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The Kishida administration last month announced its new hydrogen strategy, a key thrust in efforts to achieve decarbonization, a stable energy supply and economic growth.

Commuters accessing a Transses Hybrid fueled public transport bus in Tokyo, Japan.

The Kishida administration has promoted the establishment of international hydrogen supply chains in cooperation with countries in the Indo-Pacific, Europe, and the Middle East. Both the public and private sectors in Japan have already developed partnerships with countries such as Australia and the United Arab Emirates. In particular, Australia has been regarded as one of the most important hydrogen energy partners for Japan as demonstrated in the successful project for the world"s first liquefied hydrogen transportation vessel, the Suiso Frontier.

As mentioned by Chief Cabinet Secretary Matsuno Hirokazu at a cabinet meeting on June 6, the Japanese government considers hydrogen to be "an industrial sector that can make a triple achievement of decarbonization, stable energy supply and economic growth in one shot." On the same day, the Kishida administration announced Japan"s new hydrogen strategy, its first in six years.

Previously, the Abe administration formulated the country"s first-ever national hydrogen strategy (the Basic Hydrogen Strategy) in December 2017. It stimulated the creation of energy policies in other countries; Australia, the European Union, Canada, Chile, France, Germany, Hungary, the Netherlands, Norway, Portugal, South Korea, and Spain all formulated their own hydrogen strategies after Japan.

At the same time however, there was negative feedback and criticism on the Abe administration"s hydrogen strategy. For example, the Renewable Energy Institute (REI) based in Tokyo harshly criticized the 2017 hydrogen strategy, pointing out that it prioritized fossil-fuel based gray or blue hydrogen. REI argued that the feasibility of establishing a so-called hydrogen society is unattainable in reality, calling the government"s vision a "fantasy." The REI moreover contended that the government"s strategy on fuel cell vehicles (FCVs) was clearly a "complete failure," calling for fundamental revision of the 2017 hydrogen strategy.

The 2023 hydrogen strategy is composed of five chapters. The introductory first chapter describes the Basic Hydrogen Strategy as the nation"s will to achieve carbon neutral goals and a hydrogen-based society. The Basic Hydrogen Strategy deals with not only hydrogen but also ammonia and other hydrogen-related energy. It states that it will be revised in about five years.

In the second chapter, Japan"s basic hydrogen policy is specified. First, it reconfirms that Japan"s hydrogen

policy is based on the premise of S+3Es (safety + energy security, economic efficiency, and environment) amid the Russia-Ukraine War and the global energy crisis. The chapter then outlines the hydrogen polices of the United States, European countries, China and other Asian countries, and Australia.

The third chapter outlines Japan"s basic strategy on hydrogen and ammonia with the following specific goals: expansion of supply and creation of demand, transition to low-carbon hydrogen, hydrogen production using renewable energy and the establishment of a supply chain in Japan, establishment of international hydrogen energy supply chains, use of hydrogen and ammonia in power generation, mobility of hydrogen energy including FCVs and development of hydrogen stations, and the use of hydrogen in industries such as green steel production and automobile production. In addition, the use of e-methane is considered as a pragmatic effort.

To this end, the government plans to fill a cost gap between hydrogen-ammonia and fossil fuels by providing necessary subsidies. "First movers" shall be able to receive the subsidy for 15 years in principle. Moreover, the government plans to subsidize the development of infrastructure for hydrogen energy, such as tanks and pipelines. It plans to financially support three large-scale points in major cities and five middle-scale areas.

The fourth chapter sets forth a strategy to improve hydrogen"s competitiveness in industries. The Hydrogen Industry Strategy prioritizes the following five areas in which Japanese companies have advantages over foreign competitors in light of cutting-edge technology: hydrogen supply (hydrogen production and hydrogen supply chain), decarbonized power generation, fuel cells, hydrogen use (iron/steel, chemical products and hydrogen-fueled vessels), and hydrogen compounds (fuel ammonia and carbon-recycle products). Furthermore, nine strategic areas, such as electrolysis development, fuel storage batteries, and large-scale tankers for the transportation of hydrogen, are specified as targets of investment.