

GS Yuasa Corporation

# CSR Activities in 2017

Web version



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Every year, the GS YUASA Group announces its views toward CSR and the status of related initiatives on its Group websites. This PDF file has been prepared to allow readers to refer to the information released in the 2017 fiscal year through the contents of the “CSR Activities” website, which is one of the sites of our Group.

## President's Message

### President's Message

**"Into the future, GS Yuasa aims to become an energy device company by developing leading-edge technologies focused on quality, while maintaining an untiring commitment to dependability and safety."**



GS Yuasa is able to celebrate the 100th anniversary thanks to all stakeholders, both past and present. On behalf of the Company, I would like to express my sincere appreciation to our stakeholders for their enthusiastic support over so many years.

Since beginning as a dedicated manufacturer of industrial-use lead-acid batteries, GS Yuasa helped establish batteries as essential devices as business evolved over 100 years. Formed through the merger of two companies, Japan Storage Battery Co., Ltd., and Yuasa Corporation, GS Yuasa has been transforming into an energy device company, expanded business beyond batteries to power supplies and lighting as well as specialty equipment and other electrical equipment.

Amid this transformation, maintaining a commitment to dependability and safety is essential for the GS Yuasa brand. Both of the Company's founders were dedicated to contributing to society by developing high-quality products with an inventor's passion and to pioneering new businesses ahead of their times with the spirit of challenge. These ideals have been passed down to all employees of the GS Yuasa Group—right up to today. I am certain that this corporate culture is vital for delivering the highest quality to customers as their company of choice.

Looking ahead, we will continue exploring ways of using energy effectively while maintaining our commitment to quality, as well as striving to develop the battery businesses as an energy device company that benefits the environment and people around the world. We regard that as our key mission over the next 100 years. At the same time, we will do our utmost to realize the newly established GS Yuasa CSR Policy and Code of Conduct so that we can further contribute to making communities more sustainable through the Group's business activities.

We sincerely appreciate the understanding of all stakeholders and their continuing support.

Osamu Murao

President  
GS Yuasa Corporation



# CSR Policy and Code of Conduct

## CSR Policy and Code of Conduct

The GS Yuasa CSR Policy and Code of Conduct formulated in May 2017 are based on the President's Policy and have become the foundation of the Group's CSR. In the GS Yuasa Group, all employees understand that CSR activities are business activities and we encourage everyone to take part based on our CSR Policy and Code of Conduct in order to ensure the sustainable development of society and business.

### GS YUASA CSR Policy

Besides legal compliance, we respect international norms, guidelines, and initiatives related to social responsibility, work on sustainable development of our business through developing energy storage technologies, and contribute to people, society, and global environment.

#### 1. Developing fair, transparent, and sound business, and anti- corruption

GS YUASA conducts a transparent business policy which aims to earn the trust of customers, business partners, shareholders, and of local communities as a top priority. And to adhere to laws and regulations of each country and region. Furthermore, we address to prevent any kind of corruption, will not tolerate any illegal political contribution, bribery of public officials, and will not have relationships with personnel or organizations of organised crime.

#### 2. Respect for human rights

GS YUASA will respect all human rights and labor rights, and will not tolerate any forced labor or child labor. Diversity will be respected, without any discrimination being tolerated.

#### 3. Conservation and improvement of adequate working environment

GS YUASA will provide safe and comfortable working environments for employees. Proper management will be provided in order to promote mid to long-term development of human resources.

#### 4. Fulfillment of our responsibilities to provide safe and secure products and services

GS YUASA ensures the safety and quality of products/services to the end of their lifecycle throughout manufacturing. Furthermore, GS YUASA honest provides clear safety information for all products/services.

## 5. Global environmental conservation

GS YUASA addresses to prevent pollution, and to mitigate climate change, and to establish a sound material-cycle society through using sustainable resources.

## 6. Building better relationships with local communities

GS YUASA will contribute to sound and sustainable development of local communities through building better relationships with their local communities.

## 7. Ensuring social responsibility within our supply chain

GS YUASA will promote actions to ensure social responsibility within our supply chain.

# GS YUASA CSR Code of conduct

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## 1. Developing fair, transparent, and sound business, and anti-corruption

### 1-1 Compliance

- (1) We respect international and regional norms, guidelines, and initiatives, and also strictly comply with the laws and regulations in each country and region in which we operate.
- (2) As a member of the international community, we will comply with the export control laws and regulations of each country in order to maintain international peace and security, and we will not export in a manner to spread materials which could lead to the proliferation of weapons of mass destruction.

### 1-2 Elimination of mixing up official business with personal affairs

We will never conduct to bring damage to the company, through misappropriation of corporate assets and corporate expenses only for one's personal ends or else with misfeasance allowing one's personal advantage.

### 1-3 Fair, Transparent and free competition and trade

- (1) We will not engage horizontal agreements (cartel) through meeting and participation to trade association's activities, i.e. price and quantity fixing as well as exclusivity in distribution of products and services. Upon receipt of such proposal, we decline clearly without leaving no doubt to be misunderstood. To this extent, we will never act in collusion with other contractors, nor to fix the winning bidder and/or contract price.
- (2) We never act in abuse of dominant position, to take advantage of subcontractors, i.e., withholding the amount of subcontract payments without reasons attributable to the subcontractor or failing to make payment after the lapse of the due date of payment, or obtaining undue or improper advantage. Also, upon issuing our order to subcontractors, we will retain the written offer on paper or electronic record.
- (3) We will not obtain or use industrial information or data of other companies or firms in an unauthorized way.

(4) We will not leave product labelling or service information inexact or unclear in a manner to cause customers misunderstanding.

#### 1-4 Management of confidential information

(1) We observe the protection of confidential information and its appropriate use; then, at the event of disclosure to the third parties, we will disclose only after concluding confidentiality agreement.

(2) We will observe the protection and appropriate use of confidential information received from our business partners and co-researchers or co-developers; We will not disclose to the third parties without the prior consent of the disclosing party.

(3) Before assembling personal information, we will at first notify the purpose of use, and then collect in an appropriate way. The purpose of using personal information is to be limited and specified.

(4) We will conserve personal information data in safety and control its use, then monitor in a suitable way the employees and subcontractors using/handling these data.

(5) We always respect the individual privacy, so need to pay the most attention in handling their confidential information, learned from one's business relations or in the course of business, and at last, not to inform or leak to anyone without authority.

(6) We will not commit so-called "insider trading", act of making max profit in stock and security exchanges transaction thanks to privileged acknowledgement of internal information, within our group and received from business partners.

#### 1-5 Respect for intellectual property

(1) We will assess sufficiently third parties' patents, industrial designs, trademarks and other commercial rights, prior to development, production, commercialization and delivery of, or providing our products and services.

(2) We will not use intellectual property of a third party without authorization of patent holder, or unless we have a justifiable reason.

(3) We will not unlawfully duplicate any software and other copyrighted works, i.e., Literature and images, Journalistic articles, Paintings, Music.

#### 1-6 Separation from organized crime

(1) We will not provide any form of benefit in excess of the normal shareholder's right to any person or company associated with organized crime.

(2) We will cut off business or any other relationships with individuals and organizations having an indication of support for organised crime.

#### 1-7 Transparency of information disclosure

We will disclose, within a specific time limit and with appropriate method, any information required by laws and regulations of each country and region in which we operate, as well as specific information to maintain good communication with other stakeholders and local communities.

#### 1-8 Legal compliance for political funds control

We will not contribute for political funds, requesting some business advantage in return, such as acquisition or maintenance of trading, or access to nondisclosure information. Also, we will comply with the conditions stipulated by the laws and regulations of each country and region in which we operate before making political contributions.

#### 1-9 Prohibition to offer entertainment or gifts to public employee

We will not offer money, entertainment, gifts, or other economic benefits, nor provide advantages to public employees or equivalent persons perceived as a conflict of interest.

#### 1-10 Sound relationship with business partners

We will endeavor to maintain sound business relationships with our business partners; therefore we will not receive money, gift or entertainment offered from business partners exceeding commonly accepted limits.

## 2. Respect for human rights

#### 2-1 Prohibition of discrimination and respect for diversity

We will respect and honor diversity and will not discriminate anyone for any reason, including race, gender, sexual identity, nationality, national origin, disability, and religious or political opinions.

#### 2-2 Respect for individual personality

We will not condone the removal of human rights of any individual person, including sexual harassment and power harassment, nor the reduction of personal dignity of others.

#### 2-3 Respect for labor rights

We will respect labor rights including freedom of association and collective bargaining rights, in accordance with the laws of each country and region in which we operate.

#### 2-4 Prohibition of forced labor and child labor

We will neither force labor, nor employ children under the legal working age . Furthermore, we will not tolerate forced labor or child labor in any way.

#### 2-5 Avoidance of complicity in human rights abuse

Directly or indirectly, we will not be complicit in human rights abuse.

## 3. Conservation and improvement of adequate working environment

#### 3-1 Conservation and improvement of safety and health in working environments

We will maintain and improve working environments from the perspective of health and safety in accordance with laws and regulations of each country or region in which we operate."

#### 3-2 Ensuring appropriate working hours, securing minimum wages and prohibiting unreasonable wage reduction

(1) We will provide management in order to maintain appropriate working hours and will make every effort to take measures to prevent mental and physical health disorders caused by overwork.

(2) We will respect minimum wages in accordance with laws and regulations of each country or region in which we operate and will not conduct unreasonable wage reduction.

### 3-3 Mid to long-term human resources development and appropriate ability assessment

We will make every effort to proactively support career development in accordance with each employee's abilities and aptitudes. Performance of each employee will be assessed adequately.

### 3-4 Respect for individual work-life balance

We will make every effort to respect diverse working styles, so as to ensure work-life balance and to maintain physical and mental health of employees.

### 3-5 Offer of equal employment and working opportunities

We will offer equal opportunities in recruitment and promotion, as well as forbid any arbitrary or discriminatory treatments.

## 4. Fulfillment of responsibilities to provide safe and secure products and services.

### 4-1 Focus on safety and quality

We will address to prioritize safety and quality throughout our business. For this purpose, we will strive to provide safe products and services to maintain and improve satisfied quality for customers, through all our business activities which are research & development, design, procurement, production, sales and after-sales service.

### 4-2 Making Safety Information accessible

We clarify Safety Information on our products and services. Safety Information includes Instruction manuals supplied with products, Labelling of products, Web portal communication, etc. We will make Safety Information accessible for customers as well as for any other stakeholders involved in commercialization of our products and services.

### 4-3 Solutions in case of Product accidents

We address to prevent spin-off effects on the extent of damages of accidents as well as swiftly react in case a serious accident occurs on our product or service. And also, we investigate and collate the relative facts, research of causalities, make a necessary report on these inside and outside our company group, and then we disclose information so as to take preventive steps.

## 5. Global environmental conservation

### 5-1 Promoting environmental protection

(1) We will evaluate environmental impact resulting from our business activities, products and services; strive for environmental protection (including prevention of pollution) through energy saving, greenhouse gas reduction, efficient use of raw materials and water as well as waste reduction and recycling; and aim to increase our environmental performance through continuous improvement of these aspects.



(2) We will address to reduce the environmental burden resulting from the activities conducted at each stage of the life cycle of products and services, from acquisition of raw materials, development and design/conception, production, transportation, use, until end-of-life treatment and final disposal.

(3) We will satisfy environmental needs corresponding to comply with environmental laws and regulations. In addition, if necessary, we address to develop our environmental risk management with operational control by voluntary management standards and for preventing accidents likely to lead to environmental pollution.

#### 5-2 Providing environmental considerations products

We will contribute to the environmentally conscious society through the provision of products and services corresponding to the environmental requirements.

## 6. Building better relationships with local communities

#### 6-1 Contribution to sustainable development of communities

We recognize that we are member of the community and we aim to work together in cooperation with the local community which is our foundation. We will respect local culture and customs.

#### 6-2 Adoption of local human resources

We will actively adopt local human resources in the business activities of our overseas affiliates and contribute to the development of local communities through our business activities.

## 7. Ensuring social responsibilities within our supply chain

#### 7-1 CSR procurement promotion

We will share CSR procurement guideline among our suppliers, then address to promote CSR procurement upon interactive cooperation, aiming to ensure our social responsibilities across overall supply chain.

Date : May 1, 2017  
GS Yuasa Corporation  
President Osamu Murao

➤ [See details of GS Yuasa's philosophy and Management vision](#)

# CSR Promotion Framework

**Our CSR management, in which we seek to contribute to a sustainable society and ensure long-term commerce, forms an integral part of our aim to realize our corporate philosophy.**

## GS Yuasa Group's CSR

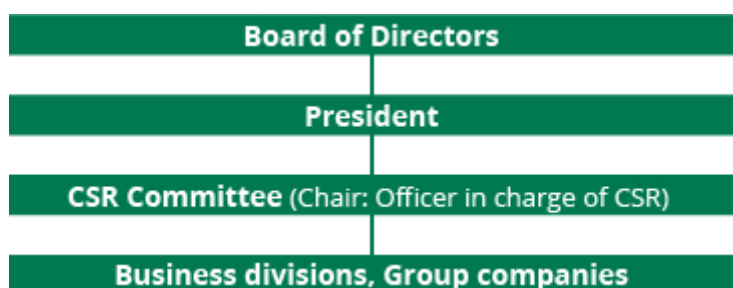
"Innovation and Growth," our corporate philosophy, is the basis of the GS Yuasa Group's CSR. By reforming our business processes and by developing new technologies that go beyond a traditional approach, we aim to generate innovation, and as a result, drive growth by expanding earnings and contributing to people, society and the global environment. This is the basis of our CSR. Further, we aim to be a company that earns the long-term trust of society and becomes one that society wants to stay operating into the future and that responds quickly, via our main business, to worldwide social issues as well as the needs and expectations of stakeholders.

## Initiatives for the Fiscal 2017

Over the years, we have acted based on an awareness of our social responsibility in line with corporate rules such as our Corporate Ethical Behavior Guidelines. Given the expectations of the international community for companies, however, the GS Yuasa Group in Japan has started to undertake global CSR initiatives. We created a CSR Promotion Framework led by the CSR Committee, which was established through participation of members from respective divisions in November 2016. Then, in May 2017 we formulated a CSR Policy and Code of Conduct as the foundations for our CSR activities and disseminated these internally. In response to our CSR issues, we identified key CSR challenges in relation to the Mid-Term Management Plan.

During this fiscal year, we will formulate an action plan and KPIs (key performance indicators) for these important challenges and will make improvements by running a PDCA (plan-do-check-act) cycle. In addition, we intend to write CSR procurement guidelines for the Group's supply chain and promote sustainable purchasing.

### ■ CSR Promotion Framework



## Medium- to Long-Term Initiatives

The GS Yuasa Group is planning medium- to long-term CSR initiatives as follows and has set targets for fiscal 2019 that incorporate these CSR challenges into the business strategy.

Phase	Period	Target
First stage	FY 2016-2017	Create processes to deal with the CSR challenges in relation to our business strategy (Fourth Mid-Term Management Plan)
Second stage	FY 2018	Analyze and evaluate our performance using these processes and then make improvements
Third stage	FY 2019	Establish business processes that incorporate CSR challenges into our business strategy (Fifth Mid-Term Management Plan)

# Materiality

## Materiality (Key CSR Challenges)

To reflect CSR challenges in our business strategy, the GS Yuasa Group analyzes and assesses the impact on business and the impact of our business on society and then clarifies the Group's materiality for items that need to be addressed. Next, we will explain the materiality specification process that we implemented fiscal year under review and the results.

## Materiality Specification Process

### Step 1: Identify risk and opportunity in CSR

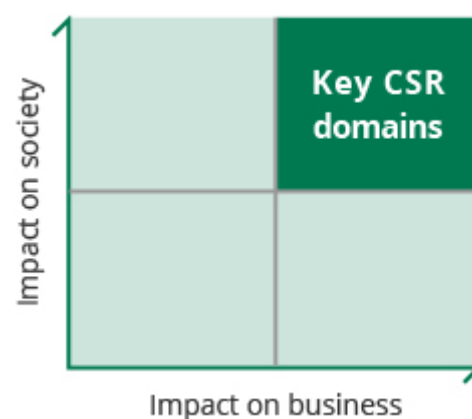
For key challenges in the Mid-Term Management Plan, GS Yuasa identifies risk in CSR (that hinders the resolution of these challenges) and opportunity in CSR (that promotes the resolution of the challenges). When identifying these risks and opportunities, our actions are based on international guidelines related to CSR.

### Step 2: Specify significant risk and opportunity in CSR

GS Yuasa evaluates and assigns a score to the scale of the CSR risk and opportunity identified in Step 1 in consideration of the impact on business (possibility of occurrence x scale of impact on business), which enables us to specify risks and opportunities as key business challenges.

Next, we evaluate the impact of GS Yuasa's business activities on society relative to these core business risks and opportunities based on the number of related CSR themes and social importance. We then specify risks and opportunities that will be key CSR domains.

#### Matrix of key CSR domains



### Step 3: Specify materiality

GS Yuasa orders the core CSR risks and opportunities evaluated in Step 2 and then specifies materiality in consideration of the response method to the risks and opportunities.



## Results of Specifications

CSR Policy	Materiality
1. Developing fair, transparent, and sound business, and anti- corruption	Thoroughly fulfilling our CSR and ensuring compliance
	Management of confidential information
	Respect for intellectual property
2. Respect for human rights	Respect for individuality
3. Conservation and preservation of adequate working environment	Improvement of safety and health in working environments
	Human resources development
4. Fulfillment of our responsibilities to provide safe and secure products and services	Provision of high-quality products
5. Global environmental conservation	Promoting environmental protection
	Developing and popularizing environmentally considered products
7. Ensuring social responsibility within our supply chain	CSR procurement promotion

Going forward, we will formulate an action plan and key performance indicators (KPIs) relative to the materiality we have specified and look to make improvements via a PDCA cycle. In addition, we will clarify the correlation between materiality and sustainable development goals (SDGs).

# Developing Fair, Transparent, and Sound Business, and Anti-Corruption

**We are focused on strengthening our corporate governance to enhance our sustainable growth and improve our medium- and long-term corporate value.**

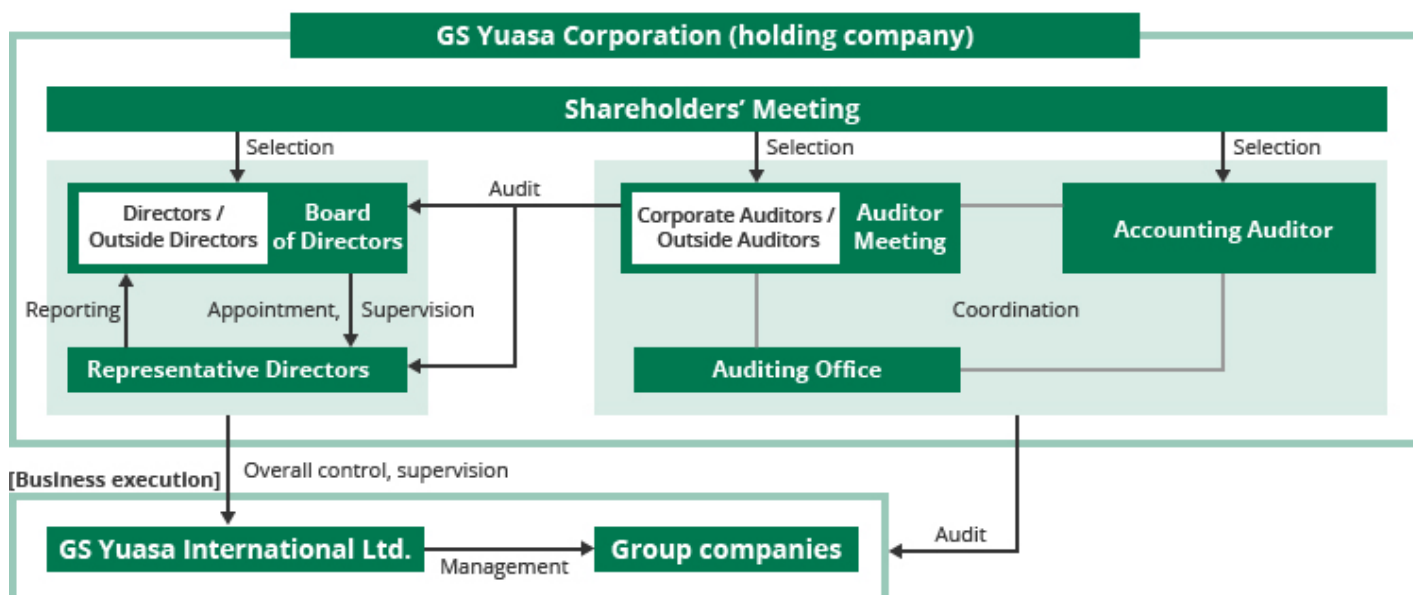
## Approach to Corporate Governance and Our Governance System

To drive sustainable growth and enhance corporate value over the medium and long terms, the GS Yuasa Group is committed to establishing an organization and systems that enable fast, efficient responses to a changing business environment. At the same time, our basic policy on corporate governance is to make every effort to thoroughly implement and strengthen compliance and improve the soundness and transparency of management.

A new governance structure began in fiscal 2017 based on this philosophy. GS Yuasa Corporation, the holding company, is responsible for formulating management strategies for all of the Group's businesses, as well as management for the entire Group and oversight of the Group's business execution. GS Yuasa International Ltd., the Group's core operating company, is the key decision-making body for business execution, consolidating and strengthening business execution and making swift business-related decisions.

The Board of Directors makes quick, effective decisions by prioritizing strategic decision-making and supervisory functions for management policy. In addition, increasing the number of independent outside directors helps reinforce monitoring.

### ■ Governance Structure



GS Yuasa is continuing to strengthen and enrich corporate governance based on this new structure.

\* For details, see Notice Regarding Governance Structure Reforms and Representative Director Replacement (released on May 9, 2017).  
([https://www.gs-yuasa.com/en/ir/pdf/170509\\_1\\_e.pdf](https://www.gs-yuasa.com/en/ir/pdf/170509_1_e.pdf)).

## Evaluating the Effectiveness of the Board of Directors

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The effectiveness of the Board of Directors was evaluated between January and February 2016. All directors and corporate auditors filled out a questionnaire and were interviewed on the structure, management, agenda and duties of the Board. After analyzing and evaluating the results, the Board of Directors was found to be running effectively. However, certain opinions held that some areas required reconsideration, notably the further deepening of discussions regarding medium/long-term strategic management as well as the decision-making process and the structure of the business group. In light of these findings, the Group resolved to reform the governance structure. Going forward, we will continue to assess the effectiveness of the Board of Directors and make further improvements.

## Reasons for Appointing Internal Directors

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GS Yuasa Corporation, to provide control over the Group as the holding company, applies a balanced approach to appointing directors with knowledge and experience that covers the business and functions of the entire Group and that have the necessary aptitude and competence to ensure fast decision-making.

## Policy on the Independence of Outside Directors

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Candidates selected as outside directors must meet the requirements for independence set out in the Companies Act and possess the experience and insight to objectively and fairly judge the legality and appropriateness of the execution of the company's duties from the shareholders' perspective without being limited by being in charge of business implementation. Also, we believe in the importance of employing people who are outwardly independent and use the Tokyo Stock Exchange's independence standards as their reference.

## We are committed to promoting sound corporate management and daily company-wide risk management.

### Internal Control System

To strengthen the management foundation, the GS Yuasa Group has improved the system and relevant rules to ensure the maintenance of ethical business practices based on the Companies Act. This system includes mechanisms to ensure effective auditing, information management, and risk management throughout the Group.

To comply with the internal control reporting system required under the Financial Instruments and Exchange Law, we are maintaining an internal control system and financial reporting mechanisms to meet all requirements.

Our international subsidiaries and other consolidated Group companies evaluate the status of the improvement and implementation of internal controls. Following external audits, reports on these internal controls are publicly disclosed.

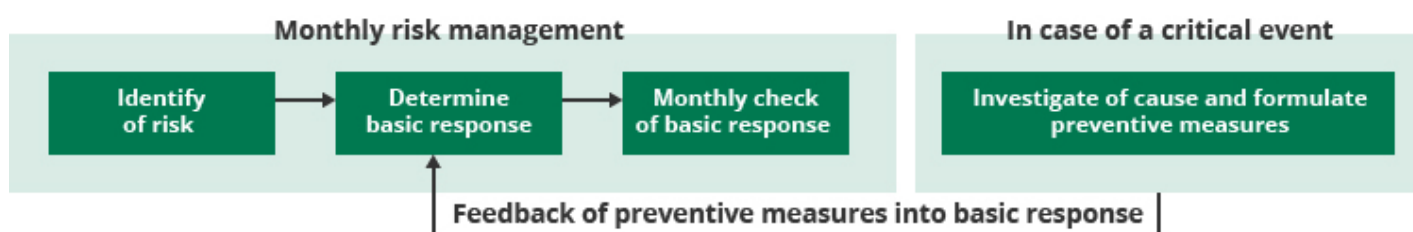
## Risk Management

### Risk Management Based on Risk Management Sheets

The GS Yuasa Group has adopted risk management rules intended to avoid or reduce exposure to business risk and to minimize potential corporate losses. Every department assesses risk each month using a risk management sheet. On this form, the department first fills in the measures it is taking as a basic response to mitigate the risks it has identified and to avoid any critical events as well as the policies to minimize loss if a critical event does occur. Every department confirms the status of implementation of these measures and related policies each month. The department also fills in the details of any critical events that occurred, as well as a summary of the response and the investigation into the cause and measures to prevent a reoccurrence. These preventive measures are fed back into the "basic response" and the status of implementation is checked each month to provide a framework that ensures that similar events do not happen again.

The risk management sheets produced by the departments are compiled at the divisional level with the director in charge of the division verifying and assessing the status of response through a risk management committee. The deliberations by the committees are summarized and then fed back to each department as part of a mechanism to improve the effectiveness of risk management.

#### ■ Risk Management Sheet



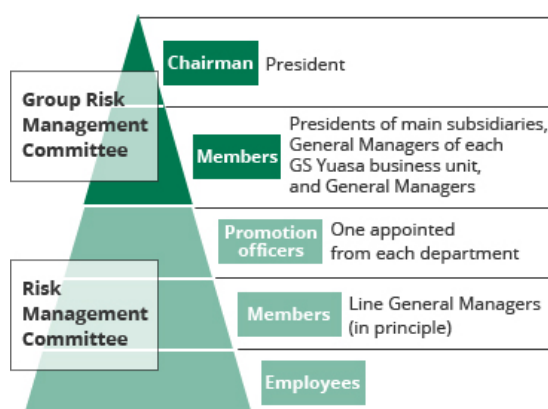
### System for Dealing with Crises

To prepare for the possibility that a risk materializes, we have established a system that includes an emergency contact network to swiftly implement crisis management. When a serious crisis occurs, members of the Group Risk Management Committee are appointed to organize a crisis management headquarters, under the president, to minimize corporate losses. The system we have set up enables us to implement an effective response swiftly and with appropriate care.

### Risk Management under the Group Risk Management Committee

The Group Risk Management Committee - headed by the president with the chairs of departmental Risk Management Committees - holds semiannual meetings to promote Group-wide risk management and to encourage the sharing of key information related to risk management. The Risk Management Committee confirms that the appropriate risk management measures have been implemented and the committee chairs report on progress in this area. We also actively exchange opinions and share information on the different styles of risk management.

#### ■ Risk Management Structure





## Solid, multifaceted measures ensure that every person takes initiative with a strong awareness of compliance.

### Compliance

#### Basic Philosophy on Promoting Compliance

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By training our personnel according to our philosophy of "Innovation and Growth" while manifesting our commitment to society and preserving the global environment, we are ensuring that all employees are guided in their behavior focusing on compliance with laws, company regulations and ethical standards.

Multifaceted activities with innovative methods are being used to promote compliance and ensure that the different themes cover all levels of employees. When promoting compliance, it is also essential to establish rules and a structure to follow, as well as a strong sense of commitment. In this spirit, we adopted Compliance Promotion Regulations in line with the Compliance Declaration made by the president. The GS Yuasa Corporate Ethical Standards cover the 10 items that all employees must support and the corporate ethical behavior guidelines that outline responses to specific situations. Other activities are aimed at enhancing awareness, or getting every employee to think about what he or she should do for compliance.

#### Compliance Manual

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We distribute a compliance manual to all employees that includes company regulations related to compliance. The 10-item Code of Conduct includes commentary in a Q&A format, innovative ways to promote understanding with content based on actual practices, an introduction to the GS Yuasa Group corporate ethics hotline, the Group's internal whistleblower system and an emergency contact system for use in a crisis. In addition to distributing the manual, in fiscal 2016 we began spreading awareness of the content via an in-house email newsletter throughout the year with the aim of boosting awareness of compliance among employees.

#### Workplace Meetings on Compliance

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Workplace meetings on compliance have been conducted for five consecutive years since 2012. The purpose of these meetings is to improve employee awareness of compliance. The meetings, including active exchanges of opinion, were held at 391 workplaces in fiscal 2016 with 96% of the sites commenting that the activities were effective. Many topics were covered, including prevention of inappropriate actions, management of work hours, harassment, occupational health and safety, waste management, personal information protection, product safety, handling of confidential information and subcontracting laws. The meetings use educational materials made by the division in charge on each topic and including content related to the circumstances of the Group. We intend to continue running these meetings and upgrading the content to ensure that it is both up to date and educational.

## GS Yuasa Group Corporate Ethics Hotline

We established GS Yuasa Group corporate ethics hotline regulations and set up a corporate ethics hotline. Accessible both internally and externally, the hotline enables employees, temporary workers, business partners and others to provide information anonymously if they become aware of behavior by a Group employee that violates the law or company regulations or is unethical or otherwise inappropriate or any matter that is at risk of becoming a violation. In fiscal 2016, five reports were made (eight in fiscal 2015), including one case of harassment. We conduct inquiries and take appropriate action, while remaining committed to protecting whistleblowers.

Number of reports to the GS Yuasa Group corporate ethics hotline	
2013	5
2014	3
2015	8
2016	5



Period: April to March of the following year

## Compliance Survey

A survey related to compliance is conducted every year for all employees in which the Company's president gathers questions on compliance in daily operations via email. In fiscal 2016, 2,936 people responded (response rate: 89%) with information on unethical or inappropriate behavior collected from 27 people. The details were carefully investigated to not disadvantage the person who divulged the information and appropriate steps were taken. In addition, we will plan and implement activities to raise awareness of compliance within the Group in light of the opinions provided on topics to be addressed in the future.

## Respect for Human Rights

**The GS Yuasa Group believes that the rights of all people must be respected in order to realize our philosophy of contributing to people's lives, society and the global environment.**

### Providing Fair Selection and Opportunity

The GS Yuasa Group promotes fair employee selection, evaluation and training based on ability and performance. We prohibit discrimination in recruitment, personnel assessment and other employee circumstances, and we respect diversity irrespective of race, gender, sexuality, nationality, place of birth, disability, religion or political opinion. At the same time, we conduct the necessary checks to make sure we don't hire people under the legal working age or those without qualifications.

### Creating a Pleasant Workplace through Labor and Management Working as One

The GS Yuasa Group in Japan has adopted a "union shop system" and as a general rule all regular employees, aside from management, are members of the labor union. We pursue business based on mutual understanding achieved through labor union recommendations and active discussion on domestic management policies, including work conditions and benefit programs. Through this relationship between labor and management, we are improving the objectivity and transparency of company management, while increasing the effectiveness of various initiatives.

#### ■ GS Yuasa Labor-Management Consultative Structure

Name of Labor-management consultative body	Meeting frequency	Content
Management council	4 times/year	Company's management policies, business conditions and status of business execution, etc.
Divisional committee	Monthly	Issues for the respective R&D and business divisions
Factory committee	Monthly	Issues in production divisions
Health and safety committee (statutory)	Monthly	Initiatives to prevent occupational accidents
Expert committee on work hours	Monthly	Checking the status of work hours and making improvements
Expert committee on future generations	Twice/year	Child-rearing and nursing care support

## TOPICS

### Interaction between Company and Labor Union (GS Yuasa Labor Union's 10th Anniversary Festival and Summer Festival)

A festival was held at the Kyoto International Exhibition Hall (Miyako Messe) on April 15, 2017 to celebrate the 10th anniversary of the labor union's founding. More than 800 people attended, including family members, providing colleagues an excellent opportunity to interact.

A summer festival is also held at the Tokyo Branch every August, one of the events run by a mutual aid society that promotes friendships among employees.



## TOPICS

### Initiatives at Tianjin GS Battery Co., Ltd.

Group companies in China, Southeast Asia and other areas overseas hold company trips and sports festivals that deepen interactions between labor and management.

Tianjin GS Battery Co., Ltd. has received a commendation from Tianjin City every year for being a model company for labor-management relations.



## Basic Rules on Forced Labor and Child Labor

The GS Yuasa Group is establishing the following basic rules on forced labor and child labor at overseas Group companies, in addition to Japan. We take immediate corrective action upon discovering forced labor or child labor by a business partner.

### Prohibition of Forced Labor and Child Labor

We will neither force labor, nor employ children under the legal working age. Furthermore, we will not tolerate forced labor or child labor in any way.

### Avoidance of complicity in human rights abuse

Directly or indirectly, we will not be complicit in human rights abuse.



## Response to the UK's Modern Slavery Act

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The GS Yuasa Group complies with the laws and regulations of every country and region, taking all necessary steps to meet the provisions of the UK's Modern Slavery Act enacted in October 2015. GS Yuasa Battery Europe Limited (GYEUR), our subsidiary in the United Kingdom, has released a statement on its website regarding modern slavery. This company will continue to research the risks and will, based on the results, update this statement regularly.

➤ [Click here for GYEUR's statement on modern slavery.](#)

## Conservation and Improvement of Adequate Working Environment

**The GS Yuasa Group respects diversity and works to maintain and improve a pleasant work environment. We are also committed to developing human resources with an emphasis on workplace conditions.**

### Occupational Health and Safety

#### Reducing the Risk of Accidents

GS Yuasa makes health and safety-related assessments based on an organizational framework led by health and safety committees in every business division and company. These assessments are guided by a health and safety management policy intended to create a corporate culture that ensures worker safety and health.

To reduce the risk of occupational accidents, we identify the root causes of danger through risk assessments and by promoting the safe operation of equipment and machinery. To develop safety-conscious employees, in addition we appoint "safety trainers" who are vital for conducting safety-related programs in the workplaces, including contract employees. We are working to entrench and improve safety through education on safety procedures (danger prediction, risk assessments, etc.).

For work environment management and health management, we try to understand the workplace environment through assessments and by monitoring the impact of harmful substances on workers through special health diagnoses. The programs to make improvements are put in a PDCA cycle at major workplaces.

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
GY missed work frequency rate <sup>* 1</sup>	0.21	0.00	0.37	0.55	0.85
Average frequency rate in manufacturing industry	1.00	1.05	1.00	1.06	1.15
GY rate of intensity <sup>* 2</sup>	0.00	0.00	0.00	0.01	0.01
Average rate of intensity in manufacturing industry	0.10	0.10	0.09	0.06	0.07

<sup>\* 1</sup> Missed work frequency rate is the number of people missing work per 1,000,000 work hours, calculated as :  
Missed work frequency rate = (Number of people missing work / Total number of work hours) x 1,000,000

<sup>\* 2</sup> Rate of intensity is the number of lost days due to accidents per 1,000 work hours, calculated as :  
Rate of intensity = (Days missed / Total number of work hours) x (300/365) x 1,000

## Initiatives for Diversity

### Promoting Women's Roles

GS Yuasa is taking steps to promote women's roles with the aim of developing women who can maximize their potential in whatever they do. We believe that providing the environment and opportunity for women's roles will enable every woman to shine, which in turn will help us realize the "innovation and growth" stated in our philosophy. We aim to create a company where every female employee shines in her own unique way by enhancing the desire for personal growth and increasing the style and number of roles through the synergistic effects of what we call the "three Ls."

#### Declaration

**GS Yuasa will provide a diversity of roles for women that are bright, fun and affirming.**

#### Link

Strengthen **links** inside the company

#### Life

Warmly embrace the different **life** events

#### Lead

**Lead** women toward opportunities for autonomy and growth

#### Action Plan Promoting Women's Roles (April 1, 2016 to March 31, 2019)

##### Objective 1

Steadily increase the percentage of women hired **20% in FY 2016 30% in FY 2018**

##### Objective 2

Ensure that at least one woman a year takes part in next-generation select group training in order to boost the business skills of female employees

##### Objective 3

Support the strengthening of management abilities for supervisors in order to create an environment that encourages female employees to work to their potential

### Employment of People with Disabilities

To promote the employment of people with disabilities, GS Yuasa offers a wide range of opportunities to people with disabilities, including in a company certified as a special subsidiary in December 2007.

As of June 1, 2017, 2.51% of GS Yuasa's employees were people with disabilities, which exceeds the legally mandated employment rate of 2.0% as well as the previous fiscal year's mark of 2.47%.

We will continue to manage employment so that people with disabilities can put their skills and qualities to good use in an effort to maintain and improve a pleasant work environment.

## Medium- to Long-Term Human Resource Development

### Fostering Autonomous Acting Talent

At GS Yuasa, front-line workplaces are the engine that generates corporate value, and the lead players in those workplaces are our employees. We believe the best training is on-the-job training, so with a strong focus on management by objective we implement training to nurture autonomous acting talent. In off-the-job settings, employees take part in communications training and voluntary training for career development and the improvement of management skills.

#### ■ Basics of Human Resource Development



#### ■ Training System



## Promoting Work-Life Balance

### Optimizing Work Hours

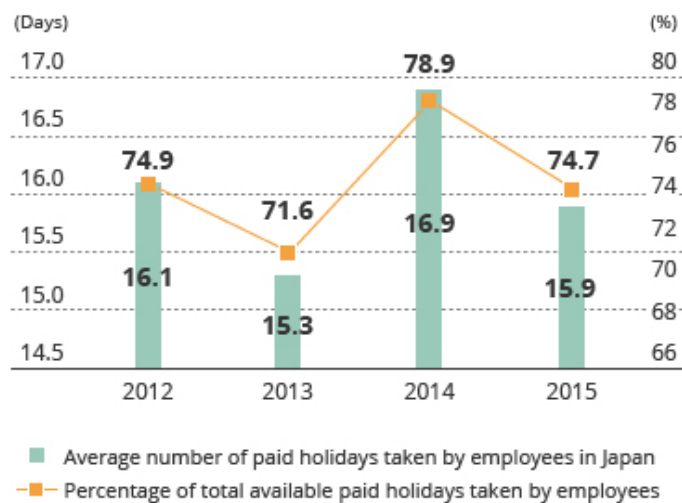
Aiming to be a workplace that protects the health of employees and enables them to work with peace of mind, GS Yuasa is striving to ensure the most appropriate work hours, based on cooperation between labor and management. An expert committee on work hours checks the condition of employees working long hours in addition to introducing and using an attendance management system and access control system to accurately understand and manage work hours.

We are taking steps to reduce labor hours for employees working long hours by providing consultation with an industrial physician in accordance with the law and through an advisory system (see "Work Style Reform" below) for supervisors. In addition, we provide compliance-related education with the themes of promoting understanding of work hour rules and appropriately managing work hours.

## Work Style Reform

At GS Yuasa, labor and management are working as one to reduce long work hours and encourage employees to take annual paid leave with the aims of improving work efficiency and enhancing creativity at work by making sure employees stay physically and mentally healthy. Currently, we are strengthening initiatives to provide variation in work style by implementing the following: setting one "no overtime" day a week; making it compulsory to take at least 10 days of leave a year; prohibiting two consecutive days of work on prescribed holidays; prohibiting overtime late at night (10 pm to 5 am); introducing a system to monitor employees working in excess of the standard hours; and providing advice to supervisors on how to deal with overtime issues.

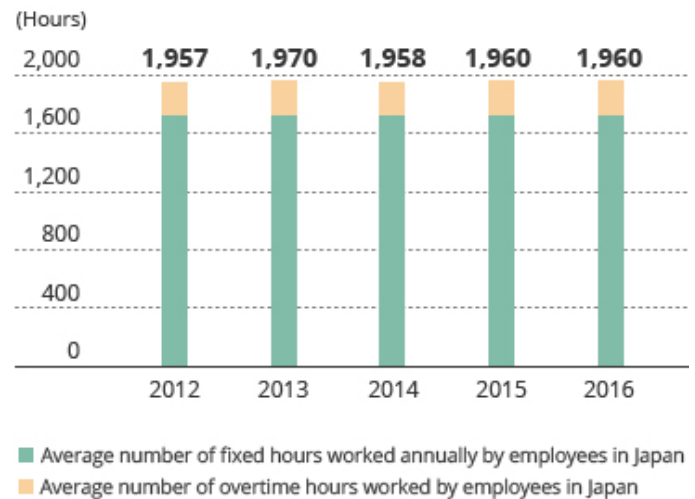
### ■ Percentage of Annual Paid Leave Taken (FY 2012 to 2015)



\* Notes: Employees do not include personnel on leave or those transferred to workplaces outside Japan.

The years shown in this chart refer to September in the specified year to August of the following year, based on a calculation method set by Japan's Ministry of Health, Labour and Welfare.

### ■ Total Annual Work Hours (FY 2012 to 2016)



\* Notes: Employees do not include personnel on leave or those transferred to workplaces outside Japan.

The average number of fixed hours was calculated as fixed working hours minus hours absent from work due to days off, arriving late to work or leaving work early, etc.

\* Number of annual prescribed workdays = prescribed work hours minus hours taken for leave and hours absent due to tardiness, leaving work early, etc.

\* Period: January to December



## TOPICS

### GS Yuasa Designated as a "Company with Excellent Health Management"

GS Yuasa and four Group companies were each designated as a Company with Excellent Health Management 2017 - White 500 in a program run by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi. The companies were recognized for (1) improving the health awareness of employees, (2) enhancing and expanding the health management system, and (3) enhancing, expanding and diversifying initiatives to promote health.

Aiming to create a corporate culture that protects people's safety and health, the GS Yuasa Group works with companies and health insurance associations to support the health of employees and their families.



## Supporting Work Alongside Childcare/Nursing Care

GS Yuasa formulated an action plan based on the Act on Advancement of Measures to Support Raising Next-Generation Children as a joint labor-management program. We implement activities to achieve the objectives of the plan, with the aim of creating an environment that makes it easy for employees to participate in childcare. We have also set up an in-house electronic message board called Supporting a Work and Childcare Balance where we disseminate information on childcare-related systems to employees. To ensure that the childcare and nursing care support systems are being used, we are making every effort to increase awareness of the systems through training based on levels within the Company that include managers.

### ■ Percentage of Employees Taking Childcare Leave

FY	Females				Males			
	Usage rate (%)	Birth	Users	Return-to-work rate (%)	Usage rate (%)	Birth	Users	Return-to-work rate (%)
2014	100.0	5	5	100.0	0.0	99	0	-
2015	100.0	9	9	100.0	1.1	87	1	100.0
2016	100.0	7	7	88.9	3.0	66	2	100.0

## ■ Number of Employees Taking Long-term Nursing Care Leave and Return-to-Work Rate

### Number of Employees Taking Short-term Nursing Care Leave and Total Number of Days on Leave

FY	Long-term nursing care leave		Short-term nursing care leave	
	Number of users	Return-to-work rate (%)	Number of users	Days of leave
2014	2	100.0	12	42.5
2015	1	100.0	7	26.5
2016	1	100.0	10	30

## TOPICS

### GS Yuasa Awarded Kurumin Mark

GS Yuasa attained the Kurumin Mark certification in 2017. The Kurumin Mark is a symbol granted by Japan's Ministry of Health, Labour and Welfare to organizations that meet certain standards related to formulating action plans and attaining their goals based on the Act on Advancement of Measures to Support Raising Next-Generation Children.

GS Yuasa aims to be a company that continually supports childrearing by establishing an environment where employees can strike a good balance between work and childcare, and then further enrich these results.



# Fulfillment of Our Responsibilities to Provide Safe and Secure Products and Services

**As a trusted manufacturer, GS Yuasa is constantly working to improve customer satisfaction and ensure safety.**

## Quality Policy

GS YUASA is committed to a diligent study of 'Monozukuri,' customer first thinking and the improvement of products and service for the realization of our Corporate Philosophy.

\* 'Monozukuri': Meaning 'manufacturing' is not just pointing to 'craftsmanship' in the narrow sense.

**It is "the overall process of the corporation, the industry and the on-site activity, implementing the designers' determination into the products and the services for customer satisfaction, corporate profit and job security."**

## Ensuring Quality and Safety through Company-wide Quality Management

To remain a manufacturer trusted by customers at all times, the GS Yuasa Group approaches manufacturing activities from the customer's perspective and works relentlessly to improve the quality of products and services.

To maintain this trust, we formulated, under the leadership of top management, the GS Yuasa Quality Management System based on the ISO 9001 standard and are promoting a quality management system that crosses business divisions. The quality of our products and services is discussed company-wide every month by the Quality Management Committee, which is chaired by a director (the executive officer in charge of quality), to enable us to respond swiftly to any change. President Osamu Murao was the chairman of this committee in fiscal 2016.

As part of our approach to manufacturing, we provide quality-related education courses to all employees and promote *kaizen* (improvement) team activities company-wide as a way to bolster the awareness of quality among employees and to boost their understanding and skills related to quality control. Our aim here is to always enhance the quality of our products and services.

### Quality Management Organization



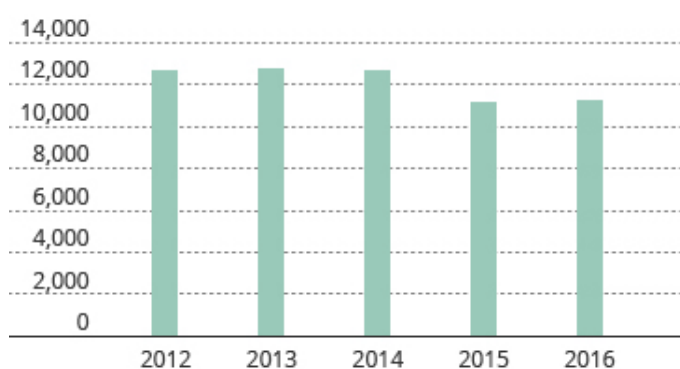
## Promoting Greater Customer Satisfaction

The GS Yuasa Group values the opinions, recommendations and complaints of customers regarding our products and services as important customer feedback. We aim to improve customer satisfaction by improving our products and services after considering inquiries received by email and the opinions of customers heard at our Customer Consultation Office (for customers in Japan).

The number of complaints received through the Customer Service Center has been declining over the past five years.

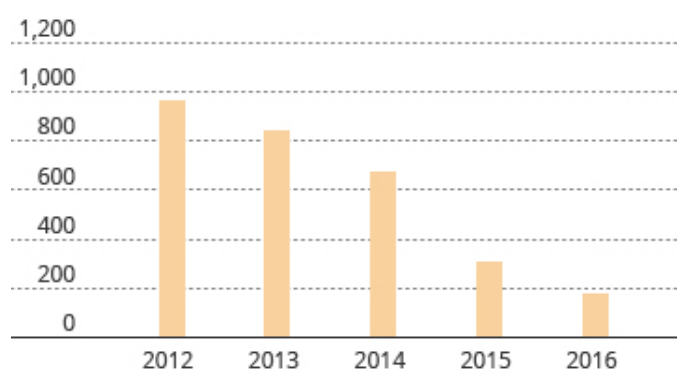
Going forward, we will continue working to improve customer satisfaction by paying close attention to the opinions of our customers.

■ Number of inquiries to the customer consultation office



\* Period: April to March of the following year

■ Number of customer complaints



\* Period: April to March of the following year

## Initiatives for Product Safety and Swift Dissemination of Information

Ensuring the safety of GS Yuasa Group's products has been positioned as a critical challenge because our products store, control and convert electrical energy.

The Product Safety Management Committee is responsible for guaranteeing the safety of our products across the board. We promote developments in business divisions after assessing conformity with product safety standards as well as the safety of products as they are used, age and deteriorate. For this reason, we are strengthening our product testing procedures using failure mode and effect analysis (FMEA) and fault tree analysis (FTA). In addition, we constantly gather information on issues with product safety and provide this to top management without delay as part of a system that we have established and are operating to ensure a swift response.

Moving ahead, we aim to become a company supported by trust and quality by developing human resources capable of providing guidance on quality engineering and product safety, while internally and proactively disclosing information on product safety.

## ■ GS Yuasa Product Safety Action Flow

Flow	Details of activities	Process, mechanism
<b>Feedback on Information</b> 	◇Formulate policy on product safety activities ◇Debate issues related to product safety ◇Respond by setting up a crisis management headquarters	• Risk Management Rules • GS Yuasa Quality Management System • Regulations on management of product safety
	◇Formulate policies on product safety in business divisions ◇Ensure product safety in product realization process	• Divisional policy book • Quality-related manual for business divisions
	◇Gather information on product safety ◇Gather information on complaints, defects and accidents for our products and services	• Claims information system and Customer Service Center • GS Yuasa website • Daily quality report
	◇Examine information, decide on and implement appropriate steps and make continual improvements (to prevent a recurrence) ◇Manage and respond to crises concerning product-related accidents and quality-related claims ◇Take steps to prevent harm and any additional accidents	• Quality manual for business divisions • Manual on crisis management concerning product-related accidents and quality-related claims • Manual for implementing product recalls

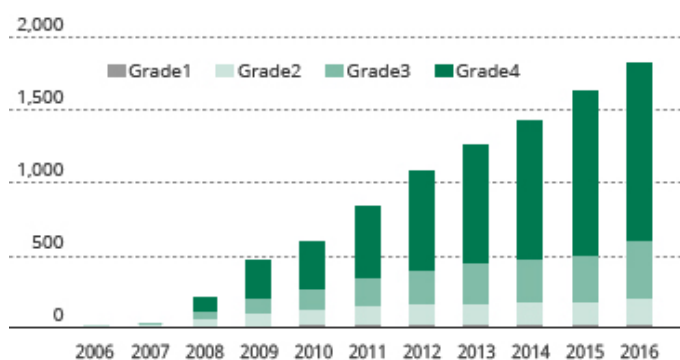
## Improving Employees' Awareness of Quality

The GS Yuasa Group educates employees about quality to instill a "culture of quality" throughout the organization based on our Basic Quality Policy.

The education is systemized. The level of quality control and type and rank of their job are considered so that employees can be taught based on the type of their work and their experience. Basic quality-related education has been compulsory for all new recruits since fiscal 2008 and their knowledge of quality control (QC) is tested with the QC examination. 191 passed from grade one to four in fiscal 2016 with a cumulative total of 1,805 people passing the exam company-wide up to fiscal 2016.

GS Yuasa will continue to position the raising of quality-related awareness and the attainment of knowledge as important issues going forward.

### ■ Cumulative Total of Successful QC Examinees



\* Period: April to March of the following year

### ■ Quality-related Education

Level	Course on quality								Rank		
Application				Quality engineering					Management-level and mid-level employees		
				Estimation, examination							
Basic	QMS	7 new QC tools	Fundamentals of management diagrams	Sampling inspection	Variation	FMEA	FTA	Reliability			
										Fundamentals of statistics	QC grade 3
Entry	Why-why analysis									From year 2	
	QC story and 7 QC tools (Q7)										New recruits
	Fundamentals of quality										



**GS Yuasa Customer Consultation Office** (accepts inquiries and provides consultation on the GS Yuasa Group's products)

Toll free (in Japan): **0120-43-1211** Hours: Weekdays 9:00 - 17:30

\* Excludes Saturdays, Sundays, public holidays and Company holidays

Valid only within Japan. Attended in the Japanese language only.

## Examples of Activities

### Presentation about the first half of FY2017 24th Team Activities to Drive *Kaizen*

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Since 2004, GS Yuasa has presented the activities implemented company-wide that support *kaizen*, or continual improvement. The goals are to enhance workplace capabilities, to learn from *kaizen* programs and their results while sharing these across the board, to promote all employees participation in ways to change for the better and dynamic communication, as well as to build a corporate culture with a mindset focused on improvement. The Human Resources and Quality Management Divisions lead the organization of these activities.

A presentation about the first half of FY2017 24th Team Activities to Drive *Kaizen* was held on July 18, 2017 at the Kyoto Head Office. The presentation was video broadcast to five locations in Japan and one overseas. Top management and around 200 employees took part.

At the presentation, eight teams nominated by each business division presented examples of their activities in areas such as "solutions to problems in line with the quality control story," "improving operational and management methods," "enhancing operational efficiency" and "initiatives to boost performance." After the presentations, Director Yoshiaki Yamaguchi gave feedback to the teams in a general sense. At the end of the event, President Osamu Murao expressed his appreciation to the teams and provided an assessment of the presentations before handing out team incentive awards for improvement activities.

The 25th presentation - to be held in the second half of fiscal 2017 - is scheduled for December 4, 2017.

#### <Overall Assessment by President Murao>

I was pleased that there were so many interesting topics in the presentations today. Although we've had a number of presentations from quality-related divisions in the past, this event also involved sales and development divisions as well as overseas sites, demonstrating how the scale of the activities has grown. I was particularly impressed with the presentation on the novel approach to the PDCA (plan, do, check, act) cycle taken by the Sales Division. Quality control tools are skills that everyone has to attain. Going forward, I hope all of you will make the most of this opportunity by implementing quality control testing and making any necessary improvements.

## ■ Presenting teams and topics

Presenting teams	Presenting topics
1. Industrial Battery Manufacturing Department, Industrial Battery Division, GS Yuasa Technology Ltd.	Aiming to be the world's cleanest, safest battery plant
2. Production Section 3, Global Production Division, GS Yuasa Energy Co., Ltd.	Boosting productivity on the battery charge E line by stabilizing the labeling machine
3. Development Department, Power Supply System Production Division	Reducing labor hours and shortening preparation time by improving preparation systems
4. Original Equipment Sales Group, Tokyo Sales Department I, Power Supply System Sales Division	Enhancing and strengthening reforms by using customer asset management systems more efficiently
5. Renewable Energy Sales Group, Kansai Sales Department II, Power Supply System Sales Division	Improving sales quality through the swift implementation of a PDCA cycle
6. Yuasa Battery (Thailand) Pub. Co., Ltd.	Improving sales and profits in 2016
7. Special Battery Quality Control Group, Special Battery & Lithium-ion Battery Division Manufacturing Department, GS Yuasa Technology Ltd.	Reducing the number of defects from work errors
8. Quality Assurance Department, Production Control Group, Quality Control Group, Production Division, Blue Energy Co., Ltd.	Reducing the number of customer claims



At the presentation event



President Murao giving encouragement awards to presenters



# Global Environmental Conservation

## Fundamental Environmental Policy and Environmental Mid-term Plans

**The GS Yuasa Group works to protect the environment and make constant improvements that consider the impact on the global environment of business operations, products and services.**

### Fundamental Environmental Policy

The Fundamental Environmental Policy of the GS Yuasa Group was established to serve as a guideline for environmental management. In our domestic offices, we developed an organizational environmental management system and have been promoting initiatives to implement our environmental policy, which is based on our overarching fundamental environmental policy. We have developed mid-term plans for important issues related to our environmental policy in order to contribute to the emergence of a sustainable society. We continue to manage the status of implementation of these initiatives.

### GS Yuasa Group Environmental Policy

#### Fundamental Philosophy

At the GS Yuasa Group, we set conservation of the global environment as one of our most important tasks, and we contribute to the creation of a sustainable society through the development, manufacture, and sale of batteries, which are a form of clean energy, power supply systems, and lighting equipment.

#### ● Action Agenda

- 1** We carefully evaluate the impact on the environment of our business activities, products and services, and we work to save energy, reduce resources and waste, and recycle resources as a way to protect the environment, which includes preventing pollution. By making continual improvements in these areas, we aim to improve our environmental performance.
- 2** We promote the development and design of products that protect the environment by considering how to reduce the environmental burden at every stage of the product life cycle, including acquiring raw materials, development and design, production, transportation, use and disposal.

- 3 We work to decrease environmental burdens with our business partners throughout our entire supply chain, including materials procurement and physical distribution.
- 4 We have created environmental management systems according to ISO 14001 standards and have enacted environmental policies at each of our offices based on these fundamental policies. We also advance our environmental management activities by setting related objectives.
- 5 We abide by all laws, ordinances, agreements, and regulations related to the environment, as well as other requirements agreed on by the Group. We also make voluntary management standards according to these as necessary to promote environmental conservation.
- 6 We appropriately execute revisions based on environmental audits and management reviews to maintain and improve our environmental management systems continuously.
- 7 Through education, training, and other environmental awareness efforts, we promote the environmental awareness of all Group employees, and we contribute to society through our environmental preservation activities.
- 8 We seek to achieve good communications with our stakeholders and with society as a whole by appropriately providing information related to the environment, including our fundamental environmental policy.

## Environmental Mid-term Plans

We have developed mid-term plans for important issues related to our fundamental environmental policy in order to contribute to the emergence of a sustainable society. We continue to manage the status of implementation of these initiatives.

### Third Five-Year Environmental Plan (FY 2014 to FY 2018) and FY 2016 Results

Sites covered: GS Yuasa International Ltd. (Kyoto, Osadano, Gunma and Odawara Plants)

Key items Objectives		FY 2016 results	Self-Assessment / Challenges
1	<b>Energy conservation and reduction of greenhouse gases</b>  We will reduce CO <sub>2</sub> emission intensity from production in fiscal 2018 by at least 5%, relative to fiscal 2013.	CO <sub>2</sub> emission intensity from production was at the same level as fiscal 2013 (13.0 g CO <sub>2</sub> /Wh).	Energy consumption intensity has remained roughly unchanged since fiscal 2014, while peak cut measures are the primary factor behind a tendency toward lower energy costs.

<div>Key items</div> <div>Objectives</div>	FY 2016 results	Self-Assessment / Challenges
<p>We will reduce energy consumption intensity in logistics in fiscal 2018 by at least 5%, relative to fiscal 2013.</p>	<p>Energy consumption intensity in logistics was reduced by 10% relative to fiscal 2013 (0.046 L / ton-km).</p>	<p>The primary unit (intensity) improved significantly following a further modal shift, despite a leveling off in freight forwarding volume since fiscal 2014.</p>
<p>We will create and operate efficient energy management systems.</p>	<p>We carried out energy conservation programs using our environmental management systems.</p>	<p>It is necessary to operate a system enabling a response to management risk associated with energy.</p>
<div>Resource conservation</div> <p>We will reduce the rate of production errors and defective products (consistency with ISO 9001).</p> <p>We will reduce the rate of lead scrap to less than 2% in fiscal 2018.</p>	<p>The lead scrap rate was 3%.</p>	<p>It is necessary to strengthen initiatives aimed at reducing waste and loss by linking enhancements in productivity with design for the environment (DfE).</p>
<p>We will reduce the amount of wastewater during production in fiscal 2018 by at least 77%, relative to fiscal 2003.</p>	<p>The amount of wastewater was reduced by 61% relative to fiscal 2003 (874,000 m<sup>3</sup>).</p>	<p>The usage rate of recycled water is on the rise. Going forward, it will be important to continue promoting the usage of recycled water.</p>
<div>Resource recycling</div> <p>In fiscal 2018, we will promote the correct ways of disposing and recycling 100% of used industrial products under a wide area certification system.</p>	<p>The percentage of used industrial products correctly disposed of or recycled under the wide area certification system was 99.9%.</p>	<p>The percentage of used industrial products correctly disposed of or recycled under the wide area certification system was almost 100%. The resource recycling scheme has taken hold thanks to this system.</p>
<p>We will create a resource recycling system for next-generation lithium-ion batteries.</p>	<p>We looked into a recovery method for lithium-ion batteries used in next-generation vehicles.</p>	<p>It is important to establish a suitable resource recycling scheme for lithium-ion batteries used in next-generation automobiles, for which the market is expected to expand.</p>



Key items		FY 2016 results	Self-Assessment / Challenges
Objectives			
2	<b>Environmentally considered products</b>  We will work to popularize design for the environment (DfE) products.	We promoted the development and design of products using the GS Yuasa Design for the Environment (DfE) Guidelines formulated in October 2005.	Environmental consideration is lacking in product design relative to diversification and advancement in product application.
	<b>Promotion of green procurement</b>  We will support the acquisition and advancement of environmental management system certification by business partners.	93% of all transactions were made with business partners that have acquired environmental management system certifications.	A certain level of suppliers has now introduced an environmental management system. Going forward, it will be important to promote activities to support further improvement.
3	<b>Management of chemical substances</b>  We will monitor the flow of materials subject to the GS Yuasa Group Chemical Management Guidelines.	In coordination with green procurement, we thoroughly revamped the management of chemical substances contained in products and complied with Japanese and international regulations on the allowable amounts.	It is important to continuously implement management of chemical substances in products relative to laws, regulations and customer requirements.
	<b>Thorough management of environmental risk</b>  We will comprehensively manage environmental risk with our environmental management systems throughout the entire product life cycle.	We managed environmental risk using our own environmental management systems.	It is important to effectively conduct environmental risk management in response to business challenges and stakeholder needs and expectations, etc.
5	<b>Legal compliance</b>  We will set voluntary management standards that are stricter than environmental laws and regulations, and we will make improvements to environmental management technologies.	There were no instances of emergencies directly related to environmental pollution and no instances of environment-related lawsuits, punitive fines or administrative fines.	It is important to conduct effective environmental risk management to enhance compliance.

Key items Objectives		FY 2016 results	Self-Assessment / Challenges
6	<p><b>Maintenance and continuous improvement of environmental management systems</b></p> <p>We will make continual improvements to our environmental management systems with the aim of producing effective environmental management.</p>	We improved our environmental management systems by addressing the issues identified through periodic internal and external audits.	It is important to continuously improve environmental management systems to enhance environmental risk management.
7	<p><b>Social contribution</b></p> <p>We will actively and continually take part in environmental conservation.</p>	We undertook environmental programs and initiatives, which included cleaning the areas around our offices.	It is important to promote social contribution and environmental communication to meet stakeholder needs and expectations.
8	<p><b>Communication about the environment</b></p> <p>We will expand the scope of environmental information disclosure through the Environmental &amp; Social Report and ensure social appraisal is fed back to our environmental management activities.</p>	We conducted external communications to reach a wider range of stakeholders, which included publishing the Environmental & Social Report.	

## Environmental Management Systems

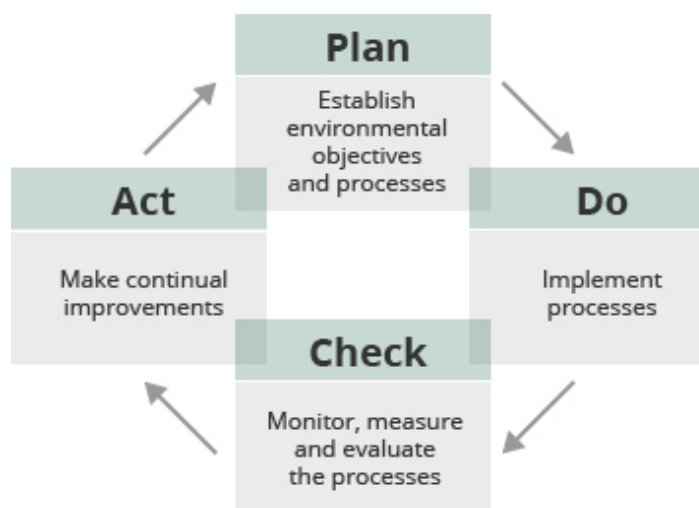
**GS Yuasa operates environmental management systems that comply with international standards.**

### Operation of environmental management systems

At GS Yuasa Group sites in Japan, we are developing and using environmental management systems that comply with the ISO 14001 international standard.

At every site, we use a PDCA(Plan, Do, Check, Act) cycle as part of a systematic framework for environmental management, enabling us to make continual improvements for environmental protection.

#### ■ PDCA Cycle



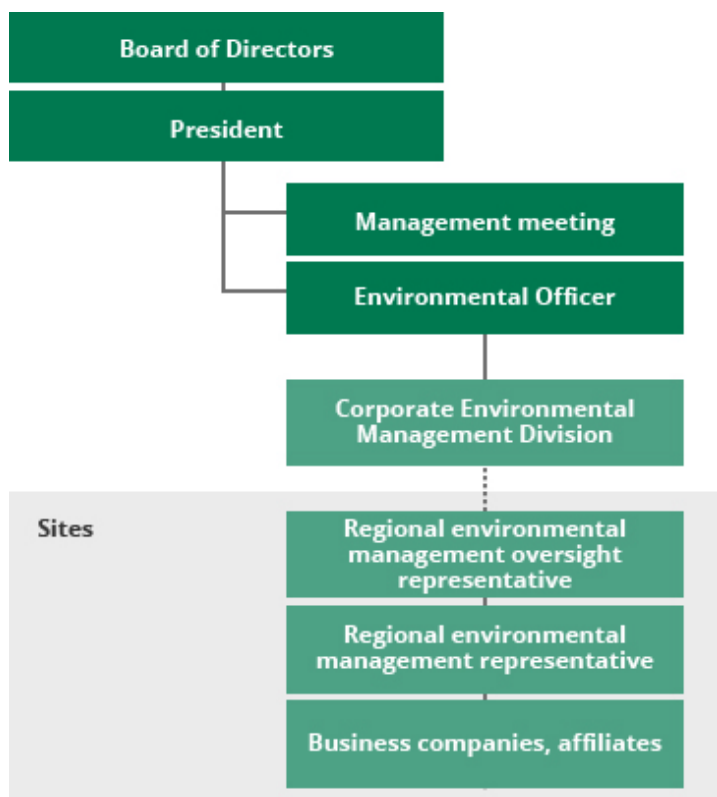
### Organizational Structure

The organizational structure for GS Yuasa Group's environmental management systems includes an overall system for the entire Group as well as specific systems for individual sites.

In the Group-wide structure, the president of GS Yuasa serves as the chief executive officer responsible for environmental management, overseeing the environmental management of the entire Group working with environmental officers under direct supervision. Environmental issues that affect the entire Group, such as fundamental environmental policy, are discussed and finalized at management meetings.

We also have environmental management systems for individual sites. These are led by regional environmental management oversight representatives and regional environmental management representatives, and important information on environmental performance is shared with the Group-wide environment management team.

## ■ Overview of Organizational Structure



## Environmental Auditing

We conduct internal environmental audits at every GS Yuasa Group business site to determine whether our environmental policy is being implemented appropriately and that environmental objectives are being met. In addition, we evaluate the environmental management system to improve performance as well as to improve the system itself. We also have an environmental certification agency conduct external environmental audits to check the conformity and effects of our environmental management systems.

Internal environmental auditing	External environmental auditing
<p>Internal environmental auditors — with qualifications gained from training both inside and outside the company — determine the condition of the following:</p> <ol style="list-style-type: none"> <li>1. Compliance with environmental laws and regulations, etc. (legal compliance audit)</li> <li>2. Maintenance and management of environmental management systems (system audit)</li> <li>3. Degree of achievement of environmental objectives (performance audit)</li> </ol>	<p>Audits of the status of maintenance and management for environmental management systems based on ISO 14001 standards and the functioning of PDCA cycles confirmed that every business site adheres to ISO 14001 standards. We will continue working to improve these systems by evaluating environmental management from a third-party perspective and by using information on such items as areas needing improvement.</p>

## Environmental Education

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The GS Yuasa Group employs different types of environmental education to maintain and improve environmental management systems. In addition, we regularly provide training to avoid exposure to environmental risk.

### General Environmental Education

#### ■ Employee education

In every division, we provide education to all employees to build awareness of their role in achieving the environmental policy.

#### ■ Education for new recruits

New recruits are made aware of the GS Yuasa Group's basic philosophy on environmental management.

### Specialized Environmental Education

#### ■ Training of internal environmental auditors

At every business location, we train internal environmental auditors and provide them with education to boost their skills to continually improve our environmental management systems.

#### ■ Emergency response training

In every division, we regularly provide training on responses to potential emergencies to all employees working in operations that have significant potential impact on the environment.

## Comprehensive Compliance Management

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The GS Yuasa Group regularly reviews the environmental laws and regulations that must be obeyed, and ensures, through monitoring, that operations are managed in a way that is legally compliant.

Further, business is conducted in compliance with environmental laws and regulations since we use hazardous substances, such as lead, in our products and we must obey the laws and regulations related to the operation of recycling systems for used products.

There was no litigation and there were no punitive fines or administrative fines for nonadherence to environmental laws or regulations in fiscal 2016.

## Preventing Exposure to Compliance Risk and Environmental Pollution Risk

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In every business location, we work to prevent environmental pollution through operational management based on voluntary standards that are stricter than regulatory standards based on environmental laws, regional ordinances and agreements.

In working to mitigate the risk of environmental pollution, we take action in operations where there is the possibility of water contamination, air pollution or soil contamination. This includes tangible actions: increasing the visibility of operations and preventing spills as well as using equipment to remove noxious substances and intangible measures, such as equipment inspections, monitoring, measuring and enhancing operating procedures.

Also, we have identified the following potential emergency situations that could have a serious impact on the environment, and we are taking steps to prevent these situations from occurring.

- Spills of liquid waste from outside tanks, pipelines, etc. and underground seepage that exceeds accepted standards
- Discharges into the air of soot and smoke from melting furnaces, dust collectors and dehydrators that exceeds accepted standards

To make sure we are fully prepared for an emergency, we regularly hold emergency response training to help minimize damage.

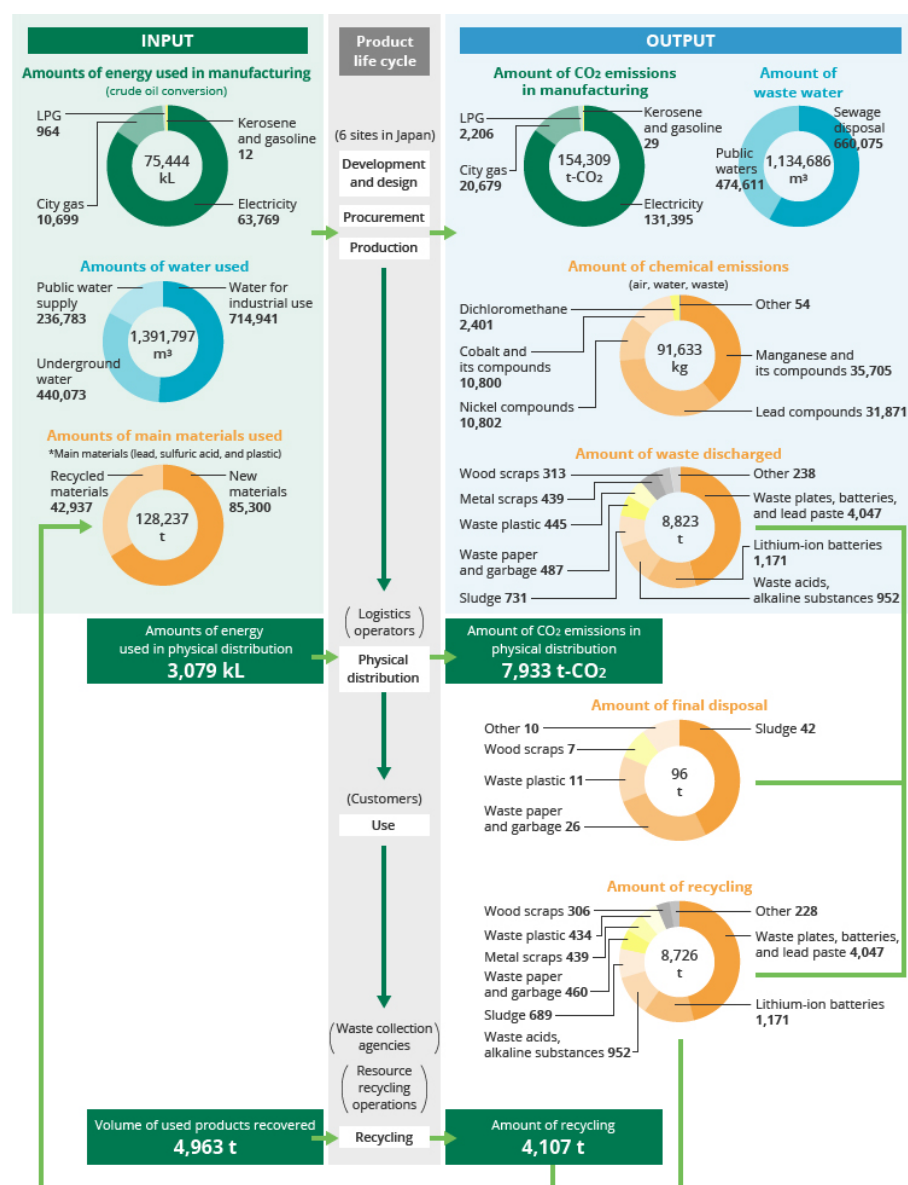
There were no instances of emergencies directly related to environmental pollution at any of our business locations in fiscal 2016.



## Environmental Performance and Environmental Accounting

We are committed to continually improving environmental performance and to evaluating the effectiveness of our environmental activities.

### Flow of Materials in the Product Life Cycle



#### ■ Remarks

- (1) Data came from six sites in Japan in fiscal 2016: GS Yuasa International Ltd. (Kyoto, Osadano, Gunma and Odawara Plants), Lithium Energy Japan and GS Ibaraki Works, Ltd.
- (2) Figures for energy consumption and CO<sub>2</sub> emissions during transportation are solely from GS Yuasa International Ltd.
- (3) Figures for the volume of used products recovered and resources recycled are solely from industrial batteries and power sources.
- (4) The conversion factor for calculating CO<sub>2</sub> emissions for power consumption uses the CO<sub>2</sub> emissions intensity data issued by the Electric Power Council for a Low Carbon Society (ELCS).

## Management of CO<sub>2</sub> Emissions at Production Sites Worldwide

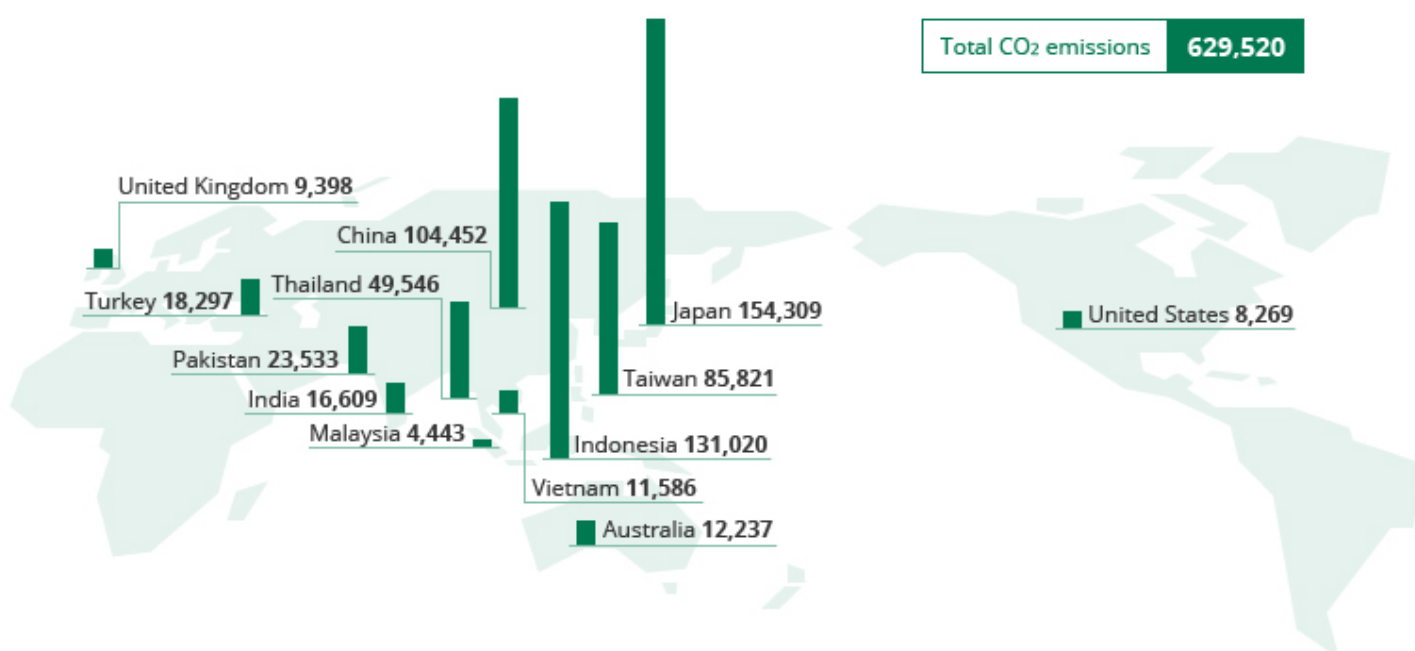
The GS Yuasa Group undertakes global initiatives to identify and reduce CO<sub>2</sub> emissions from production around the world.

The table below shows CO<sub>2</sub> emissions for fiscal 2016 at major production sites worldwide. 92% of these production sites have obtained ISO 14001 certification and, to promote reductions in CO<sub>2</sub> emissions, are using an environmental management system that complies with international standards and regulations.

The periods covered by the calculations are:

Japan	April 1, 2016 - March 31, 2017
Outside Japan	January 1, 2016 - December 31, 2016

### CO<sub>2</sub> emissions by country (Unit: t-CO<sub>2</sub>)



### CO<sub>2</sub> Emissions at Production Sites by Country (Unit: t-CO<sub>2</sub>)

Country	Production site	CO <sub>2</sub> emissions
Japan	GS Yuasa International Ltd. (Kyoto, Osadano, Gunma and Odawara Plants)	118,244
	Lithium Energy Japan	31,416
	GS Ibaraki Works, Ltd.	4,649
China	Tianjin GS Battery Co., Ltd.	41,949
	Yuasa Battery (Shunde) Co., Ltd.	28,565
	Yuasa Battery (Guangdong) Co., Ltd.	20,850
	GS Battery (China) Co., Ltd.	7,306
	Tianjin Yuasa Batteries Co., Ltd.	5,781
Taiwan	Taiwan Yuasa Battery Co., Ltd.	52,061
	GS Battery Taiwan Co., Ltd.	33,759
Vietnam	GS Battery (Vietnam) Co., Ltd.	11,586

Country	Production site	CO <sub>2</sub> emissions
Malaysia	GS Yuasa Battery Malaysia Sdn. Bhd.	4,443
Indonesia	PT. GS Battery	63,819
	PT. Trimitra Baterai Prakasa	38,622
	PT. Yuasa Battery Indonesia	28,580
Thailand	Siam GS Battery Co., Ltd.	30,014
	Yuasa Battery (Thailand) Pub. Co., Ltd.	12,983
	GS Yuasa Siam Industry Ltd.	6,549
India	Tata AutoComp GY Batteries Private Limited	16,609
Pakistan	Atlas Battery Ltd.	23,533
Turkey	Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi	18,297
United Kingdom	GS Yuasa Battery Manufacturing UK Ltd.	9,398
United States	Yuasa Battery, Inc.	8,269
Australia	Century Yuasa Batteries Pty. Ltd.	12,237

The CO<sub>2</sub> conversion factor for power outside Japan uses the coefficient specified under the GHG Protocol for each country.

### Response to Carbon Disclosure Project (CDP)

GS Yuasa responds to the CDP Climate Change Questionnaire, a project requesting companies to release information on their climate change strategy and greenhouse gas emissions (only information we collect in Japan is disclosed). We use the results of CDP evaluations and promote initiatives to mitigate and adapt to climate change.

## Environmental Performance Data

### Scope of calculations related to environmental performance

1. Data for these calculations came from six GS Yuasa Group plants in Japan (Kyoto, Osadano, Odawara and Gunma Plants, Lithium Energy Japan and GS Ibaraki Works, Ltd.). Note, however, that figures for energy consumption and CO<sub>2</sub> emissions from logistics come from GS Yuasa International Ltd., including domestic logistics sites.
2. Data from five years (FY2012 to FY 2016) was used in the calculations. Data for Lithium Energy Japan and GS Ibaraki Works, Ltd. is from fiscal 2014 and shown in orange on the graph. All data was reviewed prior to reporting.
3. The CO<sub>2</sub> conversion factor for calculating CO<sub>2</sub> emissions for power consumption uses emission intensity data from the Federation of Electric Power Companies of Japan (FEPC) and The Electric Power Council for a Low Carbon Society (ELCS) (table below). Note, however, that the CO<sub>2</sub> emission intensity data for fiscal 2016 uses figures from fiscal 2015, since figures for fiscal 2016 had not yet been released as of the date of disclosure of this data.

#### ■ CO<sub>2</sub> conversion factor data for power consumption

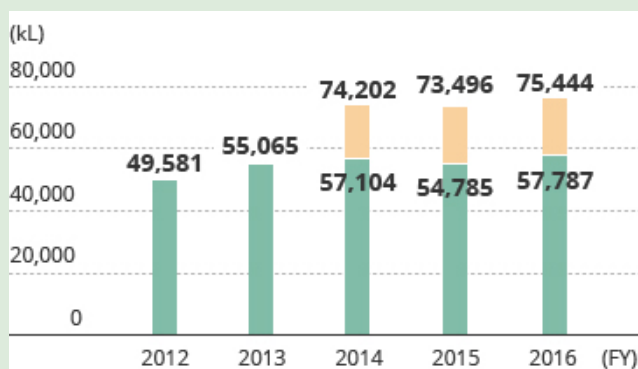
FY2012	0.57
FY2013	0.57
FY2014	0.56
FY2015	0.53

## 4. Intensity data used in the graph was calculated using the following formulas:

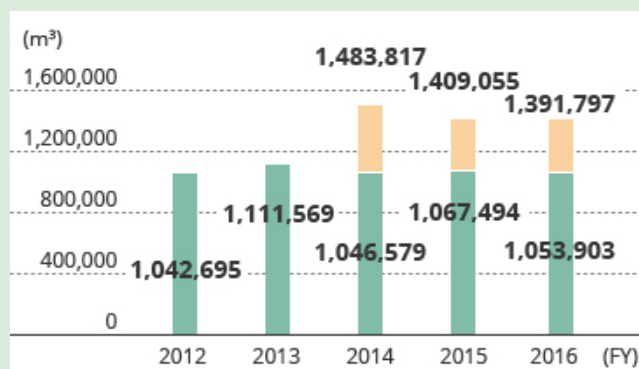
- (1) Energy intensity in logistics (kL/ton kilo) = Energy consumed / Amount of transported cargo
- (2) CO<sub>2</sub> emission intensity in production (g-CO<sub>2</sub>/Wh) = Amount of emissions / Volume of batteries produced
- (3) Ratio of wastewater reduction relative to FY2003 (%) = [Amount of wastewater in FY2003 - amount of wastewater / Amount of wastewater in FY2003] x 100
- (4) Resource recycling rate (%) = (Amount of resources recycled / Amount of waste) x 100
- (5) Ratio of lead scrap (%) = (Amount of waste plates and batteries (lead) / Amount of lead consumption) x 100

## INPUT

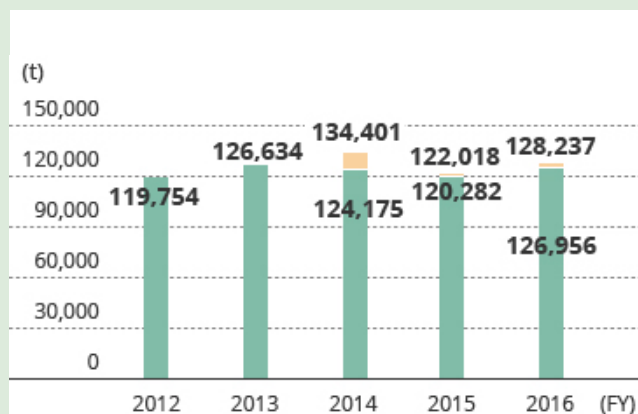
## ■ Energy Consumption in Production



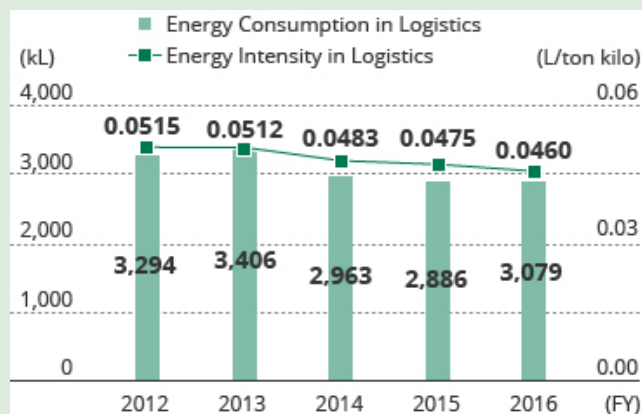
## ■ Water Consumption



## ■ Consumption of Major Materials

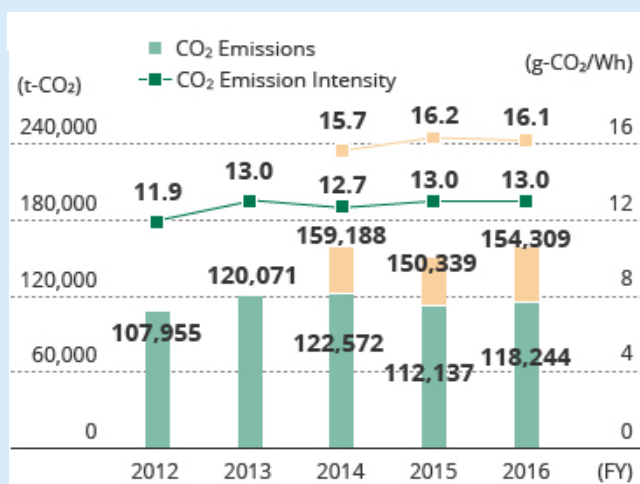


## ■ Energy Consumption in Logistics and Energy Intensity in Logistics

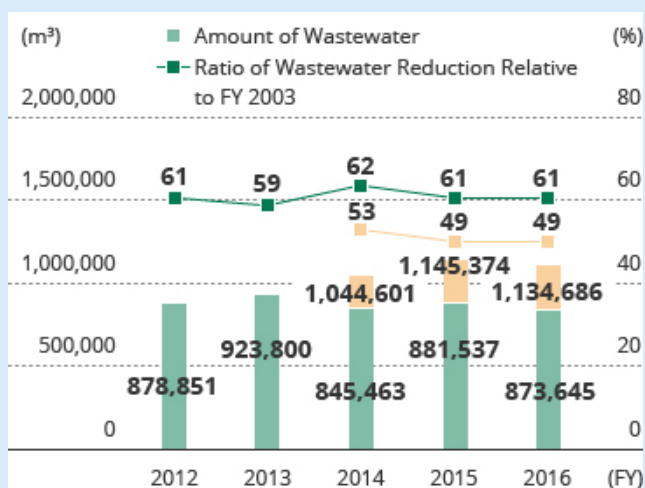


## OUTPUT

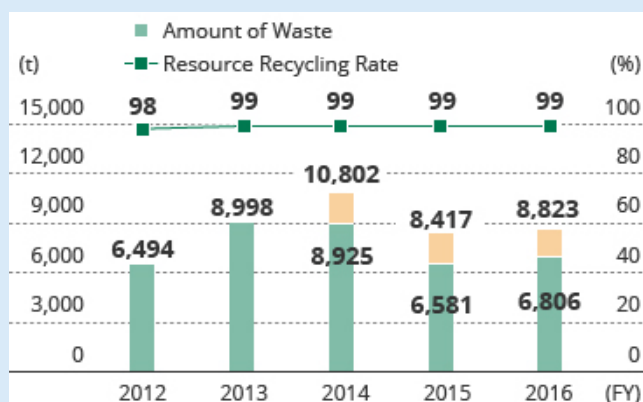
### CO<sub>2</sub> emissions in Production and CO<sub>2</sub> Emission Intensity



### Amount of Wastewater and Ratio of Wastewater Reduction relative to FY2003



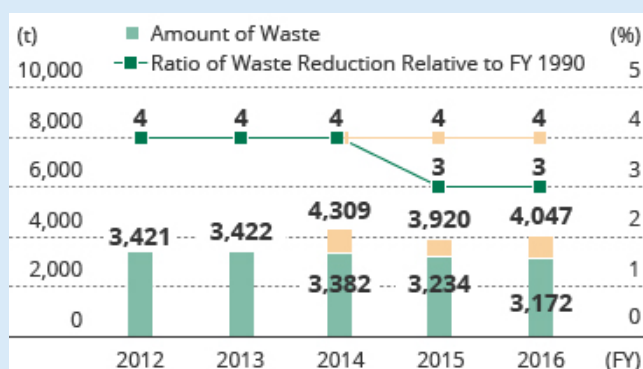
### Amount of Waste and Resource Recycling Rate



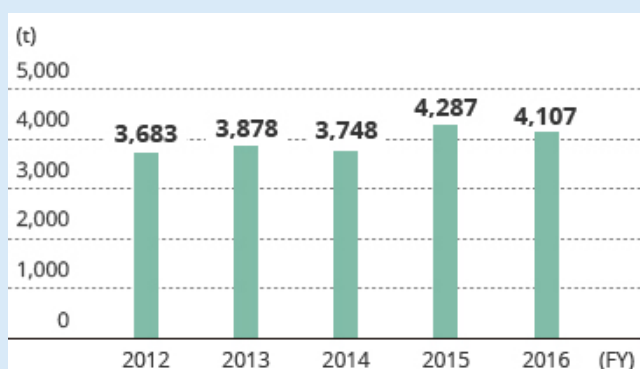
### CO<sub>2</sub> Emissions in Logistics



### Amount of Waste Plates and Batteries (lead) and Ratio of Lead Scrap



### Amount of Resources Recycled Under Wide Area Certification System



# Environmental Accounting

## Scope of calculations for environmental accounting

<b>Structures</b>	Six domestic sites (Kyoto, Osadano, Odawara and Gunma Plants, Lithium Energy Japan and GS Ibaraki Works, Ltd.). Note, however, that environment-related equipment costs within business area costs do not include onsite affiliated companies.
<b>Period covered</b>	April 1, 2016 - March 31, 2017
<b>Reference</b>	Environmental Accounting Guidelines 2005 Edition (issued by the Ministry of the Environment)

## Environmental conservation costs (categorized by business activity)

(Thousands of yen)

Category		Key initiatives	Kyoto Plant	Osadano Plant	Odawara Plant	Gunma Plant	Lithium Energy Japan	GS Ibaraki	Total
Business area costs (total)			504,517	228,438	35,005	55,637	92,756	39,197	955,550
Breakdown	Pollution prevention costs	Efforts to prevent air, water and soil pollution	348,356	146,703	7,649	27,478	10,813	16,741	557,740
	Global environmental conservation costs	Efforts to reduce greenhouse gas emissions	51,103	13,144	14,706	18,821	22,410	13,080	133,264
	Resource recycling costs	Efforts to ensure suitable disposal of waste	105,058	68,591	12,650	9,338	59,533	9,376	264,546
Upstream and downstream costs <sup>*1</sup>		Additional efforts to reduce environmental burden	432	8	15	0	0	0	455
Management activity costs <sup>*2</sup>		Employee education and ISO 14001 maintenance and management	16,593	1,999	357	80	840	707	20,576
Research and development costs		Research and development efforts in consideration of the environment	5,960,660	1,630,266	0	0	1,942,075	0	9,533,000
Social activity costs		Environmental volunteer efforts	600	748	318	825	2,573	260	5,323
Environmental remediation costs <sup>*3</sup>		Efforts related to soil pollution measures	0	2,214	0	0	0	0	2,214
Total			6,482,802	1,863,672	35,694	56,542	2,038,243	40,164	10,517,118



## Economic effect of environmental conservation initiatives

(Thousands of yen)

Category	Key item	Monetary amount
Economic effects of more efficient water use	Water use and wastewater cost reduction	-2,485 <sup>*3</sup>
Energy conservation effects	Cost reductions for electricity, heavy oil and gas (city gas, LNG, LPG)	404,117 <sup>*3</sup>
Waste reduction effects	Cost reduction for industrial waste treatment	-8,440 <sup>*3</sup>
Resource recycling effects	Profit from recycling and reusing waste	146,669

## Effect of environmental conservation

Category	Key items	Material amount
Effects related to resources used in business activities	Amount of recycled water used	1,420,595m <sup>3</sup>
	Amount of reduction in water use	17,258m <sup>3</sup> <sup>*3</sup>
Effects related to environmental burden and waste from business activities	Amount of CO <sub>2</sub> reduced	-3,970ton-CO <sub>2</sub> <sup>*3</sup>
	Amount of waste reduced (final disposal volume)	5ton <sup>*3</sup>
	Amount of wastewater reduced	10,688m <sup>3</sup> <sup>*3</sup>
	Amount of waste recycled	8,726ton <sup>*3</sup>
	Recycling rate	99%
	[Water quality] Amount of lead discharged	23kg
	[Air] Amount of lead emitted	103kg

<sup>\*1</sup> Upstream and downstream costs are the total of consulting expenses and expenses for contracts to create new products based on the Law for Promotion of Sorted Collection and Recycling of Containers and Packaging.

<sup>\*2</sup> In addition to employee education, and costs related to ISO 14001 maintenance and management, the management activity cost includes expenses related to information disclosure.

<sup>\*3</sup> The tables show amounts reduced compared with the previous fiscal year (negative amounts represent increases).

<sup>\*4</sup> Recycling rate (%) = (amount recycled / amount of waste) x 100

## Activity to Decrease Environmental Burdens

**The GS Yuasa Group is working to lessen the Group's environmental burden not only at the manufacturing stage but also throughout the product life cycle.**

### Development and design

#### Design for the Environment (DfE)

The GS Yuasa Group's products have some impact on the environment during every stage of the product life cycle, from procurement and manufacturing to transportation, use and disposal. For this reason, we are committed to designing products based on the GS Yuasa Design for the Environment Guidelines with the aim of reducing the environmental burden throughout the product life cycle, which includes the consumption of resources, the emission of greenhouse gases, and waste. The guidelines cover design that considers the materials used in the product, the 3Rs (reduce, reuse, recycle), ease of disassembly, labeling, energy conservation and packaging. The GS Yuasa Group promotes the development and design of environmentally considered products through design for the environment (DfE) by using these guidelines while, at the same time, maintaining and improving the performance of products.

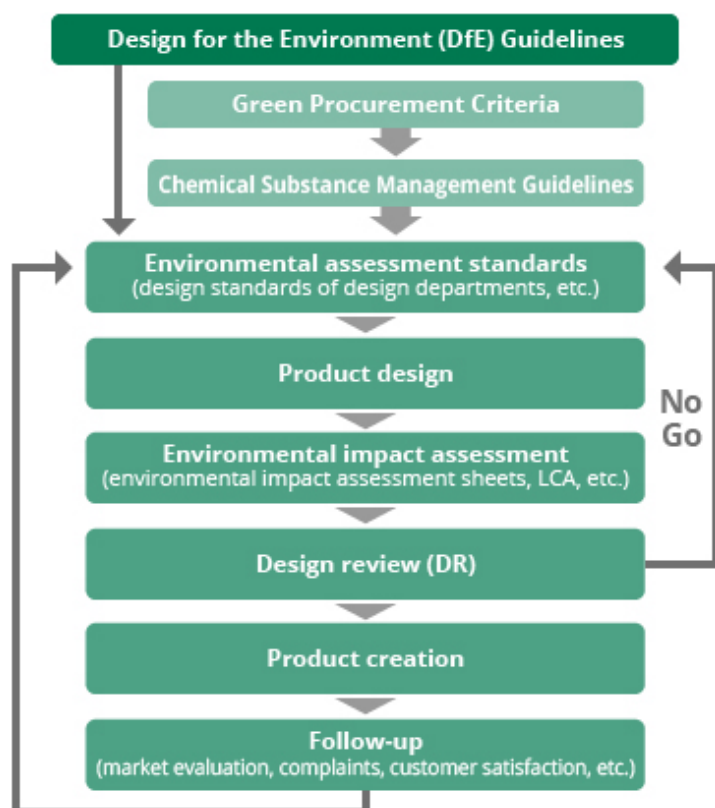
#### Implementing environmental impact assessments for products

For an environmental assessment of product design, design departments employ design standards and then evaluate the suitability of products in design review (DR) meetings based on environmental impact assessments of every stage of the product life cycle. When environmental impact standards are not met, we review the design standards and redesign the product. We use the expertise of several departments in addition to design departments, including engineering, marketing, procurement, quality and the environment, to make sure that the results of Design for the Environment (DfE) are communicated widely, which also maximizes their effectiveness.

#### ■ Environmental Assessment Items

- |                                      |  |
|--------------------------------------|--|
| 1. Energy conservation               | 2. Volume reduction                      |
| 3. Recyclability                     | 4. Ease of disassembly                   |
| 5. Ease of separation and processing | 6. Safety and environmental conservation |
| 7. Material selection                | 8. Ease of maintenance                   |
| 9. Energy efficiency                 | 10. Reusability (lifecycle extension)    |

## ■ Flow of Environmental Assessment



## Reflecting information in the products we distribute

Important information, such as customer requirements for GS Yuasa Group products, is used when we change the design of existing products or design new products. This helps boost the value of our Design for the Environment. Information from interested parties related to after-sales service, returns and complaints are used as a valuable resource to improve the environmental performance of products.

## Management of chemical substances contained in products

The GS Yuasa Group takes steps to provide products with minimal environmental burden based on the Chemical Substance Management Guidelines, which clarify the standards for chemical substances in products. These guidelines are part of initiatives to examine chemical substances contained in materials delivered as stipulated in the GS Yuasa Group green procurement criteria. With these guidelines, we classify chemicals contained in our main materials, as well as the secondary materials and the parts used in the products that the Group makes and sells as either prohibited substances or managed substances. The GS Yuasa Group works with suppliers to identify and definitively manage the substances covered by the guidelines to raise the environmental quality of our products.

## Production

### Identifying chemical substance emissions

Today, among the chemicals used in GS Yuasa Group plants, the following substances are subject to reporting under the PRTR Law. \* The Group incorporates the management of hazardous substances into environmental management and regularly assesses how they have been handled to reduce environmental risk and related legal compliance.

#### \*PRTR (Pollutant Release and Transfer Register) Law

This law covers identifying, etc., the emissions of specific chemical substances into the environment and promotes improved management. The law requires businesses to collect, tabulate and disclose data related to hazardous chemical substances, their sources, the amount of emissions and how much is transferred out of the plant, including as waste. Class I Designated Chemical Substances (substances that may damage people's health or interfere with the growth of animals and plants) are subject to reporting under the PRTR system. Of these substances, those that have carcinogenic properties are classified as Specific Class I Designated Chemical Substances.

#### ■ Status of release and transfer of substances subject to the PRTR Law

(kg)

Substances subject to the PRTR Law	Sites	Released into the air	Released into public waterways	Transferred to sewage system	Transferred outside the site	Total
Lead compounds *	Kyoto	44.0	-	3.6	28,000.0	28,047.6
	Osadano	23.0	-	9.5	3,500.0	3,532.5
	Gunma	32.0	4.1	-	4.9	41.0
	Ibaraki	4.0	6.2	-	240.0	250.2
Arsenic and its inorganic compounds *	Kyoto	1.8	-	0.6	2.8	5.2
	Gunma	0.0	0.6	-	0.0	0.6
Antimony and its compounds	Kyoto	7.4	-	0.6	36.0	44.0
	Osadano	0.0	-	2.3	0.0	2.3
	Gunma	0.0	2.2	-	0.0	2.2
Manganese and its compounds	Kyoto	0.0	-	0.0	1,100.0	1,100.0
	Osadano	4.3	-	0.0	0.2	4.5
	Lithium Energy Japan	0.0	-	0.0	29,000.0	29,000.0
Nickel compounds *	Kyoto	0.0	-	0.0	1,100.0	1,100.0
	Osadano	1.6	-	0.0	0.3	1.9
	Odawara	0.0	-	0.0	0.0	0.0
	Lithium Energy Japan	0.0	-	0.0	9,700.0	9,700.0

(kg)

Substances subject to the PRTR Law	Sites	Released into the air	Released into public waterways	Transferred to sewage system	Transferred outside the site	Total
Cobalt and its compounds	Kyoto	0.0	-	0.0	1,100.0	1,100.0
	Osadano	0.2	-	0.0	0.2	0.4
	Odawara	-	-	-	-	0.0
	Lithium Energy Japan	0.0	-	0.0	9,700.0	9,700.0
Dichloromethane	Kyoto	0.7	-	0.0	480.0	480.7
	Ibaraki	1,900.0	0.0	-	20.0	1,920.0
Cadmium and its compounds *	Odawara	0.0	-	0.0	0.0	0.0
Triethylenetetramine	Ibaraki	0.0	0.0	-	0.0	0.0
Total		2,019.0	13.1	16.6	89,584.4	91,633.1

- : Outside scope of coverage

\* : Production of Specific Class I Designated Chemical Substances

## Energy Conservation Activities Using Power Demand Control

At the Odawara Plant, in addition to conserving energy in traditional production processes, following the Great East Japan Earthquake and Tsunami that struck on March 11, 2011, we are strengthening ways to save power, which includes voluntarily managing targets for peak power consumption.

If the amount of power used at the plant reaches a peak power target (95% or 97%), an alarm is activated via a power demand control system and the pertinent departments implement activities to reduce peak power consumption such as operating systems aimed at the urgent conservation of power.

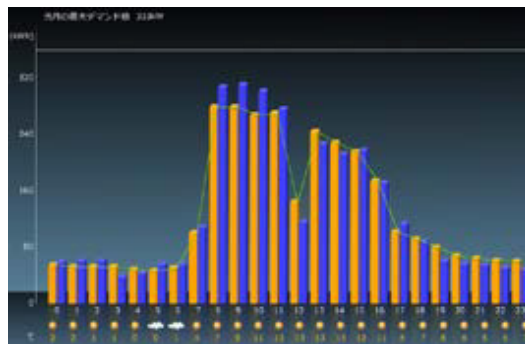
As a result of these practices, in fiscal 2016 we achieved our target figure for peak power consumption and revised the amount of power we use under contract from the power company, reducing power consumption and associated costs.

### ■ Examples of measures to save power at the Odawara Plant

1. Monitoring and analysis of power consumption using a power management system
2. Making improvements based on reports from energy conservation patrols
3. Shifting to LED lighting for certain fluorescent lamp fluorescent and mercury lights
4. Reducing the amount of lighting (all areas of the site)
5. Controlling the air conditioning temperature



Remote monitoring of power demand



Graph showing power demand management

## Power and water conservation through facility upgrades

Air conditioning units in some areas of the Kyoto Plant were used for 34 years, and the system was inefficient, having all units working simultaneously from the first to the fourth floors. For these reasons, we decided to upgrade to more efficient air conditioners in fiscal 2016 to both replace aging facilities and save energy.

This upgrade enabled air conditioning on individual floors and conserved energy in the units themselves, along with shift to the latest gas heat pumps, which resulted in cutting peak power consumption. In addition, although cooling towers built with the previous air conditioning units had been using around 1,000m<sup>3</sup> of water annually, this water consumption became unnecessary thanks to the facility upgrade, which enabled air conditioning without such towers.

By reducing the environmental burden through upgrading facilities, we have reduced power, water and sewerage costs, as well as other costs, including maintenance expenses, by simplifying facility maintenance and management. Further, these initiatives reduced the investment in facilities, since the upgrade projects were eligible for subsidies for businesses investing in ways to save energy and boost productivity.

## Shift to LED Lighting

The Kyoto Plant is promoting a shift to LED lighting for energy conservation.

In fiscal 2016, we upgraded from high-pressure electric discharge lamps to LED lamps for the arena lighting in the gymnasium. Through this move, we are forecasting a reduction in costs associated with lighting, since power consumption was cut to 57% compared with the previous fiscal year and the product life has more than doubled relative to the previous lighting equipment. The new lighting brightens up the floor as soon as it is turned on and has been very well received.



New LED lighting in the arena section of the gymnasium

## Internal Processing of Confidential Documents

The Kyoto Plant is installing an internal processing system for confidential documents that are no longer required.



Every month, this plant generates approximately 100 boxes of confidential documents that are no longer required. Previously, these documents were put in the shredder and processed by an outside contractor. Shifting to internal processing, however, has reduced the risk of confidential information being leaked. The process dissolves used paper and employs only water rather than chemicals, such as organic solvents. Water is then recycled. We encourage the employment of persons with disabilities for operations involved in the internal processes such as separation.

Today, some confidential documents that are no longer required are inserted into a single machine for dissolving as part of test operations. Going forward, we intend to use this system completely by installing two additional machines.

## ■ Overview of internal processing of confidential documents no longer required



## Transportation

### Reducing energy consumption in logistics

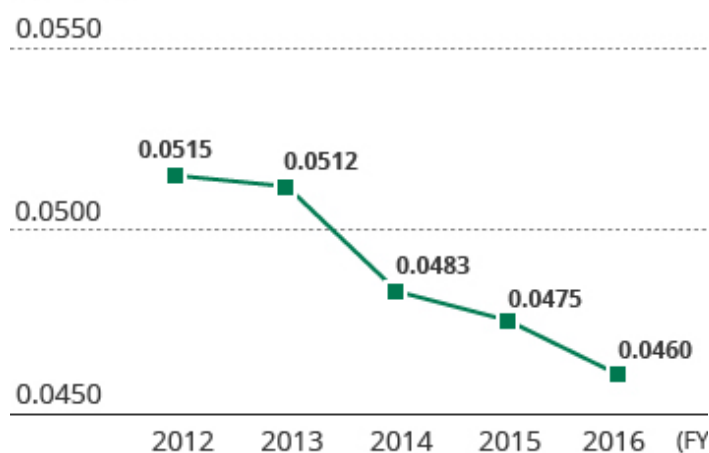
The GS Yuasa Group promotes energy conservation for freight forwarding (shipping) as one way to reduce the environmental burden during the product life cycle.

As part of coordinated efforts to save energy, we created a system to identify the quantity of goods being shipped, as well as energy consumption and CO<sub>2</sub> emissions during logistics. After that, a panel of experts regularly checks the results (relative to targets for reducing energy). We also work to reduce the quantity of items shipped between sites by integrating physical distribution base and we have conducted a modal shift from trucks to rail containers for transportation.

Through these activities, we succeeded in reducing the energy consumption intensity in fiscal 2016 by 10% compared with fiscal 2013. Going forward, we will strive to continually improve energy efficiency in logistics and will promote activities that lower the environmental burden and logistics costs.

### ■ Energy consumption per freight forwarding (crude oil conversion)

(L/ton kilo)

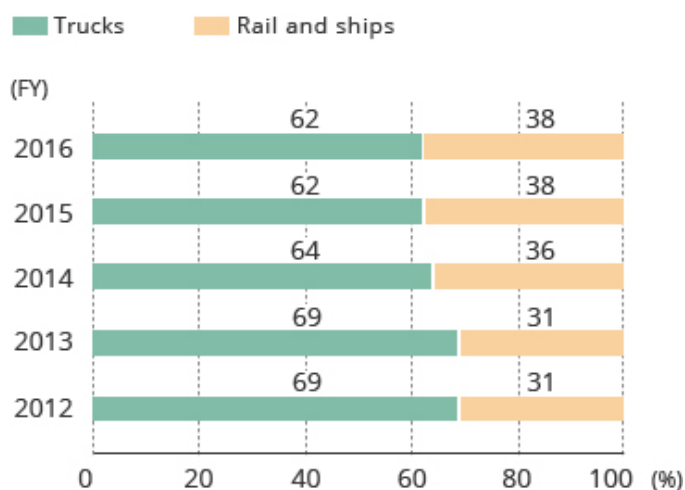


A ton kilo is a unit measuring the amount of freight forwarding volume being shipped.  
One ton kilo is equivalent to moving one ton of cargo one kilometer.

## Operation of an Eco Rail Mark System

The Eco Rail Mark System is a system of certification for companies and products that make thorough use of rail transportation for minimal environmental burden. The GS Yuasa Group has been designated as a certified company by the Railway Freight Association for seven series of batteries for automobiles and motorcycles have been certified. By getting customers to purchase certified products, we are promoting activities in which customers and companies can participate together to reduce the burden on the environment. In fiscal 2016, although we eliminated single-way routes due to changes in transit and arrival times caused by revisions to the timetable for rail freight we were able to start two-way rail freight. The Group will promote logistics that consider the environment by increasing the amount of freight shipped by rail.

### Ratio of freight forwarding volume



Examples of GS Yuasa Group products with Eco Rail certification

## Resource recycling

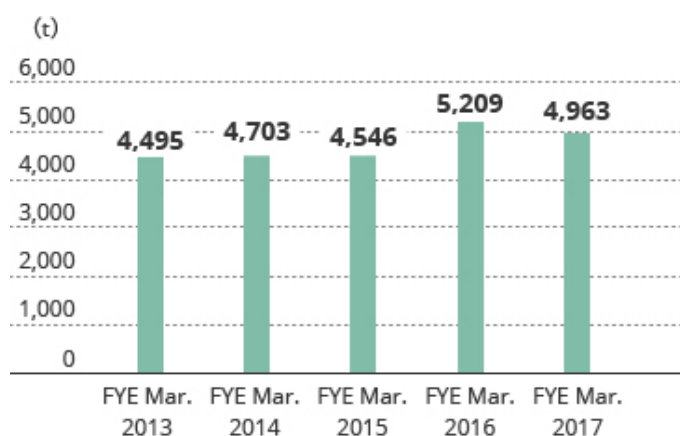
A wide-area certification system aims to involve the manufacturers of a product in the product's recycling and disposal once it reaches the end of its useful life. These systems make possible more efficient recycling and provide feedback on product design leading to easier disposal and reuse, while ensuring that discarded goods are disposed of properly.

In January 2008, the GS Yuasa Group in Japan acquired wide-area certification from the Ministry of the Environment for industrial batteries and power supplies, and in January 2009 started accepting orders in earnest for a recycling system based on this certification. In FY 2010 and FY 2013 we broadened the range of eligible products, and in FY 2011 we reviewed the operating rules related to small products, resulting in an improvement of our secure, effective disposal system for discarded goods.

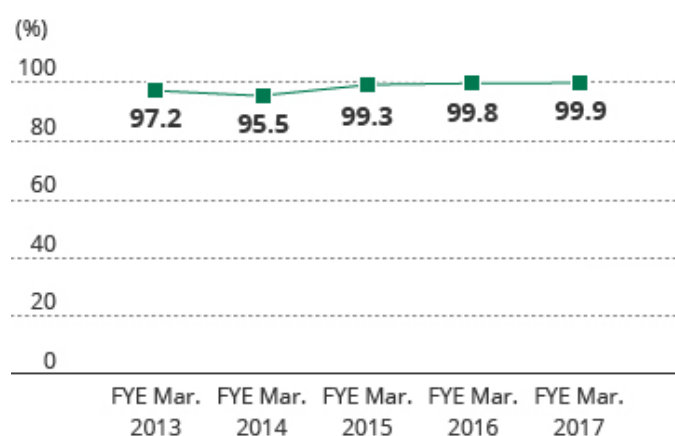
In FY 2016, the amount of discarded goods we processed under the wide-area certification system reached 4,963 tons. This figure was 99.9% of the discarded products the GS Yuasa Group in Japan collected in the same period. As far as industrial batteries for the domestic Group are concerned, the wide-area certification system is now firmly established.

In the future, we will promote even more effective operation of the wide-area certification system to improve customer service as well as to recycle and properly dispose of post-use products.

### ■ Amounts Handled under the Wide-Area Certification System (Industrial Batteries, Power Supplies)



### ■ Application Rate of the Wide-Area Certification System (Industrial Batteries, Power Supplies)



## Thorough operation and management of processing under a wide area certification system

The GS Yuasa Group believes in the importance of creating and operating a system for recovering and recycling resources from our used products to help create a recycling-oriented society. To achieve this goal, the Group is strengthening initiatives for processing used products and resource recycling using a wide area certification system based on the wide area certification system for industrial waste guidelines issued in March 2010. These guidelines express our basic philosophy on processing used Group products. Under the guidelines, we have designated three key elements for operating a wide area certification system: (1) an outline of the system; (2) processing under the system; and (3) establishing an operational system and clarifying the concrete management and operating procedures. In addition, we are working to ensure the effective operation and management of processing under the wide area certification system using tools, such as a checklist to confirm the status of processing by waste processors, and by showing a series of examples in the guidelines.

# Building Better Relationships with Local Communities

**We contribute to local communities through our business activities.**

## Stable Supply of Photovoltaic Generation Systems

A photovoltaic generation system using the GS Yuasa's lithium-ion batteries has been in operation at the Kushiro Town Toritoushi Wildland Photovoltaic Generation Plant in Hokkaido since April 2017.

When generating photovoltaic power, changes in natural conditions, such as sunshine hours and temperature, can lead to significant fluctuations in the power generated, while a major increase in the photovoltaic power load could reduce the quality of the system's power in terms of both voltage and frequency. For this reason, in Hokkaido, it is necessary to reduce output fluctuations by installing storage battery systems when connecting photovoltaic power generation to power systems. The GS Yuasa Group's lithium-ion battery system was installed at this plant as a key device to reduce power output fluctuations.

The Group continues to promote the use of high-performance lithium-ion battery systems in power generation and is aiming to contribute to creating sustainable local communities using renewable energy.



Industrial lithium-ion battery module LIM50EN series



Overall view of Kushiro Toritoushi Wildland Photovoltaic Generation Plant



## GS Yuasa Eco Art Contest for Elementary School Children

Since FY 2009, GS Yuasa Battery Ltd. has sponsored the GS Yuasa Eco Art Contest for Elementary School Children to give the pupils, who will become the young citizens in the future, an opportunity to express their thoughts on the global environment.

This contest program provides the opportunity for children and their families to come together and think about the environment. We plan to continue holding this event in the future.



Gold award-winning entry

## Regional Contributions at GS Yuasa Siam Industry Ltd.

GS Yuasa Siam Industry Ltd. (GYSI), our group companies in Thailand, promotes local activities with a focus on community interaction.

In the past, the company implemented a number of programs that contributed to the local community. These programs include cleanups and fundraising for local elementary schools and temples, running an ice cream stall at an event for children (second Saturday in January), installing lights at an elementary school after shifting to LED lighting, holding factory tours for school students and sponsoring a long-distance race at an industrial park. This activity was recognized by the Thai government, garnering the CSR-DIW Award\* for the second year running in 2017.

As a company rooted in the local community, GYSI also promotes interaction through education for local citizens that goes beyond donations and volunteering.

\*The CSR-DIW Award is given by the Department of Industrial Works (DIW) in Thailand to companies that promote exceptional business activities that contribute to sustainable development and the local community.



Plaque for the CSR-DIW Award



Participating in the construction of a dam (as a measure against flash floods during the monsoon season)



GYSI factory tour for local junior high students



## Ensuring Social Responsibility within Our Supply Chain

**The GS Yuasa Group, together with the supply chain, will contribute to creating a sustainable society.**

### Major Procurement Programs

The GS Yuasa Group provides education and guidance on compliance and CSR (corporate social responsibility) to business partners, checks the way they manage harmful substances in products, responds to conflict minerals via surveys and encourages green procurement. We also started activities to help our business partners improve results as well as study sessions and presentations on how to boost quality.

Through better partnerships in the supply chain, we are improving the results of both our business partners and the GS Yuasa Group, while decreasing business risk.

#### Basic Procurement Policy

**We intend to boost the results of our business partners and the GS Yuasa Group by working to create better partnerships based on mutual understanding and relationships of trust.**

### Briefing Sessions on Production

GS Yuasa holds briefing sessions on production run by management as well as social gatherings every year to increase our major business partners' understanding of the GS Yuasa Group's management policies, annual business policy and basic procurement policy. This also deepens mutual understanding and strengthens relationships of trust with these business partners. In addition, we give awards to business partners who have made outstanding contributions to quality, price and the supply system over the previous fiscal year.

### Ensuring Quality and Health/Safety

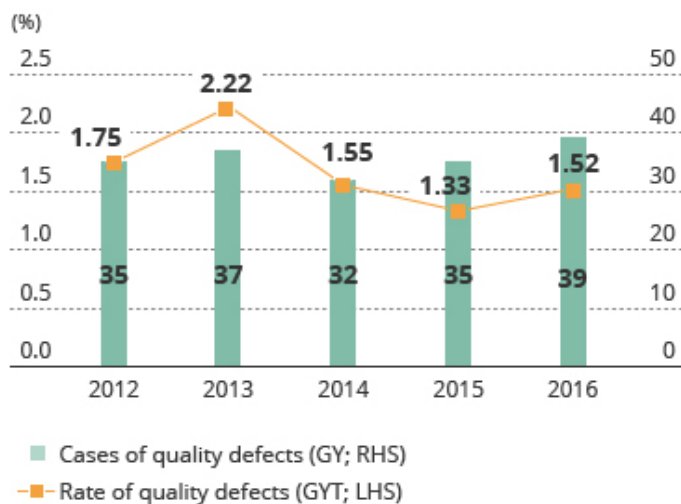
To promote activities that raise quality and enhance health and safety, including for business partners who supply parts and raw materials, the GS Yuasa Group provides guidance on quality reflecting the needs of our business partners as well as health and safety patrols, if required. In programs that raise quality, we share with business partners the target values and the results of quality defect analysis of products supplied to the Group and work to



improve the quality of these items along with our partners. Target values for FY 2017 were 27 cases (GS Yuasa International Ltd. (GY)) and 1.17% (GS Yuasa Technology Ltd. (GYT)).

We believe that these activities create strong partnerships in the supply chain and are important to ensure the quality of products used by customers as well as the health and safety of our business partners.

### ■ Incidence of Quality Defects



Guidance on Quality for Business Partners

\* Period: April to March of the following year

## Response to Conflict Minerals

Every year, the GS Yuasa Group's domestic production division analyses how business partners deal with conflict minerals<sup>\*1</sup> through surveys using EICC and GeSI template forms.<sup>\*2</sup> By checking throughout the supply chain, right back to refining, we can verify that none of our suppliers contribute to conflict minerals. The Group's production division overseas also continually investigates conflict minerals. In fiscal 2016, we formulated a policy to deal with these minerals and distributed it to our overseas affiliates.

<sup>\*1</sup> Conflict minerals are tantalum, tin, tungsten, gold and their derivatives used as resources by antigovernment armed groups who commit inhumane acts in the Democratic Republic of the Congo and neighboring countries.

<sup>\*2</sup> Templates issued by the Electronic Industry Citizenship Coalition (EICC) and Global e-Sustainability Initiative (GeSI), organizations working to tackling the problem of conflict minerals, to check whether conflict minerals have been used or not.

### Policy on Conflict Minerals Overview

- We will never procure or use conflict minerals.
- If it is discovered that conflict minerals have been procured or used, we will contact the overseas site and supplier and take steps to avoid using them again.
- We will continually investigate the use of conflict minerals. In cases of possible procurement and use of conflict minerals, when information on the purchasing source has not been disclosed, we will work to clarify information on the purchasing source.

## Green Procurement

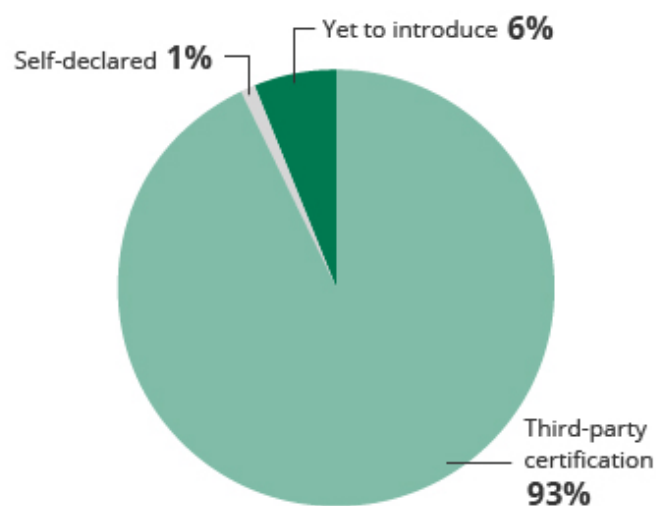
The GS Yuasa Group in Japan makes the following requests of business partners based on our Green Procurement Criteria.

Requirements for Business Partners
<ol style="list-style-type: none"> <li>1. Operation of an environmental management system</li> <li>2. Examination of chemical substances contained in items being supplied</li> <li>3. Checking the legality of cutting down certain trees (logging)</li> <li>4. Programs to identify and reduce CO<sub>2</sub> emissions</li> </ol>

For 2. above, we ask our business partners to examine substances using Chemical Substance Management Guidelines, which comply with international laws and regulations including EU directives (REACH, RoHS, etc.), and to test individual chemical substances as specified by customer needs.

GS Yuasa evaluates the appropriateness of stipulations to business partners concerning green procurement by checking and auditing the status of their response. By prioritizing those business partners that supply goods that conform to green procurement standards, we are reducing the environmental burden, including the burden within the supply chain.

### ■ Introduction of Environmental Management System by Business Partners (FY 2016, transaction amount base)



## Promoting CSR-based Procurement

The GS Yuasa Group assesses business partners using a QCDE approach (quality, cost, delivery and environment). Going forward, we will add elements of CSR to these assessments to ensure that our social responsibility is being met throughout the supply chain. To achieve this goal, we will share the GS Yuasa Group's CSR Procurement Guidelines with our business partners and work to promote CSR procurement based on mutual cooperation. For new transactions, we will prioritize business partners that understand and accept the Group's CSR Policy.

In briefing sessions on production in fiscal 2017, we are asking our business partners to strengthen their CSR initiatives and to cooperate with us on CSR-based procurement, and we plan to identify CSR risk in the supply chain by analyzing survey and assessment results.

# Editorial Policy

Final update: November 16, 2017

We report herein on the GS Yuasa Group's CSR activities. We disclose information that considers the opinions of stakeholders and their importance to the GS Yuasa Group.

## Period covered

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Focus on Fiscal 2016 (April 1, 2016 to March 31, 2017)

## Coverage

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GS Yuasa Group (GS Yuasa Corporation and major domestic and overseas subsidiaries)

The term "the Company" refers to GS Yuasa Corporation. An explanation is given in a particular situation if this coverage differs.

## Accuracy of information

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To ensure the accuracy of the information we disclose, it is verified by multiple departments first, such as the department in charge of the specific area and the Public Relations Department.