



Environmental & Social Report  
环境・社会報告書

2016

 GS YUASA

The logo consists of the letters 'GS' in a green sans-serif font, followed by 'YUASA' in a larger green sans-serif font. A thin orange diagonal line starts from the top of the 'G' and extends upwards and to the right, ending at the top of the 'A'.

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## Regarding the preparation of this report

This Environmental & Social Report, part of our commitment to keeping our various stakeholders informed, introduces in a clear and understandable manner the efforts of the GS Yuasa Group to implement sustainable business initiatives. We present this report for the purpose of soliciting the opinions of the public, and we intend to reflect the intent of these opinions in our management initiatives.

In compiling this report, we have followed the 2012 edition of the Environmental Reporting Guidelines issued by the Ministry of the Environment of Japan. We have prepared this report in print form in addition to posting digital versions on our website.

## Publication and requests for information

### Publication

July 2016  
(next publication planned for July 2017)

### Production department / requests for information

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## Reporting information

### Organizations covered in this report

This report presents information on the six domestic offices listed below. In addition, Blue Energy Co., Ltd. has been included within our Osadano office.

Office	Date of ISO 14001 certification (certification number)	Primary business activities (Scope of ISO 14001 certification)
Kyoto office	December 24, 1997 (EC97J1151)	Research, development, design, manufacture and sales of storage batteries, power supply system, lighting equipment and other products
Osadano office	June 12, 1998 (JQA-EM0173)	The manufacture of automotive lead-acid batteries and industrial batteries; the research and development, manufacture and sales of automotive and industrial lithium-ion batteries; the development and manufacture of battery production facilities; and the design / development, manufacture and sales of membranes, filtration systems and separators
Odawara office	November 27, 2009 (E1298)	The manufacture of lead-acid batteries for automotive use and industrial use; the design / development and manufacture of alkaline storage batteries for industrial use and vehicle use; and storage and shipment of industrial batteries
Gunma office	December 25, 1998 (EC98J1133)	Manufacture of automotive lead-acid batteries
Lithium Energy Japan	September 26, 2011 (EC11J0028)	Design, development, manufacture & servicing of large lithium-ion batteries (repair, maintenance & safety checks)
GS-Ibaraki Works, Ltd.	March 1, 2013 (JQA-EM6943)	Manufacture of valve regulated lead-acid batteries

### Business activities covered by this report

The focus of this report is the product life cycle (including development & design, procurement, production, physical distribution & sales, use and collection of products).

### Period of report coverage

April 1, 2015-March 31, 2016  
(Some of the data, however, predates March 31, 2015.)

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### 环境报告

<b>专题</b>	在生产过程中利用太阳能发电 杰士汤浅集团利用太阳能发电来抑制生产 过程中的CO <sub>2</sub> 排放和应对电力短缺。	7
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## 关于本报告书的编辑

本报告书的编辑力求通俗易懂地向广大利益相关方报告杰士汤浅集团为建设可持续性发展社会所做的努力，并得到社会的广泛评价，以反馈在企业经营情况上。

另外，编辑本报告书时谨以日本环境省发行的《环境报告书指南（2012年度版）》作为参考。同时，

本集团的环境·社会报告书每年除以出版物的形式发布外，还刊登在本公司的网站上以备查阅。

## 发行时间和咨询处

### 发行时间

2016年7月  
(下次发行时间预计在2017年7月)

### 制作部门、咨询处

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网址 : <http://www.gs-yuasa.com/en>

## 报告涵盖信息

### 报告涵盖的组织

以国内的6家事业所为中心进行报告。此外，“Blue Energy Co., Ltd.”包含在长田野事业所之内。

事业所	取得ISO14001认证日期 (注册证号)	主要事业活动 (ISO14001注册活动范围)
京都事业所	1997年12月24日 (EC97J1151)	各种蓄电池、电源系统、照明器材以及其他电气机器的研究、开发、设计、制造和销售
长田野事业所	1998年6月12日 (JQA-EM0173)	汽车用铅蓄电池以及产业用电池的制造；汽车用以及产业用锂离子电池的研究与开发、制造和销售；电池生产设备的开发和制造；过滤膜和过滤系统以及分离器的设计、开发和制造、销售
小田原事业所	2009年11月27日 (E1298)	汽车用和产业用铅蓄电池的制造以及产业用、车辆用碱蓄电池的设计、开发和制造；产业用电池的保管及发货
群马事业所	1998年12月25日 (EC98J1133)	汽车用铅蓄电池的制造
Lithium Energy Japan	2011年9月26日 (EC11J0028)	大型锂离子电池的设计、开发、制造及服务（维护检查及修理）
株式会社 杰士茨城制作所	2013年3月1日 (JQA-EM6943)	控制阀式铅蓄电池的制造

### 报告涵盖的企业活动

围绕对象组织在产品生命周期（开发·设计、采购、生产、物流、销售、使用、回收）方面的活动进行报告。

### 报告涵盖的时间

2015年4月1日-2016年3月31日  
(但是，部分数据包含2015年3月以前的信息。)

**GS Yuasa Corporation**

Form the management plan and strategy for GS Yuasa Group and administer the group of companies

Established April 1, 2004  
 HEAD Office 1, Inobanba-cho, Nishinoshio, Kissho-in, Minamiku, Kyoto 601-8520, Japan  
 TOKYO Branch 1-7-13, Shiba-koen, Minato-ku, Tokyo 105-0011, Japan  
 Capital stock 33 billion yen

**GS Yuasa International Ltd.**

Manufacturing &amp; sales of automotive batteries, industrial batteries, power supply systems, switch gear, lighting equipment, ultraviolet systems, specialty equipment and other electrical equipment

**GS Yuasa Battery Ltd.**  
 Sales of automotive battery for replacement market; sales of automobile-related products

**GS Yuasa Technology Ltd.**  
 Manufacturing, sales and technical service of other batteries, charging/discharging rectifiers and other electrical equipment; contracting of research & development

**GS Yuasa Fieldings Ltd.**  
 General engineering services for industrial batteries, power supply systems and power conversion systems

**GS Yuasa Accounting Service Ltd.**  
 Affiliated-company finance and accounting business

**Lithium Energy Japan**  
 Development, manufacturing & sales of large lithium-ion batteries

**Blue Energy Co., Ltd.**  
 Development, manufacturing & sales of high-performance lithium-ion batteries

**GS-Ibaraki Works, Ltd.**  
 Manufacturing of valve regulated lead-acid batteries

**株式会社 杰士汤浅**

杰士汤浅集团企业整体经营战略的统筹策划

设立 2004年4月1日  
 总公司 邮编 601-8520 日本国京都市南区吉祥院西之庄猪之马场町1番地  
 东京分公司 邮编 105-0011 日本国东京都港区芝公园1-7-13  
 资本金 330亿日元

**株式会社 杰士汤浅国际**

汽车用和产业用各类电池、电源系统、受变电设备、照明器材、紫外线应用机器、特种专业机器、其他电气设备的生产和销售。

**株式会社 杰士汤浅蓄电池**  
 补修市场中汽车电池以及汽车相关。

**株式会社 杰士汤浅工艺**  
 其他电池和充放电用的整流器等电子设备的制造销售、技术服务及研究开发业务的承包。

**GS Yuasa Fieldings Ltd.**  
 产业用电池、电源系统、受变电设备的综合工程服务。

**株式会社 杰士汤浅财务公司**  
 分公司财务、财会业务。

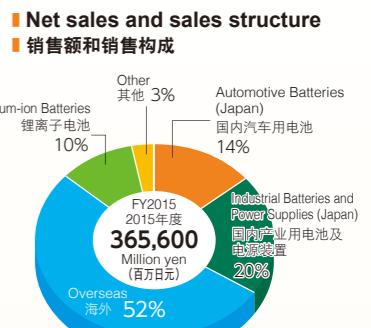
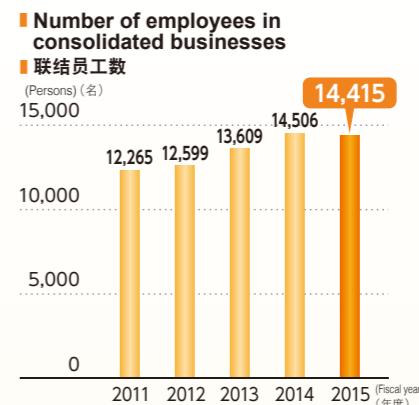
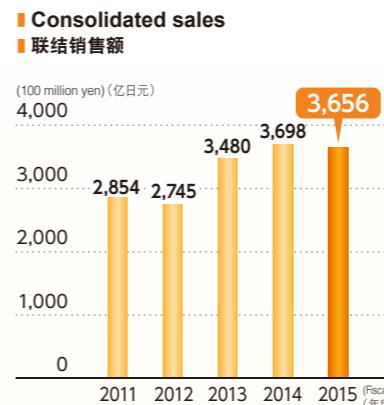
**Lithium Energy Japan**  
 大型锂电池的开发、制造和销售。

**Blue Energy Co., Ltd.**  
 高性能锂电池的制造、销售和研究开发。

**株式会社 杰士茨城制作所**  
 控制阀式铅蓄电池的制造。



38 locations in 17 countries 17国・38个基地

**Corporate Data 业绩数据**

## The GS Yuasa Group continues to develop its business through practicing environmental management while contributing to the emergence of a sustainable society.



We are pleased to present to the reader the 2016 edition of our Environmental & Social Report.

During fiscal 2015, Japan's economy was bolstered at the macro level with growth in the GDP and increased employment, although consumer spending and capital investment were both restrained.

Looking to the global economy, the slowing growth of China and the emerging economies began to impact the economies of neighboring countries. The uncertain future — including continued adjustment of natural resource prices and the likelihood of a trend toward rising interest rates in the U.S.A. — requires continued monitoring.

These economic conditions served as the backdrop for a major event convened to address the environmental issue of global warming. The United Nations Conference on Climate Change (COP21) was held in Paris at the end of 2015, with each participating country and economic zone adopting voluntary greenhouse gas emission reduction targets while also seeking to reconcile various other interests. In addition, an agreement was reached to ensure verification procedures are undertaken every five years. Through the efforts of all participating nations, including the United States, a political agreement was reached that accommodates the varying economic circumstances and uneven impact of global warming issues affecting the respective signatories. This agreement can be considered a major step forward. For its part, Japan submitted a draft proposal, which was approved, to reduce its greenhouse gas emissions to 26% below 2013 levels by 2030.

As is common knowledge, Japan has already begun to implement domestic measures intended to meet its obligations in this regard. In the years ahead, Japan will remain committed to further advancing measures intended to reduce the threat of climate change. These measures include the initiatives already under way, such as the long-term goal-setting for the power generation mix that was announced last year, the adoption of the Act on Improvement of Energy Consumption Performance of Buildings, and the Chlorofluorocarbons (CFCs) Emissions Control Act. It is expected that the national budget will include measures to enhance private sector incentives. Companies such as ours, as well as our employees, must be prepared to comply with these measures.

In light of such trends, this is an appropriate time to readdress the concept of "environmental management." To be sure, environmental management refers to a management approach that is easy to say but difficult to implement. Clearly, the principal business of our Group is manufacturing; we conduct business by procuring resources and consume them as we manufacture products that we provide to our customers. Naturally, our operations have an environmental burden of one kind or another, but the days are over when one can simply regard such burdens as a normal part of doing business. In the past, a company would see its primary role as simply pursuing growth and profits and the distribution of a portion of those profits to the individuals who supported the company.

In recent years, however, companies have come under increasing pressure to conduct their businesses with a clear stance toward adopting effective initiatives to contribute to society and the local environment. In addition to pursuing the above role, companies are now applying solutions to social issues through their business operations while also helping to solve environmental issues. Of course, those corporate managers who lack a social and environmental perspective are exposing their stakeholders and their own companies to risk. With the revision of the ISO 14001 standard last year, this issue will remain at the forefront.

At the G7 meeting of Ministers of the Environment ahead of the G7 Ise-Shima Summit held in May 2016, the attendees discussed a variety of environmental issues that required attention from the global community, including the issue of mitigating global warming. The joint statement issued by the Ministers reflected their eagerness to be effective and went a step beyond the conventional limits of international coordination by including promotion of the Joint Crediting Mechanism (JCM). I believe this significant result indicates the global spread of the advanced environmental technologies that Japanese companies have to offer and represents the extent to which businesses contribute to society. In the year ahead, GS Yuasa intends to participate in the JCM business in collaboration with Bangladesh by utilizing technologies incorporating lithium-ion batteries.

In the domestic market, our Group's proprietary products and technologies are contributing to society and business development while also improving the living environment through the application of energy storage technology on remote islands, supplanting the use of diesel engines on railroads and in other transportation equipment, controlling CO<sub>2</sub> emissions by storing regenerated energy, providing battery technology to the expanding eco-car market, providing effective electricity storage systems for the renewable energy sector, and offering water treatment technology. We are confident that market demand in these sectors will continue to expand. All our Group employees continue to pursue environmental management from every angle, including aspects of everyday life and our business operations, and we remain committed to spreading awareness of this approach.

The GS Yuasa Group will continue to work toward developing and manufacturing products that provide solutions to these social issues.

GS Yuasa Corporation  
President Osamu Murao



### Philosophy

## Innovation and Growth

We are committed to the people, society and global environment through Innovation and Growth of our employees and business entities.

### Vision

We are committed to delivering security and comfort to our customers around the globe through advanced technologies developed in the field of stored energy solutions.

### Management policy

1. GS Yuasa will become "First call" company based on our "Customer First" policy.
2. GS Yuasa considers "Quality" and "Safety" as most important, and supply environmentally considered product all over the world.
3. GS Yuasa will comply with all laws and operate by clear and fair management.

### 来自管理高层的承诺

## 杰士汤浅集团将实现“为可持续发展社会作贡献”和“通过环保经营的实践不断发展事业”的并存。

本年度，杰士汤浅集团继续向大家公布环境·社会报告书。

上年度的日本经济虽然出现个人消费下滑、设备投资停顿等个别严峻的指标，但也传来了GDP转为正增长、雇用状况好转等宏观经济数据转好的鼓舞人心的好消息。而在世界经济方面，由于以中国为代表的新兴国家的增长放缓也影响到周边国家的经济，此外，由于资源价格的大幅调整以及美国的加息动向等情况，也都表明世界经济仍处于需要仔细观察的状况。

在这种形式下，去年在世界性环境课题的抑制地球变暖方面出现了一件令人瞩目的大事。去年年底在巴黎召开的COP21上，虽然为调整各国的利害关系而苦心焦虑，但所有参与国和经济圈都设定和发表了自主性温室效应气体减排目标，并对每5年重审减排目标达成一致。这是包括美国在内的所有参与国，能够不受本国的经济情况及所面临的气候变暖程度不同的影响而达成的政治决定，可以说跨出了历史性的巨大的一步。在COP21上，日本政府也提出了以2030年的温室效应气体排放与2013年相比减少26%为主旨的承诺草案并得到承认。

众所周知，日本政府已经开始采取为履行该承诺的各种措施。去年公布的电源配置的长期目标设定、建筑物节能法、氟利昂排放抑制法的施行等，包括现在已经开始实施的措施，相信今后，仍将进一步完善抑制地球变暖的对策，并投入奖励民营企业的预算。我们企业以及所有员工也都必须认真予以应对。

基于这种趋势，我们有必要来重新来探讨一下“环保经营”的含义。“环保经营”是一种说易行难的经营方法。毋庸赘言，杰士汤浅集团的主要业务是产品制造，而这就意味着我们需要通过采购和消费资源，并向客户提供产品来完成我们的事业活动。当然，在开展事业活动的过程中就可能出现对环境造成影响的情况，而认为这是理所当然的时代已经一去不复返。至今为止，企业大都是将追求利益、谋求发

### 企业理念

## 革新与成长

通过员工和企业的“革新与成长”，为人类、社会和地球环境作出贡献。

### 经营目标

我们通过电池而培植积累起来的先进能源技术，致力于为全球客户提供舒适而安心的服务。

### 经营方针

1. 杰士汤浅将以“客户至上”为宗旨，成为客户的“首选”公司。
2. 杰士汤浅重视“质量”，提供考虑到环境与安全的产品以及服务。
3. 杰士汤浅将遵循所有法律规定，实现高度透明、公平的管理。

展，并将成果分配给利益相关方视为主要的职责。但是，近年来，通过事业活动为解决社会性课题及改善环境做贡献等企业对于社会和环境的明确的观点和行动，也成为事业运营的一个组成部分。缺乏环境和社会性观点的经营，则可能给本公司及利益相关方带来风险。去年ISO14001修改主旨也表明，今后该需求也将不断增多。

在今年5月的伊势志摩峰会之前召开的G7环境部长会议中，就抑制地球变暖等国际社会需要解决的各种环境课题进行了讨论。在通过的联合声明中，加入了推进联合计人机制(JCM)等比原有的国际协调更进一步的更有效且更积极的内容。这个意义非凡的提议，指明了如何将日本企业所拥有的环保技术在全球进行应用，如何通过事业活动为社会做贡献的方向。今年，杰士汤浅集团也将通过利用锂离子电池进行蓄能的技术应用，以孟加拉国为伙伴国而参加到JCM事业的行列之中。

在国内事业方面，我们将通过在孤岛应用蓄能技术改善生活环境、铁路等输送设备的无柴油化、利用再生电力粗存抑制CO<sub>2</sub>排放、向不断扩大的环保汽车提供电池、可再生能源的高效率蓄电系统及水处理技术等杰士汤浅集团所拥有的技术和产品为社会和我们公司的事业发展做出贡献。而且，预计这些需求领域将进一步扩大。我们承诺：杰士汤浅集团所有员工将在事业活动及日常生活的所有方面致力于各自的“环保经营”，以更高的觉悟来开展行动。

杰士汤浅集团将通过产品制造，为开发和提供有助于解决这些社会性问题的产品而不断努力。

株式会社 杰士汤浅  
董事长  
董事社长 村尾 修

村尾 修



**GS Yuasa  
Gunma  
Photovoltaic  
Power Plant**  
杰士汤浅群马  
太阳能发电站

**Special  
Feature**  
**专题**

**Utilizing photovoltaic  
power for manufacturing**  
在生产过程中利用  
太阳能发电

**The GS Yuasa Group  
CO<sub>2</sub> emissions from**  
杰士汤浅集团利用太阳能



**Iwaki Yuasa  
Photovoltaic  
Power Plant**  
磐城汤浅  
太阳能发电站

**generates photovoltaic power in order to control its  
production while also addressing the electricity shortage.**  
发电来抑制生产过程中的CO<sub>2</sub>排放和应对电力短缺。

**Features of GS Yuasa Gunma Photovoltaic Power Plant**

Our Group's Gunma Plant in the city of Isesaki, Gunma Prefecture, is the site of GS Yuasa's 1-MW Gunma Photovoltaic Power Plant.

This solar power plant participates in the Feed-in-Tariff Scheme for Renewable Energy promoted by the Ministry of Economy, Trade and Industry by selling the electricity it generates to Tokyo Electric Power Co., Inc. As an emergency power source, it can supply 100 kW during an internal power outage because the plant incorporates an independent operation function and high-capacity 100-kWh lithium-ion batteries.

Our Group supplies equipment capable of making good use of this renewable energy, including a system that links solar power sources and storage batteries in order to supply electricity during a power outage caused by a natural disaster or the like. We can meet a variety of needs with flexibility. This includes absorbing power fluctuations and supplying power during periods of reduced peak power consumption and during shifting peaks that will occur in the future.

**杰士汤浅群马太阳能发电站的特征**

在杰士汤浅集团群马事业所(群马县伊势崎市)内,修建了输出容量1MW的“杰士汤浅群马太阳能发电站”。

该太阳能发电站利用经济产业省所推进的“可再生能源的固定价格买进制度”,将所发电力出售给东京电力株式会社。此外,由于装配了独立运转功能及100kWh的大容量锂离子电池,停电时可作为应急电源对事业所进行100kW的供电。

杰士汤浅集团提供将太阳能发电和蓄电池进行组合,可在发生灾害而停电等情况时进行供电的系统等有效利用可再生能源的方法。今后,我们将进一步灵活应对电力波动吸收及削峰填谷等各种需求。



Battery charger for electric vehicles provided at the Gunma Plant  
设置在群马事业所的电动汽车充电器



Utility-connected inverters and  
lithium-ion batteries in the Gunma Plant  
群马事业所的功率调节器和锂离子电池

First, the Gunma Photovoltaic Power Plant is equipped to provide power output of 300 kW independently, which enables it to supply electricity generated with solar panels during a blackout caused by a natural disaster or the like. Second, unusual for a mega solar power plant, the system is equipped with high-capacity 100-kWh stationary lithium-ion batteries. As a result, it can supply the plant with 100 kW of electricity during a nighttime blackout caused by a natural disaster or the like. Third, it is equipped with quick-chargers for use with electric vehicles. This ensures that electric and plug-in hybrid electric vehicles can be charged during normal times or even during a power outage resulting from a natural disaster.

群马太阳能发电站的特征是:(1)由于装配了300kW独立运转功能,在发生灾害而停电等情况时,也可通过太阳能电池板发电而进行供电;(2)在大型太阳能发电站中,由于是罕见地装配了100kWh大容量的固定锂离子电池的系统,所以在发生灾害而在夜间停电时,可对事业所进行100kW的供电;(3)与电动汽车快速充电器同时设置,可在平时或发生灾害而停电时,对电动汽车或插入式混合动力汽车进行充电。

**Facility Overview of Photovoltaic Power Plant**

Total area	About 12,480 m <sup>2</sup>
Output	1 MW (1000 kW)
Photovoltaic cell installation	Ground level (about 1000 kW)
Solar panels	About 4,110 units
Utility-connected inverters	1 MW (100 kW × 9 units, 50 kW × 2 units) 1100 MWh
Annual power generation	About 345,950 kg-CO <sub>2</sub>
Estimated CO <sub>2</sub> reduction	About 249,700 L
Estimated amount of oil conserved	About 672,008 m <sup>2</sup>
Estimated forest cover equivalent	February 2015

**太阳能发电站的设备概要**

占地面积	约12,480m <sup>2</sup>
输出容量	1MW (1000kW)
太阳能电池设置概要	地上部分 (约1000kW)
太阳能电池板片数	约4110片
功率调节器概要	1MW (100kW×9台、50kW×2台)
发电量 (全年)	1100MWh
CO <sub>2</sub> 削减效果 (推算)	约345,950kg-CO <sub>2</sub>
石油削减效果 (推算)	约249,700公升
森林面积换算 (推算)	约672,008m <sup>2</sup>
运转开始时间	2015年2月

**Facility Overview of Photovoltaic Power Plant**

Total area	About 14,600 m <sup>2</sup>
Output	1 MW (1000 kW)
Photovoltaic cell installation	Ground installation area (equivalent to about 750 kW) Plant roof area (equivalent to about 250kW)
Solar panels	About 4,400 units
Utility-connected inverters	Line Back Gamma (250 kW) × 4 connected in parallel 1100 MWh
Annual power generation	About 345,950 kg-CO <sub>2</sub>
Estimated CO <sub>2</sub> reduction	About 249,700 L
Estimated amount of oil conserved	About 672,008 m <sup>2</sup>
Estimated forest cover equivalent	June 2013

**太阳能发电站的设备概要**

占地面积	约14,600m <sup>2</sup>
输出容量	1MW (1000kW)
太阳能电池设置概要	地上部分 (约相当750kW) 厂房屋顶部分 (约相当250kW)
太阳能电池板片数	约4400片
电源调节器概要	Line Back Gamma (输出250 kW) × 4台并列使用 1100MWh
发电量 (全年)	约345,950kg-CO <sub>2</sub>
CO <sub>2</sub> 削减效果 (推算)	约249,700公升
石油削减效果 (推算)	约672,008m <sup>2</sup>
森林面积换算 (推算)	2013年6月
运转开始时间	



Utility-connected inverters  
磐城汤浅功率调节器

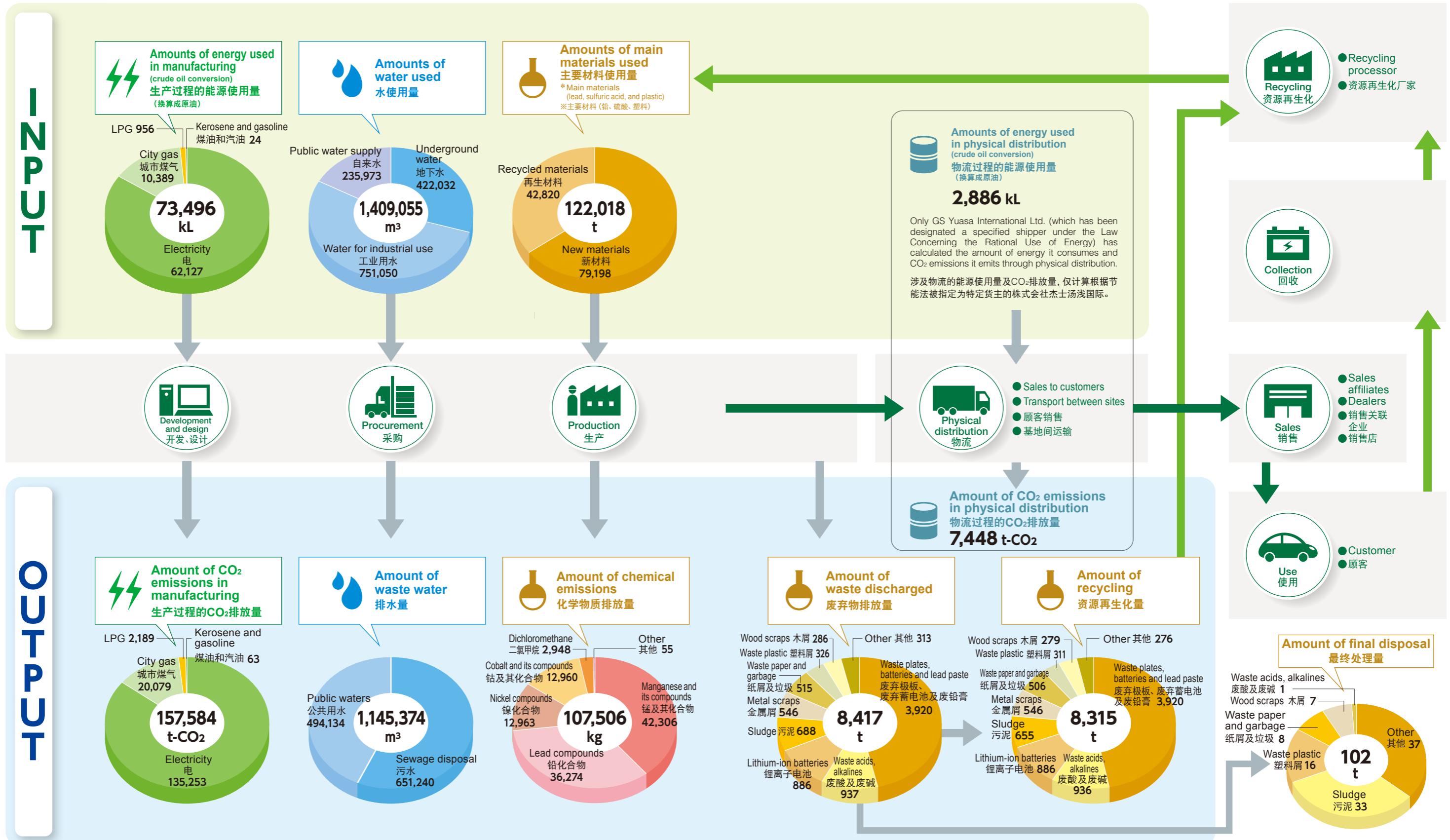


## Business activities and the environment

We are committed to reducing environmental burdens throughout the product life cycle, and not merely during manufacturing operations.

Our Group manufactures and sells batteries, power supply systems, and lighting equipment and provides related services to many sectors of business and society. Our business operations consume energy, water, raw materials, and other resources while generating waste water, waste products, the greenhouse gas, and other materials. We are well aware of the impact of our business operations on the environment. At the same time, we are striving to reduce CO<sub>2</sub> emissions and use resources efficiently. In addition, we consider environmental impacts right from the product development and design stages through to the stages of material procurement, production, transport, sale, use, and disposal. Thus, our "product design for the environment" initiative strives to reduce environmental burdens throughout the product life cycle by, for example, promoting the recycling of depleted batteries.

## Material flow in business activities (Scope: Fiscal 2015 results from six offices in Japan)





Fundamental policies and a medium-term plan for environmental conservation

## We will balance environmental conservation and economic development by developing a medium-term plan with policies targeting environmental conservation.

### ■ Third Five-Year Environmental Plan (Fiscal 2014–18) and Fiscal 2015 Results

#### Our Policies and Medium-term Plan for Environmental Conservation

We established a Fundamental Environmental Policy that sets out our basic approach to our group-wide environmental initiatives. In our domestic offices, we have developed an organizational environmental management system and have been promoting initiatives to implement our environmental policy, which is based on our overarching environmental policy.

We have developed medium-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.

(Our medium-term plans apply to our offices in Kyoto, Osadano, Gunma and Odawara.)

#### GS Yuasa Group Fundamental Environmental Policies

##### 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 environmental impacts of our business activities, products and services, and we are working to reduce environmental burdens and to prevent pollution. Through energy and resource conservation, waste reduction and recycling, we will continuously improve our results.
- 2** We promote the development and design of products that protect the environment throughout product life cycles. We seek to reduce environmental burdens from the product development and design stages to manufacture, 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 and targets.
- 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 steadily 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 providing information related to the environment, including our fundamental environmental policies.

	Third Five-Year Environmental Plan  Key items Objectives	(Fiscal 2014 to 2018)	
		Fiscal 2015 Results	Self-assessment/Challenges
<b>1</b>	<b>Energy conservation &amp; GHG emissions reduction</b> By fiscal 2018, to reduce the CO <sub>2</sub> emissions intensity related to production by at least 5% of the fiscal 2013 level	Our CO <sub>2</sub> emissions intensity related to production was the same as the fiscal 2013 level. (13.0 g-CO <sub>2</sub> /Wh)	Because of the tendency toward increased energy consumption, we must address energy conservation and cost reduction through increased energy efficiency.
	By 2018, to reduce the energy consumption intensity related to physical distribution by at least 5% of the fiscal 2013 level	Our energy consumption intensity related to physical distribution was 7% below the fiscal 2013 level. (0.0475 L/ton-km)	
	To build and operate an effective energy management system	We implemented energy-efficiency measures through our environmental management system.	We must design and implement a system responding to management risk regarding energy.
	<b>Resource conservation</b> We will reduce the rate of production errors and defective products (consistency with ISO 9001).	The lead scrap rate was 3%.	Through coordination of process improvements and "product design for the environment," we must strengthen our efforts to reduce waste and loss.
	We will reduce the lead scrap rate to less than 2% by fiscal 2018.		
	We will reduce the volume of waste water related to production by at least 77% of the fiscal 2003 level by fiscal 2018.	We reduced the volume of waste water by 61% of the fiscal 2003 level. (882,000 m <sup>3</sup> )	The water recycling rate has tended to increase. It is important that we continue to promote our water recycling in the future.
	<b>Recycling</b> To achieve a 100% rate for industrial products discarded under the wide area certification system by fiscal 2018	Industrial products discarded under the wide area certification system totaled 99.8%.	The percentage of used industrial products processed under the wide area certification system has been increasing annually. The system has gradually taken root.
	To build the next-generation lithium-ion battery-recycling system	We considered a scheme for collecting lithium-ion batteries installed in next-generation vehicles.	It is important that we establish an appropriate recycling scheme for lithium-ion batteries used in next-generation vehicles, as that market is expected to grow.
<b>2</b>	<b>Environmentally considered products</b> To popularize design for the environment (DfE) products	We developed and designed the products based on the GS Yuasa Design for the Environment Guidelines issued in October 2005.	Considering the development of diverse product applications, the incorporation of environmental considerations in product design is insufficient.
<b>3</b>	<b>Promotion of green procurement</b> We will support the acquisition and advancement of environmental management system certification by suppliers.	Two of our suppliers obtained initial third-party certification of their environmental management systems.	We must continue to support our suppliers' efforts to introduce and improve their environmental management systems.
<b>4</b>	<b>Management of chemicals</b> We will monitor the material flow of chemicals regulated by Chemical Management Guidelines.	In coordination with our green procurement initiative, we implemented comprehensive identification and management of the chemicals contained in our products and complied with domestic and international regulations regarding their content levels.	We must continue to manage the chemicals contained in our products by accommodating regulatory compliance as well as customer requirements.
<b>5</b>	<b>Thorough environmental risk management</b> To utilize our environmental management systems to thoroughly implement environmental risk management throughout the product life cycle	We implemented environmental risk management through our environmental management systems.	We must review the environmental risk presented by deteriorating facilities.
<b>6</b>	<b>Compliance with laws</b> To promote the improvement of environmental management technologies by adopting voluntary management standards stricter than existing environmental laws and regulations	There were no instances of emergencies directly related to environmental pollution and no instances of lawsuits, punitive fines, or administrative fines related to environmental issues.	We need to ensure effective risk management aiming for full compliance with laws.
<b>7</b>	<b>Maintenance and continuous improvement of environmental management systems</b> To achieve continuous improvement of our environmental management systems in order to achieve effective environmental management	We improved our environmental management systems by addressing the issues identified through our periodic internal and external audits.	We must continue to improve our environmental management systems in order to achieve thorough environmental risk management.
<b>8</b>	<b>Contributions to society</b> To actively participate in environmental conservation efforts on an ongoing basis	We conducted environmental educational programs at elementary schools and cleaned the areas neighboring our offices.	
<b>8</b>	<b>Communication about the environment</b> To obtain positive appraisals of our environmental management efforts as a result of the expanded scope of disclosure of environmental information in our Environmental & Social Report	To reach a wider range of stakeholders, we expanded our external communications, which included the publishing of our Environmental & Social Report.	We must promote social contributions and environmental communications that correspond to the needs and expectations of stakeholders.



## 环境基本方针及中期计划

# 依据环境基本方针，制定中期计划， 为同时实现环境保护和经济发展而努力。

### 杰士汤浅集团的环境基本方针及中期计划

本公司制定了表明杰士汤浅集团整体关于环保活动的基本想法的环境基本方针。国内各事业所根据该环境基本方针制定相应的环境方针，并构建组织性环境管理体制，推进为实现环境方针的相关活动。

关于环境基本方针的重点事项，以为实现可持续性发展社会作贡献为目的而制定的中期计划，并对其实施情况进行管理。

(中期计划的对象事业所：京都、长田野、群马、小田原)

### 杰士汤浅集团环境基本方针

#### 基本理念

在杰士汤浅集团，我们将地球的环境保护作为最重要的经营课题之一，通过对清洁能源的蓄电池、电源供应系统、照明设备等的开发、生产和销售，为建造可持续性发展的社会作出贡献。

#### 行动准则

1 确实地评估经营活动、产品和服务对环境造成的影响，通过节省能源、节省资源、削减废弃物及循环再利用等途径，努力降低对环境负荷，预防污染，并针对这些方面进行持续改进。

2 力争降低贯穿产品开发、设计至生产、使用、废弃的各个阶段的产品生命周期中对环境负荷，推进考虑到环境保护的产品的开发、设计。

3 致力于降低包括原材料的采购和物流等所有的合作伙伴在内的整个供应链中对环境负荷。

4 根据ISO14001标准创建环境管理体制，根据该环境基本方针制定各个事业所的环境方针，设定环境保护目标、指标，推进环境管理活动。

5 除了遵循与环境保护相关的法律、条列、协议等规定以及集团认同的其他方面的要求事项之外，根据需要制订自行主动管理基准，致力于环境保护。

6 确实地实施环境监察以及经营决策层所进行的修正，力求环境管理体系的维持及持续改进。

7 通过教育、培训等来提高集团全体员工的环境保护意识，并通过环境保护活动贡献于社会。

8 通过提供展示包括该环境基本方针在内的与环境保护相关的信息，致力于同利益相关方及社会的良好沟通。

### 第3个环境5年计划（2014年度～2018年度）及2015年度成果

	第3个环境 重点项目 目 标	第3个环境	5年计划（2014年度～2018年度） 2015年度成果	自我评估 / 课题
1	节能、温室效应气体的削减	有关生产方面的CO <sub>2</sub> 排放原单位数值与2013年度相同。（13.0g-CO <sub>2</sub> /Wh）		能源使用量呈增加趋势，需要致力于确保能源及成本对策的节能活动。
	2018年度的有关生产方面的CO <sub>2</sub> 排放原单位将比2013年度削减5%以上。	有关物流能源使用原单位比2013年度削减7%。（0.0475L/ton-km）		
	构建和运用具有效果的能源管理体系。	实施了充分利用环境管理系统的节能活动。		
	节省资源	铅废弃率为3%。		
	降低废品、不良品率（与ISO9001共通任务化）。 2018年度的铅废弃率将低于2%。	排水量比2003年度削减61%。（882千m <sup>3</sup> ）		
	2018年度的有关生产方面的排水量比2003年度削减77%以上。	针对使用后产业用产品的广泛认定处理比率99.8%。		
	再资源化	探讨了下一代汽车中搭载的锂离子电池的回收计划。		
	2018年度针对使用后产业用产品的广泛认定处理率为100%。 构建下一代型锂离子电池的再资源化体系。	针对有望扩大市场的用于下一代汽车的锂离子电池，需要确立合理的再资源化计划。		
2	考虑环保的产品	实施了充分利用2005年10月公布的产品环保性设计指南的产品开发和设计工作。		与产品的用途方面开展的多样化相比，在产品环保性设计方面的投入显得不足。
3	推进绿色采购	2家供应商新获得环境管理系统的第3方认证。		需要继续对供应商的环境管理体系的引进以及水平提高进行支援。
4	化学物质的管理	结合绿色采购活动，对产品中所含的化学物质进行了彻底的管理，适合国内外的产品含有量的规定。		需要继续实施符合法律法令及客户需求的产品含有化学物质管理。
5	环境风险管理的贯彻	实施了充分利用环境管理体系的环境风险管理。		需要重新考虑设备陈旧化等的环境风险。
6	遵循法规	从未发生过与环境污染有着直接联系的紧急事态，也未有与环境关联的诉讼、罚款和赔款等事项。		需要实施具有贯彻合规精神效果的风险管理。
7	环境管理体系的维持、持续改进	充分利用定期实施的内部审核及外部审核指出的不足，力求改善环境管理体系。		为了贯彻执行环境风险管理，需要继续改善环境管理体系。
8	对社会的贡献	针对小学生开展环境保护学习、事业所周边的清洁等活动。		需要推进顺应利益相关方需求和期待的社会贡献及环境保护方面的交流沟通活动。
	环境保护方面的交流沟通	实施了发行环境·社会报告书等针对广大利益相关方的外部沟通交流活动。		



Effort of overseas affiliated companies

## Environmental Burden Reduction Initiatives of GS Yuasa Siam Industry Ltd.

One of GS Yuasa Siam Industry Ltd.'s basic environmental policies is to provide our customers with products (such as lead-acid batteries for electric forklift trucks) that promote energy efficiency while actively reducing environmental burdens from the manufacturing process.

### Energy-Efficiency and Resource-Conservation Initiatives

The Company implemented the following initiatives in fiscal 2015, which resulted in a 4% reduction in costs related to energy and waste disposal.

- Adoption of LED lighting for plants and offices
- Recycling of cooling water and washing water discharged from manufacturing processes
- Re-use of dilute sulfuric acid and lead powder discharged from manufacturing processes
- Reduction of waste generated in manufacturing processes (including efficient use of materials and reduced production of defective products)

### Volunteer Activities Around the Plant

In 2015, many of our employees participated in local events such as grass cutting at the local elementary school and the release of "oxygen balls" (clay balls incorporating effective microorganisms that generate oxygen through photosynthesis, or EM balls) into local rivers suffering from lack of oxygen caused by eutrophication.



LED lighting installation  
更新为LED照明



Lead powder collectors  
铅粉回收装置



海外关联公司的环保努力

## GS Yuasa Siam Industry的降低环境负担活动

GS Yuasa Siam Industry将环境保护作为公司的基本方针之一,通过提供本公司产品(电动叉车用铅蓄电池等),为客户的节能化做贡献,并积极推进在制造工序中的降低环境负担活动。

### 节能及节约资源的活动

2015年度,实施了以下活动之后,在能源及废弃物方面的成本与上年度相比削减了4%。

- 将工厂和事务所的照明换成LED
- 制造工序中排出的冷却水、洗涤水的循环使用
- 制造工序中排出的稀硫酸、铅粉的再利用
- 制造工序中排出的废弃物的削减(资材的有效利用、不良品的减少等)

### 工厂周边的义工活动

2015年度,众多员工参加了当地小学的除草活动,以及向由于富营养化而缺氧的河流投放氧气球(EM Ball: Effective Microorganisms Ball 通过光合作用产生氧气的含有微生物粘土球)等活动,并提供了赞助。



EM ball release event  
氧气球的投放活动



Grass cutting  
除草活动

### Corporate Profile of GS Yuasa Siam Industry Ltd.

**Scope of business:** Manufacture and sales of lead-acid batteries for electric forklift trucks, sales of industrial storage batteries

**Established:** June 3, 2008

**Location:** Chachoengsao Province, Thailand

**Number of employees:** 329 (as of December 31, 2015)



Corporate offices

### GS Yuasa Siam Industry Ltd. 公司概要

**事业内容:** 电动叉车用铅电池的制造销售、各产业用蓄电池的销售

**设 立:** 2008年 6月3日

**地 址:** 泰王国北柳府

**雇 员 数:** 329名(截至2015年12月31日)



公司办公楼



## Corporate governance 企业管控

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

为了持续性的发展及提高中长期的企业价值，致力于企业管控的强化和充实化。

## Promoting Ongoing Efforts to Implement Our Corporate Philosophy

## Approach to corporate governance and our governance system

To implement our philosophy of contributing to "people, society, and global environment through Innovation and Growth," our Group is working to manifest its vision of "delivering security and comfort to our customers around the world through advanced technologies developed in the field of stored energy solutions" and to unite all Group employees in this common commitment.

Moreover, by strengthening our corporate governance in order to enhance our sustainable growth and improve our medium- and long-term corporate value, we are continuing to maintain a system that allows for rapid and effective decision-making, ensure thorough compliance management, and implement positive information disclosure.

To ensure the effectiveness of management and processes along with appropriate decision-making throughout our Group, we have established a governance system intended to strengthen our Board of Directors by incorporating periodic reporting at meetings of the board of directors that include external directors. This initiative includes periodic reporting to the Board on the work status of each business subsidiary and important related issues. In addition, corporate and outside auditors present their opinions to the Board and to important meetings of the Group. As well, we are establishing a framework for conducting effective audits by facilitating the exchange of information at Auditor Meetings and ensuring coordination with the GS Yuasa Corporation Business Auditing Office and accounting auditors.

## Establishing Systems that Support Sound Management

## Focused on internal controls

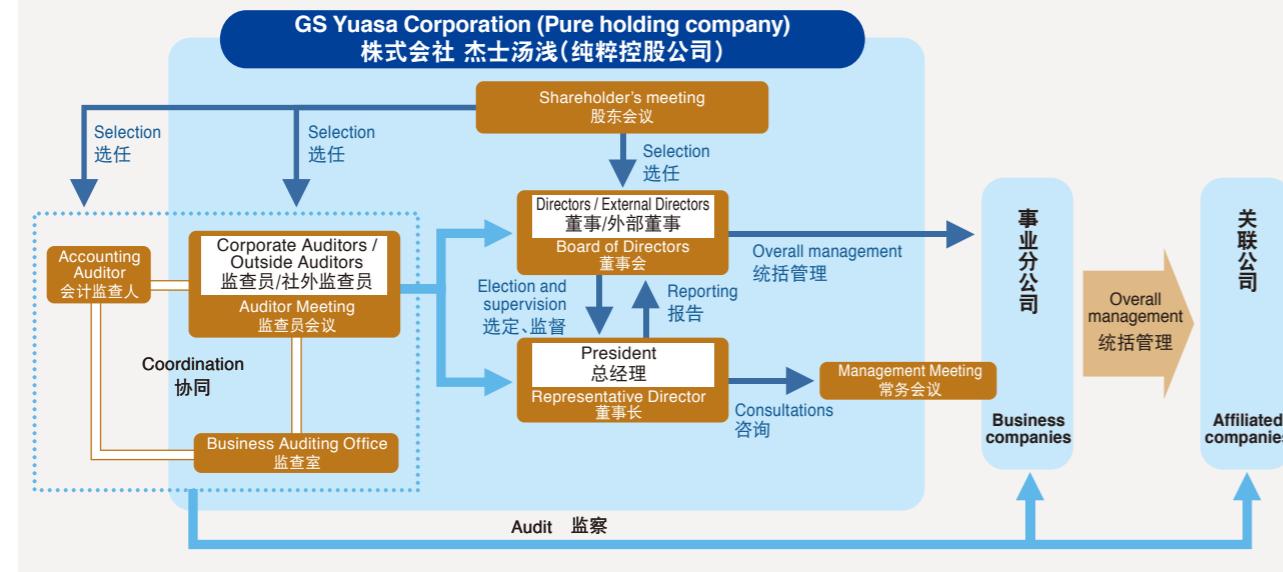
In order to strengthen its management foundation, the GS Yuasa Group has improved its system and relevant rules to ensure the maintenance of ethical business practices based on the Companies Act. This system includes mechanisms to ensure proper auditing, information management, and risk management throughout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

In order 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 their internal controls. Following external audits, reports on these internal controls are publicly disclosed.

## Governance structure

## 管控体制

GS Yuasa Corporation (Pure holding company)  
株式会社 杰士汤浅(纯粹控股公司)

Selection 选任  
Coordination 协同  
Audit 监察  
Shareholder's meeting 股东会  
Directors / External Directors 董事/外部董事  
Board of Directors 董事会  
President 总经理  
Representative Director 董事长  
Management Meeting 常务会议  
Consultations 咨询  
Overall management 统括管理  
Reporting 报告  
Election and supervision 选定、监督  
Business companies 事业分公司  
Affiliated companies 关联公司



## Risk management 风险管理

Implementing thorough compliance management and risk management

力求贯彻合规精神经营和风险管理。

## Evaluating the Scope of Risk in Detail and Appropriately Managing the Risk

## Thorough risk management and crisis management

The GS Yuasa Group has adopted Risk Management Rules intended to avoid or reduce exposure to business risk and minimize potential corporate losses.

Each department uses a Risk Management Sheet to evaluate the extent of risk and the potential impact of risks identified within the department. These departments hold monthly meetings to review the results of risk evaluations performed by their respective risk management committees. In addition, the Group Risk Management Committee — headed by our president with members comprising chairs of various 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 appropriate risk management measures have been implemented, and the committee chairs report on progress in this area.

Moreover, in preparation for the possibility that a risk materializes, the system maintains 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 in order to minimize corporate losses. We have also established a system to implement an appropriate response to moderate the situation.

## Publishing Guidelines and Manuals and Conducting Compliance Training

## Compliance activities

By training our personnel according to our philosophy of "Growth and Innovation" 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.

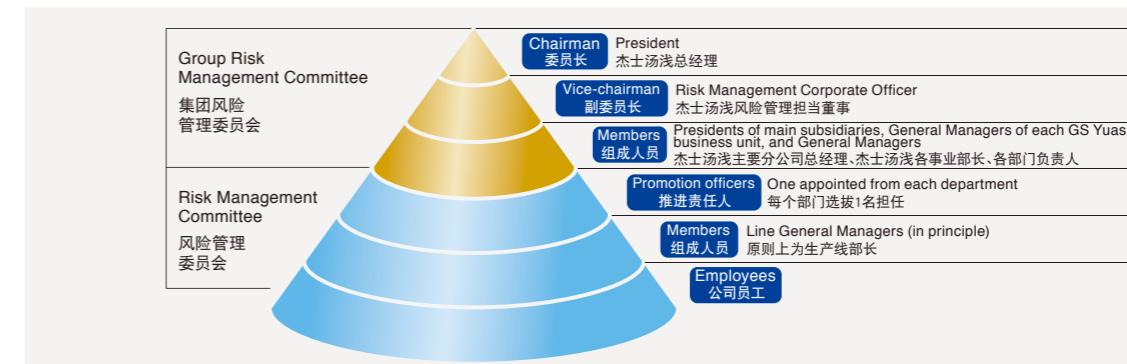
In this spirit, we have adopted the GS Yuasa Corporate Ethical Standards comprising 10 items that all employees must uphold. Moreover, we have established Corporate Ethical Behavior Guidelines that stipulate responses to specific situations. We also compiled and distributed Compliance Manual to all employees. In fiscal 2015, for the fourth consecutive year, we held meetings at all workplaces to improve awareness of compliance through active exchange of opinions. In addition, we promoted a compliance education initiative using innovative approaches such as providing the sales division with training in Antitrust Law.

We have also established the GS Yuasa Group Corporate Ethics Hotline for employees who become aware of behavior that is unethical or otherwise inappropriate. Accessible both internally and externally, the hotline enables employees to provide information anonymously. Our investigation team conducts inquiries and takes appropriate action while remaining committed to protecting whistleblowers.

Moreover, our president periodically conducts a compliance survey by distributing an in-house email questionnaire to all Group employees. The survey contains questions on compliance practices that arise in day-to-day operations.

## Risk management structure

## 风险管理体制图



周密地评估风险的大小程度，对风险进行正确管理

## 风险管理的贯彻与危机管理

杰士汤浅集团为避免、减少经营风险并力求将企业损失降到最低，制定了《风险管理规则》。

各事业部门采用《风险管理一览表》，评估各自部门所特定的风险影响的重要性和发生的可能性，进行风险管理，在每月召开的风险管理委员会会议上修正风险评估的结果。另外，为推进集团整体的风险管理和共享风险信息，本集团每半年召开一次集团风险管理委员会会议，该委员会委员长由本公司总经理担任，组员由各事业部门风险管理委员长组成。在委员会会议上，听取个事业部门的风险管理委员会委员长对风险管理情况的汇报，检测风险管理是否合理。

特别是，我们建立了预防风险的显著化事态，快速掌握经营危机的紧急联络网等体制。一旦发生重大的危机事件，我们将从集团风险管理委员会中选拔成员，设立由本公司总经理担任委员长的危机管理对策总部，确立为平息事态而采取适当应对措施的体制，力求将公司的损失降到最低。

## 发行准则和手册，实施合规精神教育

## 合规精神活动

杰士汤浅集团为了通过“革新与成长”的企业理念为社会和地球环境作贡献，充分认识到全体员工开展重视遵守法律法规、伦理及公司规则相关活动的重要性。

为此，我们制定了明确全体员工应该遵守的十项行动规则《杰士汤浅集团的企业伦理标准》，和表明其具体措施的《企业伦理行动准则》，并向全体员工分发了归纳该内容的《合规精神手册》。2015年度，继2012年以来连续四年实施了通过在各职场广泛交换意见来提高合规精神意识的“合规精神职场会议”。此外，以营销部门为对象还开展了反垄断法培训等各种通过精心编排的课程而实施的培训活动。

此外，我们在公司内部和外部设置“企业伦理热线”，以便一旦员工发现有合规精神方面的不恰当行为可用匿名进行报告。完善了在力求保护信息提供者的同时，可进行详细调查和采取适当措施的体制。

还有，以全体员工为对象，本公司总经理定期性地进行合规精神调查——通过公司内部邮件收集日常业务中的合规精神方面的疑问等信息。



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