

## Speaker Profile



# Eka Suhendra

Director of Business Planning

Pertamina International Shipping

Eka Suhendra, serves as the Company's Director of Business Planning that responsible to Corporate Strategy, Sustainability, and Business Development. He holds a Bachelor's degree in Economics from the University of Indonesia, a Master's in Management from Sriwijaya University, and a Master of Business Administration from Manchester Business School, United Kingdom.

With a career spanning 23 years at Pertamina, Eka has held various key roles. He most recently served as the VP Controller of the Finance Directorate at PT Pertamina Patra Niaga SH - C&T (2020-2024). He undertook managerial positions including Manager Finance & Accounting at PT Donggi Senoro LNG (2016-2017) and Manager Cost Management – MA Controller (2017-2020), where he also oversaw supervisory responsibilities.

# Charting PIS Course For The Future

**PT PERTAMINA INTERNATIONAL SHIPPING**  
SUB HOLDING INTEGRATED MARINE LOGISTICS

*Energizing  
The Ocean*

# PIS's Response to Environmental Demands in the Global Shipping Landscape

## PIS Aspiration



Becoming a **Global Leader**  
in Shipping and Marine  
Logistics

## Global Demands



IMO require Shipping  
Industry Emission to be  
**Net Zero by 2050**

V

## Our Strategy



**Operational Pattern Efficiency**

Waiting Time Reduction, Speed Reduction  
Voyage Optimization, Capacity Utilization



**Fleet Design**

Hull design/coating/lightweight materials,  
Waste Heat Recovery System,  
Auxiliaries System Efficiency



**Alternative Fuels**

LSFO, MDF, LNG, Fuel Cell



**Green Cargo**

LNG, DME, Ammonia

## Alternative Fuels Challenges

	Technical Readiness	Tank size HFO=1	Total Cost of Ownership HFO=1
Fuel Oil	Favorable	1.0	1.0
MGO	Favorable	1.1	1.1
LNG	Favorable	1.8	1.1
Biodiesel	Slightly Unfavorable	1.1	1.3-1.5
Methanol	Slightly Unfavorable	2.4	1.5-1.7
Ammonia	Unfavorable	3.3	1.3-1.4
Liquid Hydrogen	Unfavorable	4.5-14.0	1.8-2.0

# PIS Offers Holistic Marine Logistics Services

Including International Shipping, Port & Marine Services and Storage

## Shipping

## Marine Services

## Logistics



### SHIPPING

Transport of material using vessels, e.g.

- Crude
- Refined products
- LPG
- LNG
- Dry bulk
- Container/Cargo

### MARINE SERVICES

Seaside services for shipping & port, e.g.,

- Towages/tugboat services
- Pilotage
- Line-handling
- Vessel berths
- Inspection and repairs

### PORT OPERATIONS & SERVICES

Management of port-side ops for terminals/jetties, e.g.:

- Loading master
- Security & customs
- Maintenance activities

### PORT ASSET OWNERSHIP

Ownership of port/jetty, with responsibility to:

- Invest or acquire
- Operate and maintain

### LOGISTICS - STORAGE

Ownership & operations of tanks, e.g.:

- Providing storage services to own or third party volumes
- Or services to operate facilities

### OTHER SUPPORT SERVICES

Other land based logistics, example:

- Freshwater
- Waste management
- Freight forwarding



# Area of Operation and Distribution



PIS Covers Extensive Domestic And  
International Routes With Indonesia's  
Strategic Location As The Anchor

# 63

Vessels

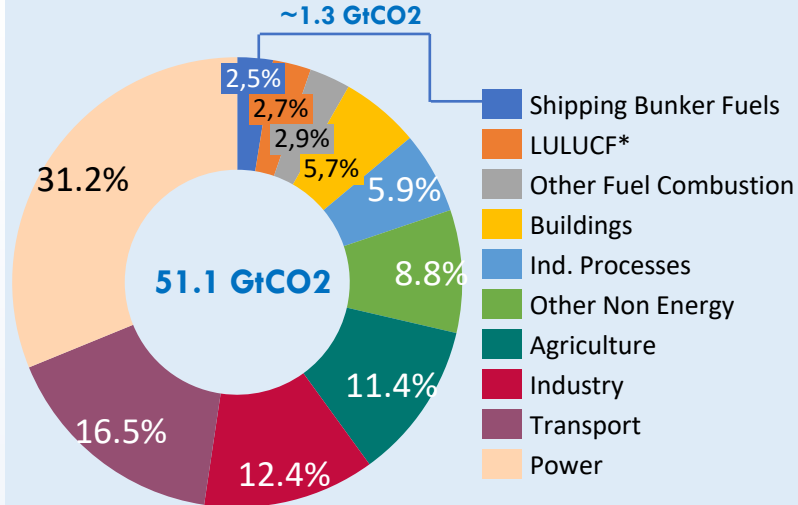
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International Routes

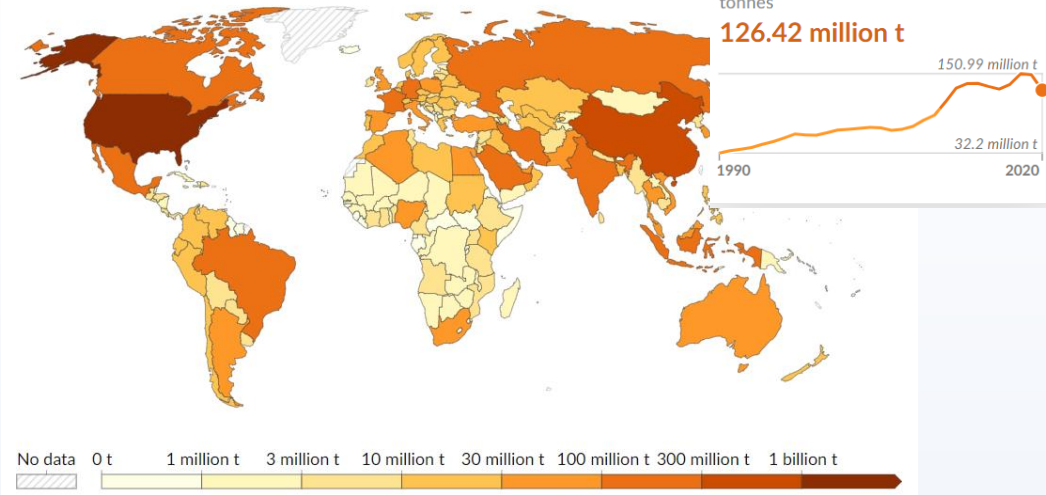


# In 2022 international shipping accounted for about 2,5% of global energy-related CO<sub>2</sub> emissions

## Global GHG Emission by Sector



## CO<sub>2</sub> emissions from Transport, 2020

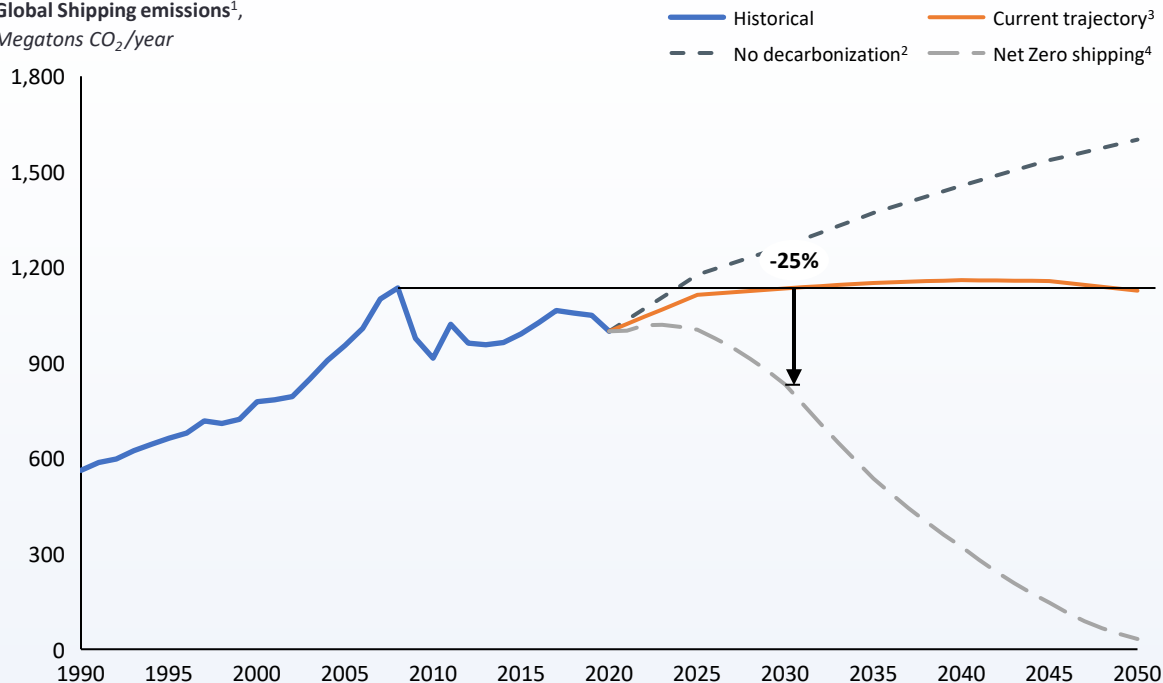


While the revised emissions reduction targets recently announced by the International Maritime Organization (IMO) are now in line with the goals set out in the Paris Agreement with the Net Zero Emissions by 2050 (NZE) Scenario, which requires an almost 15% reduction in emissions from 2022 to 2030.

SOURCE : World Resources Institute, BNEF, [CO<sub>2</sub> and Greenhouse Gas Emissions - Our World in Data](#)

# Shipping industry must be on track to meet Net Zero IMO Target

Global Shipping emissions<sup>1</sup>,  
Megatons CO<sub>2</sub>/year



1. Tank-to-propeller emissions; 2. Assuming carbon intensity (tCO<sub>2</sub>/ton-mile) stays as it was in 2019; 3. Current Trajectory (2-2.5C) scenario incorporates existing and announced policies, as well as McKinsey perspective on trade and technology cost; 4. IMO target pathway achieves 100% reduction by 2050

SOURCE: IMO, Global Energy Perspective on Maritime powered by Maersk Mc-Kinney Moller Center for Zero Carbon Shipping NavigaTE model

## Net Zero Target



2060



2050

**PIS shall accelerate  
decarbonization  
compared to other  
business**

# Pertamina 10 Sustainability Focus

## Focus

## SDGs

### Environmental

1



**Addressing climate change**



2



**Reducing environmental footprint**



3



**Protecting biodiversity**



### Social

4



**Enhancing health and safety**



5



**Prevention of major accidents**



6



**Respecting and empowering our people**



7



**Reorienting innovation and research**



8



**Expanding community engagement and impact**



### Governance

9



**Strengthening cyber security**



10



**Leveraging corporate ethics**





# PIS's Aspirations and Projections through 2034



## Financial

**~\$7 Bn**  
**Market Cap\***

...Current NYK ~12 Bn,  
MISC ~7 Bn

**\$9 Bn**  
**Revenue**  
(>40% from Non-Captive)

...20% CAGR from 2024

**~34 %**  
**Revenue From Low  
Carbon**

...Current portion ~15% in 2024

**~27 %**  
**Revenue From Marine  
& Terminal\*\***

...Current Marine & Terminal  
~18%\* in 2024

\*) Exclude terminal asset transfers

\*\*) Include terminal asset transfers



## Operational

**>190**  
**Owned Tanker Vessels**  
(<15 years of Avg. Tanker Age)

...Current tanker age industry  
leaders ~14 years

**>3.5**  
**TMSA Score**

...Current TMSA Score 2.5 in 2023



## Sustainability

**~32 %**  
**Emission Reduction**  
(from BAU 2030)

...Current emission reduction  
~3% in 2023, est. ~6 % in 2024

**>30%**  
**Women in Leaders  
Position**

...Current diversity ~8% in 2023

# PIS has established a solid foundation for becoming a Global Leader in Sustainable Shipping and Marine Logistics

2017 – 2024

(Laying Strong Growth Foundation)

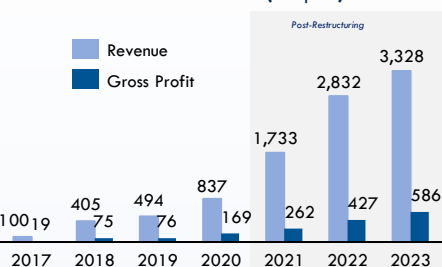
2024 - 2029

(Growing Diversified Logistics Business)

2030 Onward

(Building Green Portfolio)

## Pertumbuhan Usaha PIS (US\$ M)

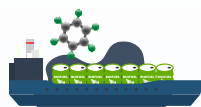


### Capitalize on petroleum core

~10% growth from captive **baseload demand**

Expand to **Midde East & ASIA** vessel chartering

**LPG cargo & shipping**



### Pursue new growth industries

**Petchem** JVs feedstock & products shipping

**3rd party chemicals**

**Upstream Services**

Domestic **FAME** shipping

**Dry bulk** shipment

Domestic **LNG** shipment



### Build ASEAN integrated shipping & Logistics

**Multiple-product, multiple-service logistics solution** to 3rd party domestic and regional players, incl. shore-base logistic

Bunkering services, including **alternative fuels**



### Governance & Access to Capital Market

**Initial Public Offering**

**Bond Issuance**

**Low Risk ESG Score**



### Grow green energy business

**LNG cargo & shipping**

Technology-led **emissions reduction** (fuel efficiency, hull cleaning)

Green vessel segments

~\$6 bn. revenue in 2030

>\$9 bn. revenue in 2034

>40% Revenue from non-captive in 2034

~27% Services & Logistics

~20% Green Cargoes

## Enablers

**Proven talent & capability**

**Performance-led organization**

**HSSE & reliability first**

**Digitalization**

Hub of Indonesian maritime talent

Operational efficiency through integration

0 maritime incidents

Deep management bench with years shipping expertise

World class assets

Top quartile IPT

Value creation for stakeholders

Digitally-enabled tracking & monitoring systems

✓ **Pendirian PIS**

✓ **Restrukturisasi PIS menjadi Integrated Marine Logistics Co**

✓ **Pendirian PIS Asia Pacific**

✓ **Strategic Partnership with**



✓ **Pendirian PIS Middle East sebagai branch office**

# Low carbon maritime fuels are in development phase and are not expected to become economical soon without a high carbon price

Economies of scale make future fuels unfavorable compared to current fuels

Favorable

Slightly unfavorable

Unfavorable

Fossil Fuels

Low carbon fuels



	Lifecycle Emissions <i>ton / TJ</i>				Technical Readiness Level <sup>5</sup>	Tank size <i>HFO=1</i>	Total Cost of Ownership <sup>6</sup> <i>HFO=1</i>	Remarks
	GHG <sup>1</sup>	SOx <sup>2</sup>	NOx <sup>3</sup>	PM <sup>4</sup>				
<b>Fuel Oil</b> <i>HSFO / VLSFO</i>	Unfavorable	Slightly unfavorable	Slightly unfavorable	Unfavorable	Favorable	1.0	1.0	Fuel oil has the lowest cost, but strict sulfur caps require use of low sulfur variants (VLSFO globally or ULSFO/MGO in ECAs) or installation of an expensive scrubber
<b>MGO</b>	Unfavorable	Favorable	Favorable	Unfavorable	Favorable	1.1	1.1	Marine Gasoil or Diesel oil (MGO / MDO) are main fuels in regions with strict SOx regulation (i.e., ECAs in EU/NA) and domestic vessels
<b>LNG</b>	Unfavorable	Favorable	Favorable	Favorable	Favorable	1.8	1.1	LNG is 20-30% lower on CO2 emissions compared to HFO, but methane slip in engine and supply could lead to only 0-10% GHG reduction on well-to-wake basis
<b>Biodiesel</b> <i>FAME / HVO</i>	Slightly unfavorable	Favorable	Favorable	Unfavorable	Slightly unfavorable	1.1	1.3-1.5	Usable in existing vessels and infrastructure without big adaptations High cost remains due to competition for limited available sustainable feedstock Fuel quality and sustainability standards still uncertain
<b>Methanol</b> <i>bio / synthetic</i>	Slightly unfavorable	Favorable	Favorable	Favorable	Slightly unfavorable	2.4	1.5-1.7	Dozen ships already operable with methanol, retrofitting relatively small procedure Can be net-zero carbon if CO <sub>2</sub> -source is DAC <sup>7</sup> or from sustainable bio feedstock.
<b>Ammonia</b> <i>blue / green</i>	Favorable	Favorable	Slightly unfavorable	Favorable	Unfavorable	3.3	1.3-1.4	Engine and fuel supply system in prototype phase Fuel quality and safety standards need to be developed further SCR reduces NOx emissions
<b>Liquid Hydrogen</b> <i>blue / green</i>	Favorable	Favorable	Favorable	Favorable	Unfavorable	4.5-14.0	1.8-2.0	Large volumes required for storage make hydrogen uneconomic option for long-haul shipping

Differs depending on shipping segment and use case, and will change over time

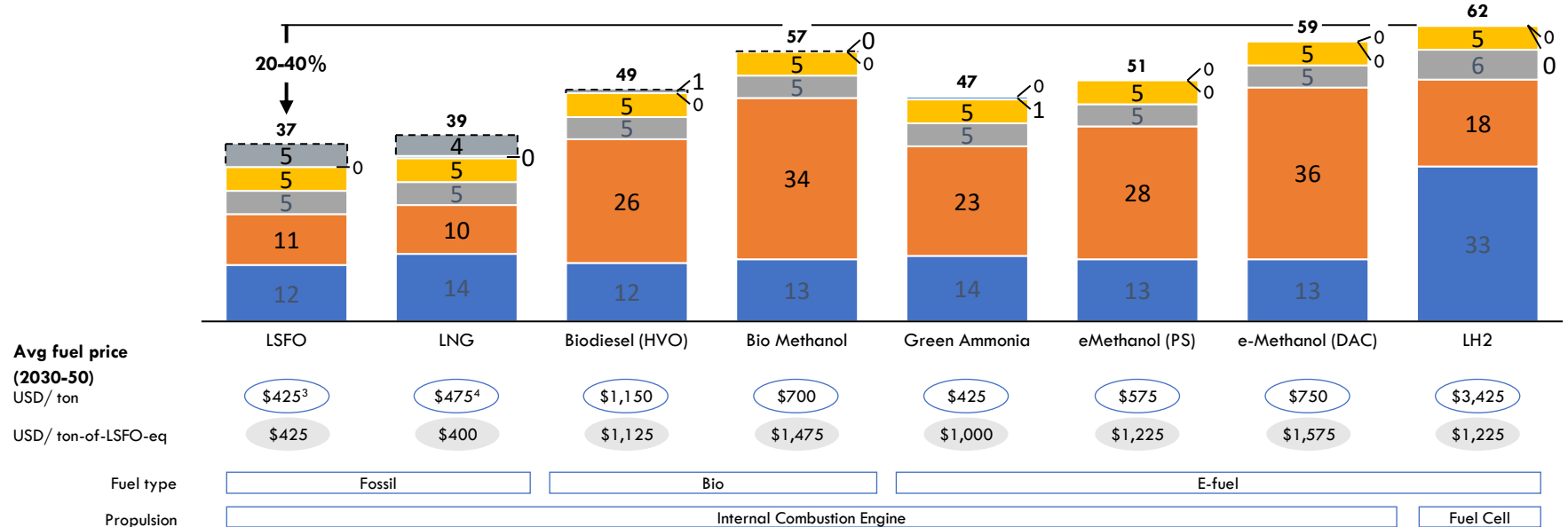
1. Greenhouse gasses including CO<sub>2</sub>, NH<sub>3</sub> and NO<sub>2</sub>; 2. Sulphur limitations of 0.5% (global) and 0.1% (ECA); 3. NOx emissions are commonly reduced using Selective Catalytic Reduction (SCR) and Exhaust Gas Recirculation (EGR) solutions for both FO and MGO; 4. Particulate matter; 5. **Technical Readiness Level**, assessed from 1 (basic principles observed and reported) - 9 (scaled up to global implementation); 6. Full lifecycle TCO of Large Container entering the fleet in 2030 assuming no Carbon price; 7. CO<sub>2</sub> source is from direct air capture (DAC)

Source: McKinsey Global Energy Perspective 2022, Techno-economic assessment of zero-carbon fuels, Lloyd's Register (2020)

# TCO for alternative fuel ships needs to come down between 20-40% by 2030 to be competitive with fuel oil

2030 total cost of ownership (TCO) for a 14,000 TEU containership<sup>1</sup> EU-ETS<sup>2</sup> Cargo Capacity Loss Port/ canal fees Maintenance Fuel Capex & finance

## Total Cost of Ownership<sup>1</sup> (2030), mUSD/ year



1. Deployed globally, using weighted average price of Rotterdam, Fujairah and Singapore
2. Assuming a USD 100/t CO2 price with 50% of roundtrip emissions being subject to ETS scheme
3. Long term Brent crude oil price of 50-60 USD / bbl
4. Long term TTF gas price of \$6.25 USD/MMBtu (excluding liquefaction and bunkering)

Source: McKinsey Global Energy Perspectives powered by Maersk McKinney Moller Center for Zero Carbon Shipping (2022)



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The Ocean*

# Thank You

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