



ASIA PACIFIC
GREEN
HYDROGEN
2024
CONFERENCE & EXHIBITION

Hydrogen Clusters Development:

*Private sector perspective &
Current Activities*

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Development Team

PTT Public Company Limited





PTT Introduction



Thailand's National Energy Company



State-Owned Enterprise

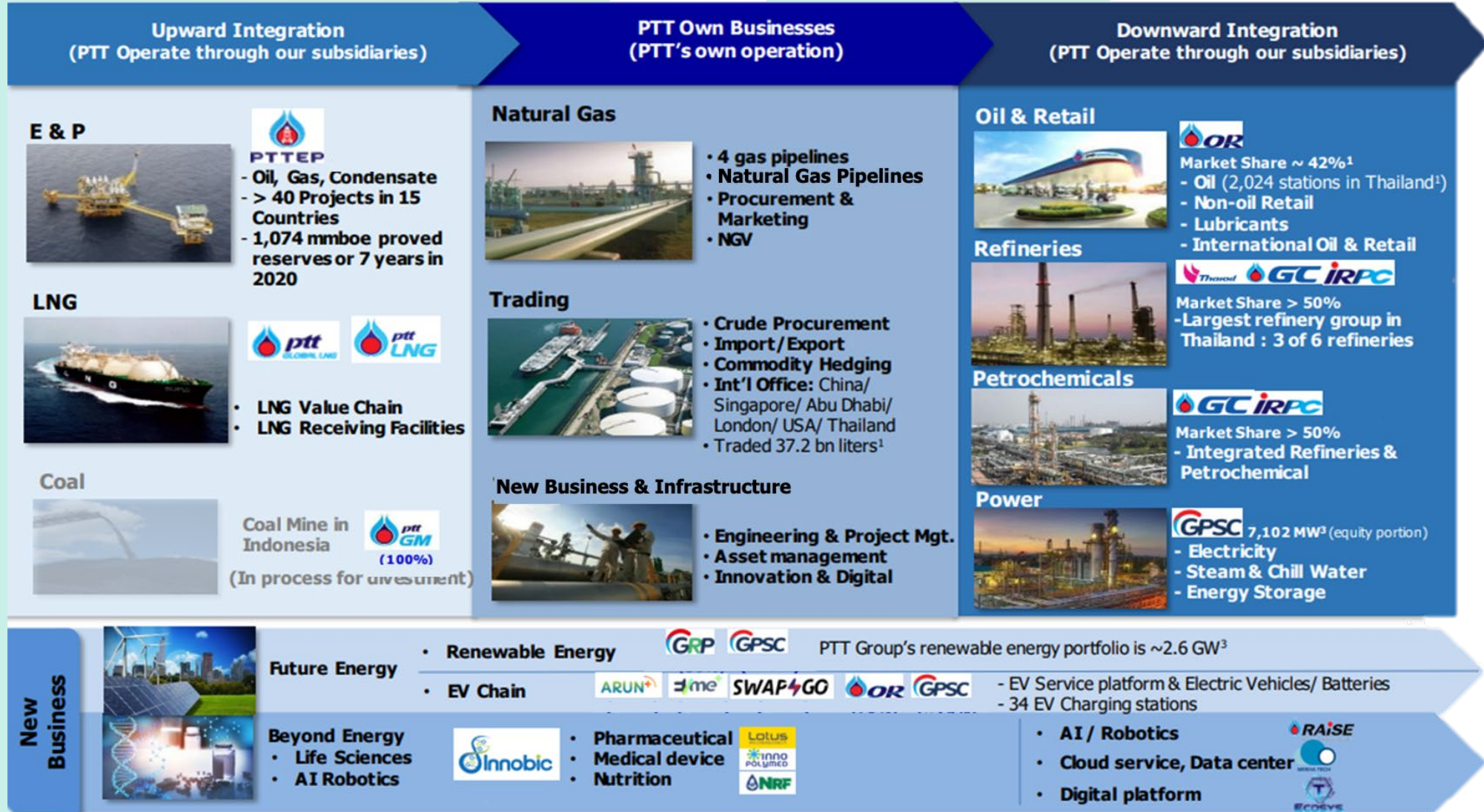
51% owned by MoF



2021 Market Cap.
32 Billion USD



Top Company by Size
140 Ranked by Fortune



3P Decarbonization Pathways

Partnership with Nature and Society

(Reforestation)

PTT: 1,000,000
PTT Group: 1,000,000
by 2030 (Unit: Rai)

Pursuit of Lower Emissions



(Clean growth)

15% GHG reduction from 2020 by 2030

- GHG Reduction Project
- Carbon offset / RECs



Portfolio Transformation

(Business growth)

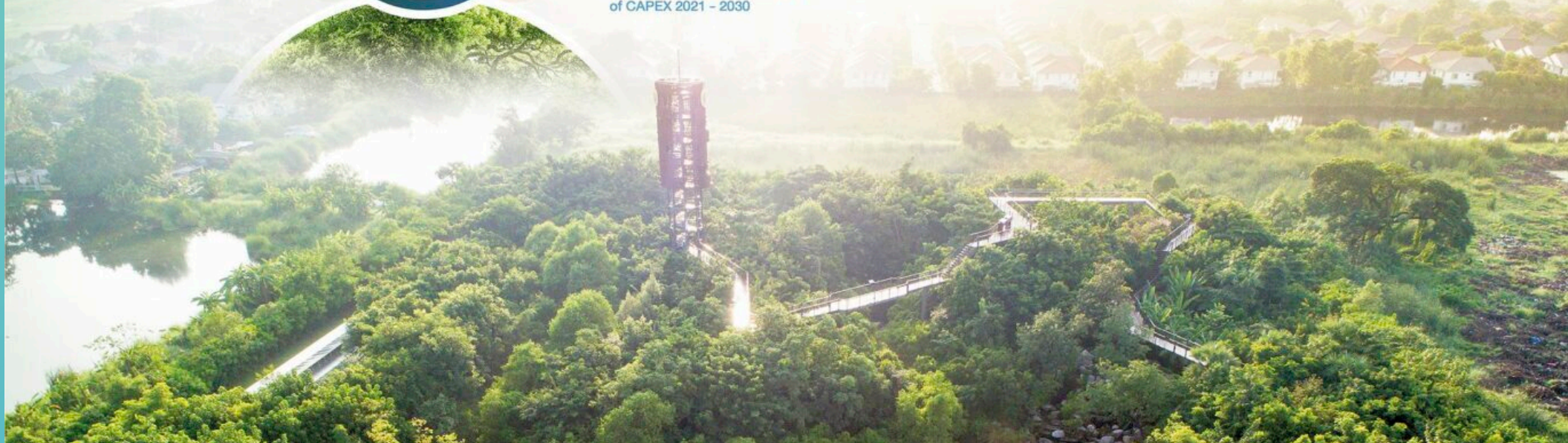
RE 12 GW by 2030

(Green portfolio)

Future Energy and Beyond 32% of CAPEX 2021 - 2030

PTT Group Decarbonization Projects

CCS	CCU	Renewable Energy	Hydrogen	PTT Group Reforestation
Off-shore	On/near-shore			
To execute and demonstrate first CCS pilot site off-shore	To capture CO ₂ , build pipeline network and seek potential CCS pilot site on/near-shore	To create business value from CO ₂	To increase renewable energy used in operation	To supply and implement hydrogen energy and Fuel cell technology
Reduction				Removal





PTT advances “hydrogen ecosystem” through collaboration with partners



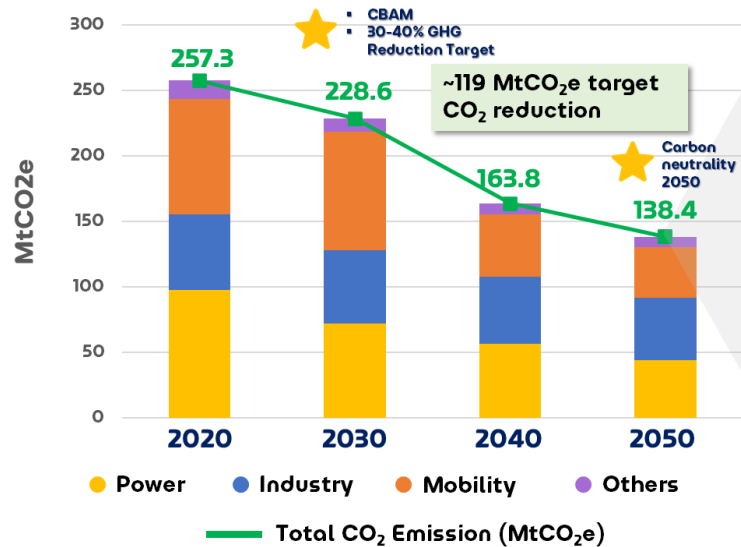
“To drive **HYDROGEN AS A FUTURE ENERGY ECOSYSTEM** for Thailand’s decarbonized and circular economy”





Engage with Government for Hydrogen Strategy & Roadmap

Long-Term Low Greenhouse Gas Emission Development Strategy (LT-LED)



Role of Hydrogen in Decarbonization for Thailand

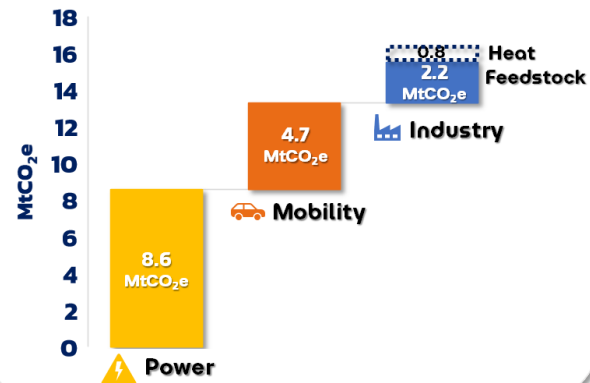
High case analysis

~16.3

MtCO₂ Reduction in 2050

~14%

Reduction of total MtCO₂ emission



Department of Alternative Energy Development and Efficiency



Department of Energy Business

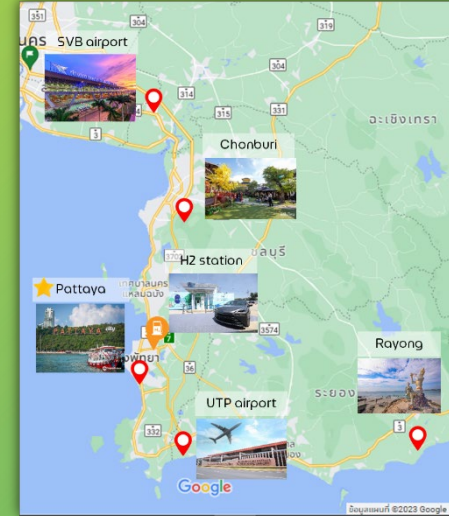


Energy Policy and Planning Office







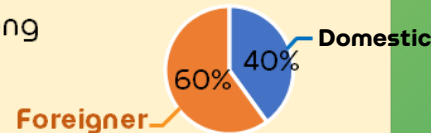
Hydrogen for Mobility Activity in Thailand





Limousine service information



- 1. Project period : February 2023 - December 2024
- 2. Actual usage : 7,500 - 9,500 km/mth.
- 3. Destination : Pattaya City, SVB Airport, BKK, Rayong
- 4. No. of customer : 3-5 trips per day
- 5. Customer type : Tourist & Business (high income tourist)
- 6. Accu. Mileage :  110,000 km  120,000 km



- 7. Accu. H₂ usage : 1,710 kg 
- 8. CO₂ reduction : 35,800 kg of CO₂  FCEV VS ICE (Camry 2.5)





Large Scale Green Hydrogen Production Development in Thailand



MOU Signing ceremony (October, 2022)



Feasibility study activities



“Green hydrogen is a **promising solution** towards Net-Zero Emission”

“**Strong collaboration** between government, academic & private sectors ensures sustainable success”



“Catalyzing the **development across ASEAN** would augment the economic viability and heighten the compelling proposition”