

"Is the global energy transition failing?"

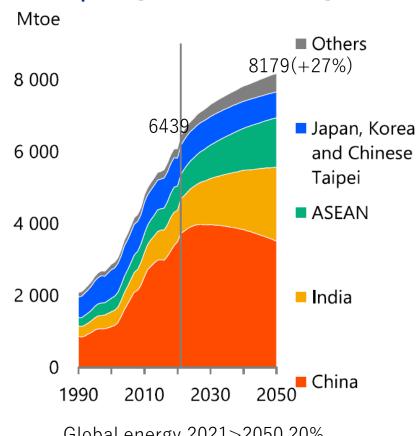
June 6<sup>th,</sup> 2024 YOSHIDA, Satoshi Senior Adviser

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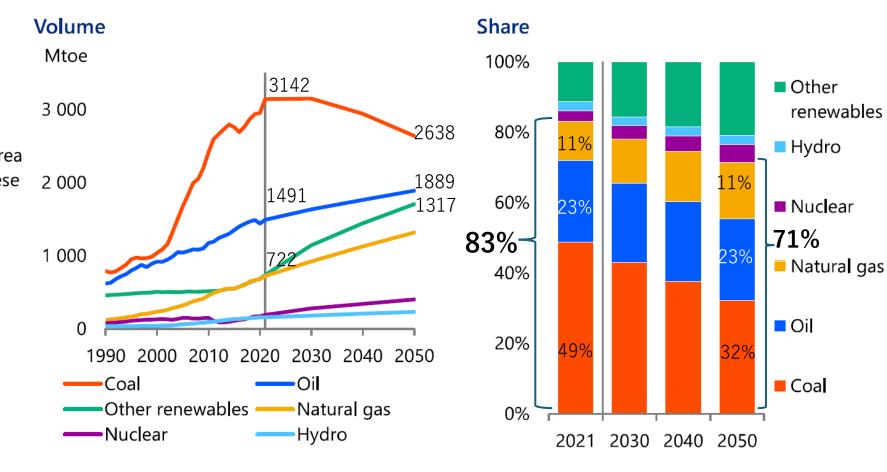
## Development of the energy markets in Asia-Pacific

Figure 2-24 | Asian primary energy consumption [Reference Scenario]



Global energy 2021>2050 20% Share of Asia/global 44% > 47%

Figure 2-26 | Asian primary energy consumption [Reference Scenario]

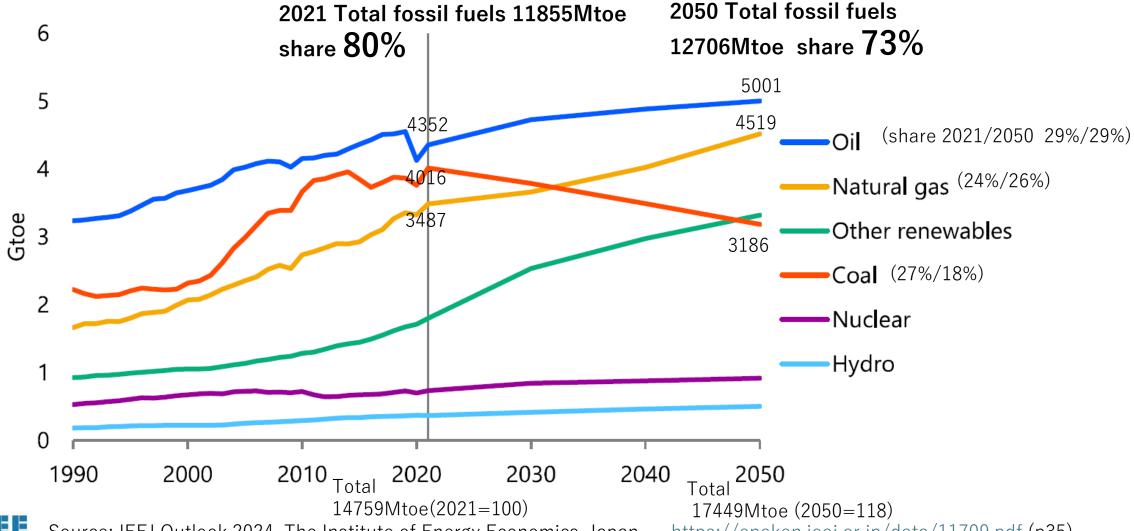




Source: IEEJ Outlook 2024, The Institute of Energy Economics, Japan https://eneken.ieej.or.jp/data/11709.pdf (p34, p35)

## Global Primary Energy consumption

Figure 2-3 | Global primary energy consumption [Reference Scenario]





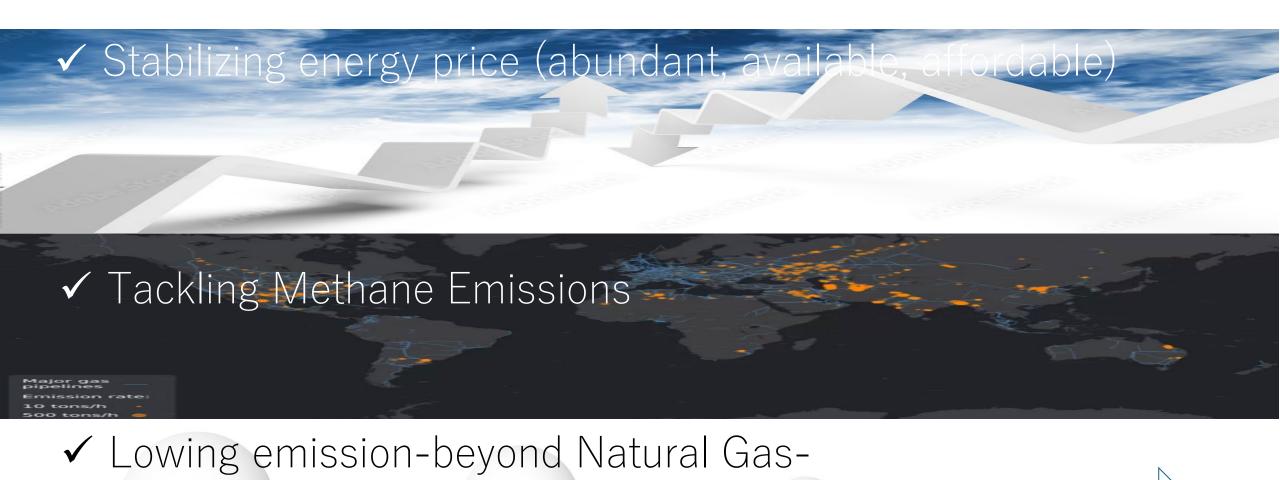
Source: IEEJ Outlook 2024, The Institute of Energy Economics, Japan

https://eneken.ieej.or.jp/data/11709.pdf (p35)

## Gas Industry's Challenge towards 2050

Oil(80)

Coal(100)



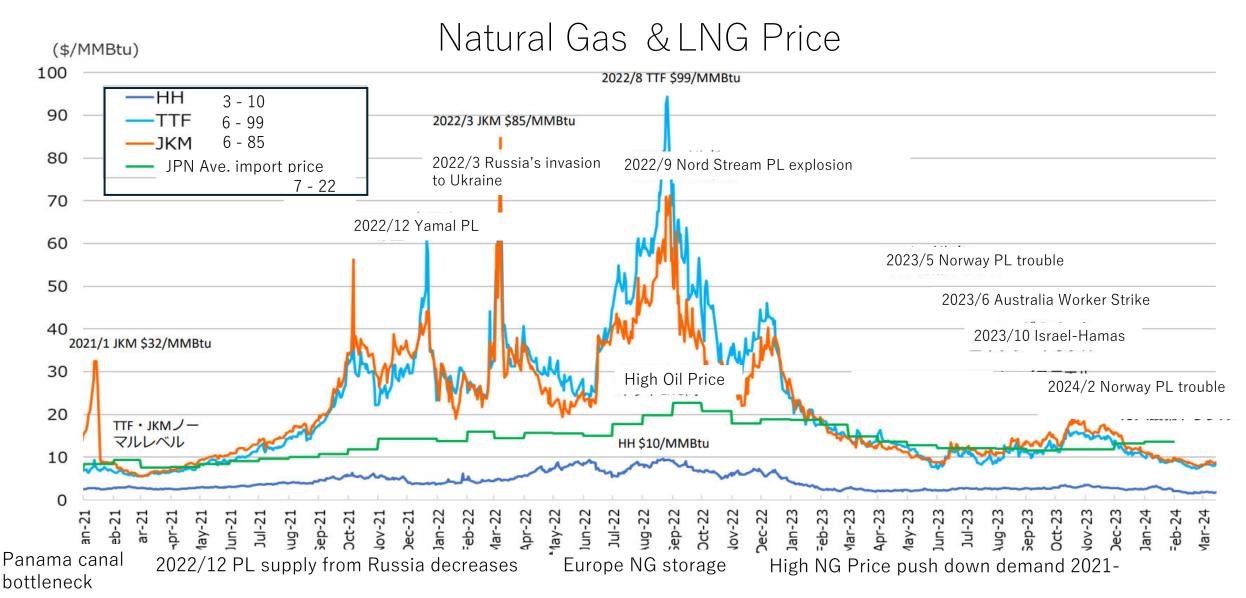
Natural

Gas (57)

5

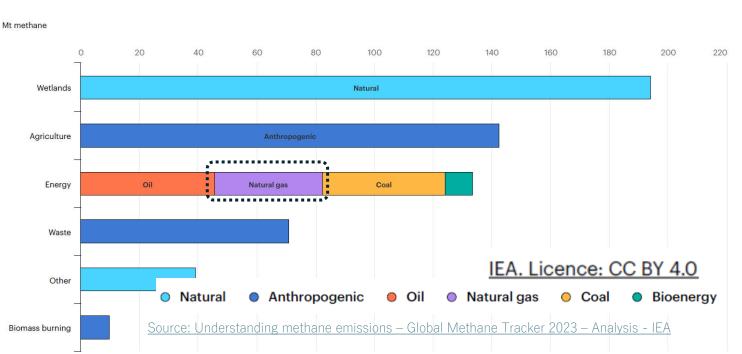
biogas, H2, e-methane

### ✓ Stabilizing energy price (abundant, available, affordable)

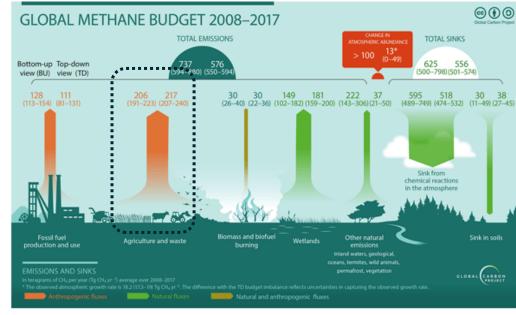


### ✓ Tackling methane emissions

Sources of methane emissions, 2022



#### LDAR: Leak Detection and Repair



Source; ESSD - The Global Methane Budget 2000–2017 (copernicus.org)

車載化により検査速度が向上

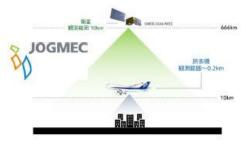
(40km/h~ 80km/h)

Daigas

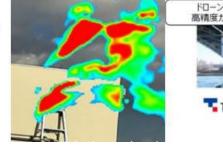
#### Upstream to Downstream



Satellite imagery
Source: BBC news website: Climate change:
Satellites map huge methane
plumes from oil and gas



Aerial imagery



Methane Leak Visualization Camera \*



Drone inspection \*



Portable laser methane detector \*



Source: JOGMEC

### ✓ Lowing emission/carbon neutralizing gas -beyond Natural Gas-"Methane solution"

Natural gas > biogas, e-methane (methanated hydrogen, synthetic gas), RNG (renewable natural gas)



### "La transition énergétique mondiale est-elle à la peine ?"

2050 Net Zero

Impossible n'est pas français.

Thank you

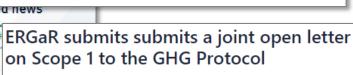
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## Ref. Establishing International GHG Accounting rules for new gases Promoting low/de-carbonized gases



2024.1.31

Eurogas, The GHG Protocol Update should include Market-Based Accounting.. 2024.1.31



The European Renewable Gas Registry (ERGaR) together with other 17 organizations submitted a letter to the Greenhouse Gas Protocol (GHG) Secretariat to propose the inclusion of a market-based approach and the recognition of low-carbon fuels certificates in the GHG Protocol's Scope 1 inventory.

This proposed update follows Scope 2's already established market-based approach, which has been instrumental in increasing renewable electricity use.























The European Renewable Gas Registry, ERGaR submits submits a joint open letter on Scope 1 to the GHG Protocol. 2024.1.30