

Alliance for Nuclear Heat Utilization

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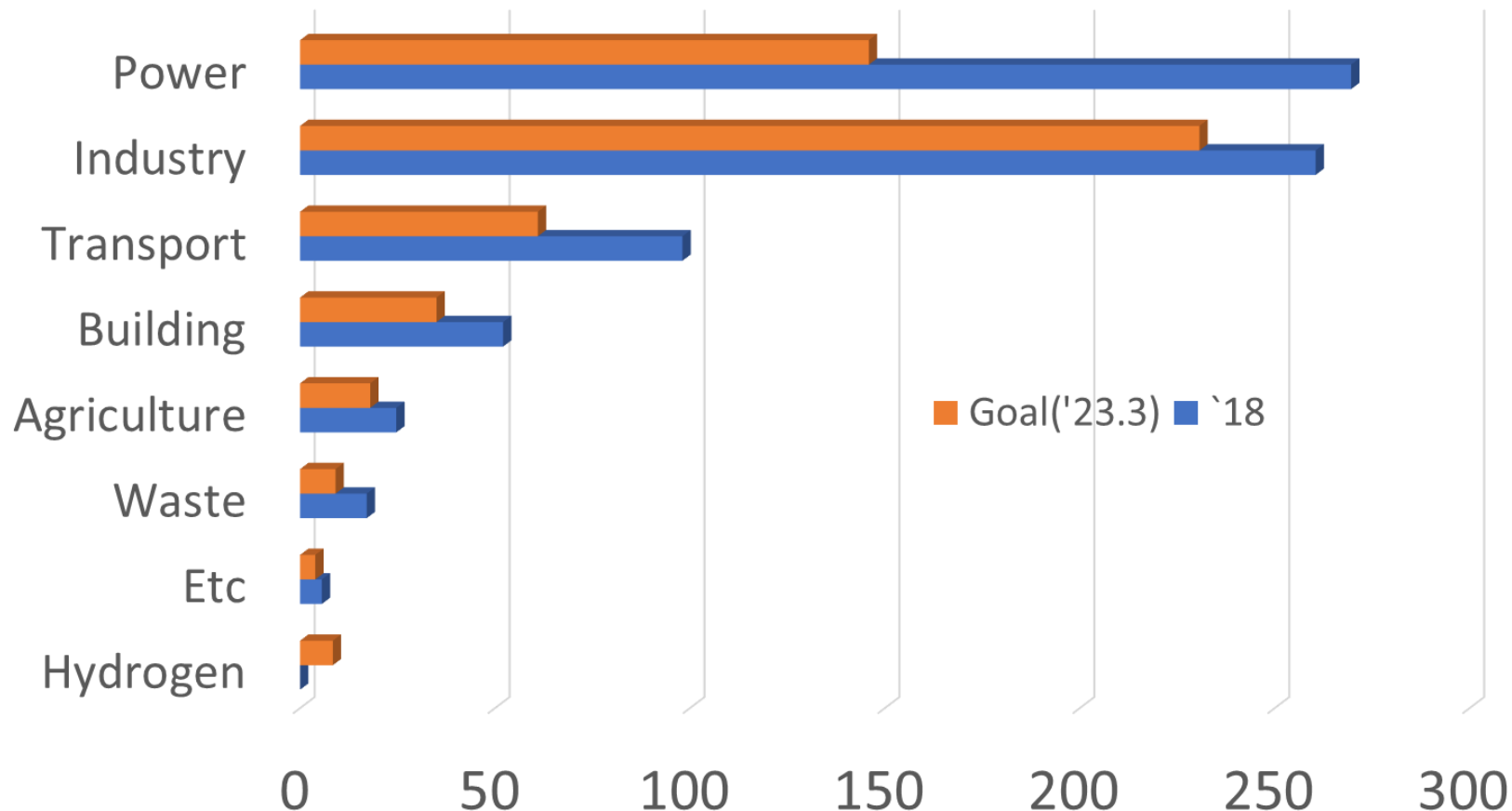
NEHA Workshop

BEXCO, Busan, Republic of Korea

April 26, 2024

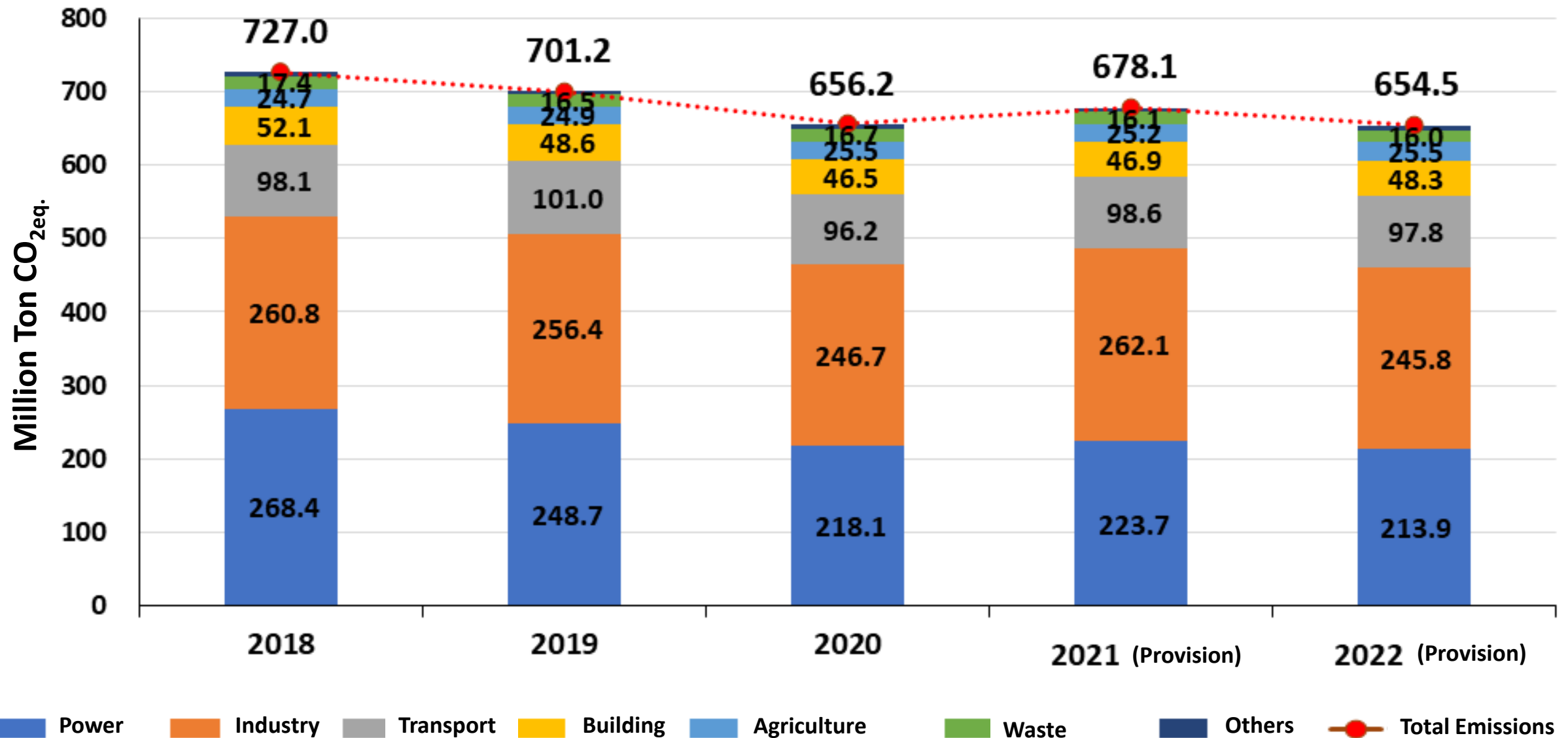
'30 NDC GHG Mitigation Target of ROK

'30 NDC Goal of Greenhouse Gas Emissions

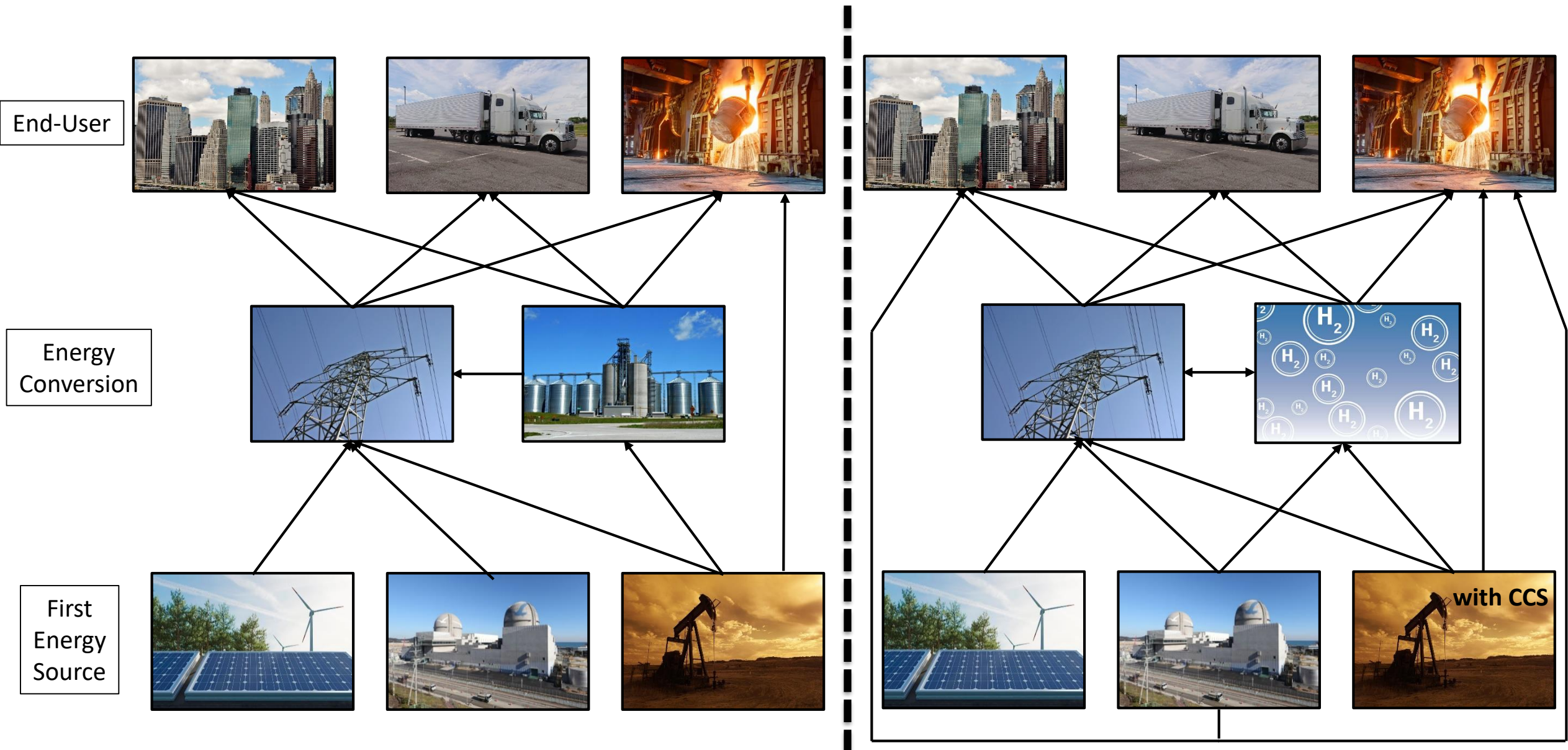


- ◆ Power (45.9% ↓)
 - Coal Power ↓
 - Nuclear Power ↑
 - Renewable Power ↑
- ◆ Industry (11.4% ↓)
 - Development of low-carbon technology
 - CO₂ tax and incentive
- ◆ Transport (37.8% ↓)
 - Electricity mobility
 - Hydrogen mobility
 - Zero carbon fuel
- ◆ Building (32.8% ↓)
 - Zero energy building
 - Green remodeling

Korean GHG Emissions



Non-Electric Application of Nuclear Heat



Alliance for Nuclear Heat Utilization

◆ Objective & Tasks

- Developing technologies for nuclear heat supply and utilization
- Exchanging information on nuclear heat business
- Establishing nuclear heat business framework
- Accelerating demonstration of nuclear heat supply system



◆ Participating Organizations

- Institute: KAERI
- Local government
 - Gyeongsangbuk-do
- 6 Plant construction companies
- 4 Chemical companies including hydrogen
- 1 Steel-making company



Interests of Alliance for NHU (I)

DL E&C, Doosan to invest \$25 mn in SMR developer X-Energy

X-Energy is in negotiations to raise an additional \$60 mn from a S.Korean private equity firm

According to DL E&C Plant Biz Division Director Yu Jae-ho, X-Energy's SMR technology can be used in diverse industries, so a synergy effect is expected with DL E&C's plant business. "We will actively propel eco-friendly energy source development such as hydrogen and ammonia by combining our BIM and modular plant design technology with the SMR business," he added.

DL E&C partners with X-energy and KEPCO KPS to boost global SMR business.



Ultra Safe Nuclear Corporation, Hyundai Engineering, & SK ecoplant Sign MOU for Clean Hydrogen Production

- Hyundai Engineering, SK ecoplant, and USNC have signed a memorandum of understanding (MOU) for hydrogen production.
- They will conduct joint research and development for the commercialization of "Hydrogen Micro Hubs" over the next five years.
- Hydrogen will be produced by combining the 4th generation MMR® 'nuclear battery' and the next-generation water electrolysis technology, SOEC.



Interests of Alliance for NHU (II)



Air Liquide Korea and LOTTE Chemical cooperate on ammonia and hydrogen-related activities

POSCO Takes a Significant Step Towards Realizing the Dream of Hydrogen Reduction Ironmaking with the Inauguration of Its Development Center



Topsoe to provide Approtium with ammonia cracking technology

Gyeongsangbuk-do begins to attract investment in new national industrial complexes such as hydrogen and nuclear power

MOU signed with 6 companies including Lotte Chemical



Thank you for your attention

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