

Industrial Batteries and Power Supplies



Takashi Taniguchi

Managing Director
Business Unit Manager of Industrial Batteries and Power Supplies
GS Yuasa International Ltd.

Review of the Fifth Mid-Term Management Plan

Delivering peace of mind and safety to customers through the *Koto-zukuri* (service creation) business

Our fundamental policy for fiscal 2022, the final fiscal year of the Fifth Mid-Term Management Plan, was to deliver peace of mind and safety to customers and evolve into a business enterprise that gains the trust of society. One of the results was the start of provision of STARELINK services* using remote storage battery monitoring services to customers in the regular field. This service gathers and analyzes information on the operational status and degradation of energy storage systems (ESS) using a cloud-based system equipped with monitoring, analytical, and diagnostic functions and is a first step in the area of *Koto-zukuri* (service creation) business. The Company is already receiving orders, and we will continue to focus our efforts in this area in the future.

In terms of sales, we took measures to appropriately reflect soaring costs for raw materials and fuel in sales prices. Regarding production, operating rates declined and sales were below the initial plan due to deliveries for many projects being delayed until fiscal 2023 or later as a result of disruption of supply chains and long delivery times for parts, mainly in the emergency field. On the other hand, there were shortages of parts and materials in the regular field and overseas markets, but we were able to respond as needed and there were positive effects from the weaker yen, and as a result, the impact was minimal.

With regard to development, we made progress on the development of new ESS products and undertook development of even more competitive lithium-ion batteries in collaboration with the LIB Technical Center. For lead-acid batteries, which are essential as backup for public infrastructure, we worked to enhance heat resistance and extend lifespans and took measures to reduce energy used in manufacturing.

Measures to Achieve Vision 2035 and the Sixth Mid-Term Management Plan

Contributing to the development of sustainable public infrastructure and securing high profit

Under the Green Growth Strategy announced by the Japanese government, the composition of electric sources will be drastically changed to achieve carbon neutrality by 2050, and it is expected that renewable energy will account for 50% to 60% of all energy. Under these circumstances, the Company declared a policy of ensuring high profitability by contributing to the realization of sustainable public infrastructure in Vision 2035.

Under the Six Mid-Term Management Plan, we will maintain our market shares in the emergency field, which is expected to experience firm demand, while formulating scenarios necessary for growth including development of new ESS products and cutting the cost of forklift lead-acid batteries overseas in response to robust demand in the regular field and overseas markets, and we will take action to achieve the plan.

Regular field Growth in *Mono-zukuri* and *Koto-zukuri* (manufacturing and service creation)

The Company is steadily increasing orders received in the regular field, such as the storage battery facility for wind power generation in Hokkaido, one of the world's largest storage facilities, which was completed installation in fiscal 2021. In the regular field, which is a driver of growth, we have adopted a policy of taking advantage of opportunities to achieve growth in both *Mono-zukuri* and *Koto-zukuri* (manufacturing and service creation). As a part of this effort, we established the Energy Systems Sales Division, which integrates technology and sales divisions. By having engineers

accompany sales personnel on sales visits, we hope to develop proposals that can leverage our strengths in mobility and specialization.

In Japan, we are currently focusing sales activities on projects that are eligible for subsidies, but in preparation for the termination of subsidy programs, we will continue to develop economical products for end users who use the power they generate.

Regarding overseas markets, we plan to start by enhancing our competitiveness in Japan and then developing business overseas by identifying our unique key factors for success.

Emergency field

Maintain and expand market share by increasing added value

In the emergency field, where the pace of transition from lead-acid batteries to lithium-ion batteries is slower than that for automotive batteries, the key will be how to raise profitability while capturing robust demand. To increase added-value, we will begin providing the STARELINK service,* which is already available to customers in the regular field, in the emergency field in fiscal 2023. We plan to distinguish this service from those of competitors including overseas manufacturers by enhancing convenience while listening to the opinions of on-site users. In addition, we implemented an absorption-type merger with GS Yuasa Infrastructure Systems Co. Ltd. (GYIS), which was established through transfer of the social infrastructure business from Sanken Electric Co., Ltd. in fiscal 2021, to maximize synergy effects so that we can enhance product competitiveness. By integrating the strengths of GS Yuasa and the former GYIS, we will leverage the battery control technologies and high-efficiency power electronics technologies developed over many years to accelerate development of high-quality products.

In overseas markets, we will deploy the heat resistance and lifespan extending technologies that we accumulated in Japan while expanding sales of second brand products to customers that require moderately-priced products.

For forklifts

Steadily capture electrification demand

In light of the trend toward electrification in the forklift field, we will develop a lineup of both lead-acid batteries and lithium-ion batteries and expand our customer base. We will seek to increase sales volumes by developing and providing trial deliveries of products that meet lithium-ion battery demand. Overseas, we will increase production capacity at our site in Thailand, focus sales efforts in ASEAN area, and also expand sales channels to Europe.

Developing human resources who can carry out strategies and creating the foundations for achieving Vision 2035

The biggest issue that we face in order to achieve the Vision 2035 is the development of human resources who can carry out our strategies. I value communication with employees for enhancing engagement as we reinforce human capital. I often say that it is important for personnel to "listen to customer opinions, consider together what will make customers happy, and achieve growth together." If we can engage in dialogue with customers and affiliates in Japan and overseas and demonstrate our respective strengths to achieve common goals, this will lead to stronger human capital throughout business divisions and increased corporate value.

The Sixth Mid-Term Management Plan is a stepping stone for major growth in the future. We will lay the foundations for expanding business in the public infrastructure field so that we can achieve the Vision 2035.

* Maintenance services that use proprietary remote monitoring technology and forecasting and preventive technologies. Preventive maintenance services that use AI and DX are provided to maintain the stable operations and optimal control essential for power generating facilities that are used for extended periods.

Main Points of the Sixth Mid-Term Management Plan

Emergency field

Japan

- Expand STARELINK services* that provide remote monitoring, analytical, and diagnostic functions

Overseas

- Increase competitiveness by expanding the product lineup

Regular field

Japan

- Greatly increased sales of lithium-ion batteries marketed by GS Yuasa
- ▶ Sales capacity: Three times greater than in fiscal 2022 or more

Overseas

- Implement best practices from Japanese markets

For forklifts

Japan

- Promote revision of sales prices

Overseas

- Increase the capacity of the production site in Thailand and expand sales in ASEAN and Europe

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Sixth Mid-Term Management Plan

Business Policy

Building a business foundation to capture the growth of the next generation

Strategies and Important Tasks

Emergency field (Japan)

- Expand our remote monitoring services
- Maximize profit by utilizing unparalleled superiority

Regular field (Japan)

- Setting the stage for a second pillar of business

Emergency field (Overseas)

- Strengthen competitive ability by expanding product lineup

Review of the Fifth Mid-Term Management Plan

In the emergency field (Japan), we have been working to maximize synergies by acquiring the social infrastructure business of Sanken Electric Co., Ltd., which has extensive experience with uninterruptible power supplies (UPS) and power supply equipment for base stations.

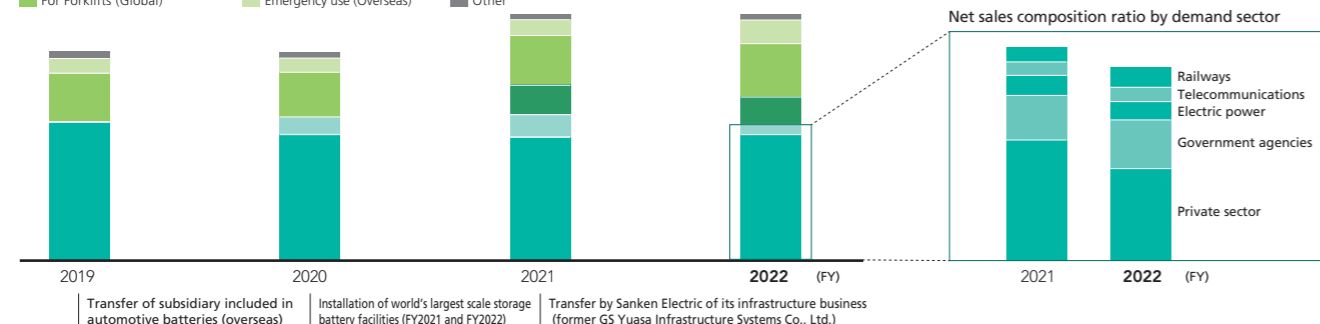
In the regular field (Japan), we installed lithium-ion battery facilities for wind power generation in Hokkaido. We will perform service and maintenance of the storage battery facilities for 20 years.

Achievements and issues

- Achievements**
 - Installation of lithium-ion batteries for wind power generation in Hokkaido
 - Acquisition of the social infrastructure systems business from Sanken Electric Co., Ltd.
 - Starting "Koto-zukuri business" such as STARELINK service
- Issues**
 - Delivery delay due to shortage of components and materials
 - Secure profits in regular field business

Composition ratio of net sales by product type

- Emergency use (Japan; backup)
- Regular use (Japan; ESS, etc.)
- Emergency use (former GS Yuasa Infrastructure Systems Co., Ltd.)
- For Forklifts (Global)
- Emergency use (Overseas)
- Other



TOPIC

GS Yuasa lithium-ion battery-based power storage system to be installed at Honda's Kumamoto Factory

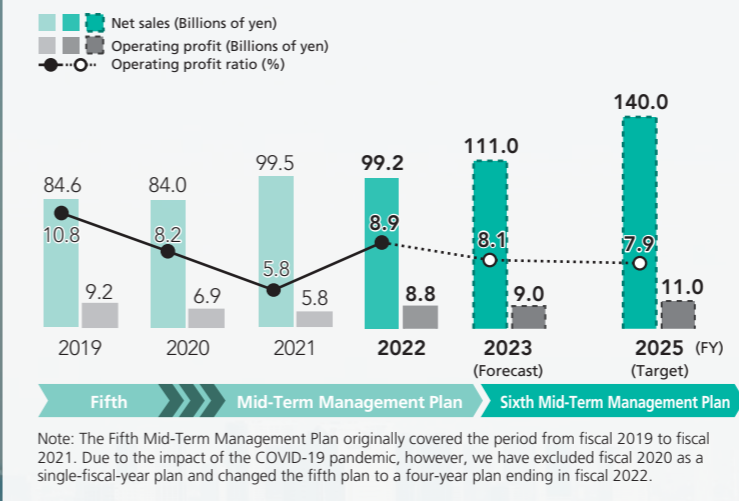
With a capacity of 20MWh, the system will be one of the largest*1 demand-side in-house consumption-use power storage facilities in Japan. It will operate in conjunction with a solar power generation system. The system will facilitate efficient utilization of solar power (the levels of which fluctuate depending on weather and other conditions) by storing, in lithium-ion batteries, surplus energy generated at times, and then releasing the energy when necessary. The system will be equipped with LEPS-2-14 industrial lithium-ion batteries newly developed by GS Yuasa.



How system will appear when installed

*1 As of March 1, 2023; according to GS Yuasa research

Net Sales, operating income, operating profit ratio



SWOT

Strengths	Opportunities
<ul style="list-style-type: none"> High presence in Japan 	<ul style="list-style-type: none"> Expansion of renewable energy market
Weaknesses	Threats
<ul style="list-style-type: none"> Low market share in overseas 	<ul style="list-style-type: none"> Overseas competitors entering renewable energy markets Advancement of lithium-ion batteries in response to electrification of the forklift market

Outlook for the Sixth Mid-Term Management Plan Period

We expect that the regular field (Japan) will expand substantially in conjunction with expansion of the renewable energy market during the term of the Sixth Mid-Term Management Plan. Securing profit is an issue, and we will increase profit over the medium to long-term by expanding the servicing and maintenance business. We also expect stable demand in the emergency field (Japan and overseas) and the forklift field (global).

Regular field (Japan)

- Expansion of renewable energy market
- Expansion of servicing and maintenance business

Emergency field (Japan and overseas)

For Forklifts (Global)

- Maintenance and expansion of market share in Japan
- Expansion of overseas business

Outlook for fiscal 2023

In fiscal 2023, in the domestic emergency field, we anticipate effects from increased volumes and sales price revisions due to recovery of private-sector demand and ongoing improvement of delivery lead times for parts, which became longer in the previous fiscal year. In the regular field, we expect increased sales in conjunction with an increase in subsidized projects, and we also anticipate an increase in volume of batteries for forklifts, primarily overseas. For the segment as a whole, we expect higher sales and profits.

Emergency field (Japan)

- Recovery of private-sector demand
- Increase in volumes due to improvement of long delivery lead times for parts
- Sales price revision

Regular field (Japan)

- Increase in ESS sales as a result of increased subsidized projects
- Development of ESS products

For Forklifts (Global)

- Japan: Sales price revision
- Overseas: Increase in volumes

Relevant data

