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Japan Energy Newsletter

**Japan Electric Power
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1 Japanese Government Approves New Economic Measures, Including Promotion of Decarbonization

On November 2, 2023, the Cabinet of Japan approved “Comprehensive Economic Measures towards Completely Overcoming Deflation” in response to the recent economy-wide inflation. This new economic stimulus package includes economic relief measures, such as stimulus checks and tax cuts, as well as subsidies and payouts. To protect the public from the recent rise in consumer prices, the stimulus package focuses on priorities including:

- 1) Countermeasures against rising energy prices;
- 2) Sustainable wage and income increases, including in rural areas and for small and medium-sized enterprises;
- 3) Strengthening economic growth and promoting domestic investment;
- 4) Anti-population decline measures such as digitalization and childcare support, and
- 5) Promoting national resilience and disaster prevention.

The total budget for the economic package is approximately 17 trillion yen, including tax breaks and household subsidies.¹ In the electricity and energy sectors, in particular, the Japanese government aims to extend measures to curb soaring energy prices, such as for gasoline. In addition, the government will also accelerate efforts to promote energy conservation and decarbonization, support the deployment of energy-saving equipment at factories, and expand the adoption of renewable energy and storage batteries.

Summary of the Economic Stimulus Package

At the press conference, Prime Minister Kishida announced the new economic stimulus package, “Comprehensive Economic Measures towards Completely Overcoming Deflation.” Japan has suffered from continuous deflation for 30 years since the bubble economy burst, with large companies prioritizing short-term performance improvements and cutting costs. To combat this vicious cycle, the Japanese government has emphasized that it will try its best to create a virtuous cycle in which household purchasing power and consumption will increase, which will prompt improved corporate financial performance and ultimately lead to higher wages. The government will compile a supplementary budget bill to execute these economic measures, aiming to submit it for early enactment to the current extraordinary Diet session.²

The package also calls for strengthening economic and social resilience to rising energy costs. The government aims to accelerate efforts to achieve carbon neutrality by 2050, including promoting further energy conservation and introducing renewable energy. Such efforts will help to reduce dependence on foreign fossil fuels and strengthen resilience to rising energy costs. Consequently, the measures mainly aim at 1) extending easing measures to curb fuel prices and energy costs and 2) accelerating efforts to promote energy conservation and decarbonization.

¹ https://www5.cao.go.jp/keizai1/keizaitaisaku/2023/20231102_taisaku.pdf

² https://www.kantei.go.jp/jp/101_kishida/statement/2023/1102kaiken.html

- 1) Extending assistance measures to curb fuel prices and energy costs
 - In light of the recent rise in energy prices, fuel price emergency mitigation measures were implemented in September 2023 and will be effective until the end of 2023. The latest measures are designed to prevent excessive burdens for households that already face difficult financial circumstances, as well as small/medium-sized enterprises that have difficulty passing on rapid price increases to customers. The government will extend the measure through the end of April 2024 while considering recent factors such as the increasingly tense international situation and trends in crude oil prices.
 - Along with the new economic package, the ongoing assistance measures for electricity and gas prices will continue through the end of April 2024 by monitoring international fuel price trends. The measures will be phased out in May 2024.

- 2) Accelerating efforts to promote energy conservation and decarbonization³
 - To reduce energy prices for businesses and households, the government will promote energy conservation and support the introduction and utilization of renewable energy.
 - For households, to promote wide-spread deployment of energy-efficient housing, a “one-stop shop” will be established to aid with installing insulated windows and introducing high-efficiency water heaters. Government guarantees will also be provided based on the Japan Housing Finance Agency’s green bonds.
 - For businesses, the measures will support introducing equipment that contributes to transforming commercial facilities into Zero Energy Buildings (ZEB) and making energy efficiency improvements to existing factories and office facilities. Additionally, they will assist with building supply chains for next-generation power semiconductors and storage batteries with high energy-saving performance and will promote energy audit services for small and medium-sized enterprises. Furthermore, businesses will be supported to integrate solar power generation and storage batteries to maximize intermittent energy resources.
 - Moreover, to reduce CO₂ emissions in the transportation sector, which applies to both businesses and households, the measures will support the introduction of clean energy vehicles, EV charging/hydrogen fuel infrastructure, etc., and demonstration research projects aimed at early commercialization of synthetic fuel (e-fuel).

³ https://www5.cao.go.jp/keizai1/keizaitaisaku/2023/20231102_taisaku_gaiyo.pdf

2 METI Announced Launch of Task Force to Draft a Hydrogen Safety Rule⁴

On October 4, 2023, the Ministry of Economy, Trade and Industry (METI) announced that it will establish a task force to consider crafting a safety regulatory system for large-scale hydrogen use. Additionally, to develop a safety regulation system that supports the promotion of hydrogen and ammonia power generation in the electric power sector, as indicated in the Hydrogen Safety Strategy, it is expected that the technical standards and interpretation of the Electricity Business Act will be reviewed during fiscal 2024.

Background

On October 4, 2023, a joint meeting of the following three subcommittees of the METI discussed the establishment of a safety regulatory system for large-scale hydrogen use:

- 1) Hydrogen and Ammonia Policy Subcommittee of the Energy Conservation and New Energy Subcommittee of the Advisory Committee for Natural Resources and Energy;
- 2) Decarbonized Fuel Policy Subcommittee of the Resources and Fuels Subcommittee, and
- 3) Industrial Structure Council Safety and Consumer Product Safety Subcommittee Hydrogen Safety Subcommittee.

This joint meeting was held to discuss the issues collaboratively and cooperatively. The discussion covered challenges and measures to promote the use of hydrogen and ammonia as fuels along with infrastructure development, even though the hydrogen and ammonia production costs are much higher than existing fuel prices.⁵ Large-scale hydrogen usage is still in the initial stages worldwide and has not yet been commercialized. One necessary step for commercialization is establishing a safety regulatory system encompassing the entire supply chain. The Japanese government revised its basic hydrogen strategy in June 2023, which includes the hydrogen safety strategy.

During the joint meeting, the plan to establish a task force was presented as one of the initiatives based on the hydrogen safety strategy. In Japan, various technology development projects aimed at large-scale hydrogen utilization are underway through grants from the New Energy and Industrial Technology Development Organization (NEDO), Japan's public R&D funding organization. Safety authorities participate from the early stages of the project to introduce safety regulations in a timely and economical manner. By doing so, they aim to be the first in the world to strategically acquire scientific data to formulate safety standards and share it with the public and private sectors.

Moreover, Japan aims to prioritize the review of safety regulations related to hydrogen strategically. Specifically, a task force will be established consisting of representatives from the METI, NEDO, and the High Pressure Gas Safety Institute of Japan (Koatsu Gas Hoan Kyokai; "KHK"), a special private corporation, to conduct periodic studies to

⁴ https://www.meti.go.jp/shingikai/enecho/shoene_shinene/suiso_seisaku/009.html

⁵ https://www.meti.go.jp/shingikai/enecho/shoene_shinene/suiso_seisaku/pdf/009_01_00.pdf

establish a system for hydrogen safety regulations. This task force will be beneficial for monitoring the progress of individual projects related to hydrogen safety, clarifying matters that require technological development, and leading specific regulatory reviews. The task force will mainly discuss the following topics:

- 1) Monitoring the progress of each project related to hydrogen safety using the national budget (NEDO projects, etc.)
- 2) Sharing information on safety regulations
- 3) Reviewing safety-related regulations that should be prioritized and clarifying the necessary matters that require technological development

Promotion of Hydrogen and Ammonia Power Generation in Power Sector⁶

During the joint meeting, the promotion of the potential use of hydrogen and ammonia in the power generation sector was also discussed while considering the development of hydrogen safety regulations. To promote the large-scale use of hydrogen and ammonia in the future, the government plans to review the existing technical standards and interpretation under the Electricity Business Law regarding hydrogen and ammonia power usage in thermal power plants as well as fuel cell generators during the 2024 fiscal year. The following issues will be reviewed:

- 1) Interpretation of pre-use, welding, and periodic self-inspections suitable for hydrogen/ammonia power generation
 - The Electricity Business Law requires installers to confirm the conformity of equipment to technical standards before starting operation and to maintain compliance with technical standards during operation. The government has posted interpretations regarding the pre-use self-inspection, pre-use self-confirmation, welding self-inspection, and periodic self-inspection stipulated in the Enforcement Regulations.
 - It is necessary to consider the amendments announced in December 2022 to the technical standards for using hydrogen or ammonia as fuel in thermal power generation equipment and fuel cell power generation equipment. Regarding the interpretation of the inspection, the government will investigate and take it into consideration within FY 2023, with plans to act within FY 2024. The aim is to review inspection items and methods related to safety valve tests, gas leak countermeasures, and newly added inspection processes to make them suitable for hydrogen and ammonia power generation.
- 2) Safety regulations related to fuel cell power generation equipment⁷ that uses pure hydrogen:
 - The definition of general-use electrical facilities for fuel cell power generation equipment, stipulated in the Enforcement Regulations of the Electricity Business Act, is a regulation based upon the ENE-FARM (i.e., a

⁶ https://www.meti.go.jp/shingikai/enecho/shoene_shinene/suiso_seisaku/pdf/009_03_00.pdf

⁷ It generates electricity by directly supplying hydrogen to fuel cells without producing hydrogen by reforming the fuel.

system in which hydrogen produced by reforming fuel is supplied to a fuel cell to generate electricity).

- Under these circumstances, a study is scheduled to be conducted on current technology trends for “fuel cell power generation equipment that uses pure hydrogen fuel cells,” the use of which has been growing in recent years. Based on the results of such a study, the government will investigate and consider the interpretation of the regulations, related ministerial ordinances, and technical standards within FY 2023 and plan to take measures within FY 2024.

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