

Environmental & Social Report
环境・社会报告书

2013



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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 2013 (next publication planned for July 2014)
- Production department / requests for information
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Reporting information

- Organizations covered in this report
This report presents information focused on the following four domestic offices.

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 (JQA-EM6438)	The manufacture of lead-acid batteries for automotive use and industrial use; and the design / development and manufacture of alkaline storage batteries for industrial use and vehicle use
Gunma office	December 25, 1998 (EC98J1133)	Development and manufacture of 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, 2012-March 31, 2013
(Some of the data, however, predates March 31, 2012.)

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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
2013年7月（下次发行时间预计在2014年7月）
- 制作部门、咨询处
株式会社 杰士汤浅国际 环境统括部
电话：+81-75-312-0716 传真：+81-75-312-0719
网址：<http://www.gs-yuasa.com/us>

报告涵盖信息

- 报告涵盖的组织
本次报告以日本国内4家事业所为核心进行。

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 (JQA-EM6438)	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
群馬事业所	1998年12月25日 (EC98J1133)	铅蓄电池的开发和制造
- 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
2012年4月1日－2013年3月31日
（但是，部分数据包含2012年3月以前的信息。）

Pure holding company

GS Yuasa Corporation

Form the management plan and strategy for GS Yuasa Group and administer the group of companies to enhance the total value of the group

Established April 1, 2004
HEAD Office 1, Inobanba-cho, Nishinosho, Kisshoin, Minamiku, Kyoto 601-8520, Japan
TOKYO Branch 1-7-13, Shiba-koen, Minatoku, Tokyo 105-0011, Japan
Capital stock 33 billion yen

Business companies

GS Yuasa International Ltd.

Manufacturing & 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 of other batteries

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.

Manufacturing, sales and R&D of high-performance lithium-ion batteries

纯粹控股公司

株式会社 杰士汤浅

统筹规划杰士汤浅集团企业的经营战略，以实现集团企业价值的最大化。

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

经营公司

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

其他电池的生产和销售。

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

大型锂离子电池的开发、生产和销售。

Blue Energy Co., Ltd.

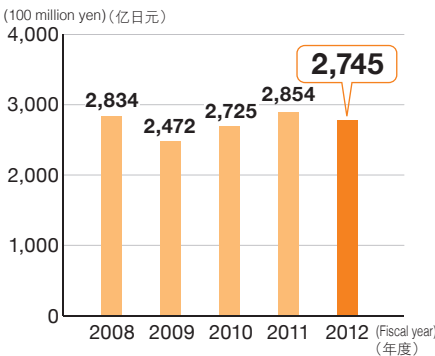
高性能锂离子电池的生产、销售和研发。

International locations 海外基地

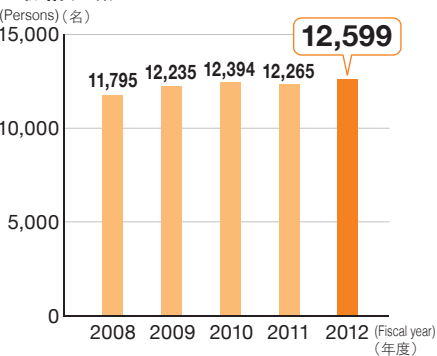
36 locations in 16 countries 16国・36个基地

Corporate Data 业绩数据

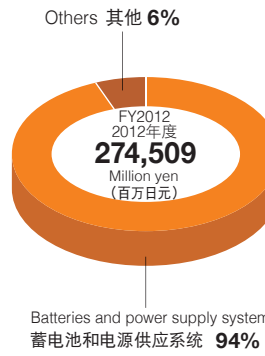
Consolidated sales 联结销售额



Number of employees in consolidated businesses 联结员工数



Sales by business area 不同业务领域的销售额



Principal Products 主要产品



By storing and managing electricity with our innovative technologies, the GS Yuasa Group is improving environmental management while helping society achieve its environmental objectives.



We are pleased to present to the reader the 2013 edition of our Environmental & Social Report.

During 2012 and into 2013, Japan has been preoccupied with conventional environmental problems, particularly the outbreak of air pollution comprising hazardous particulate matter measuring less than 2.5 microns.

At the same time, prospects remain uncertain regarding the restart of Japan's nuclear power plants, resulting in increased dependence on conventional energy sources such as oil and natural gas. This has resulted in soaring power generation costs, and we cannot overlook the economic impact of this reality in Japan in combination with the emerging depreciation of the yen. To counteract these trends, Japan has been compelled to build new coal-fired power stations while downplaying the issue of excess CO₂ emissions. Clearly, the economic environment in which we operate is becoming difficult to accommodate, and one could say that, in one sense, we may even be approaching a "moment of truth."

In last year's message, I stated the opinion that our affluent civilization and values may be forced to undergo a fundamental change. Considering the conventional environmental problems I mentioned at the outset, the impact of human activities may, at first glance, appear to resemble that of our past experience; in actuality, however, we may be encountering completely new types of environmental problems. This can be seen in stories about the influenza virus that causes the typical symptoms with which we are all familiar; in fact, a succession of such viruses have been undergoing a transformation, with conventional vaccines having little effect.

At the GS Yuasa Group, one of our business challenges is to contribute to

the emergence of an environmentally sound society. Having cultivated technologies for storing and managing electricity for over a century, we remain committed to providing solutions for constantly changing environmental problems. We are dedicated to supporting society's use of energy, which is the very foundation of civilization.

This fiscal year represents the final year of our Group's Second Five-Year Environmental Plan. At the same time, it represents the first year of our Group's Third Medium-term Management Plan (FY 2013 to FY 2015). During the preceding four years of this plan, expectations increased for lithium-ion batteries and electricity storage systems in light of society's rising interest in battery-oriented solutions.

The achievements and solutions we devised during implementation of our Group's Second Five-Year Environmental Plan will now be applied to the goals of our Third Medium-term Management Plan. Considering current circumstances, I believe that this approach will represent an important environmental management issue for our Group.

In addition to dedicating ourselves to global environmental initiatives, we remain committed to full compliance with relevant laws and ordinances. Equally important, in our relations with our customers, business partners, shareholders, local communities, and our own employees, we shall proactively strive to meet our responsibilities in full cognizance of our role as a good corporate citizen.

Our 2013 Environmental & Social Report has been prepared in two editions: a Japanese-language edition and a combined Chinese-language and English-language edition. This publication is intended to promote a better understanding of our environmental management initiatives and our efforts to contribute to society through our communities, business partners, shareholders, and investors both inside and outside Japan. In disclosing information related to our environmental and social initiatives, we aim to provide more transparency and foster greater trust. Clearly, by working with a common interest in reducing our environmental burdens, we will contribute to the emergence of a sustainable society.

GS Yuasa Corporation
President Makoto Yoda

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.

杰士汤浅集团将凭借蓄备、控制电力技术承当社会责任，为实现环境对应型社会做贡献，并致力于进一步提升环境保护经营。

本年度，杰士汤浅集团继续向大家公布环境·社会报告书。

从2012年度到本年度发生了PM2.5空气污染等问题，所以，也可以说过去的一年是将至今为止的环境问题放大特写之年。

另一方面，核电站重新启动的前景依然不明，对于石油及天然气等化石燃料的依存度不断提高。所以，其造成的发电成本上升，和时下的日元贬值，都将对我国的经济造成不可忽视的影响。而且，作为其对策，还不得不新建仍存在CO₂排放量多等问题的燃煤电站，这也使我们陷入了环境保护与经济发展难以并立的困难局面。从某种意义上来说，我们已经到了非常紧要的关头。

去年在这里也提及过，对于文明和文明带来的发展的价值观，可能已经需要从根本上予以转变。这是因为，上面所提到的至今为止的环境问题，换一种角度来看，也就是至今为止的人类活动不断对地球造成影响的结果，只是以类似于过去的情况出现而已，实际上这可能就是新的环境问题。我认为这也与流感病毒的情况一样，即感染后症状基本相似的流感病毒，其实在不断发生变化，原有的疫苗已经不起作用了。

杰士汤浅集团将“为实现环境对应型社会做贡献”作为经营课题之一而提出。我们将以一个多世纪来培养的“储备、控制电力技术”，通过提供人类文明基础的“能源”，从商务方面为解决不断发生变化的新的环境问题做出贡献。

本年度是第2个环境保护5年计划的最终年度，也是杰士汤浅集团第3个中期经营计划（2013年度－2015年度）的第1年度。在过去的4年间，包括锂离子电池在内的蓄电池及蓄电系统的社会使命增强，其期待程度也在

不断提高。在此的情况下，如何将第2个环境5年计划实施中所获得的成果和出现的课题充分应用到第3个中期经营计划之中，是杰士汤浅集团的环境经营中的重要课题。

而且，杰士汤浅集团并不只是停留在地球环境保护的相关活动上，今后，除了严格遵守各类法令法规之外，我们还将重视企业作为社会一员的职责，在处理与客户、合作伙伴、股东、地区社会以及员工的关系中积极致力于承担企业责任的事业活动之中。

《2013年环境·社会报告书》以日语版和中英文双语版的两种版本形式制作。我们希望通过它，能够使杰士汤浅集团事业活动所在地区社会的人们、国内外的合作伙伴以及股东和投资者，了解我们在环境保护管理活动和社会工作方面所作的努力。通过向公众展示我们在环境保护管理活动和社会工作方面的信息，我们将确保透明可信的事业活动。今后，集团上下仍将团结一致，努力减轻环境负担，为实现可持续发展的社会作出贡献。

株式会社 杰士汤浅
董事长 依田 诚

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。

Special Feature

Contributing to society with innovative power generation and energy storage technologies

专题

通过“创能和蓄能技术”为地区社会做贡献

Power generation and energy storage technologies that help to reduce environmental burden and power supply risk

凭借“造电”和“储电”技术，为降低环境负担和减少电力供给风险作贡献。



Mega Solar facility at Iwaki Yuasa Ltd.
株式会社磐城汤浅的大型太阳能发电

Mega Solar installation in Iwaki, Fukushima

在福岛县磐城市设置大型太阳能发电

Responding to power shortages as a leading maker of photovoltaic inverters

Iwaki Yuasa Ltd., a subsidiary of our Group, has plans to install a Mega Solar facility with 1MW of output capacity by installing photovoltaic inverters made by our Group and photovoltaic panels at the main plant premises. This facility is scheduled to be interconnected with the power grid of the local electric power company, and all generated electricity will be provided through this connection according to the Feed-in Tariff system promoted by the Ministry of Economy, Trade and Industry.

The production hubs of our Group — our Kyoto office, Osadano office, and Gunma office — plan to follow the example set by Iwaki Yuasa Ltd. by installing their own mega solar facilities.

The company will compile operational data on the photovoltaic inverters that will be interconnected to the commercial power grid. Information on these units, which convert the DC power generated by the photovoltaic panels into AC power, will be used to develop new products offering additional functional improvements.

Our Group is helping to reduce the environmental burden from consuming our dwindling fossil fuel resources while reducing greenhouse gas emissions. We are also addressing power supply risk by providing structures that use renewable energy effectively, such as systems that combine photovoltaic power systems and battery storage systems to supply power during blackouts and in emergency situations.

作为功率调节器的龙头企业为应对电力不足问题作贡献

杰士汤浅集团子公司株式会社磐城汤浅，计划在总公司工厂内引进太阳能面板和杰士汤浅集团制造的功率调节器，设置输出容量为1MW的大型太阳能发电。准备充分利用经济产业省推进的全量购买制度，将产生的电力全部连接到电力公司的系统电力。

此外，继株式会社磐城汤浅之后，杰士汤浅集团的生产基地京都事业所、长田野事业所以及群马事业所也准备设置大型太阳能发电。通过将太阳能面板产生的直流电力转换为交流电力，并积累与商用电力系统连接的功率调节器运用数据，为开发进一步提高性能的产品作出贡献。

杰士汤浅集团通过将太阳能发电与蓄电池的组合，提供停电时或灾害时的供电系统等有效利用可再生能源的机制，为防止化石燃料的枯竭和削减温室效应气体等环境负担，以及解决供电风险做贡献。



Photovoltaic inverter
功率调节器

Lithium-ion energy storage system for use in emergencies and during peak shaving

锂离子蓄电系统被有效利用于电力削峰填谷和紧急用途

Introducing an energy storage system utilizing renewable energy

The photovoltaic power generation system utilizes renewable energy derived from sunlight. This power generation system emits almost no greenhouse gasses when generating power.

This system combines a photovoltaic power generation facility developed by our Group with a large lithium-ion storage battery. It comprises mainly a photovoltaic panel, a photovoltaic inverter, and a lithium-ion battery. Intended for use in factories and offices, this system can be used in a variety of applications such as a continuous power supply in emergency situations.

This peak shaving application provides supplementary power by using solar power generated by the photovoltaic panel during periods of peak daytime power consumption as well as storage battery power charged at night. During longer blackouts, the disaster prevention system can continue to supply electricity to critical equipment such as information and

充分利用可再生能源的蓄电系统的销售

太阳能发电系统是利用可再生能源的太阳能的发电方式，是一种在发电时基本上不排放温室气体的发电系统。

杰士汤浅集团所开发的太阳能发电设备与大型锂离子蓄电池组合的系统，主要由太阳能发电面板、功率调节器和锂离子电池构成，将工厂或事业所内所使用的电力进行削峰填谷，是可在灾害时继续供电的防灾等各种用途的系统。

削峰填谷系统，通过在白天电力使用高峰时段使用太阳能面板发电和夜间蓄电池充电的电力，可以消减系统电力的消费量。防灾型系统可在系统电力长时间停电时，通过太阳能面板发电和蓄电池蓄电，可对信息通信等重要设备继续供电。

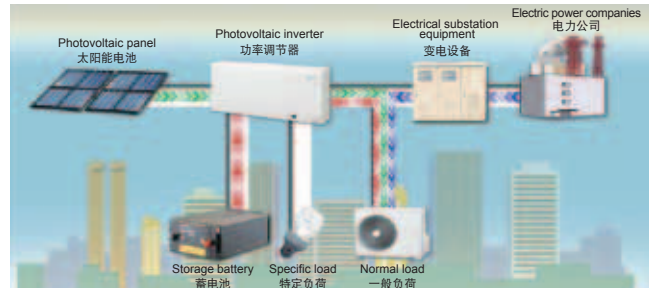
近二十年来，杰士汤浅集团在功率调节器和大型锂离子电池的制造和销售方面积累了丰富的业绩。今后，我们将以至今为止培养的业绩和信誉为基础，为创造可应对不断变换的电力供给状况的社会做贡献。

communications devices using power generated by the photovoltaic panel and energy stored in the battery.

Our Group has a track record of almost 20 years of manufacturing and marketing photovoltaic inverters and large lithium-ion batteries.

Building on the trust and expertise we have demonstrated to date, we will continue to contribute to a society capable of responding to changing power supply situations.

System illustration 本系统示意图



Our Group was the first in Japan to be authorized as a manufacturer of large custom energy storage systems falling within the scope of the Stationary Lithium-Ion Battery Energy Storage System Subsidy Program of the Ministry of Economy, Trade and Industry. This subsidy is issued to establishments that introduce energy storage systems as part of their power supply measures.

作为供电对策的一个环节，杰士汤浅集团引进蓄电系统的事业所等，作为经济产业省提供补助金的“固定用锂离子蓄电池引进促进对策事业补助金”事业的对象，在日本首次获得大型定制蓄电系统制造商的认定。

Utilizing an electric car as an emergency power source

作为灾害时的紧急用电源而活用电动汽车

Providing electric cars at no cost as an initial emergency response

Our Group has concluded an agreement with Kyoto Prefecture that allows Kyoto to request electric cars and power supply units in response to an emergency or during disaster recovery following a natural disaster or massive blackout. This agreement, the first of its kind in Japan, is intended to provide mobile emergency power sources when the electric power grid or fuel supply has been interrupted. These units can also function as a means of transportation during a disaster. In addition, they are especially effective in certain disaster situations where they can be either dispersed to evacuation centers or concentrated around the local disaster headquarters. This system is expected to contribute to a more effective initial emergency response.

无偿提供电动汽车作为灾害时的早期应对

为了京都府能在京都府内发生自然灾害或大规模停电等情况时进行紧急对应和重建，杰士汤浅集团与京都府签订了可要求提供电动汽车及供电装置的协议。将电动汽车作为灾害等情况时可移动的紧急用电源的协议，在日本全国尚属首次。

根据本协议，在京都府内发生灾害等情况时，电动汽车不仅可以作为移动工具，还可期待在电力或燃料供给中断时，作为具有机动性紧急用电源而使用。此外，电动汽车可根据灾害情况进行有效运用，比如分散到各避难所或集中到当地灾害本部等，可望为灾害等情况时的早期应对做出贡献。

Summary of cooperative agreement 合作协议概要



Typical uses

of the energy stored in electric car batteries during an emergency

灾害时的电动汽车 使用例

Supplying power to lighting equipment
向照明设备供电



Supplying power to sound equipment
向音响设备供电



Supplying power to rice cookers
向电饭煲供电



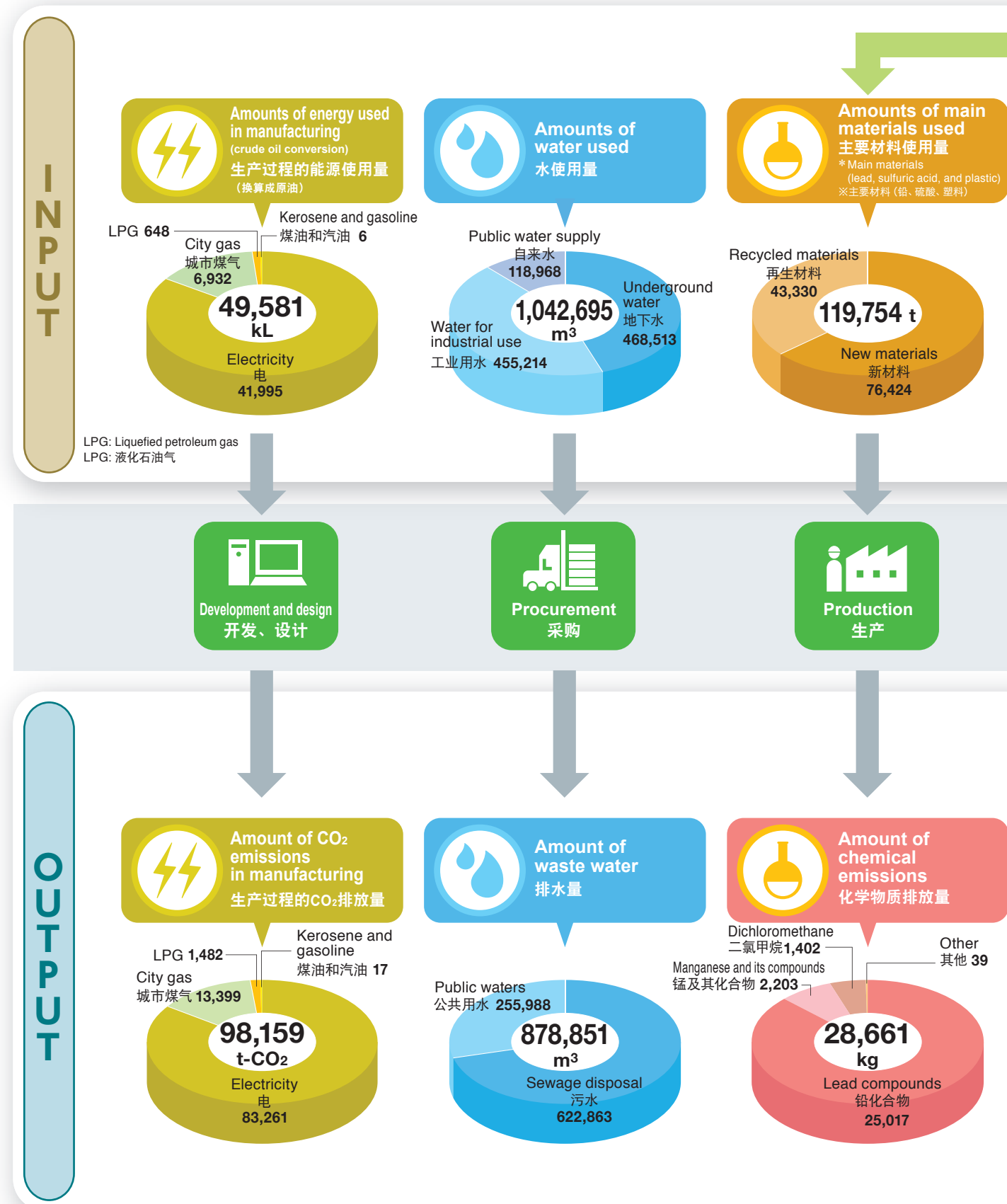
Business activities and the environment

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 CO₂ 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 2012 results from four offices in Japan)



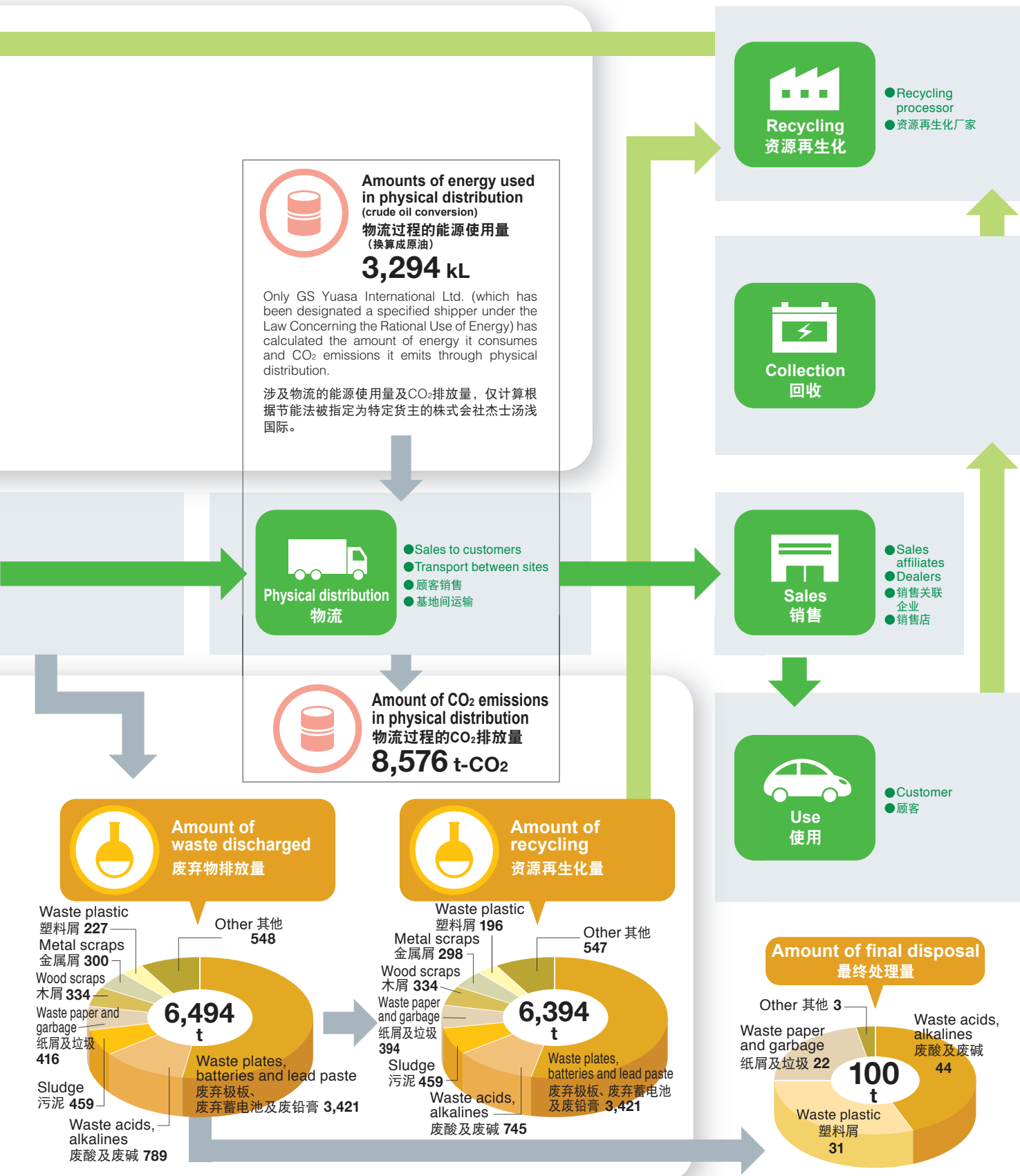
经营活动和环境

不仅是在生产工序，还致力于考虑产品生命周期的降低环境负荷的活动。

杰士汤浅集团生产提供在各领域中被广泛应用的电池、电源供应设备和照明器材等产品和服务。在此经营活动过程中，我们投入了原材料、能源和水等资源（输入），而排放了废弃物、温室效应气体和废水（输出）。我们充分认识到集团的经营活动对环境造成的影响，并致力于推进资源的有效利用以及减少CO₂排放量等活动。

此外，我们还考虑到从产品的开发、设计阶段到采购、生产、输送、销售、使用及废弃的各阶段中的环境负荷，在致力于基于环保的产品设计的同时，还推进了对使用后蓄电池资源再生化等活动，努力降低产品生命周期整体的环境负荷。

事业活动中原材料流程（统计对象：日本国内4家事业所的2012年度实际业绩数据）



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.

Our Policies and Medium-term Plan for Environmental Conservation

The Fundamental Environmental Policy of the GS Yuasa Group was established to serve as a guideline for the environmental management efforts implemented throughout the Group. In our domestic offices, we have developed an organizational environmental management system and have been promoting environmental management initiatives to implement our environmental policy, which is based on our overarching environmental policy.

In keeping with our philosophy of "Innovation and Growth," 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.

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.

Second Five-Year Environmental Plan (Fiscal 2009 to 2013) and Results for Fiscal 2012

	Key items Objectives	Results for Fiscal 2012	Self-assessment/Challenges
1	Reduction of energy and resource usage We will reduce the amount of CO ₂ emissions to 30% less than the fiscal 1990 level by fiscal 2013. We will promote energy-efficiency initiatives in operations division. We will reduce the specific energy consumption from physical distribution to 5% less than the 2008 level by fiscal 2013. We will reduce the rate of production errors and defective products (pursuit of greater efficiency of resource usage and the 3Rs; consistency with ISO 9001). We will reduce the lead scrap rate to less than 2% by fiscal 2013. (The lead scrap rate for fiscal 2008 was 7%.) We will reduce the amount of waste water produced by industrial processes to one-third of the fiscal 2003 level by fiscal 2013. We will promote the proper disposal and recycling of used products according to the wide area certification system.	We succeeded in reducing CO ₂ emissions in fiscal 2012 by 3% below the fiscal 1990 level. The amount of energy consumed by operations division, including our sales locations, in fiscal 2012 was 11% below the fiscal 2011 level. The amount of energy consumed by physical distribution in fiscal 2012 was 5% below the fiscal 2008 level. The lead scrap rate in fiscal 2012 was 4%. We reduced the amount of waste water produced in fiscal 2012 to 61% of the fiscal 2003 level. In fiscal 2012, the percentage of used industrial batteries discarded according to the wide area certification system under the Waste Management and Public Cleansing Law was 97%.	The state of target achievement is not favorable. We must manage our lithium-ion battery segment with greater consideration for carbon management. It is important that we continue to implement ongoing initiatives even as the benefits of our energy efficiency measures gradually show results. The state of target achievement is favorable. In the future, it is important that we address energy efficiency and cut costs by examining modal shifts and transportation efficiency. The state of target achievement is not favorable. Efforts aimed at reducing waste and loss must be intensified through coordination of process improvement and "product design for the environment." Efforts are required to increase the water-recycling rate. The volume of waste discarded under the wide area certification system has been increasing annually. This system is gradually taking root.
	Focusing on higher levels in the management of environmental aspects We will implement product design for the environment and life cycle assessment in development and design departments and prepare to address the issue of carbon footprints. We will address the issue of MIPS (Material Intensity Per Service) in product design.	We promoted the development and design of environmentally considered products on the basis of the GS Yuasa Design for the Environment Guidelines issued in October 2005.	Compared with the varied development of product applications, the incorporation of environmental consideration in product design is insufficient.
	Promotion of green procurement We will support the acquisition and advancement of environmental management system certification by suppliers.	We implemented second-party audits for suppliers subject to environmental auditing. We also took steps to implement improvements to our environmental management systems.	The introduction and improved support of environmental management systems by suppliers must continue to be promoted.
	Management of chemicals On the basis of GS Yuasa Group Chemical Management Guidelines established in April 2005, we will monitor the material flow of chemicals regulated by these guidelines.	In coordination with green procurement activities, we implemented the comprehensive identification and management of chemicals contained in products, and attained compliance with both Japanese and overseas regulations on the amount of contents.	Going forward, it is important that we continue to practice chemical management in keeping with regulatory compliance and customer requirements.
	Increased sensitivity to environmental risk We will implement environmental risk education based on the GS Yuasa Group Regulation Guidelines on Environmental Risk.	We implemented environmental risk management through our environmental management systems.	The identification of environmental risks, including compliance, is insufficient. Environmental risks at each site must be reconsidered.
	Compliance with laws We will set voluntary management standards that exceed the requirements of municipal and national government environmental regulations and pursue the improvement of our environmental management technologies.	There were no instances of emergencies directly related to environmental pollution, and there were no instances of lawsuits, punitive fines, or administrative fines related to environmental aspects.	We will need to ensure continued compliance by employing the framework of our environmental management systems.
6	Maintenance and continuous improvement of environmental management systems We will conduct internal environmental auditing and undertake continuous improvement of our environmental management efforts. We will undergo environmental auditing from external inspection agencies and seek to upgrade our environmental management efforts.	All offices periodically underwent internal and external audits to identify issues in order to implement improvements to our environmental management systems.	All offices are committed to the continuous improvement of our environmental management systems following certification of registration with ISO 14001.
	Contributions to society We will actively and continuously participate in environmental conservation efforts and community beautification activities. We will conduct continuous environmental education and training for our employees.	We undertook various activities such as cleaning the areas around our office grounds and conducting environmental education programs at elementary schools. Moreover, under our environmental management systems, we developed and implemented training programs.	It is important that we continue to practice social contribution initiatives employing the framework of our environmental management systems.
8	Communication about the environment We will continuously provide information about our activities and the environment through Environmental & Social Reports and other means. We will strive to receive positive appraisals of our environmental management efforts from society.	We published the print edition of our Japanese-language Environmental & Social Report as well as a combined English-language and Chinese-language edition. We also posted digital editions on our website. We have thus engaged in external communication to reach a wider range of stakeholders.	It is important that we continue to implement environmental communication initiatives.

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

本公司制定了杰士汤浅集团整体的环境管理活动基本准则《杰士汤浅集团环境基本方针》。国内各事业所根据该环境基本方针制定相应的环境方针，并构建为实现该环境方针的组织性环境管理体制，以推进环境管理活动。

关于环境基本方针的重点事项，是在考虑本公司“革新与成长”的经营理念，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。

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、条例、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2个环境5年计划（2009年度～2013年度）以及2012年度实际业绩

	重点项目 目 标	2012年度实际业绩	自我评估 / 课题
1	削减能源的使用量以及节省能源化 2013年度的CO ₂ 排放量将比1990年度削减30%。	2012年度的CO ₂ 排放量比1990年度削减3%。	目标达成情况严峻。需要充分考虑锂离子电池事业的碳排放管理。
	推进业务部门的节能活动。	2012年度包括营业基地在内的业务部门相关能源使用量比2011年度消减11%。	节能对策效果虽已逐渐体现，但重要的是今后仍需继续采取相应的对策。
	2013年度的有关物流能源原单位将比2008年度削减5%。	2012年度物流相关的能源使用量比2008年度消减5%。	目标达成情况顺利。重点是今后也要继续探讨模式转变、运输效率化等问题，致力与节能和降低成本工作。
	降低废品、不良品率（追求资源效率化和3R，与ISO9001共通任务化）。	2012年度的铅废弃率为4%。	目标达成情况严峻。必须通过工序改善和产品环保设计的结合，强化减少浪费和损失的工作。
	2013年度的铅废弃率将低于2%（2008年度的铅废弃率：7%）。		
	2013年度的工序排水量比2003年度降低至1/3。	2012年度的排水量比2003年度降低61%。	需要进一步提高水的循环利用率。
2	通过使用后产品的广泛认定推进正当处理及再生资源化。	2012年度针对已使用后电池的正当处理的广泛认定活用项目比率为97%。	充分利用广泛认定制度的废弃物处理量逐年增加，该制度的运用已逐步固定下来。
	环境因素管理的视线向上流转移 开发、设计部门在对产品环保性设计以及实施对生命周期评估的同时开始进行对“碳足迹”的对策准备。	实施了考虑环保的产品开发和设计工作，该工作活用了2005年10月公布的产品环保性设计指南。	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 要求供应商企业取得环境管理体系认证注册，同时对其水准提高进行支援。	对环境监测对象的供应商企业实施双重监测，同时支援其提高环境管理体系的水平。	必须继续推进对供应商的环境管理体系的引进以及水平提高的支援。
	化学物质的管理 以2005年4月制定的化学物质管理指南为基准，监控该指南规定的化学物质的材料流程。	结合绿色采购活动，彻底掌握和管理产品中所含的化学物质，适合国内外的产品含有量的规定。	重点是今后也要继续实施考虑法律法令及客户需求事项的化学物质管理。
4	对环境风险灵敏度的提高 根据“环境风险特定指南”实施环境风险教育。	实施了活用环境管理体系的环境风险管理。	对于包括合规精神方面的环境风险的规定还处在不充分的阶段。要求重新考察各现场的环境风险。
5	遵循法规 设定高于国家、地方政府环境保护规定值的更为严格的自行主动管理基准，推进环境保护管理技术的改善。	从未发生过与环境污染有着直接联系的紧急事件，也未有过与环境关联的诉讼、罚款、赔款事项。	今后仍需要继续充分利用环境管理体系的机制进行合规精神的应对。
6	环境管理体系的维持、持续改进 开展内部环境审核，不断进行环境管理体系的改善。	在各事业所，活用由定期实施的内部环境审核或外部环境审核指出的不足，力求改善环境管理体系。	各事业所正致力于遵循ISO14001标准的环境管理体系所要求的持续改进。
	接受来自外部检查机构的环境审核,力求提高环境管理体系的管理水平。		
7	对社会的贡献 积极地不断进行环境保护活动和美化活动。	积极参与各事业所周边的清洁活动，以及对小学生开展环境保护学习事业等活动。同时，在环境管理体系的运用中，建立并实施了教育计划。	重要的是今后仍需继续充分利用环境管理体系的机制，实施对社会作贡献的活动。
	不断实施员工环境保护教育与培训。		
8	环境保护方面的交流沟通 通过环境·社会报告书及其他方式，不断提供展示所开展的环境保护方面的信息，获得环境保护管理活动的社会性评价。	实施了发行环境·社会报告书（日语版、中英文双语版）以及在本公司网站登载等针对广大利益相关方的外部沟通交流工作。	重要的是今后仍需继续实施环境保护方面的交流沟通活动。



International

Effort of overseas affiliated companies

Environmental Burden Reduction Initiatives of GS Battery Taiwan Co., Ltd.

GS Battery Taiwan Co., Ltd. became a wholly owned member of our Group in 2010; in 2011, its name was changed from Ztong Yee Industrial Co., Ltd. (Taiwan) to its current name. The company completed its new factory in April 2013, when it began full-scale production of automotive batteries.

In 2000, the company acquired certification under the ISO 14001 standard and since then has continued to implement environmental burden reduction initiatives. It formulated a plan to reduce CO₂ emissions per unit of production to 12% less than the fiscal 2009 level by fiscal 2013.



Energy-efficiency Initiatives

① Conversion of hydraulic and pneumatic devices to inverter power sources

We upgraded 12 hydraulic and pneumatic devices by incorporating inverter-type power sources, thus reducing annual electricity consumption by 304,299 kWh. These devices are used in assembly of automotive batteries, the casting of battery components known as plates, and the molding of the battery body known as the container.

② Updating of lighting fixtures

The lighting fixtures used on the shop floor and in offices and

passageways have been updated to energy-efficient fluorescent lamps, reducing annual electricity consumption by 350,394 kWh.

③ Adjustment of temperature settings for air conditioners

Energy-efficient air conditioners were installed and office temperature settings for summer air conditioning were increased by 2 degrees to 28°C, thereby reducing annual electricity consumption by 444,509 kWh.

Initiatives to Control Environmental Pollution and Improve Working Environment

① Controlling environmental degradation caused by acids

The plate manufacturing process requires the use of dilute sulfuric acid. We have therefore reinforced our floors with acid-resistant tiles, acid-resistant resin layers, and barrier films to prevent the acid from infiltrating into the ground. In addition, ventilation equipment has been upgraded to collect acid mist and prevent its diffusion. Through such efforts, we are ensuring workplaces that give full consideration to our workers.

② Preventing the dispersion of lead particles

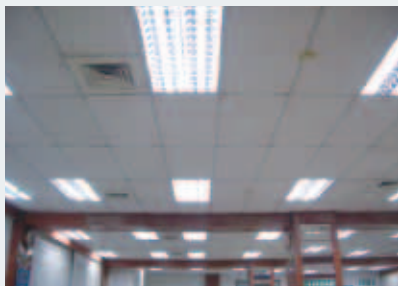
We have upgraded our dust collection facilities to limit the dispersion of lead powder from the lead filling process and plate cutting process.

③ Reuse of cooling water

By using recycled cooling water from the battery charging process, we have saved 100 tonnes of water per day.



Inverter
变频器



Energy-efficient fluorescent lamps
节能型日光灯



Energy-efficient air conditioner
为节能而引进的空调设备



海外

海外关联公司的环保努力

台湾杰士电池工业股份有限公司的降低环境负担的活动

台湾杰士电池工业股份有限公司，于2010年成为由杰士汤浅集团的100%出资公司，2011年由当时的台湾统一工业股份有限公司变更为现在的公司名称。2013年4月建设了新的工厂，提升了汽车电池的生产规模。此外，该公司于2000年获得ISO 14001标准的认证，不断推进了降低环境负担的活动。2013年度，更制定了每单位生产量的CO₂排放量较2009年度削减12%的计划。



节能方面的活动

① 液压、气压设备的变频器化

将在电池部件的极板铸造工序、汽车电池的组装工序以及电池本体的电解槽的成形工序中所使用的12台液压、气压设备更新为变频器式，每年电力使用量削减了304,299kWh。

② 照明设备的更新

将作业现场、办公室及通道的照明设备更新为节能型的日光灯，每年电力使用量削减了350,394kWh。

③ 空调设备的温度设定及设备更新

将办公室的冷气空调的温度设定为提高2°C的28°C，并引进节能型的空调设备，每年电力使用量削减了444,509kWh。

防止环境污染及改进作业环境的活动

① 防止由于酸造成的环境恶化

在使用稀硫酸的极板制造工序中，在地面实施耐酸砖、耐酸树脂层、防渗透薄膜层的强化措施，以防止酸渗透到地下。此外，为了防止酸雾的扩散和强化回收，加强了换气设备，开展了考虑作业人员健康的职场建设。

② 防止铅的飞散

在铅的充填工序及极板切断工序中，加强了集尘设备能力以防止铅的飞散。

③ 冷却水的再利用

将电池充电工序中所使用的冷却水进行循环利用，每天节约了100吨的冷却水。



Acid-resistant floor
进行过耐酸加工的地板



Facility for recycling cooling water
冷却水的循环设备

Corporate Profile of GS Battery Taiwan Co., Ltd.

Scope of business: Manufacturing and sales of batteries for automotive, motorcycle, and industrial applications
Date established: 1977

Plants: Yongkang Plant, Guantian Plant, Northern Region Logistics Center
Number of employees: 769
Sales: NT\$4,734,760,000

台湾杰士电池工业股份有限公司概况

事业内容: 汽车·摩托车用电池、产业用电池的生产、销售
设立: 1977年

工厂: 永康工厂、官田工厂、北部物流中心
雇员数: 769名
销售额: NT\$ 4,734,760,000



Corporate
governance
企业管控

Corporate governance

We are engaging in an ongoing effort to improve our corporate governance to ensure the transparency, soundness, and legal compliance of our management.

企业管控

为了确保经营的透明性、健全性和守法性，持续强化企业管控。

Approach to corporate governance and our governance system

Maximizing Corporate Value

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, we believe that a continued focus on corporate governance will maximize our corporate value to ensure management transparency and soundness while strengthening corporate profitability through timely decision-making and operational efficiency.

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. 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.

Focused on internal controls

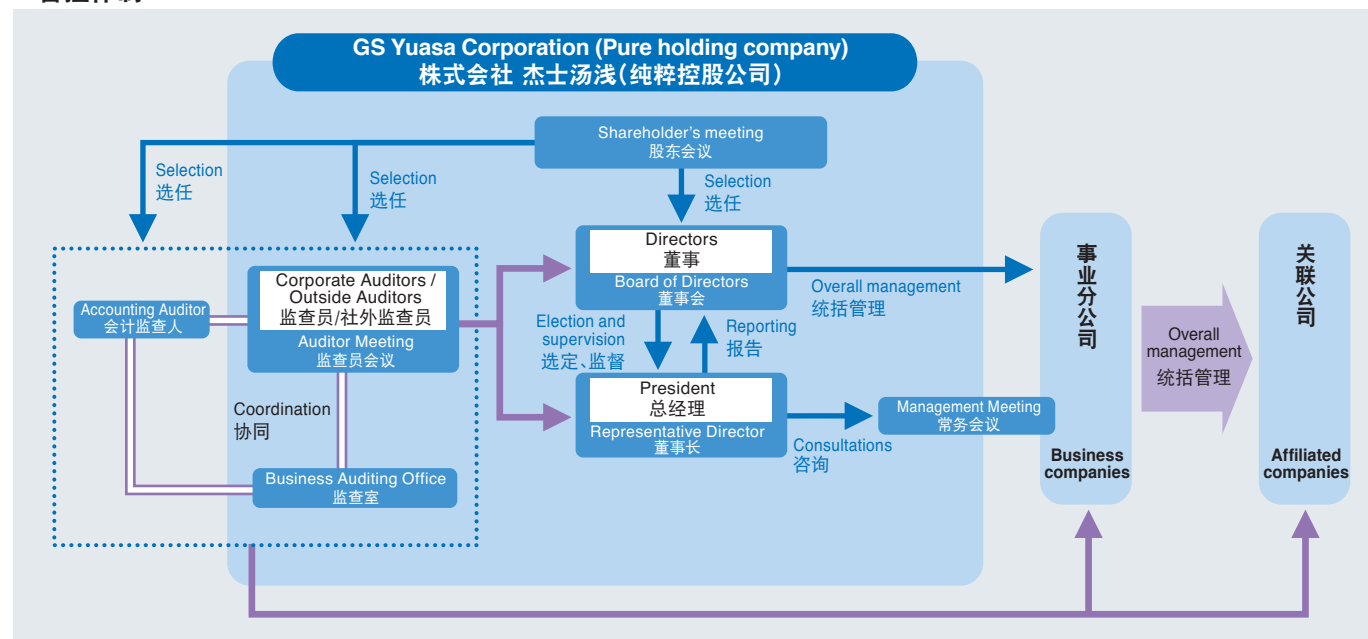
Building Systems and Structures Based in Law

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



企业管控理念及体制

以企业价值的最大化为目标

杰士汤浅集团为了实现“通过革新与成长，为人类、社会和地球环境作出贡献”的企业理念，把“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”的经营理念具体化，力求集团公司员工的意志统一。

另外，企业管控的持续推进，与确保经营的透明性和健全性，通过快速的决策和事业的高效执行，强化企业收益能力等企业价值的最大化息息相关。

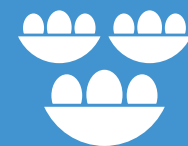
本公司为了实现集团整体的有效管理以及正确的经营决策，采用定期向董事会报告事业分公司业务执行情况和重要事项的方式，构筑强化董事会职能的管控体制。另外，公司内部、外部监察员在董事会和集团的重要会议上陈述意见的同时，通过监察员会议上的信息交流，以及与公司监察室和会计监察人员的合作，完善了可开展有效监察的体制。

有关内部控制的措施

根据法令法规构筑体制和组织结构

杰士汤浅集团为强化经营基础，完善了确保基于公司法的业务正确性的体制，以及必要的公司规则，并运用了合适的经营信息管理、风险管理以及集团的监查等组织结构。

另外，为应对基于金融商品交易法的内部控制报告制度，构筑并维持了财务报告相关的内部控制的体制和组织结构。包括海外分公司的关联集团各公司，在公司内部评估内部控制制度的完善以及运用情况，并在接受公司外部的监察后，公开内部控制报告书。



Risk management
风险管理

Risk management

Implementing thorough compliance management and risk management

风险管理

力求贯彻合规精神经营和风险管理。

Thorough risk management and crisis management

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

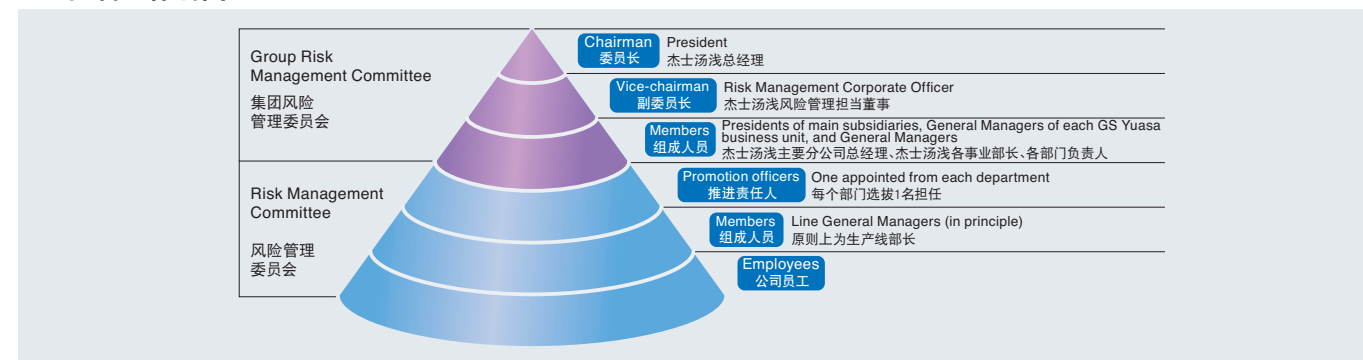
The GS Yuasa Group has adopted Risk Management Rules intended to avoid or reduce exposure to business risk and minimize potential corporate losses.

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.

■ Risk management structure

■ 风险管理体制图



Compliance activities

Publishing Guidelines and Manuals and Conducting Compliance Training

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 Group employees are guided in their behavior in 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. To better implement these standards, we have established Corporate Ethical Behavior Guidelines that stipulate what is either required or prohibited of all employees in specific situations.

In fiscal 2012, we revised our Antimonopoly Act Compliance Manual, which clearly addresses the Antimonopoly Act, and distributed it to all employees. We implemented an initiative intended to improve compliance awareness throughout the Group and to inculcate knowledge through workplace meetings and knowledge confirmation testing for this manual and other existing compliance manuals.

As a point of contact for employees who become aware of behavior that is unjust or inappropriate, we have established GS Yuasa Group Corporate Ethics Hotline. It is accessible both internally and externally and enables employees to convey information anonymously. Our investigation team remains committed to protecting whistleblowers when conducting investigations and taking appropriate action. In addition, our president periodically conducts a compliance survey among all Group employees by means of an in-house email questionnaire. The survey contains questions on compliance practices in day-to-day operations.

风险管理的贯彻与危机管理

周密地评估风险的大小程度，对风险进行正确管理

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。

合规精神活动

发行准则和手册，实施合规精神教育

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，充分认识到集团全体员工重视遵守法律法规、伦理及公司规则的重要性。

为此，我们制定了《杰士汤浅集团的企业伦理标准》，明确了全体员工应该遵守的十项行动规则。同时，为了确实地执行该标准，制定了《企业伦理行动准则》，具体指示全体员工“应该做什么”、“不能做什么”。

2012年度，我们修改并向全体员工分了解释说明有关反垄断法的《反垄断法遵守手册》，并针对本手册和既有的合规精神手册，召开职场会议和进行确认理解程度的测试等活动，开展了提高杰士汤浅集团整体的合规精神意识和掌握相关知识的工作。

此外，我们还完善了相关体制：作为一旦员工发现有合规精神方面的不恰当行为时的报告窗口，在公司内部和外部设置可用匿名报告的“企业伦理热线”，在力求保护信息提供者的同时，进行详细的调查和采取适当的措施。而且，以杰士汤浅集团全体员工为对象，本公司总经理进行定期性的合规精神调查——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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