



## **SUMMARY STATEMENT - The Third International Conference on Fuel Ammonia (ICFA 2023)**

October 2, 2023

- 1 . On September 29 (Fri.), the Ministry of Economy, Trade and Industry (METI) and the Clean Fuel Ammonia Association (CFAA) held the Third International Conference on Fuel Ammonia (ICFA2023).
- 2 . More than 1,300 participants registered this conference in total. Three international organizations such as the International Energy Agency (IEA), the United Nations Industrial Development Organization (UNIDO), and the Economic Research Institute for East Asia and ASEAN (ERIA) took the stage and 15 presentations from seven countries were delivered in the industry session. In addition, panel discussion was held from this year to deepen the discussion with industries and participants. Ceremony was held to mark the signing of MOU between Mitsubishi Corporation and Proman to study a new clean ammonia production project in Lake Charles, Louisiana in USA.
- 3 . The importance of fuel ammonia for decarbonization was shared throughout this conference, as it was specifically demonstrated that fuel ammonia can contribute to achieving carbon neutrality through a wide range of applications in various industries.
- 4 . IEA emphasized on the importance of ammonia in decarbonization and predicted that one-third of the hydrogen required towards net-zero emissions would be supplied by ammonia, and in light of the low-carbon-derived hydrogen export projects currently under consideration, 80% of hydrogen carriers would be ammonia in the near future. It was also noted that establishing international framework for carbon intensity is crucial for the future utilization of ammonia.
- 5 . UNIDO and ERIA highlighted the vital role of ammonia as a hydrogen carrier and fuel for power generation. It was noted that there is estimated demand for 224 million tons of ammonia in ASEAN by 2050, mainly to drive the transition from utilization in coal-fired power generation to utilization in natural gas power generation, emphasizing the importance of green ammonia in this context. Moreover, efforts to promote understanding of fuel ammonia and reduce the costs related to ammonia have been emphasized.



- 6 . In the industry session, all the stages of the ammonia supply chain, from supply to transportation and utilization were introduced.
- 7 . Regarding utilization technologies, it was introduced wide range of ammonia initiatives such as ammonia cracking for hydrogen supply and expanding ammonia use in Asia, ammonia combustion in boilers and gas turbines and the full-scale introduction of ammonia in glass melting furnaces were presented.
- 8 . It was also demonstrated the advantages of ammonia as a zero-emission marine fuel and the progress made in the development of ammonia-fueled ships.
- 9 . Regarding the supply of green ammonia, plans from Australia, India, Chile and South Africa have been presented, indicating steady progress in the development of green ammonia supply chains.
- 1 0 . In Japan, national organizations such as JOGMEC and JBIC are considering participation in the supply chain and support through financing. As for JOGMEC, it announced proactive engagement in research and support of the fuel ammonia supply chain since its business scope has expanded to include hydrogen and ammonia. JOGMEC also stated that they would provide strong support for the ammonia fuel application through working on carbon-intensity calculations.
- 1 1 . At this third International Conference on Fuel Ammonia, it was very useful to share with participants that fuel ammonia can be used for wide variety of applications in wide range of industries, including ship transportation and industrial furnaces, those efforts toward supply and the evolution of utilization technologies are steadily progressing, and the establishment of clean fuel ammonia supply chain is close to reality.