The Republic of Indonesia
Source: National Energy Grand Strategy, Ministry of Energy & Mineral Resources of the Republic of Indonesia

GHG Emission Reduction Cycle & Stimuli

In creating the GHG Emission Reduction Cycle that must be carried out by corporations, several external stimuli are also needed



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

74.8%

Flare Gas Utilization

Upstream and Refinery

utilized for own use fuel and for gas supply to customer

0.3%

Fuel Gasification

Upstream

Switching liquid base fuel to gas fuel

Pertamina's
Emission Reduction Achievement
2010 - 2020

27.08%

VS

National 1st NDC¹⁾ target in 2020

26%

and

Updated NDC²⁾ target in 2030

29%

10.5%

Energy Efficiency

Upstream, Refinery and PGE

waste heat recovery in upstream & refinery, other energy efficiency initiatives in geothermal activities

14.5%

Other Activities

Upstream and Refinery

Commercialization CO2 venting to customer in upstream, other process optimization in geothermal activities

Pertamina New & Renewables Energy Portfolio

Pertamina plans to abate 25.6 million tons CO₂e p.a. by 2030, totaling up to 81.4 million tons CO₂e p.a. by 2060



1

Geothermal

Capacity enhancement from 672 MW in 2020 to 1128 MW in 2026.



5

Green Refinery

Development of Green refinery in Plaju & Cilacap, operating in 2025



2

Hydrogen

Pertamina has started the initiatives for utilization of green hydrogen in Indonesia which will use electricity from Pertamina's geothermal field.



6

Bio Energy

Generator capacity enhancement in 2026, consist of: Biomass/Biogas, Bio blending Gasoil & gasoline, Biocrude from algae and ethanol, on stream in 2025



3

EV Battery & Energy Storage System

Participate in Indonesia Battery Company Joint Venture. Develop EV battery ecosystem including swapping & charging business



7

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



4

Gasification

Methanol Plant construction for gasification , Plan to on stream in 2025.



8

New Renewable Energy

Power generator capacity enhancement in 2020 – 2026:

- Solar PV
- Wind
- Hydro

Pertamina Framework in Social & Environmental Responsibility

4 Community Based Adaptation and Mitigation Approaches and Support for Implementation of Core Competencies.



Greening

Increase and maintain vegetation cover.



Energy

We are using new renewable energy, energy conservation, and saving.



Waste

Waste management, solid and liquid waste.













Agriculture

Agricultural cultivation with low GHG emissions and Preventing land forest fires.

Pertamina's 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



Thank You

