

水素経済 (Suiso Economy)

～オーストラリアと日本のサプライチェーン～ 閉会挨拶

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Distinguished guests, ladies and gentlemen, I am honored to be given this opportunity to make some remarks today. This seminar has brought together some of the most eminent experts in both the policy and technology fields to discuss ways to make hydrogen the key energy source for a future decarbonized society. I was especially inspired by the discussion between Dr. Yoshino and Dr. Finkel, who are both prominent experts in fields related to decarbonization.

I would like to extend my sincere gratitude to all the speakers, as well as to Asialink, for hosting this seminar. I also wish to express my deep appreciation to the Energy Research Institute of the University of Melbourne, the State Government of Victoria, the Australian Federal Government, and the Hydrogen Value Chain Promotion Council for their cooperation in organizing the seminar.

The instability of the energy market triggered by Russia's invasion of Ukraine has reminded us of just how indispensable energy security is to people's peaceful lives and how fragile that security can be at times. In the midst of this crisis, the usefulness of hydrogen in ensuring energy security is again garnering attention.

As hydrogen is basically location independent, we do not need to rely on a specific region to produce supplies. Also, as hydrogen is the most abundant element in the universe, there is no fear of those supplies being depleted. Furthermore, when used, hydrogen's only waste product is water and it can be produced with minimal environmental impact. These characteristics make

hydrogen an extremely promising energy source for solving the challenges of both decarbonization and energy security.

I believe that the hydrogen energy field can be a leading source of global energy supplies. This is a field where Japan and Australia, with a shared commitment to a realistic energy transition, should work together to utilize hydrogen and build resilient supply chains.

Although hydrogen is such a promising energy source, we have yet to establish a supply chain to distribute hydrogen to all corners of our society. Japan possesses superior technologies in all the stages needed to establish such supply chains.

For example, in the “production” stage, we have gasifiers to extract hydrogen from lignite coal and electrolyzers to produce hydrogen from water. Then in the “transportation” stage, we have insulation technology to transport liquefied hydrogen that must be kept over long periods at an ultra-low temperature of -253°C , 100°C lower than LNG. Finally, in the stage of “using” that hydrogen, we have the world’s leading technologies in fuel cell vehicles, such as the Mirai fuel cell car.

Moreover, Australia has the potential to become the world’s leading hydrogen exporting country, with its abundant natural resources and vast land area capable of producing large quantities of both blue and green hydrogen.

To truly make hydrogen the key energy source for a decarbonized society, we must grow the seeds of the hydrogen supply chain sown by Japan and Australia into a much larger economic region that could be called an “Asia-Pacific hydrogen supply chain.” This can be achieved through the additional participation of the United States, which shares similar values and has advanced technology, and the ASEAN countries, which have a strong energy demand.

The Hydrogen Energy Supply Chain (HESC), successfully launched as a cooperative project between Japan and Australia,

is an important step toward realizing this vision of the future and holds great promise for further progress going forward. One initiative that both symbolizes and demonstrates the potential of the HESC project is the Suiso Frontier—the world's first liquefied hydrogen carrier ship. On February 25, she successfully completed a round trip between Japan and Australia with its advanced technology to transport hydrogen cargoes.

I am confident that with the HESC project as a starting point, Japan and Australia can lead the world in establishing an international hydrogen supply chain.

To steadily implement policies and technologies into our society, we must also promote rulemaking related to hydrogen in parallel. In addition to collaborating to make the technology developed as part of the HESC project a global standard, I hope that Japan and Australia can lead the world in rulemaking to ensure transparent and fair governance in international trade. This includes the development of a transparent carbon footprint for hydrogen from production to delivery, and a stockpiling mechanism to prevent energy disruptions.

Our cooperation towards decarbonization is not limited to hydrogen. As partners who share values such as freedom and democracy, human rights, and the rule of law, we will work together to tackle various challenges for a realistic energy transition.

Finally, in closing, I would like to express my sincere hope that the findings of this seminar contribute to the discussions at the Clean Energy Supply Chain Forum scheduled to be held in June of this year in Australia.

Thank you very much for your kind attention.

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