Specialized Batteries and Others

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

Business policy

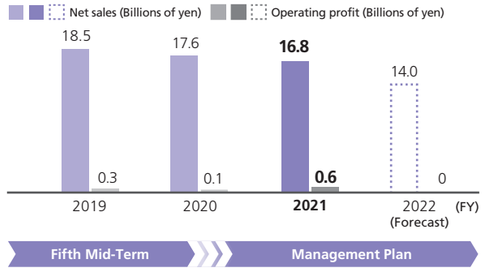
Contribute to the building of new public infrastructure through batteries with the highest level of performance and quality

Strategy and important tasks

- Work to provide stable supply of lithium-ion batteries for submarines and enhance their quality
- Expand sales of lithium-ion batteries for aircraft and satellites by improving reliability and durability

Used in extreme environments, from deep sea to outer space ▶ **Work to further improve technological capabilities, providing storage batteries able to continue supplying power even under harsh conditions**

Change in performance and plans



* The Fifth Mid-Term Management Plan originally covered the period from fiscal 2019 to fiscal 2021. Due to the impact of the COVID-19 pandemic, however, we have excluded fiscal 2020 as a single-fiscal-year plan and changed the fifth plan to a four-year plan ending in fiscal 2022.
* Since company-wide expenses (including labor expenses and R&D expenses) are included in the results, segment loss may occur.

FY2021

[Overview]
- Lithium-ion batteries for submarines
  Decrease in sales due to percentage of completion method
- Lithium-ion batteries for aircrafts
  Increase in sales volume due to steady sales to airlines (replacement)

FY2022

[Initiatives]
- Stable supply of lithium-ion batteries for submarines
- Increase in orders for lithium-ion batteries for satellites and marine applications
- Establishment of a production system for increased production
- Development of batteries for lunar rovers
- Receiving orders for lithium-ion batteries for the manned space station in lunar orbit (Gateway)

Increasing orders and establishing a production system for lithium-ion batteries used in satellites and other applications

In fiscal 2021 both profits and operating profit ratio improved over the previous fiscal year thanks to solid trends in existing businesses, such as lithium-ion batteries for aircraft, a reduction in expenses, and other factors.

In fiscal 2022 in addition to continued provision of a stable supply of lithium-ion batteries for submarines, we aim to proceed with the establishment of a production system for increased production of lithium-ion batteries for satellites.

TOPICS

1 Common lithium-ion batteries for launch vehicles installed in Epsilon-5 Launch Vehicle

Common lithium-ion batteries for launch vehicles manufactured by GS Yuasa Technology Ltd. (GYT) were installed in the Epsilon-5 Launch Vehicle launched in November 2021. This product was developed by GYT under contract with IHI Aerospace Co., Ltd., and has been used consistently since the first Epsilon was launched in 2013. The batteries have been installed in stages 1, 2, and 3 of the Epsilon-5 Launch Vehicle to supply electricity to the control equipment and other onboard systems. The launch vehicle is also equipped with thermal batteries, which provide the electricity required by its attitude control equipment while in flight.


Epsilon-5 Launch Vehicle (©JAXA)

2 Conferred with JAXA's "Meritorious Service Award for Safety and Mission Assurance in Aerospace"

GYT has been awarded the Meritorious Service Award for Safety and Mission Assurance in Aerospace by the Japan Aerospace Exploration Agency (JAXA). The award is given to those who have made outstanding achievements and contributions to the performance of JAXA's various missions. This award is a recognition of how GYT's lithium-ion batteries for use in space that have been loaded onto artificial satellites and onto the H-II Transfer Vehicle (HTV) Kounotori, have contributed to improvements in spacecraft functionality and performance and to the success of the mission.


Commemorative plaque

3 Space-use lithium-ion batteries installed in new quasi-zenith satellite "Michibiki-1R"

The space-use lithium-ion batteries manufactured by GYT have been selected for use in all of the quasi-zenith satellites from Michibiki-1 to Michibiji-4 (the Cabinet Office of Japan's satellite navigation system) and through to Michibiki-1R launched in October 2021. The first quasi-zenith satellite, Michibiki-1, with additional satellites (Michibiki-2, Michibiki-3, and Michibiki-4), established a four-satellite constellation to provide the abovementioned satellite positioning service. The recently launched Michibiki-1R will replace Michibiki-1, and is expected to be able to transmit positioning signals with even greater accuracy.


Cells used in space-use lithium-ion batteries