

Industrial Batteries and Power Supplies

Long-term strategy (Vision for around 2030)

Long-term vision

- Improve profitability by expanding sales of high value-added products and services utilizing IoT and DX
- Expand sales of lithium-ion batteries in green technology and energy field such as renewable energy applications
- Expand overseas business by expanding local production for local consumption-type business

Recognition of issues and future vision

Recognition of issues in 2018

For existing businesses in Japan within the public infrastructure field, the core of demand is for replacement

Vision for 2022 / Mid-term goal

Focus is on the utilization of IoT and DX and renewable energy fields

Vision for 2030 / Long-term goal

Overseas expansion of business with local production for local consumption-type business

SWOT

<p>S Strengths</p> <ul style="list-style-type: none"> ■ High market share and brand power in Japan ■ Extensive product lineup ■ Enhanced sales and service structure 	<p>O Opportunities</p> <ul style="list-style-type: none"> ■ Expansion of renewable energy ■ Advance of disaster mitigation and BCP measures ■ Strengthening of environmental and emission regulations ■ Expansion of utilization of IoT and DX technologies
<p>W Weaknesses</p> <ul style="list-style-type: none"> ■ Global expansion ■ Ability to respond to market changes 	<p>T Threats</p> <ul style="list-style-type: none"> ■ Advances in replacement of lead-acid batteries with lithium-ion batteries ■ Intensifying market competition due to entry by companies in other industries and manufacturers from China and South Korea ■ Raw materials and distribution cost rises

An expanded role in solving global issues such as disaster prevention and mitigation and carbon neutrality

Having long been involved in the industrial batteries and power supplies business, I realize how their importance in society has increased even further. From the time I joined the Company to today, the main role of industrial batteries and power supply devices was to serve as a backup during power outages.

We believe backup batteries and power supplies must be serviced and maintained so that they can supply electricity at any time, trouble-free, once they are installed. This is because, in the event of a power outage, it is extremely important to ensure the health of the system by supplying electricity until the power network is restored. For example, during the Boso Peninsula typhoon of 2019, we rushed to the damaged city of Minami-Boso in Chiba Prefecture with storage batteries to operate their disaster radio system, which local residents relied on during emergencies. Natural disasters have recently increased in frequency and severity, perhaps due to the effects of global warming, and it is in times like these that we need electricity, something I feel even more strongly now than before.

Storage batteries have also gained worldwide attention in recent years as a key device essential to achieving a carbon-neutral society by using renewable energy to stabilize the electric power network itself and by storing surplus power. As such, we recognize that the value we provide has grown to a level where we can play a role in solving issues on a global scale.

Combining product and service creation to provide reassurance that electricity will always be supplied when needed

In the emergency field, it is unacceptable for a backup battery and power supply to fail and not work when needed. This is why we offer services such as day-to-day servicing and maintenance. Conventionally, people would go to the site and do the work there, but we have always wondered if this process could be made more efficient and labor-saving, and if this could be done through continuous monitoring. This is why we are currently developing services that deploy remote monitoring utilizing communications technology and IoT, AI, and other technologies.

ESS* also plays an important role in public infrastructure in the regular field. Thus, we not only need to provide optimal products, but also to monitor their operation for a long period of time afterwards.

Going forward, we intend to offering services that combine a “network” of remote monitoring with the “footwork” of an on-site response that leverages our strength in having more than 100 service sites nationwide. In both emergency and regular field, we will also combine product creation with the added value of service creation, differentiating ourselves from our competitors and increasing our own competitiveness, while at the same time offering our customers the reassurance that electricity will be supplied when they need it.

* Energy Storage Systems

Growing into a business that provides safety and security in people's lives and further contributes to society

We operate our business under three basic policies of “enhanced service,” “expansion of the lithium-ion battery business,” and “environmentally friendly.”

In the emergency field, we will continue to maintain an earnings base for our business in the domestic market, where solid demand is expected going forward.

In the regular field, the renewable energy market is expected to grow dramatically, primarily around supply and demand adjustments. We started with large wind power generation applications, and have grown to become one of the leading companies in Japan in large-capacity (MWh-scale) lithium-ion batteries. Going forward, we will continue to increase the added value of our products, while aiming to commercialize remote monitoring services and enhance operation and maintenance (O&M).

In the forklift field, in Japan we are moving forward with development and trial deliveries to address lithium-ion battery demand. Overseas, we will broaden our customer base by offering both lead-acid and lithium-ion batteries to our lineup in anticipation of the trend toward electrification.

In fiscal 2021 we also acquired the public infrastructure systems business from Sanken Electric Co., Ltd. and established GS Yuasa Infrastructure Systems Co., Ltd. Welcoming the personnel of that company as our new colleagues, we will strengthen our power supply business and create further effect of synergies.

Even if the shape of devices and service change with future technological innovations, our role in providing safety and security in people's lives will not. We will grow as a business that further contributes to a sustainable society.



Takashi Taniguchi

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

Industrial Batteries and Power Supplies

Mid-term business policy (Fifth Mid-Term Management Plan)

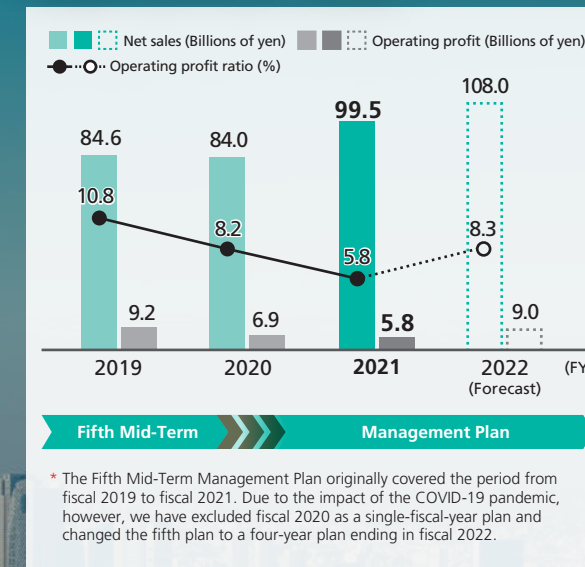
Business policy

Lay the groundwork for transition to a global energy solutions company that contributes to societal and environmental safety and security

Strategy and important tasks

- Introduce high value-added products and services in existing fields to be focused on
- Secure market position by making a strategic shift to new businesses in the environment and energy fields
- Leverage the ability, cultivated in the domestic market, to propose products, technologies, and services, in order to develop and nurture businesses in overseas markets that are optimized for each region

Change in performance and plans



FY2021

[Overview]

- Regular field
 - Completed delivery of lithium-ion batteries for a large-scale wind power generation project in Hokkaido
- Emergency field
 - Sales volume of backup batteries and power supplies decreased due to the impact of shortage of parts and materials
- For forklifts
 - Sales volume increased due to the progressive shift to battery-powered forklifts

FY2022

[Initiatives]

- Regular field
 - Launch of new lithium-ion battery with increased cost competitiveness
 - Responding to the demand for strengthening the adjustment capabilities of the electric power grid
 - Strengthening the servicing and maintenance business using DX
- Emergency field
 - Maximizing synergies with GS Yuasa Infrastructure Systems
 - Responding to the growing demand for backup battery power supplies
 - Appropriate passing on of sales price in response to soaring raw material prices

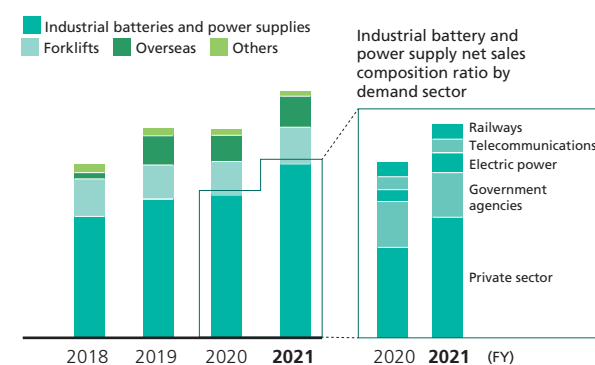
Progress in business strategies

1 Expanding sales of industrial batteries and power supplies mainly for electric power and private sector

In fiscal 2021 although backup batteries and power supplies were impacted due to shipment delays caused by shortage of materials in the fourth quarter, sales and the ratio of private sector demand have increased due to consolidated acquisition of GS Yuasa Infrastructure Systems and an increase in the sales of lithium-ion batteries for large-scale wind power generation.

In addition, sales volume for forklifts has increased due to progress in the shift from engine-powered type to battery-powered forklifts.

● Composition ratio of net sales by product type



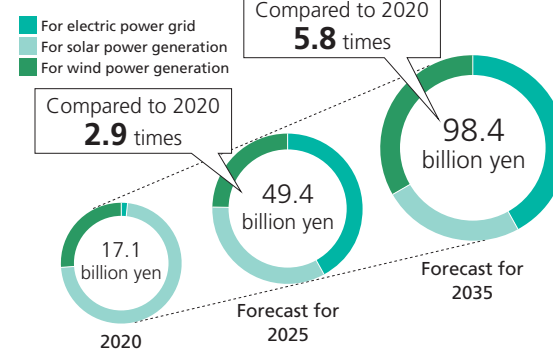
Market data

2 Accelerating introduction of battery energy storage systems due to demand for enhancing adjustment capabilities of regular-use electric power grid

As efforts to achieve carbon neutrality gather speed, the renewable energy market is expected to rapidly expand in various fields.

In particular, further advancement in the deployment of energy storage systems, indispensable for strengthening the adjustment capabilities of the electric power grid, and significant growth in the market for storage batteries, the main device of energy storage systems, are expected. The Group's business opportunities are also, thus, expected to expand more and more.

● Domestic market for secondary batteries for storage battery systems for simultaneous use of power grid and renewable energy



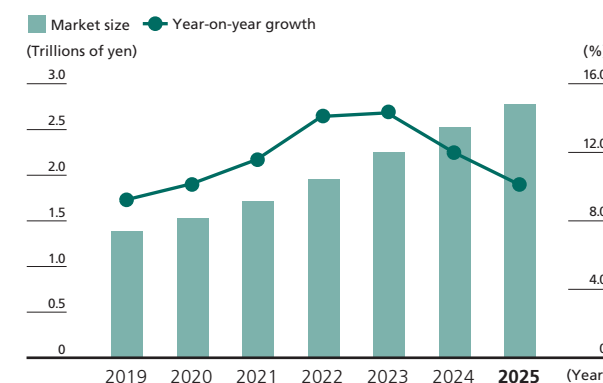
Source: Prepared by GS Yuasa based on Fuji Keizai, Research on the Global Market for ESS and Stationary Batteries

Market data

3 Expansion of the demand for backup batteries and power supplies

The domestic market for data center services is expected to increase by 11.6% year-on-year in 2021. In addition, the average annual growth rate during 2020-2025 is expected to be maintained at a high of 12.5% and the market for backup batteries and power supplies is also expected to expand.

● Forecast of market revenue and growth rate for domestic data center services



Source: IDC Japan Inc. website (October 12, 2021 press release)

TOPIC

Toward maximizing synergies with GS Yuasa Infrastructure Systems Co., Ltd.

In May 2021, we acquired the social infrastructure systems business of Sanken Electric Co., Ltd., and established GS Yuasa Infrastructure Systems. The company has extensive experience in uninterruptible power supplies (UPS) and power supplies for base stations.

In the future, we aim to work on in-house production of storage batteries and the integration of sales models, in addition to strengthening the field of power supplies for telecommunications which is one of the strengths of GS Yuasa Infrastructure Systems.

● Expected synergistic effect

