Hydrogen Energy Ministerial Meeting

Hydrogen Energy Ministerial Meeting
H2EM 2018

- Date / Place : October 23rd, 2018 / Dai-ichi Hotel Tokyo
- Organized by : METI、New Energy and Industrial Technology Development Organization (NEDO)
- Participants : 300 people including representatives from 21 countries, regions, international organizations, etc.*

*Japan, Australia, Austria, Brunei, Canada, China, France, Germany, Italy, the Netherlands, New Zealand, Norway, Poland, Qatar, South Africa, Korea, United Arab Emirates, United Kingdom, United States, European Commission, IEAParticipants :

PROGRAM

- Ministerial Session
- Industry and International Organization Session

- Plenary Session: Potential of Hydrogen Energy for Energy Transition
- Session1: Expansion of Hydrogen Use - Mobility & H2 Infrastructure -
- Session2: Upstream&Global Supply-chain for Global Hydrogen utilization
- Session3: Renewable Energy Integration & Sectoral Integration



Tokyo Statement

We share the view that hydrogen can be a key contributor to the energy transitions underway to clean energy future and an important component of a broad-based, secure, and efficient energy portfolio. Also, we confirmed the value of collaborating on the following four agendas on “Tokyo Statement” to achieve a “Hydrogen Society” .

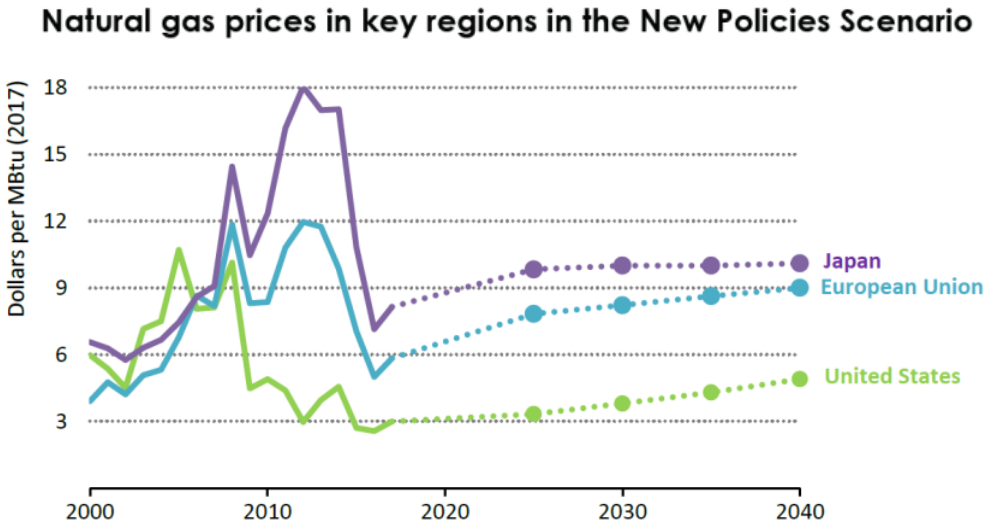
◆Harmonization of Regulation, Codes and Standards
◆International Joint R&D emphasizing Safety
◆Study and Evaluate Hydrogen’s Potential
◆Communication, Education and Outreach

*Hydrogen Energy Ministerial Meeting 2019 is scheduled for September 25th in Tokyo. (tentative)

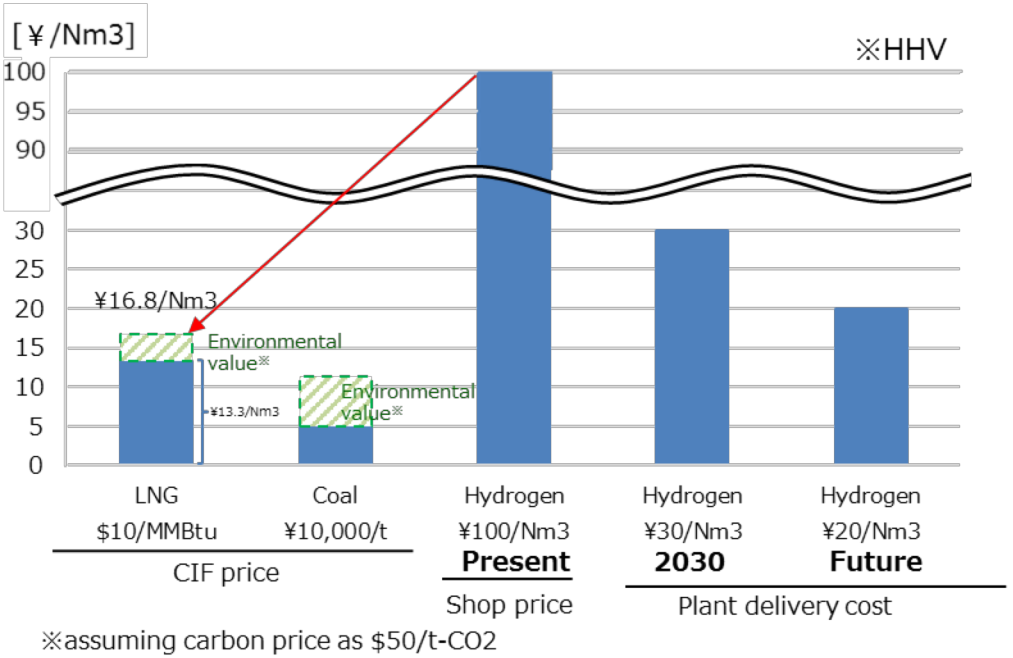
<table>
<tr><th colspan="2"></th><th>Mobility</th><th>Supply Chain</th><th>Sector Coupling /Clean Hydrogen</th></tr>
<tr><td rowspan="4">Tokyo Statement</td><td>(A) Harmonization on RCSS</td><td rowspan="2"><u>HEM-follow up meeting</u>
• Harmonization of safety rule on hydrogen
• Share best practices and lead to de-regulation (HRS, Tunnel, etc.)
• Promote international standards
• Joint development of FCV
• Knowledge sharing</td><td rowspan="2"><u>HEM-follow up meeting</u>
• Share Information on H2 Supply Chain Project et. (Japan-Australia…etc)
• IMO rule making</td><td>• Exchange infromation
• Coordination on relevant rule</td></tr>
<tr><td>(B) International R&D and Information sharing on Safety</td><td>• Information Sharing for joint R&D</td></tr>
<tr><td>(C) International Research</td><td colspan="3">• Analysis and evaluation of hydrogen potential(IEA, IRENA)</td></tr>
<tr><td>(D) Education and Outreach</td><td colspan="3">• Promote understanding in society (citizen, local authority, etc.)</td></tr>
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Hydrogen Cost Targets

- In order to achieve grid parity, Hydrogen cost is needed to be lower than price of natural gas.
- Target of hydrogen importing cost in Japan has to be ￥13/Nm^3 in future (US$1.3/kg, equivalent to US$10/MMBtu).



from World Energy Outlook 2018 (IEA)



※assuming carbon price as $50/t-CO2

Hydrogen Cost Perspective of the Supply Chain Project

- Target cost of hydrogen supply in 2030 is ￥30/Nm^3.
- Natural gas price is unpredictable, however further cost reduction is needed.

