

Acceleration and enlargement of Tokyo Statement and Global Action Agenda progress
Chair's summary of the 6th Hydrogen Energy Ministerial Meeting
25 September 2023, Tokyo, Japan

The Ministers and Delegates responsible for coordination of hydrogen energy policy within respective countries met in-person and on-line in Tokyo, Japan on 25 September 2023 to discuss strategies for cooperation toward the development of hydrogen energy.

Since the 1st Hydrogen Energy Ministerial Meeting in 2018, 41 governments have formulated national hydrogen strategies, at least more than 10 countries are preparing or announced to formulate national hydrogen strategies, and those countries are making concrete efforts toward their goals in 2030 and/or beyond 2030. The Hydrogen Energy Ministerial Meeting, as the global ministerial meeting dedicated specifically to hydrogen, reported on progress of over 550,000 fuel cell systems deployment and over 1,100 hydrogen refueling stations installation towards the Global Action Agenda goals of 10-10-10: 10 million fuel cell systems, 10 thousand hydrogen refueling station, in 10 years. Furthermore, with regard to the goal added last year to produce at least 90 Mt of renewable and low-carbon hydrogen by 2030, it was reported that its production was at 0.7 Mt with 700 MW of electrolyser installed as of 2022. We also reported that efforts have been initiated toward international standardization of GHG emissions calculation methodologies for hydrogen production, based on the working document prepared by the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE).

In recent years we have faced rapid changes in energy circumstances, and there is an urgent need to ensure energy security and resilience. At the same time, there is a need to sustain and strengthen activities toward climate goals. While there are various pathways according to each country's energy situation, industrial and social structures, and geographical conditions to achieve the goal, it is commonly agreed that expanding the use of clean hydrogen is one of the important solutions, especially in hard-to-abate sectors in industry and transportation, as well as in the electricity sector. To this end, it is essential to steadily implement the currently planned renewable and low-carbon hydrogen production projects and to originate additional projects. According to the International Energy Agency (IEA)'s Global Hydrogen Review 2023, just 4% of projects are under construction or have reached final investment decision (FID), and one of the factors hindering FID is uncertainties about demand. Recognizing the need to create firm demand for this purpose, Ministers and Delegates added a goal to increase hydrogen demand which could potentially reach 150 Mt by 2030, with up to 90Mt being demand for renewable and low-carbon hydrogen. The breakdown of demand for renewable and low-carbon hydrogen consists of approximately 40% for power generation sector, 38% for industrial sector such as steel and chemical, 20% for transport and the remainder for others. In order to achieve this goal, it is essential to accelerate or further expand the development of support schemes in each country to close the gap between the cost of renewable and low-

carbon hydrogen and fossil fuels, underdeveloped infrastructure to supply hydrogen to end users. And also, we will stimulate demand by creating an environment that promotes the safe use of hydrogen by setting out relevant regulations, safety codes and standards through the harmonization of regulations, codes and standards and the promotion of standardization.

Furthermore, in order to secure the renewable and low-carbon hydrogen needed to achieve net-zero emissions, it is important to establish international supply chains using a various method, including liquefied hydrogen and liquefied organic hydrogen carriers, to link production and demand. We reaffirm the need to accelerate efforts to increase technological certainty and reduce costs in the production, transportation, storage, and utilization of hydrogen on a global scale. We recognize the further expansion of hydrogen utilization as a breakthrough in achieving net-zero emissions and the potential for the promotion of hydrogen utilization to create new industries such as electrolysis and other hydrogen production and new jobs close to 800,000 by 2030, mostly in skilled positions, and to contribute to sustainable global growth. Therefore, we recognize the importance of developing international standards and certification schemes, including for a GHG calculation methodology for hydrogen production and mutual recognition mechanism for carbon intensity-based tradability, transparency, trustworthiness, and sustainability in the context of promoting hydrogen trade and fostering a hydrogen market, as shared at the G7 Summit in Hiroshima. We also support and accelerate development of international standards and certifications based on carbon intensity, and aim to foster an understanding of its importance and to disseminate it to other than G7 community.

We affirm that it is also important to strengthen international support for renewable and low-carbon hydrogen projects by coordinating and facilitating access to increased concessional funding and related support mechanisms that address barriers to investment in order to enable private investment at scale in developing countries. We express our appreciation for the World Bank's lead in this area and hope that it will continue to do so.

Ministers and Delegates thank the IPHE for its significant contribution to the development of hydrogen and fuel cells over the past 20 years and for promoting international collaboration. Ministers and Delegates requested the leading organizations including the IEA, IPHE, Clean Energy Ministerial, Hydrogen Initiative, Mission Innovation, Clean Hydrogen Mission, and the International Renewable Energy Agency to take actions on these issues individually and collaboratively. Cooperation in the context of the COP26 Glasgow Breakthrough Agenda, G7, G7-HAP, G20 and of the United Nations Framework Convention on Climate Change is also considered critical to leverage resources, avoid duplication, and ensure a cohesive, coordinated, and strategic effort to accelerate progress. This will enable multiple other initiatives and partnerships that are initiating hydrogen activities, such as the World Economic Forum, and others, to work collaboratively towards common goals.