



All slides are taken from the EPPO, Thailand which was co-initiated by ERI-CU and ERDI-CMU

# **Thailand Hydrogen Strategy & Roadmap**

## Role of hydrogen to national energy plan

#### Wongkot Wongsapai

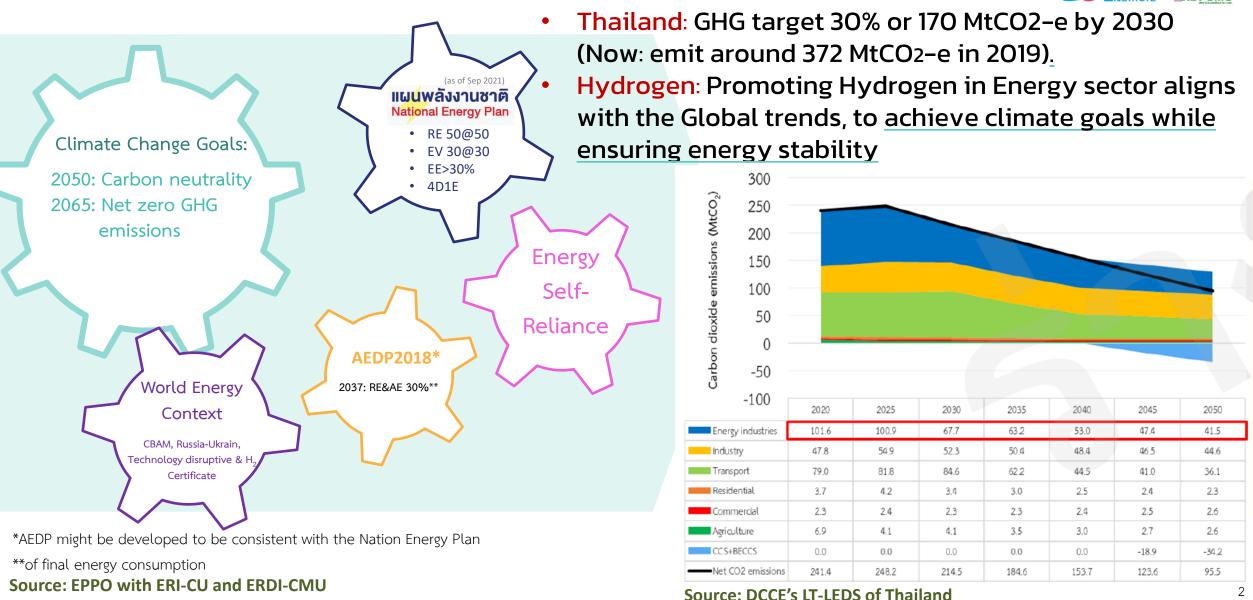
wongkot.w@cmu.ac.th Multidisciplinary Research Institute, Chiang Mai University, Thailand

Workshop on technology Foresight Scenarios Towards Net-Zero Emission and Policy Impact Assessment APEC CTF – NXPO @ Sofitel Krabi Phokeethra Golf & Spa Resort 28-30 Aug 2024

### **Factors Driving the Use of HYDROGEN**

Energy Policy and Planning Office MINISTRY OF ENERGY





#### Energy Policy and Planning Office The Development of Commercial Hydrogen STRY OF ENERGY **Prepare for** 2030 readiness **Carbon Neutrality Commercial Development** 2023-2024 2050 Strategic plan: Hydrogen utilization in the Energy sector 2023 - 2050 Short-term strategic plan: Hydrogen utilization in the Energy sector 2023 - 2030 Hydrogen promotion strategy in Thai Energy sector (4) Regulation and (2) R&D promotion (3) Hydrogen (1) Market standard for and domestic infrastructure development with Industrial promotion development (full hydrogen in incentives for H<sub>2</sub> Thailand including carbon chain) consumers

Source: EPPO with ERI-CU and ERDI-CMU

#### **Hydrogen Market in Energy Sector**

Time

Short-term **Medium-term** Long-term 2020-2030) (2031 - 2040)(2041 - 2050)**New market** Market: FCEV (LDV & Heavy-duty) **Business model** Market: Industry Market: H2 replace LPG & (<50 km from gas grid) **FCEV** residual oil (Heavy-5-15% duty) **Power train Business model Market: Power** & Bus **Mixed gas grid** of NG in east 25-75% 5% pipeline for power generation: 2030 Market: Industry **Business model** H2 replace LPG & residual oil (On Gas pipeline) 5% H2 **Business model Market: Power** Mixed gas grid 10-20% **Pilot project** 

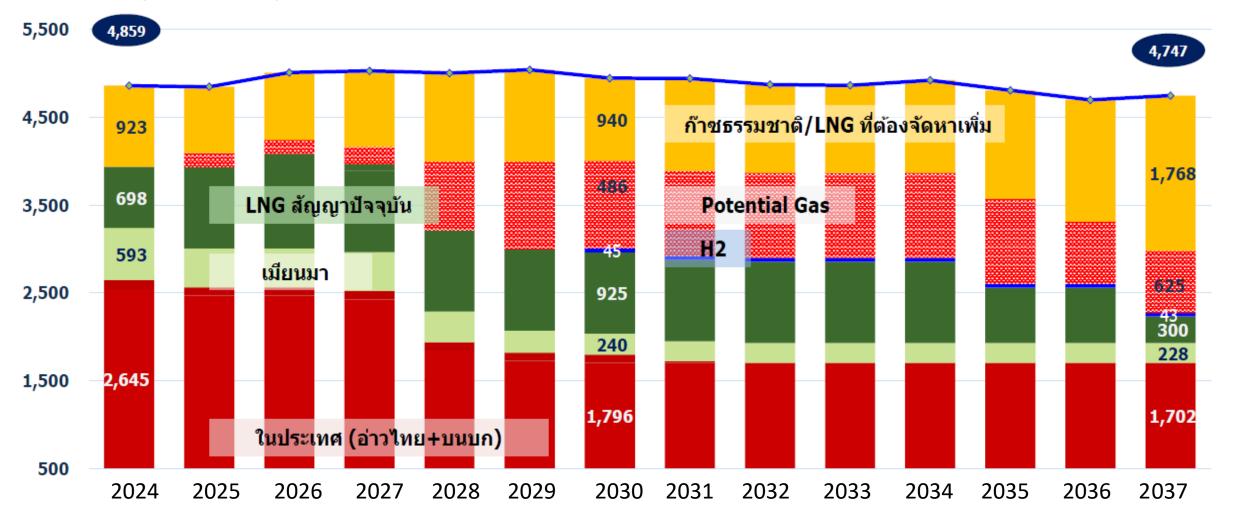
Source: EPPO with ERI-CU and ERDI-CMU

Growth

Energy Policy and Planning Office MINISTRY OF ENERGY

# Natural gas supply plan 2025-2037 (from draft NG plan 2024) Supply

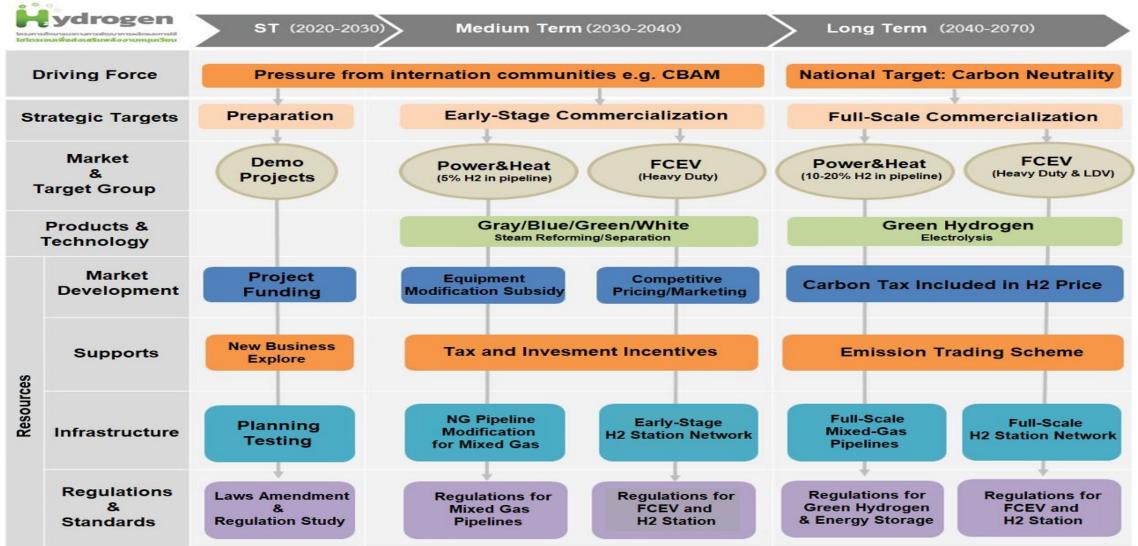
Unit : MMSCFD (@ 1,000 BTU/SCF)



#### **Thailand Hydrogen roadmap**

Energy Policy and Planning Office MINISTRY OF ENERGY





Source: EPPO with ERI-CU and ERDI-CMU

