



DIREKTORAT JENDERAL MINYAK DAN GAS BUMI
KEMENTERIAN ENERGI DAN SUMBER DAYA MINERAL

PRESENTED AT:



Arah Kebijakan Infrastruktur Gas Bumi Nasional: Mewujudkan Konektivitas Energi yang Andal, Efisien, dan Berkelanjutan

Laode Sulaeman

Direktur Perencanaan dan Pembangunan Infrastruktur Migas
Ditjen Migas, Kementerian ESDM



Jakarta, June 18th 2025



www.migas.esdm.go.id



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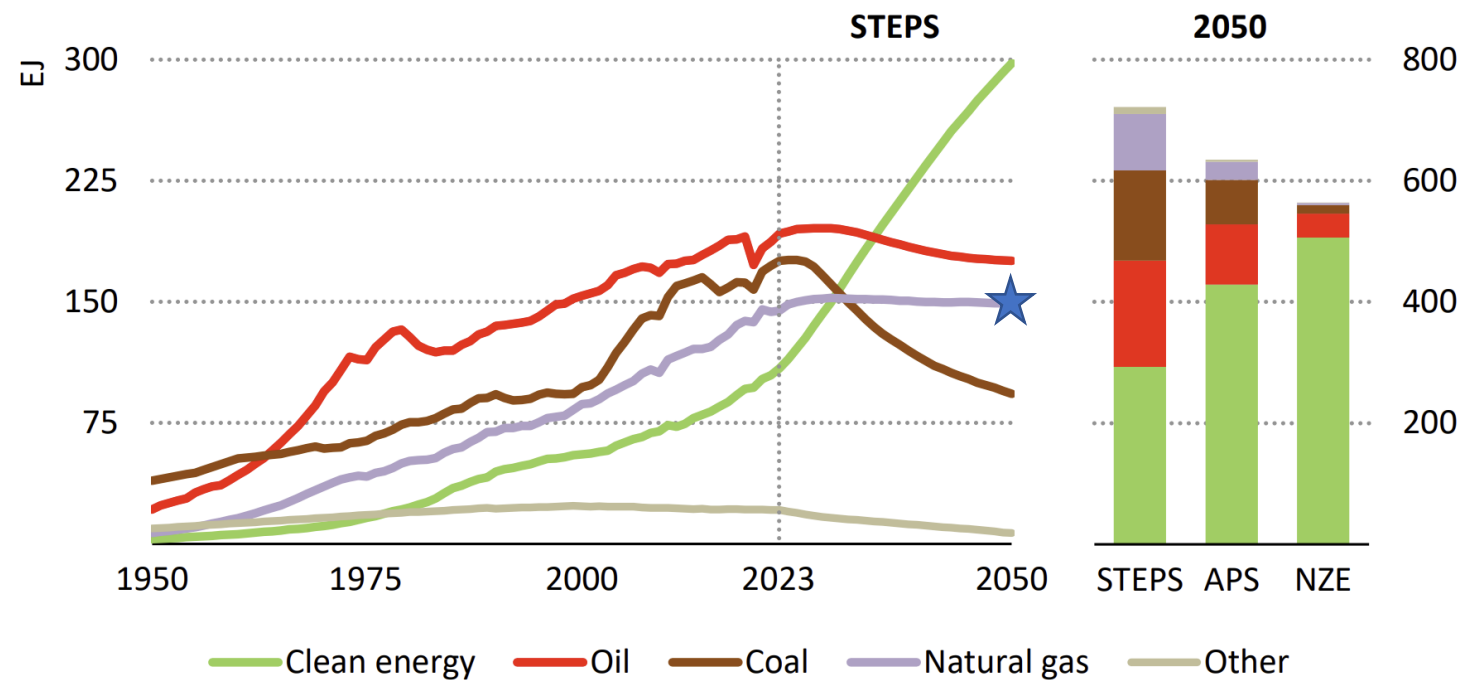
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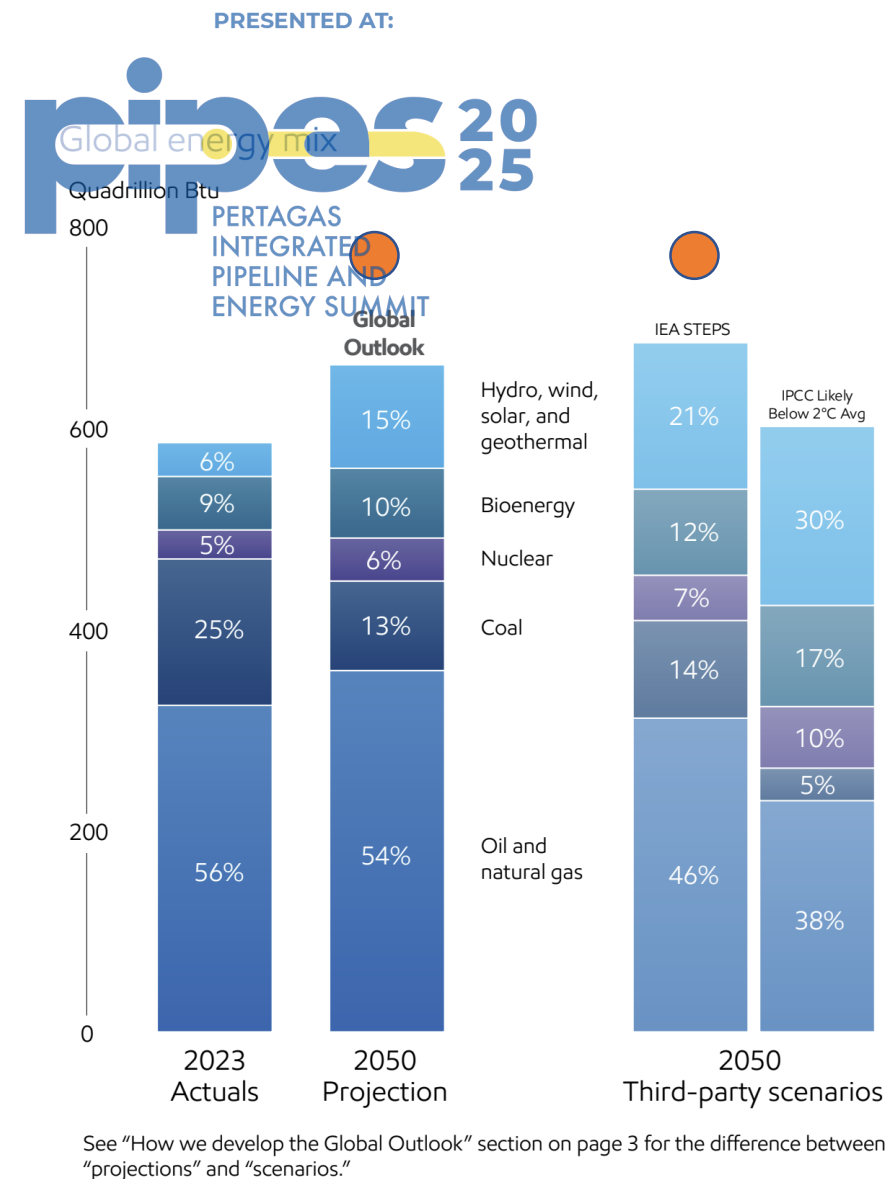
Bauran Energi Global sd 2050



STEPS, a scenario based on current policy settings, sees clean energy poised for huge growth, while coal, oil and natural gas each reach a peak by 2030 and then start to decline

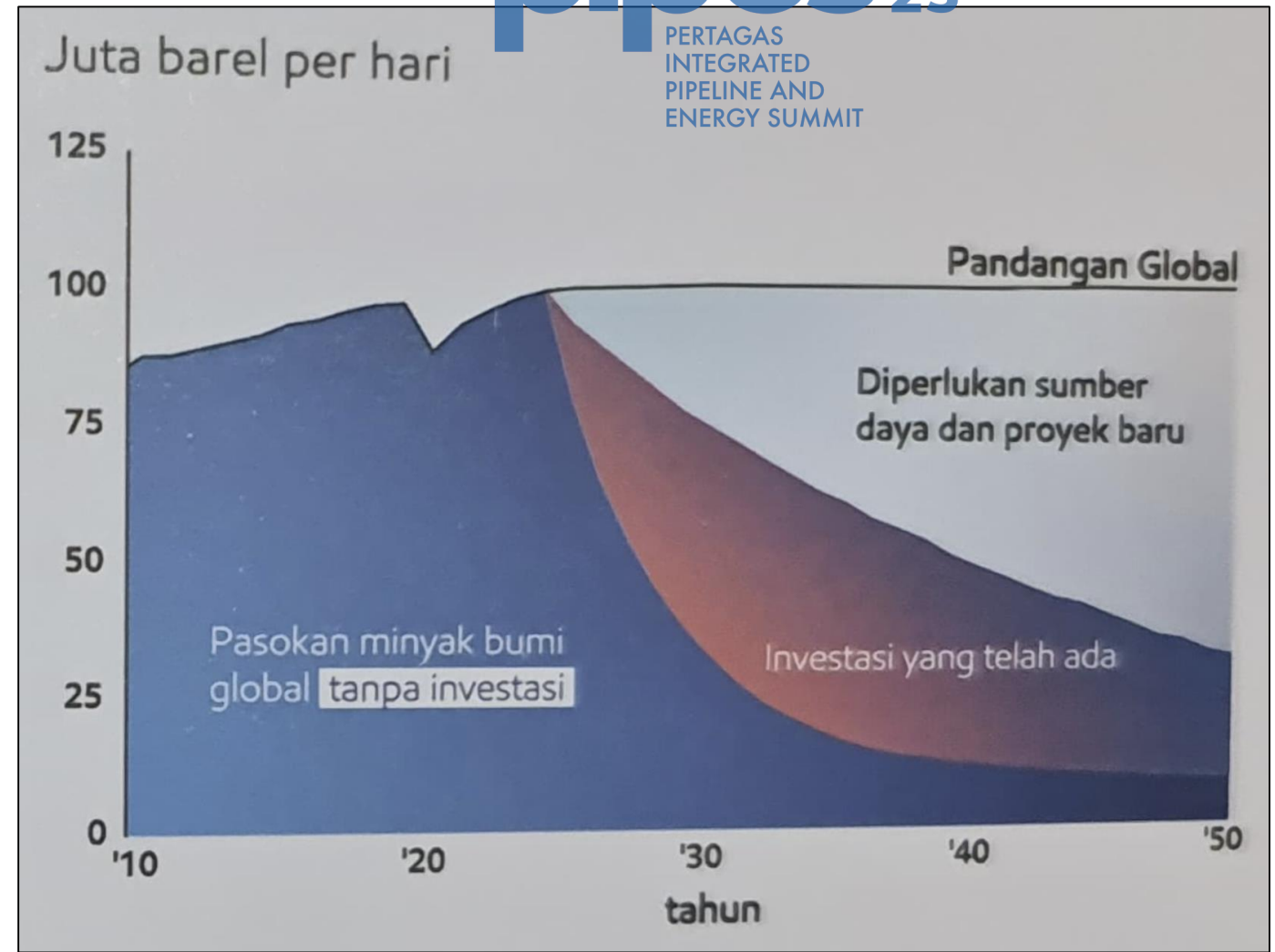
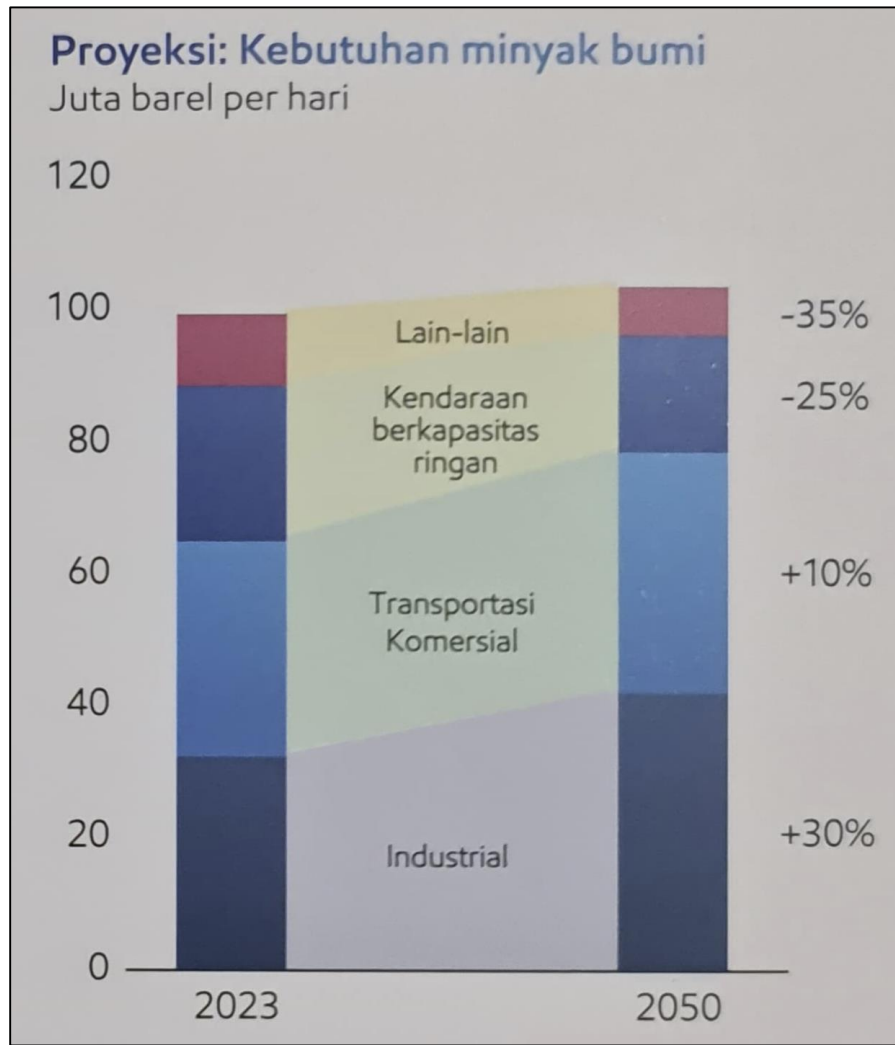
Notes: EJ = exajoules; STEPS = Stated Policies Scenario; APS = Announced Pledges Scenario; NZE = Net Zero Emissions by 2050 Scenario. Oil, coal and natural gas refer to unabated uses as well as non-energy use. Clean energy includes renewables, modern bioenergy, nuclear, abated fossil fuels, low-emissions hydrogen and hydrogen-based fuels. Other includes traditional use of biomass and non-renewable waste.

Source: IEA, World Energy Outlook 2024



Proyeksi Kebutuhan dan Produksi Minyak Bumi Global

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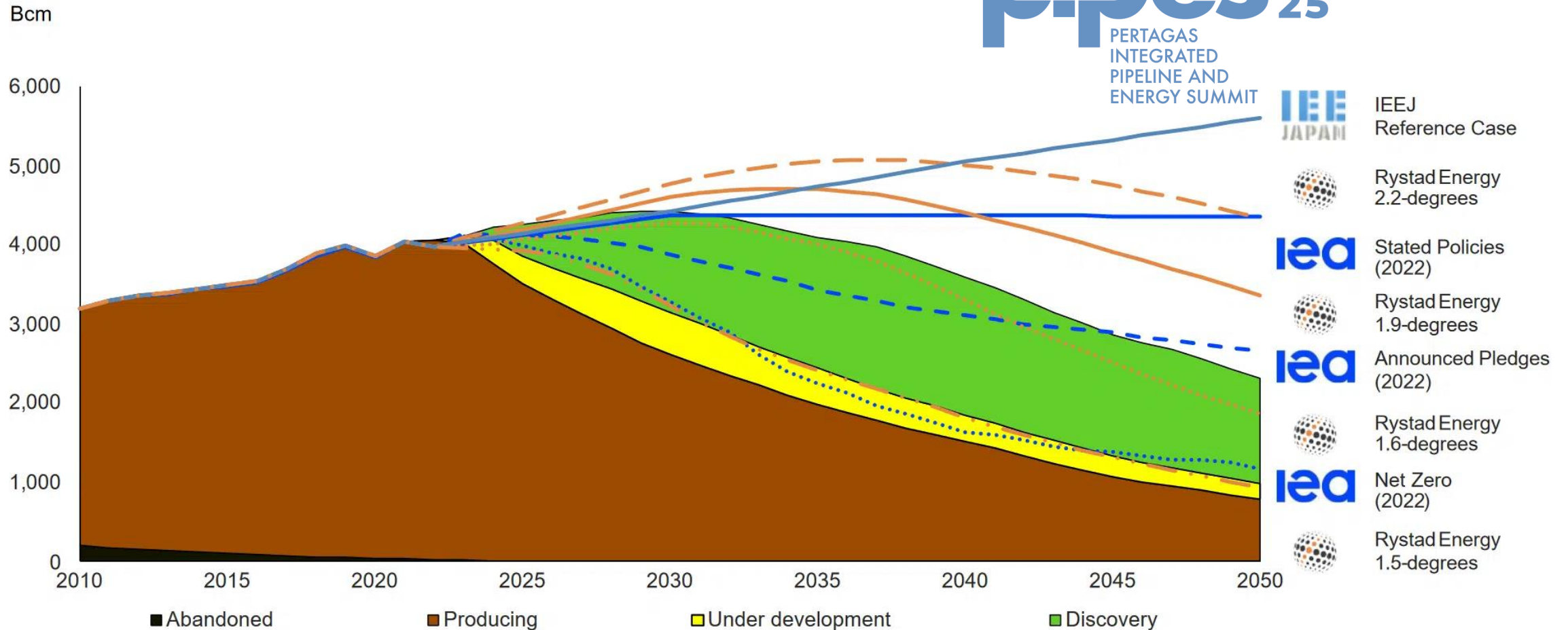


Source: ExxonMobil Global Outlook 2024



Proyeksi Kebutuhan dan Produksi Gas Bumi Global

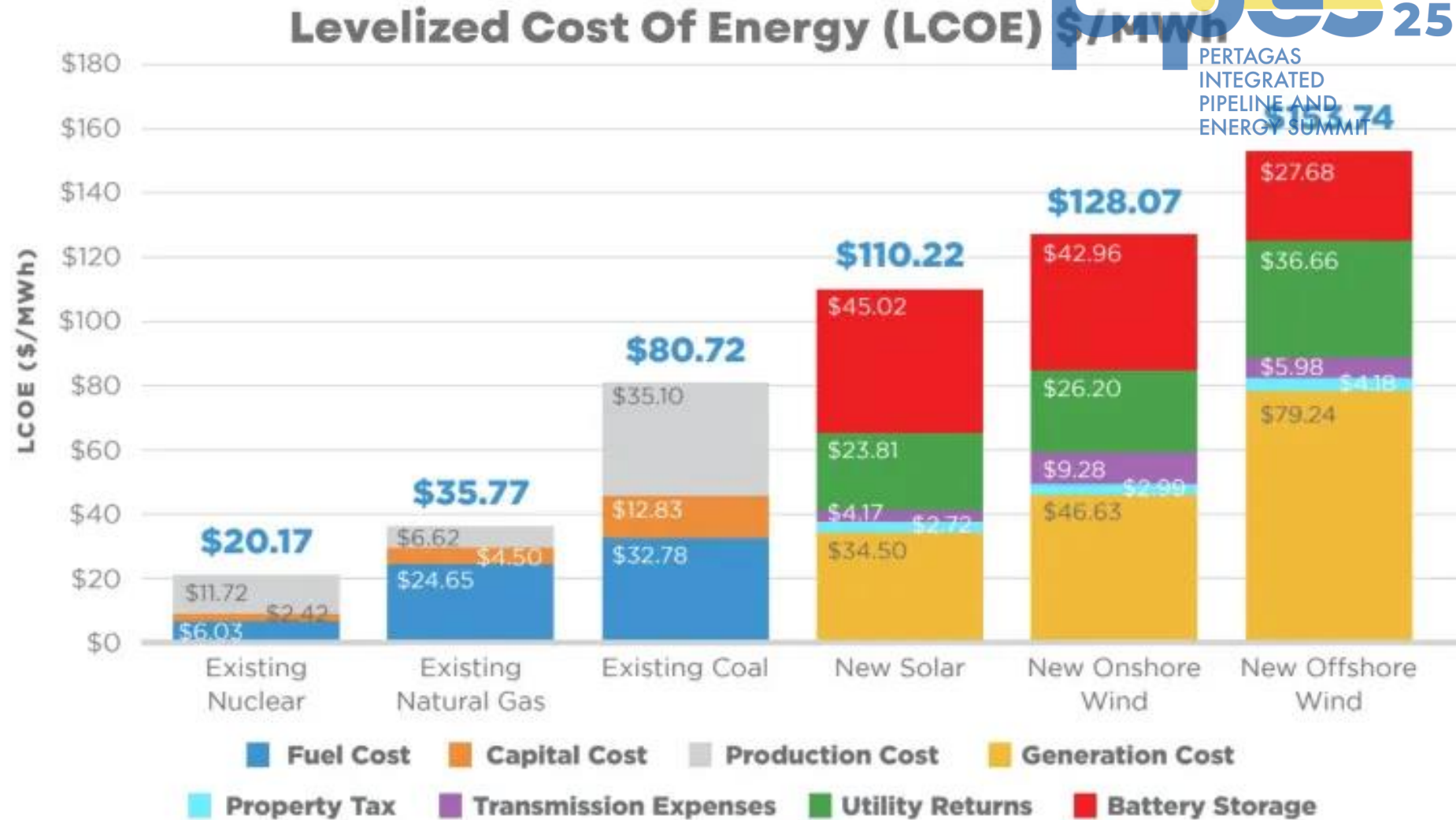
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Source: IEA; IEE Japan; Rystad Energy



Tantangan Pengembangan Energi Baru dan Terbarukan



Source: <https://www.aquaswitch.co.uk/blog/lcoe/>

Kebutuhan Gas Alam dalam RUPTL PLN 2025 - 2034

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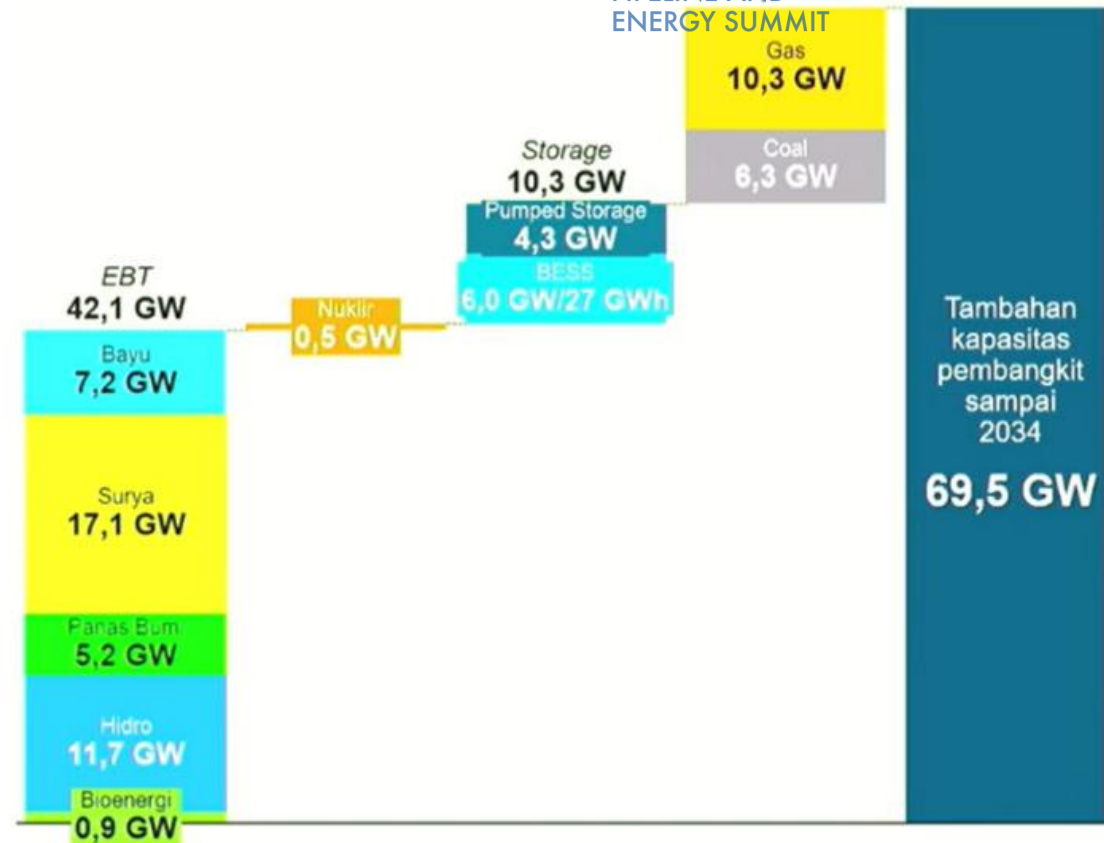
Dalam **RUPTL 2025–2034**,
76% dari penambahan
kapasitas pembangkit
berasal dari **EBT¹**
termasuk **Energi Nuklir**
dan **Storage²**.

¹ Renewable Energy (RE), dilengkapi dengan Battery Energy Storage System (BESS) untuk Variable RE (Bayu dan Surya)

² Termasuk Pumped Storage & BESS. Kapasitas BESS dengan asumsi levelized cost 4 cUSD/kWh



RUPTL 2025–2034, [GW]



*Belum termasuk Kuota PV Rooftop 3 GW

*Termasuk rencana pengembangan PLTU Hibrid (Coal 1,2 GW, PLTS 0,3 GW dan BESS 0,15 GW)

Kebutuhan Gas Alam dalam RUPTL PLN 2025 - 2034

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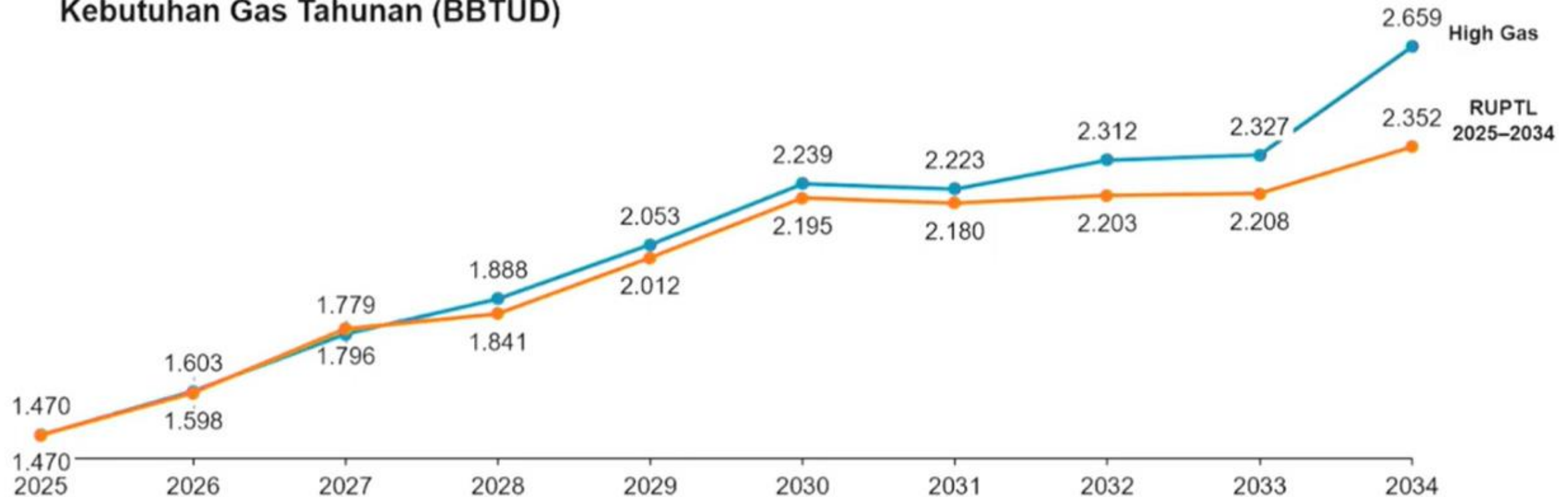


Dengan diimplementasikannya **optimasi pembangkit gas** dalam RUPTL 2025-2034, **demand gas** PLN akan berkurang sebanyak **698 BBTUD (~87 kargo)**.

PENGAS
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PIPELINE AND
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Kebutuhan Gas Tahunan (BBTUD)



Oil and gas major projects +potential area

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Andaman

Andaman II: 5 TCF*
South Andaman: 6 TCF*

IDD

Gas: 24 mmscfd
Condensate: 296 bopd
Next: Gendalo, Gandang

North Ganai

Geng North 5 TCF*

Tangguh 1,2,3

• Gas: 1.628 mmscfd
• Condensate: 6.601 bopd
• Next: UCC Project

5 potential area
(eastern)

Buton

Seram

Aru

Warim

Timor

Rokan

• Oil 160 mbopd
• Gas 35 mmscfd
• Next: Minas EOR, Unconventional

Transmission Pipeline by Gov

Transmission Pipeline by Gov

- Produced and potential upscale
 - On-going project
 - Potential area
- * Contingent Resources

Jambaran Tiung Biru

• Gas: 179 mmscfd
• Condensate: 1.611 bopd

Agung

Agung I, Agung II (BP)

Masela

Inpex, Pertamina, Petronas
On stream 2030

Source: DG of Oil and Gas, The Ministry of EMR, 2024



Pengembangan Infrastruktur Gas Bumi

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Eastern part of Indonesia:

- Virtual Pipeline by applying LNG and mini LNG transportation. The first anchor-buyer is the implementation of gas supply for power generation.

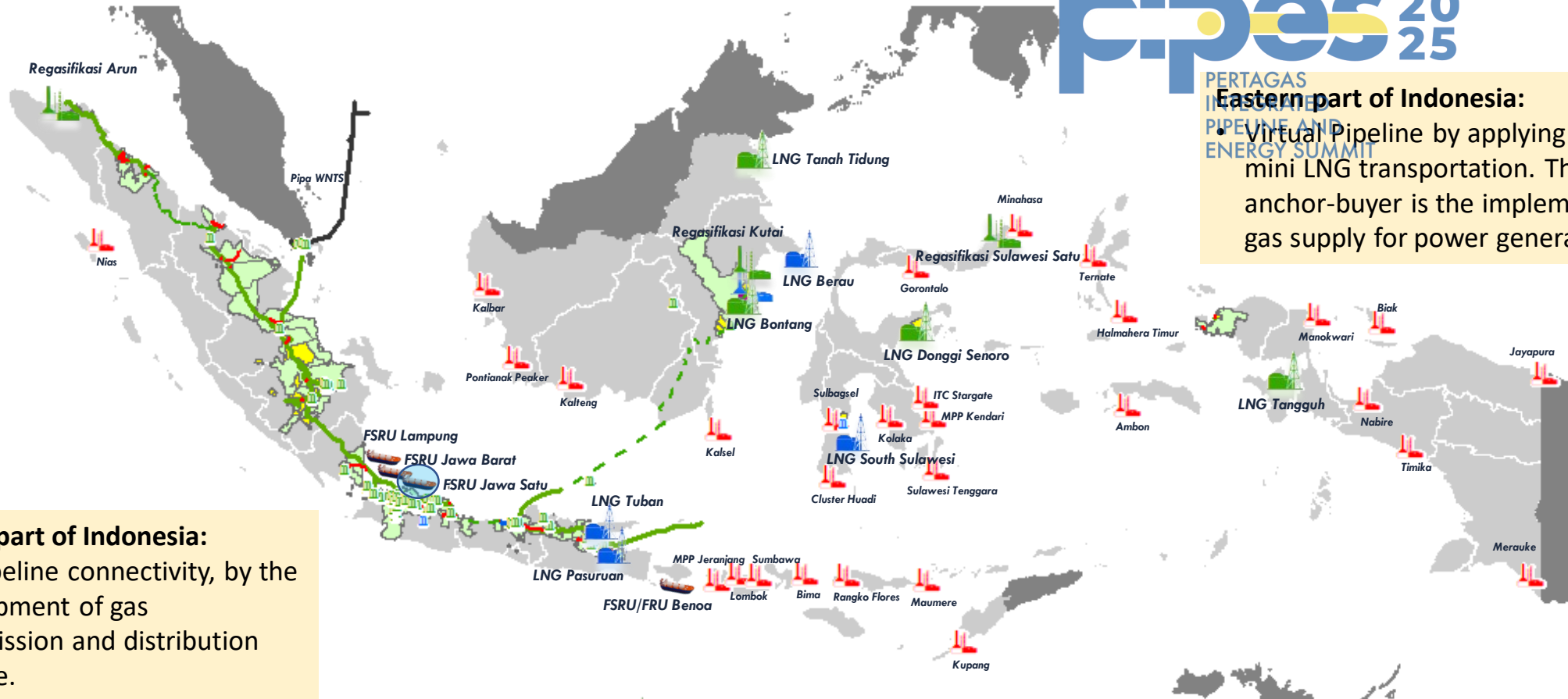
Western part of Indonesia:

- Gas pipeline connectivity, by the development of gas transmission and distribution pipeline.

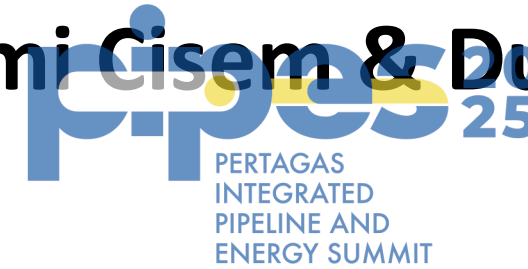
- Existing Transmission Pipe
- On Going Transmission Pipe
- Planning Transmission Pipe
- Existing Distribution Pipe
- On Going Distribution Pipe
- Upstream Pipe

- Existing LNG Plant
- On Going LNG Plant
- Existing FSRU/FRU LNG
- On Going FSRU/FRU LNG
- Existing CNG Facility
- On Going CNG Facility

- Existing LNG Regasification
- On Going LNG Regasification
- Planning LNG Regasification for Power Plant



Pembangunan Pipa Transmisi Gas Bumi Cistem & Dusem



Catatan:

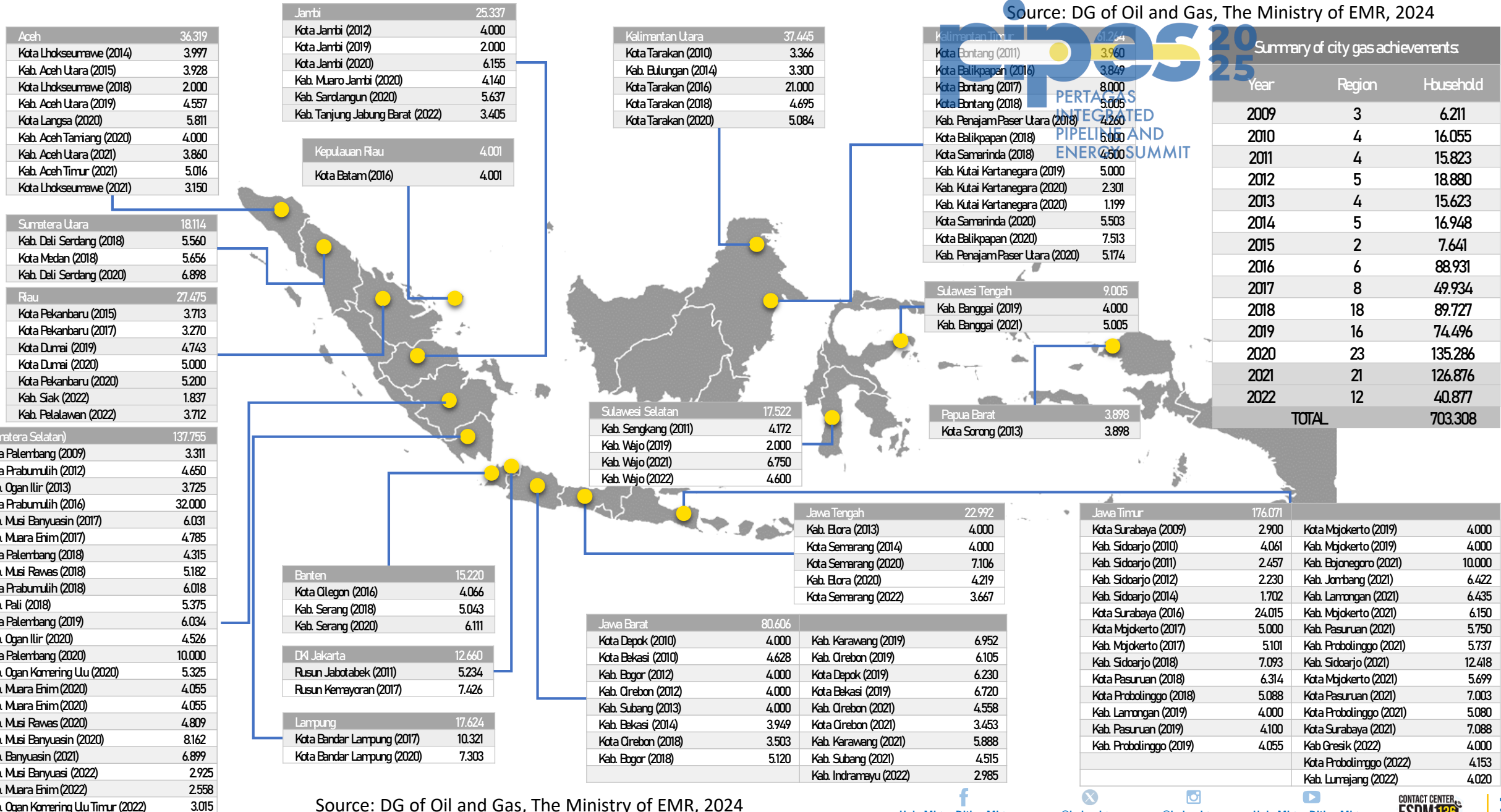
- In addition, a 130 km Tegal-Cilacap gas pipeline will be built by Pertamina
- To anticipate gas shortages, a receiving terminal will also be prepared

	Cirebon-Semarang (CISEM)	Dur-Sei Mangkei (DUSEM)
Urgency	Guarantee gas supply to West/Central Java from excess gas in East Java	- Key to pipeline integration throughout Sumatra, and Sumatra-Java, - Distributing Andaman WK gas to Sumatra & Java.
Pipeline Length	Cistem-1: 60 km (completed) Cistem-2: 245 km (on going)	555 km (Basic Design)

The Development of Pipeline Distribution: City gas project 2009 – 2022

PRESENTED AT:

Source: DG of Oil and Gas, The Ministry of EMR, 2024



Source: DG of Oil and Gas, The Ministry of EMR, 2024



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