

# CHIYODA CORPORATION Group CSR Report 2013

Fiscal Year Ended March 31, 2013



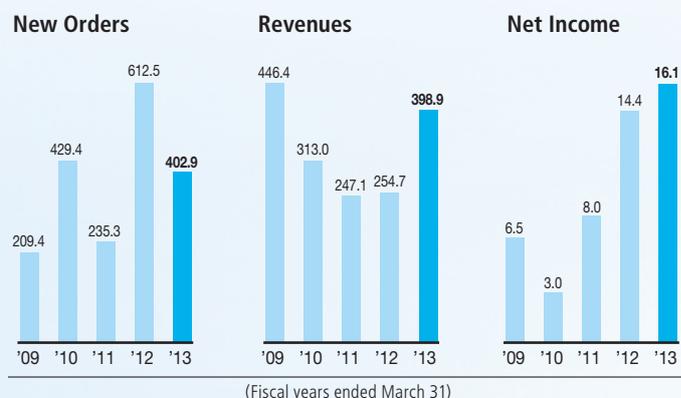
# Corporate Profile

**Chiyoda Corporation is an integrated engineering company engaged in the design and construction of plants and facilities around the world. The Chiyoda Group strives to contribute to the sustainable development of society while promoting harmony between energy and the environment.**

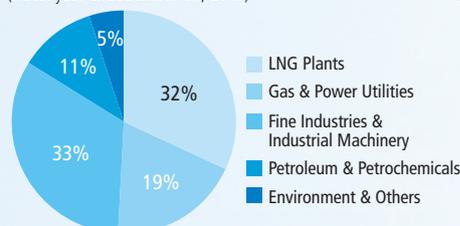
(As of March 31, 2013)

**Name:** Chiyoda Corporation  
**Address:** Minatomirai Grand Central Tower  
 4-6-2, Minatomirai, Nishi-ku,  
 Yokohama 220-8765, Japan  
**Main Offices:** Chiyoda Global Headquarters  
 (Nishi-ku, Yokohama, Japan)  
 Koyasu Office & Research Park  
 (Kanagawa-ku, Yokohama, Japan)  
 Tokyo Office (Chiyoda-ku, Tokyo, Japan)  
**Paid-in Capital:** ¥43,396 million  
**Main Business Fields:** Consulting, planning, engineering,  
 procurement, construction, commis-  
 sioning (test operation), consulting and  
 training for operation and maintenance,  
 research and development, technology  
 services, and project management for  
 plants and facilities in fields including  
 energy, chemicals, pharmaceuticals,  
 biotechnology and the environment  
**Number of Major  
 Group Companies:** Domestic: 7  
 Overseas: 12  
**Number of  
 Group Employees:** 4,915  
**URL:** <http://www.chiyoda-corp.com/en/>

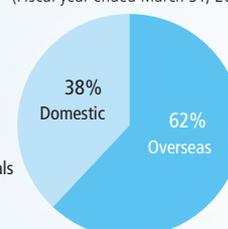
## Consolidated Financial Highlights (Billions of yen)



## Revenues by Industry (Fiscal year ended March 31, 2013)



## Revenues by Region (Fiscal year ended March 31, 2013)



## On the Cover

In line with the start of our new medium-term management plan, "Seize the moment, Open up new frontiers," the cover illustration expresses our commitment to cultivating a diverse workforce and sharing work globally, as well as our corporate philosophy of harmony between energy and the environment. (See pages 4-5.)



## Contents

Corporate Profile.....	Inside front cover
Editorial Policy .....	1
The Chiyoda Group's CSR.....	2
Message from the President .....	4
Stakeholder Dialogue Sharing Value through Sustained Communication .....	6
Feature Contributing to the Growth of Renewable Energy.....	8
Group Company Activity Highlights .....	10

## The Chiyoda Group's CSR Vision in Action

CSR Vision ① A Reliable Company .....	12
CSR Vision ② Environmental Initiatives .....	13
CSR Vision ③ Social Contributions through Business Activities.....	14
CSR Vision ④ Respect for Human Rights .....	15
CSR Vision ⑤ Commitment to Fairness.....	16
Third-Party Opinion .....	17

# Editorial Policy

## The Chiyoda Group reports its CSR activities on the Chiyoda Corporation website and in the CSR Report.

### Differentiation of Content of Website and Other Publications

The diagram below shows the differentiation of the content reported on the website and the CSR Report. On our website we present basic corporate social responsibility (CSR) information and activities for each CSR Vision to facilitate the understanding of visitors to the site.

In addition, business and financial information is available in the publications listed below.



Shareholders' Report  
(Japanese only)

An annual report that all joint-stock companies in Japan are required to prepare under the Companies Act. It is sent to shareholders by mail. We also issue an interim report for the first half of the fiscal year (April – September).



Annual Report

Prepared in English for shareholders and investors outside Japan. It includes the consolidated financial statements, which are published separately.



Fact Book

A collection of data necessary for investment analysis, including various financial and management indicators and long-term historical data, as well as graphs and charts.

The publications above, along with reports to the Tokyo Stock Exchange (in Japanese only), press releases and other information, are available for download on the Chiyoda website.

<http://www.chiyoda-corp.com/ir/en/library/index.html>

Corporate governance information is available at

<http://www.chiyoda-corp.com/company/en/corporate-governance.html>

### Composition of the CSR Report

This CSR Report highlights activities in the fiscal year ended March 31, 2013.

This year, in addition to the corporate profile, message from the president, a summary of activities for each CSR Vision, Chiyoda Group company activity highlights, and a feature titled "Contributing to the Growth of Renewable Energy," we present "Stakeholder Dialogue: Sharing Value through Sustained Communication," in which people from outside the Company discuss their expectations for the Chiyoda Group. We also include the third-party opinion of Mr. Eiichiro Adachi, an expert in CSR, who offers an objective assessment of our initiatives and suggestions for improvement.

### Scope of the Report

The report encompasses the CSR activities of 20 Chiyoda Group companies (Chiyoda Corporation and 19 major Group companies), unless otherwise specified.

### Applicable Period and Date of Publication

Applicable Period: Fiscal year ended March 31, 2013  
(April 1, 2012 to March 31, 2013)

Date of Publication: August 2013

### Guidelines Used for Reference

This report is prepared with reference to the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines G3.1, the Reporting Guidelines (2012 Version) of the Ministry of the Environment in Japan, ISO 26000, and the United Nations Global Compact.

### Contact Us

As we would like to reflect your opinions and thoughts in our future activities, please go to the "Contact Us" page on our website, select "CSR (Corporate Social Responsibility)" and submit your comments using the form provided.

# The Chiyoda Group's CSR

Our Mission

## Chiyoda Group Corporate Philosophy

Enhance our business in aiming for harmony between energy and the environment and contribute to the sustainable development of a society as an integrated engineering company through the use of our collective wisdom and painstakingly developed technology.

Our Values

### Chiyoda Group CSR Visions

As an integrated engineering company, the Chiyoda Group pledges to contribute to the sustainable development of society through its business activities, and to constantly strive to increase corporate value and earn the trust and understanding of all stakeholders by adhering to the following principles.

		Compliance with International Guidelines	
		ISO 26000 Core Subjects	UN Global Compact
<b>1</b>	<b>A Reliable Company</b> We strive to be a reliable company to our customers and other business partners by providing world-class technologies and knowledge.	Consumer (customer) issues	—
<b>2</b>	<b>Environmental Initiatives</b> We will work to remain an invaluable company to society by utilizing refined technologies to promote harmony between the global environment and economic and social activities.	The environment	Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.
<b>3</b>	<b>Social Contributions through Business Activities</b> Through our engineering business in Japan and overseas, we contribute to local communities in ways including human resources development, technology transfer and environmental protection.	Community involvement and development	—
<b>4</b>	<b>Respect for Human Rights</b> We are dedicated to respecting the human rights of all people. We will create a corporate culture where the diversity, individuality and character of employees are respected, where people are motivated to do their best, and of which employees and their families are proud.	Human rights Labor practices	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure that they are not complicit in human rights abuses. Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; Principle 4: the elimination of all forms of forced and compulsory labour; Principle 5: the effective abolition of child labour; and Principle 6: the elimination of discrimination in respect of employment and occupation.
<b>5</b>	<b>Commitment to Fairness</b> We are dedicated to achieving even greater transparency and stability by conducting our operations fairly in accordance with the highest ethical standards.	Organizational governance Fair operating practices	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

### Basis of Our Actions

Code of Conduct of the Chiyoda Group



## Participation in the UN Global Compact

In November 2012, the Chiyoda Group became a signatory of the United Nations Global Compact (UNGC), a global code for CSR. Chiyoda is the first company in the construction industry in Japan, including major engineering companies, to endorse and support the UNGC. Together with approximately 11,500 companies and organizations (as of June 2013) from more than 140 countries, Chiyoda will further strengthen its CSR activities to contribute to a sustainable society, in line with the Ten Principles of the UNGC on human rights, labor, the environment and anti-corruption.

Action Policies	Actions in the Fiscal Year Ended March 31, 2013	Concrete Initiatives
<ul style="list-style-type: none"> <li>• Provide industrial plants that earn customer trust through engineering of outstanding quality</li> <li>• Share our CSR principles with suppliers and other business partners</li> </ul>	<ul style="list-style-type: none"> <li>• Initiatives for a stable supply of energy and reduction of greenhouse gases</li> <li>• Contribution to diversification of energy sources</li> <li>• Plant construction that lives up to customer trust</li> </ul>	<p>PP. 8,9,12</p>
<ul style="list-style-type: none"> <li>• Develop and provide environmentally friendly energy and conservation technologies</li> <li>• Conduct business activities that contribute to environmental conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Continuing research and development for a low-carbon society and hydrogen energy economy</li> <li>• Expansion and promotion of renewable energy</li> <li>• Consideration of the environment and biodiversity in project planning and operation</li> </ul>	<p>PP. 8,9,13</p>
<ul style="list-style-type: none"> <li>• Contribute to society through integrated engineering business activities</li> <li>• Enhance social contribution activities by providing knowledge and labor</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion and support of culture in the community</li> <li>• Contribution to local economic development and human resource development</li> <li>• Tie-ups and cooperation with educational institutions to educate the next generation</li> <li>• Response to the Great East Japan Earthquake</li> </ul>	<p>PP. 6,7,14</p>
<ul style="list-style-type: none"> <li>• Create a lively and energetic working environment and help employees develop their talents</li> <li>• Instill in everyone involved that safety is a core value</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of pleasant work environments</li> <li>• Establishment and enforcement of a safety culture</li> <li>• Enhancement of human resource development system</li> </ul>	<p>P. 15</p>
<ul style="list-style-type: none"> <li>• Conduct business activities based on strict compliance and a high degree of transparency</li> <li>• Conduct a thorough risk management program</li> </ul>	<ul style="list-style-type: none"> <li>• Stronger collaboration with Group companies and business partners</li> <li>• Thorough information security</li> <li>• Enhancement of awareness of export controls</li> </ul>	<p>P. 16</p>



**Chiyoda Group  
Compliance Manual**

Please visit the web pages below to view the Code of Conduct and Compliance Manual.

**Code of Conduct of the Chiyoda Group**

<http://www.chiyoda-corp.com/company/en/policy/behavior.html>

**Chiyoda Group Compliance Manual**

<http://www.chiyoda-corp.com/company/en/policy/compliance.html>

# Message from the President



**In our pursuit of harmony between energy and the environment, we will seize the moment and open up new frontiers to contribute to the development of a sustainable world.**

## **The Chiyoda Group's Corporate Social Responsibility (CSR)**

Since its founding 65 years ago, the Chiyoda Group has worked to contribute to the advancement of society with the aim of realizing its corporate philosophy centered on "Energy and Environment in Harmony." As an engineering company, we build infrastructure that requires state-of-the-art technologies in various countries.

The energy industry has recently undergone structural changes such as the shift to natural gas and renewable energy. Rapid changes have also taken place in the industry environment, notably the shale revolution that has revitalized the North American market. The demands of society are becoming more diverse as well.

In this context, I believe the Chiyoda Group's corporate social responsibility is to accurately assess current demands and deploy engineering to provide the value that society requires for addressing global challenges such as poverty, environmental issues and securing resources, consistent with our Corporate Philosophy.

## **Seize the Moment and Open Up New Frontiers to Transform into an Engineering Company Ready for the Future**

The Chiyoda Group has formulated a new Medium-Term Management Plan under the slogan "Seize the moment, Open up new frontiers." In developing the new plan, we analyzed the changes and trends in the external environment, established a vision of the Chiyoda Group 10 years on, and formulated an action plan to achieve that vision.

We have defined our vision of the Chiyoda Group 10 years from now as a corporate group that has 1) diversified into new business areas and enhanced the satisfaction of stakeholders; 2) deepened its contribution to local communities in emerging and developing countries; and 3) established an operational framework for managing work globally, while maintaining our traditional engineering contractor business at the core.

Our growth strategy will be to expand our core business in the fields of gas and liquefied natural gas (LNG) projects while

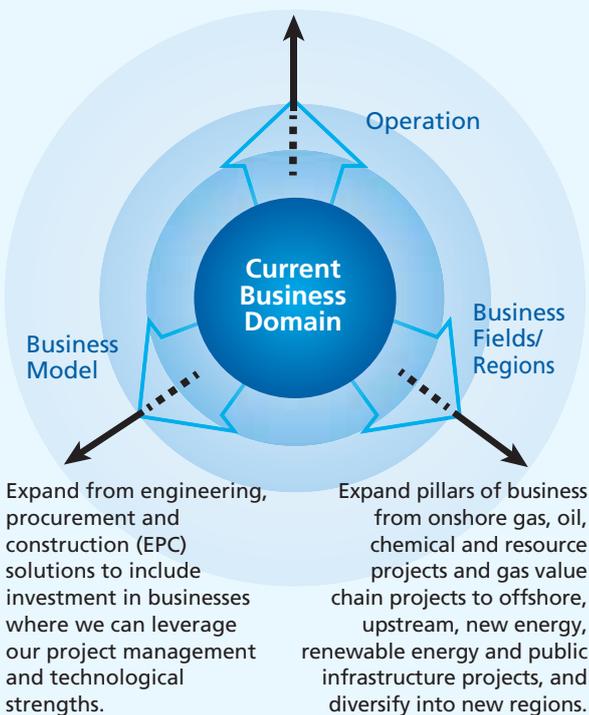
building our global presence in offshore, upstream, new energy, renewable energy and public infrastructure projects. At the same time, we will accelerate business investments in fields where we can take advantage of the Group's strengths.

To build the Group structure necessary for achieving this growth strategy, we intend to develop and promote diverse human resources regardless of nationality, gender, age or other characteristics, and evolve into a company that offers an attractive working environment in which all employees can realize their potential. In support of that objective, we established the Crisis Management Unit in April 2013 as a dedicated organization to enhance the safety and security of employees and everyone involved in our work as the top priority in our business operations.

### Direction of Evolution

#### Further evolve through business growth on the three axes of Operation, Business Model and Business Fields/Regions

Shift from operation by Japanese nationals in Japan to the global management of work by strategic regional operation centers.



## Sustained Growth and Reinforcing Our Reputation for Reliability

In November 2012, the Chiyoda Group joined the United Nations Global Compact (UNGC\*), the first company to do so in the Japanese construction industry, including major engineering contractors. Our objective in joining the UNGC is to advance our CSR efforts on a global basis and firmly establish CSR as a unifying force of the Chiyoda Group. We will align the Chiyoda Group CSR Vision with the Ten Principles of the UNGC to further raise awareness of CSR among all Group employees and ensure that it is reflected in their behavior. In addition, we will continue to support the recovery from the Great East Japan Earthquake through our businesses and by supporting employee volunteers in the affected areas.

Sustained communication with our various stakeholders is the foundation of our business activities. My personal approach is to engage our partners in an open and considerate dialogue with a friendly smile and attitude of respect. I believe that is the first step in practicing the Chiyoda Group's CSR. We will continue our CSR initiatives with the aim of reinforcing the Chiyoda Group's reputation for reliability.

\* The UNGC is a voluntary global initiative that encourages businesses to act as good corporate citizens and achieve sustainable growth by exercising responsible, creative leadership. It is centered on ten principles concerning human rights, labor, the environment and anti-corruption.

August 2013

Shogo Shibuya  
President & CEO  
Chiyoda Corporation

# Stakeholder Dialogue

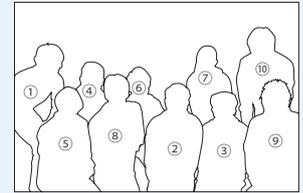


## Introducing Participating Members

- ① Ryo Shibata      Local coordinator: Industrial Growth Platform, Inc.
- ② Seiji Murakami      Nagahora Genki Village Executive Office
- ③ Yoko Murakami

## Chiyoda Corporation volunteers

- ④ Yoshiyasu Ito      Mechanical Engineering Unit
- ⑤ Noriko Shimizu      Gas & LNG Project Operations
- ⑥ Akira Tsuruoka      Mechanical Engineering Unit
- ⑦ Yuko Nakamura      Finance & Project Audit Unit
- ⑧ Osamu Hirohata      Technology Development Unit
- ⑨ Shodai Watanabe      IT Management Unit
- ⑩ Makoto Watanabe      CSR Unit



# Sharing Value through Sustained Communication

The Chiyoda Group maintains ongoing exchanges with the people affected by the Great East Japan Earthquake of March 2011 through its volunteer recovery support activities. We hope to use these exchanges to draw a roadmap to the region's revitalization by going beyond a relationship of supporter and the supported through mutual encouragement and understanding.

## Recovery Support Volunteer Efforts

The Chiyoda Group dispatched its first group of 25 employee volunteers to the region in November 2012 based on the results of a survey of employees conducted one year after the disaster, when post-disaster cleanup work and restoration undertaken by Chiyoda had slowed down. They carried out volunteer activities at three evacuation sites in Iwate Prefecture. One of these sites was a temporary housing compound called Nagahora Genki<sup>1</sup> Village.

In many instances, communities were broken up by the move to temporary housing. At Genki Village, however, a conscious decision was made to keep the community together and maintain neighborhood relationships as they were prior to the disaster. Chiyoda maintains regular contact with the village through the Yubeshi-no-Kai,<sup>2</sup> an

in-house organization that Chiyoda employees launched after the visit.

## On-Site Discussion Meeting

In May 2013, seven of the 35 Chiyoda employees who visited Genki Village met with members of Nadeshiko-Kai (whose members act as guides for visitors and volunteers and organize *yubeshi*-making and other symbolic activities for community rebuilding) for the first time in six months. At that time, they spoke with Mr. Ryo Shibata of Industrial Growth Platform, Inc., which provides on-site management assistance in Iwate and Fukushima prefectures in partnership with reconstruction support volunteers, and engaged in a discussion with Mr. Seiji Murakami and Ms. Yoko Murakami of the Genki Village Executive Office.

## Volunteer Work to Support Reconstruction

**Shibata (moderator):** How do the people in Genki Village feel about the same company regularly visiting and maintaining contact? In Chiyoda's case, they place orders for *yubeshi* with you regularly.

**S. Murakami:** Rebuilding our homes is the main goal that we all share. But we sometimes feel depressed and overwhelmed when we think about the daunting road to reaching that goal. When people from the same company visit us repeatedly, we are pleased to offer them hospitality. Even though the visits are short, each one is a special event that gives us a sense of fulfillment and confidence, which helps us believe that we can achieve our main goal.

**Shibata:** So, just having people from outside come to interact with you is an event that energizes the community.

**S. Murakami:** Yes. Because our goal is so large, doggedly persisting until we achieve it can be mentally draining. In a way, it is important to enjoy the process of trial-and-error on smaller projects. I hope that people in the village think so. The Executive Office has established relationships with the people at Chiyoda that allow us to freely discuss anything. We do not think of you as guests.

## Nadeshiko-Kai Members



Leader  
Yaeko Toba



Guide  
Eiko Toba



Rinko Murakami



Sachiko Kaneno



Kiyoko Kikawada

Notes: 1. Japanese for "vigor"

2. The Yubeshi-no-Kai maintains sustained communication with the local community in ways such as regularly ordering *yubeshi* (sweet citron-flavored steamed dumplings) from the Nadeshiko-Kai and selling them in-house.

**M. Watanabe:** We conducted a survey of the volunteers sent last November. Many of them wondered if their activities in Genki Village were really supporting people; instead, they said they were energized by the hospitality they were shown. I feel that the interaction with you encouraged the volunteers. That was an unexpected result.

**Ito:** I also participated last year. At first, I was all fired up to go and help out with the reconstruction. Instead, I felt like I was being catered to. I wondered if that was okay. In the end, I realized that it seemed to be making everyone happy.

**Shibata:** Chiyoda was about the third group to visit Genki Village since the program began. Moreover, it was the first group accepted from a large organization. I think the success of this visit gave the village confidence and led you to later accept regular exchanges with Harvard Business School and with other companies.

**S. Murakami:** I totally agree. Even though I was absent during Chiyoda's November visit, it was a success, which gave the entire village confidence, and was a boost to the program.

### Yubeshi-no-Kai

**Shibata:** Was the existence of the Yubeshi-no-Kai significant?

**Y. Murakami:** Everyone appreciates the visits. We are really thankful for having to make the *yubeshi* every month. Everyone looks forward to it, although we're afraid people at Chiyoda's headquarters might get tired of the monthly *yubeshi* shipments.

**Nakamura:** Your customer base is rapidly growing.

**Hirohata:** There are many employees who miss out because the *yubeshi* sell out so fast. Don't worry, there is plenty of demand!

**S. Murakami:** Is that right? I noticed you brought some new members along this time too. Rather than visiting us just once, you are



Regions where Chiyoda has conducted volunteer activities

continuing your support and expanding the number of participants. I am impressed.

**Shimizu:** My boss said, "I can't go to volunteer, so I'll buy a lot." Which he did, and gave them out to everyone. Some of the volunteers who came this time are here because of that.

**Hirohata:** I think we were able to create this activity because we were moved by the close social bonds of Genki Village, and felt like we wanted to help them in some way.

**Tsuruoka:** Chiyoda is a unique company. It has more than a thousand employees at its head office, but if one person brings up a suggestion like "Let's organize Yubeshi-no-Kai," others will join regardless of their age, position or department. It becomes a unified movement. We are a company that values personal interchange, and maybe the fact that people have various connections within the company makes it easy for us to act.

**S. Watanabe:** On the same topic, when I joined the company, I was impressed that there were so many people who were leaders in various capacities before they came to Chiyoda. People who have been leaders know very well how hard leadership is, so when someone suggests doing something, they give them lots of support.

### Continuing Activities

**Shibata:** Mr. Murakami, these visits by volunteers have also given rise to exchange programs as a type of community business, which is vital to the region's recovery.

**S. Murakami:** I wonder if it might lead to tourism in the future. I would also like to consider a kind of Nagahora-style tourism that evolves from accepting volunteers.

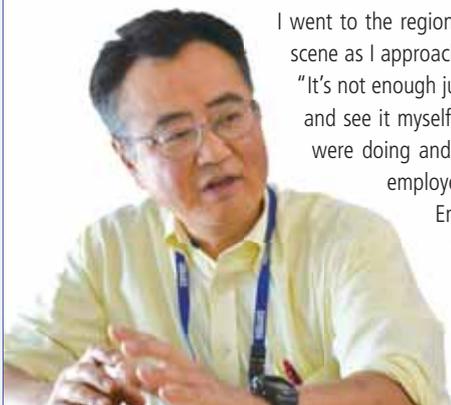
**Shibata:** Are there any goals within sight that you would like to pursue with Chiyoda? What kind of relationship would you like to have with Chiyoda going forward?

**S. Murakami:** I would like to talk not just about reconstruction support, but about the future of the whole village of Nagahora, where the number of young people is gradually declining. One of my tasks will be to figure out how to create a more vibrant environment in the countryside so that people will want to stay here.

In that sense, sending *yubeshi* to Chiyoda each month has become a core activity of Nadeshiko-Kai. Making the *yubeshi* on this regular schedule has given us a foundation to handle orders we might receive from other places as well. I think this kind of support is very helpful. We also would like to fulfill other people's wishes somehow, because it motivates us to keep trying. I will continue to value our relationship with Chiyoda.

**Shibata:** Thank you all for your participation today.

## Being impressed with the activities of Genki Village motivated us.



I went to the region affected by the Great East Japan Earthquake and tsunami for the first time in November 2012. The scene as I approached the area was different from the images I had seen on television. In our business, we often say that "It's not enough just to look at drawings; you have to go to the actual site." So I felt it was important to go to the region and see it myself. Yubeshi-no-Kai was launched because we were so impressed with what the people of Genki Village were doing and wanted to maintain the relationship with them even after we returned to Tokyo. Fortunately, many employees supported the idea. We are now selling around 500 pieces of *yubeshi* a month, which is amazing. Employees who are unable to visit the region due to their busy schedules are also buying the *yubeshi*, which gives them a sense of participation, too. I would like the people of Genki Village to come to our company and meet their *yubeshi* fans in person. We are currently planning such an opportunity.

Masao Ishikawa  
Vice President, Deputy Division Director, Technology & Engineering Division

# Contributing to the Growth of Renewable Energy

As an established leader in energy-related technologies and engineering, the Chiyoda Group is broadening its business range to the field of renewable energy and expanding its business in new technologies to contribute further to stable supplies of clean energy.

The Chiyoda Group conducts its business with a corporate philosophy centered on "Energy and Environment in Harmony." Chiyoda has been fulfilling this philosophy since the 1970s by using technology development and engineering for both stable energy supply and environmental protection. The environmental technologies we have developed include flue gas desulfurization, wastewater treatment and heavy oil cracking. Recently, in response to public demand, we have been steadily expanding our activities in the area of new energy. This includes using solar photovoltaic, solar thermal, geothermal, biomass and other types of renewable energy, creating a hydrogen supply chain with technology for storage and transport of large quantities of hydrogen, and developing Gas to Liquids (GTL)-related technology.\*

In particular, in the field of solar energy the Chiyoda Group is leveraging its expertise in plant construction to contribute to the expansion of solar power generation through plant engineering, procurement and construction (EPC) services that meet diverse customer demands, from production plants for solar panel materials and panel products to the construction of large-scale mega solar power plants.

This feature details the Chiyoda Group's aggressive expansion into concentrated solar power (CSP), a new type of solar energy.

\*Technology for producing liquid fuel from natural gas



Miyazaki Plant 3 (Kunitomi Plant)  
of Solar Frontier K.K.

## EPC Work for Large-Scale Photovoltaic

Chiyoda completed construction of the INPEX Mega Solar Joetsu project, its third large solar power generation EPC project, in March 2013. The Chiyoda Group's engineering expertise and capabilities were instrumental in winning the contract for this project, which is located in Niigata Prefecture, a region of heavy snowfall.

We installed photovoltaic panels with a capacity of 2.3MW on a 46,710m<sup>2</sup> site owned by INPEX Logistics (Japan) Co., Ltd., a subsidiary of INPEX



Completed demonstration plant in Italy

## Strengthening Presence in Concentrated

Chiyoda is also focusing on developing business in the field of concentrated solar power (CSP). In October 2012, Chiyoda acquired a 15 percent equity stake in Italian company Archimede Solar Energy (ASE). The two companies had previously signed a cooperation agreement in June 2011 to develop business in Molten Salt Parabolic Trough Concentrated Solar Power (MSPT-CSP), a next-generation solar power generation technology.

ASE is the world's only manufacturer of the receiver tubes that are a core technology of MSPT-CSP systems. Chiyoda and ASE have been working together in the construction and operation of a plant to demonstrate this technology. In January



## Construction of One of World's Largest Solar Photovoltaic Module Plants

Amid calls for the supply of electric power from renewable energy sources, in July 2012 a system was launched in Japan that obliges electric utilities to purchase electricity generated from such sources at a fixed price. The use of solar cells is growing rapidly in applications ranging from private residences to mega solar power generation facilities for industrial use.

Established in 2006, Solar Frontier K.K. has been investing in construction of factories to expand the share of its unique CIS\* solar photovoltaic modules in the solar cell market. Chiyoda was commissioned to construct Solar Frontier's Miyazaki Plant 3 (Kunitomi Plant),

which began production of solar modules in 2011. With annual production capacity of 900MW, Miyazaki Plant 3 is the world's largest thin-film CIS solar photovoltaic module plant and one of the largest single facilities of its kind. It supplies modules globally.

Chiyoda will contribute to the growth of renewable energy by leveraging the expertise it has gained from this project and from building other plants to aggressively participate in businesses that are expected to increase use of such energy.

\* Thin-film solar modules using copper, indium and selenium (CIS). Since they use less silicon than crystal silicon-based solar modules, they require fewer materials, thus enabling stable supplies of the product.



Completed mega solar facilities

## Generation System in "Snow Country"

CORPORATION. Power generation began in March 2013, and all electricity generated is sold to Tohoku Electric Power Co., Inc. The system's annual output is expected to be equivalent to the annual power demand of 750 average households.

Chiyoda is contributing to the stable supply of clean energy through the EPC services it provided for this large-scale solar power generation system under harsh conditions.

## Solar Power Business

2013, Italy implemented a system under which electric utilities are obliged to purchase electricity generated from renewable energy sources at a fixed price. Expectations that this new system would accelerate the expansion of the MSPT-CSP business led Chiyoda to invest in ASE. The investment in ASE, which specializes in this industry and business, positions Chiyoda to develop the CSP business while expanding EPC orders and sales of ASE's receiver tubes.

CSP business opportunities in Italy will provide a foothold for expansion of this business in the Middle East and North Africa. In this way, Chiyoda will contribute even more to the supply of clean energy.

### Mega Solar Construction Projects

	Client	Project location (Prefecture)	Power generation capacity
Operating	Solar Frontier K.K.	Miyazaki	2.0MW
	INPEX CORPORATION	Niigata	2.3MW
	AIKAWA PRESS INDUSTRY Co., LTD.	Yamagata	1.8MW
	SHOWA SHELL SEKIYU K.K.	Miyazaki	2.4MW
EPC work in progress	Sanko Real Estate Co., Ltd.	Mie	5.2MW
	Sanko Real Estate Co., Ltd.	Mie	2.5MW
	Japan Petroleum Exploration Co., Ltd.	Hokkaido	2.4MW
	OR Solar Co., Ltd.	Toyama	2.5MW
	LM Sun Power Co., Ltd.	Fukuoka	2.6MW
	LM Sun Power Co., Ltd.	Ibaraki	2.5MW
	LM Sun Power Co., Ltd.	Fukui	2.6MW
	LM Sun Power Co., Ltd.	Miyazaki	8.8MW
	Seibu Oil Company Limited.	Yamaguchi	10.4MW*

\*Power output of 8.19MW

### Mega Solar Project Investments

Chiyoda established ENESHIDO NOK K.K., a solar power joint venture, with a wholly owned subsidiary of Saibu Gas Co., Ltd. in July 2012.

	Client	Project location (Prefecture)	Power generation capacity
Operating	Omuta solar power plant	Fukuoka	1.3MW
	Nagasaki solar power plant	Nagasaki	0.6MW
	Kitakyushu solar power plant	Fukuoka	1.8MW

# Group Company Activity Highlights

Chiyoda Malaysia Sdn. Bhd. (CMSB) <http://www.chiyoda.com.my/>

## Charity Work in Asrama Damai

The CMSB Recreation Club organizes charity activities for an orphanage in Asrama Damai, Kuang, Selangor. This program began with the collection of used clothes, books and toys from our staff members. We have also donated a number of necessary items such as washing machines, irons and stationery.

On November 10, 2012, we held a charity event at the orphanage. The meaningful half-day event featured some simple outdoor games with the orphans and ended with a prize-giving ceremony and lunch attended by Asrama Damai residents and CMSB members.



Chiyoda Singapore (Pte) Limited (CSL) <http://www.chiyoda.com.sg/>

## Nursing Home Visit

An important part of our CSR program at CSL is organizing events to assist the community. On October 25, 2012, a group of CSL employees visited Saint Joseph's Home & Hospice and took part in the event "Feeding the Elderly/Destitute of Saint Joseph's Home," which was organized by the Chiyoda Recreation Club of CSL.

CSL staff members visited the facility and assisted the residents by helping them with their meals and taking them for walks in the garden. Participating staff members also presented funds raised by CSL employees to the administration team of Saint Joseph's Home.

Chiyoda Kosho Co., Ltd. (CKS) <http://www.cks-ykh.co.jp/>

## Resolution to Eradicate Safety & Quality Problems

The senior management of CKS has traditionally begun each year with a New Year address to employees outlining management's priorities and expectations for the coming year. At the start of 2013, CKS President Yoshiji Kenmotsu took a different approach by declaring his "Resolution to Eradicate Safety & Quality Problems." This stemmed from management's judgment that eradicating problems related to safety and quality is absolutely vital for CKS to reliably perform its role in the Chiyoda Group's global operations as a maintenance engineering specialist, in addition to the particular requirements of shut down maintenance (SDM). The resolution was summarized in three points for execution based on the causes of problems in the past:

- 1) Maintain good communication to pick up on problems and customer needs, and follow up quickly.
- 2) Share a "crisis consciousness" among supervisors and personnel engaged in tasks as well as among all executives.
- 3) Carry out routine work with alertness and a sense of mission.



Chiyoda Philippines Corporation (CPh) <http://chiyodaphil.com.ph/>

## Activities for a Greener Community

Tree planting is an aspect of habitat conservation and falls under one of the Chiyoda Group's CSR visions, "Environmental Initiatives." CPh once again made an effort to promote environmental conservation by organizing a tree planting activity under the theme "Let's Plant Trees and Promote a Greener Community."

The event was held on September 8, 2012 at Pintong Bukawe, San Mateo Rizal in Manila. A total of 77 CPh employee volunteers planted 500 saplings (rambutan, yakal, molave and kamagong). Tree planting is a great challenge that CPh gladly accepts to continuously support its CSR vision.

## General Waste Reduction Campaign

A healthy and clean working environment is one of CPh's aspirations for its environmental conservation initiatives.

On May 10, 2012, CPh launched the General Waste Reduction Campaign, which aims to promote in every employee a greater commitment to preserving the environment by monitoring the volume of waste generated in the company and providing feedback to employees. This campaign also encourages employees to reduce, reuse and recycle and aims for a more sustainable environment for future generations.





Chiyoda U-Tech Co., Ltd. <http://www.utc-yokohama.com/>

### International Contribution through Environmental and Human Resource Development Programs

At Chiyoda U-Tech, we conduct many activities internationally as part of our consulting business, mainly through the Japan International Cooperation Agency (JICA).

In the field of water treatment, an integral part of the public infrastructure, Chiyoda U-Tech has cooperated in preparatory surveys and detailed engineering for water supply system improvement projects in Paraguay since the fiscal year ended March 31, 2011 in its support work for Kyowa Engineering Consultants Co., Ltd. In the fiscal year ended March 31, 2012, we performed surveys in Vietnam, Indonesia and the Philippines with the Japan Consulting Institute and the then Chiyoda Advanced Solutions Corporation toward the deployment of Japan's earthquake-proofing technology overseas. In the fiscal year ending March 31, 2014, we plan to team up with Kyowa Engineering Consultants to conduct a similar survey in the city of Coronel Oviedo, Paraguay.

In addition, we are cooperating in student training (a government-subsidized international cooperation program of the Japan Cooperation Center, Petroleum initiated by Chiyoda in 1976) at King Fahd University of Petroleum and Minerals in Saudi Arabia. This program helps foster good relations between Saudi Arabia and Japan. Six students were accepted for training in 2012, and we plan to continue the program this year.



### Chiyoda Almana Engineering LLC (Chiyoda Almana) <http://www.chiyoda-almana.com/> Iftar Party 2012 Held

In Islam, Ramadan (the month of fasting) is a holy month of daily fasting between sunrise and sunset. Iftar is the evening meal that breaks the fast after sunset, and is typically celebrated with family and friends. To foster unity among its employees and to show respect for Ramadan, Chiyoda Almana invites all employees once a year to share in an Iftar dinner. In 2012, this dinner was held at the Marriott Hotel in Doha on August 15, where senior management thanked all employees for their contributions to the company.

### Chiyoda (Thailand) Limited (CTL)

#### Portion of Material Storage Site at BV Project Opened to Local Residents

At the Byproducts Value Added (BV) Project currently under construction in the Map Ta Phut Industrial Estate in eastern Thailand, Chiyoda (Thailand) Limited is conducting its typical CSR activities of cleaning up neighborhood streets and drainage ditches. But we have also gone a step further with a unique approach of opening a section of the material storage site to temporary food stand operators.

While enriching the diets of the approximately 2,000 workers, this initiative also helps to recycle money back into the community. A cafeteria is available at the project site, but we believe that the wider range of meal options contributes to a better working environment.

Sanitation and safety were given full consideration when the site was made available, and we conduct weekly inspections to check the safety of the facilities and cooking utensils. Project members have also gained customer understanding by responsibly disposing of food waste after meals.



### L&T-Chiyoda Limited (LTC) <http://www.lntchiyoda.com/> Uttrayan – The Kite Festival

L&T-Chiyoda Limited (LTC) celebrated Uttrayan, the kite festival, on January 10, 2013. Uttrayan is one of India's major traditional national festivals, and is held every year around this time in LTC's home state of Gujarat to celebrate the imminent arrival of spring.

This year, all employees dressed up in colorful new clothes and congregated on a rooftop to fly kites and enjoy a variety of regional foods like undhiyu and jalebi. Competitions and prizes added to the fun of this festive event.

### Chiyoda System Technologies Corporation (CST) <http://www.cst.chiyoda.co.jp/> CST World Café

CST was created on October 1, 2012 by the merger of two Chiyoda Group companies. This was a merger between companies in two different industries, with different organizational cultures, business structures and ways of working. The new company needed to leverage the synergies of the two former companies and evolve toward a new era. With that in mind, CST organized the World Café\* to unify employees by overcoming their differences. Five sessions have been held so far, and while many people were meeting each other for the first time, a lively exchange of ideas has taken place at each session.



\*The World Café is a concept originated by Juanita Brown and David Isaacs in 1995. It is a discussion technique based on the idea that knowledge and wisdom are not born in functional meeting rooms, but emerge in café-like spaces where people can converse freely.

# CSR Vision

# A Reliable Company

## Technology Exchange with Business Partners

### North America CT-121 Users Group Conference

Chiyoda has been licensing the Chiyoda Thoroughbred 121 (CT-121) Flue Gas Desulfurization (FGD) Process, its core environmental technology, to North American electric power companies to help them comply with tighter sulfur dioxide regulations that went into effect in 2010. Currently, CT-121 FGD plants are operating smoothly in 29 power plants, equivalent to 18,700MW of capacity.

The North American CT-121 Group Users Conference has been held annually since 2006 for the purpose of promoting technology exchange with users in North America. As the technology licensor, Chiyoda provides advice to user companies on any operating problems or other issues they may have. The 8th Annual Users Group Conference was held in Columbus, Ohio in August 2012, and intensive technical discussions were held among the approximately 40 attendees, including members of Chiyoda, its licensee Black & Veatch Corporation, representatives from North American users American Electric Power, Southern Company Services, Dayton Power & Light and Power South, and for the first time, a company from Denmark, DONG Energy.



Georgia Power Co. (United States)  
Plant Bowen Unit 3, CT-121 FGD Plant

### ChAS Forum 2012: Plant Maintenance in a Changing Social Environment

In October 2012, Chiyoda Advanced Solutions Corporation (ChAS) merged with Chiyoda and made a new start as ChAS Project Operations.

ChAS Project Operations will continue to hold the ChAS Forum, which took place before the merger, for the purpose of communicating with people outside the Company. In 2012, the event was held in the Chiyoda Global Headquarters lecture hall under the theme "Plant Maintenance in a Changing Social Environment." Clients showed strong interest in the forum, which attracted over 200 participants, including representatives from more than 30 businesses and organizations and Chiyoda Group companies.

Two oil companies that are major business partners, university professors, and Chiyoda Corporation staff presented lectures on topics such as "Business Innovation and Strategy," "Safe Operation from the Perspective of Accident Prevention," and "The Advanced Technology Supporting Plant Operation and Maintenance Management." A lively exchange of ideas followed the lectures.

Feedback from the forum questionnaire was positive. The forum helped share Chiyoda's Project Lifecycle Engineering\* concept for providing appropriate and comprehensive solutions in each phase of client projects.

\* A business model, involving both Chiyoda and the client, for the management of a project throughout its lifecycle including feasibility studies, front-end engineering and design (FEED), detailed engineering, procurement and construction (EPC), operation, maintenance, expansion, modification, upgrading, revamping and demolition.



Then President & CEO Takashi Kubota (present Executive Chairman) delivers a speech at the opening of the forum.

### Pharma Seminar 2013: Exchanging Ideas with Pharmaceutical Manufacturers

The pharmaceutical industry faces various challenges in meeting today's demands. In recent years, biopharmaceuticals have been a focus of attention, particularly therapeutic antibodies. Biopharmaceutical production methods are progressing in step with advances in biotechnology, and approaches to manufacturing have changed rapidly in just the last two to three years.

Against this backdrop, Chiyoda's Pharmaceutical Project Section held Pharma Seminar 2013 together with Group company Chiyoda TechnoAce Co., Ltd. Representatives from Jacobs Consultancy Inc., a leading U.S. engineering firm and Chiyoda technical information services partner, also participated in the seminar, which focused on the latest trends in biotechnology. In addition to the presentation of case studies from the Chiyoda Group, which has over 50 years of experience in executing pharmaceutical plant design and construction projects, and Jacobs, which carries out projects globally for major pharmaceutical companies, the seminar featured a lecture on the latest approaches in biopharmaceutical production facilities. The seminar took place at two venues in Yokohama and Toyama, and was attended by approximately 150 people, mainly from pharmaceutical companies, who engaged in a productive exchange of ideas.



The seminar held in Toyama on February 28, 2013

## CSR Vision

## Environmental Initiatives

### SPERA Hydrogen™

Hydrogen is a clean energy that produces water when it combusts. As such, it is expected to play a key role in the low-carbon society of the future. Chiyoda has developed the world's first technology that enables the storage and transportation of large quantities of hydrogen energy. Using this technology, hydrogen is fixed to liquid toluene with a hydrogenation reaction as liquid methylcyclohexane (MCH). Since toluene and MCH are in the liquid state under ambient temperature and pressure, it is easy to store hydrogen in large quantities over long periods without loss using ordinary tanks and transport with conventional chemical tankers for long distances without the cryogenic technology that liquefied natural gas and liquid hydrogen require. A test run conducted at a demonstration plant located in Chiyoda's Koyasu Office & Research Park in Yokohama verified the technology's expected performance.

Chiyoda is now working to create a large-scale hydrogen storage and transportation system to supply large amounts of clean hydrogen energy to users around the world under the name SPERA Hydrogen™ (the "Hydrogen of Hope").



The hydrogenation and dehydrogenation reactors (above) and storage tanks (below)

### ACETICA (Acetic Acid Production Process)

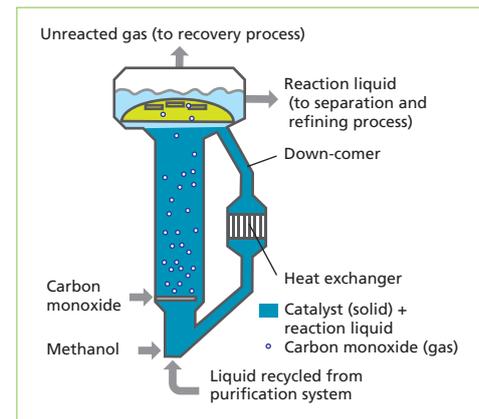
Chiyoda developed the new green production process\* ACETICA, and has worked to promote its use. In 2012, Chiyoda signed a license agreement for this process with Petrobras of Brazil.

In ACETICA, the rhodium complex, a commonly used catalyst in methanol carbonylation, was fixed on a carrier developed by Chiyoda. The process was made complete by developing an optimal reactor (a three-phase bubble column loop reactor) that utilizes the characteristics of the fixed catalyst.

Fixing the catalyst to the carrier eliminates the need to separate the catalyst from the reaction product because the catalyst is contained in the reactor. Moreover, the process precludes the discharge of the environmentally harmful substances in the catalyst, and essentially eliminates loss of the expensive catalyst.

\* A production process that minimizes impact on the environment

#### Three-phase bubble column loop reactor



### Shuttle Ship Transport and Offshore Injection System for CCS

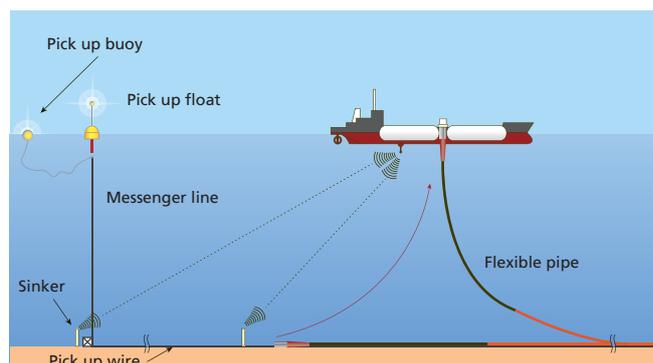
Carbon dioxide (CO<sub>2</sub>) capture and storage (CCS) is a technology used to separate and recover CO<sub>2</sub> from the flue gases of thermal power plants and other facilities, then ship it to a storage site, and inject it under the seabed. It is one of the most powerful methods for global warming mitigation. Three modes of transport – pipeline, ship and truck – are currently being developed and studied as transport methods in CCS.

Shuttle ship transport and offshore injection is a new ship-based CCS system. Using grants received over two years from the Global CCS Institute (GCCSI) established by the Government of Australia, Chiyoda verified technical and economic feasibility of the system with technical guidance from Professor Masahiko Ozaki of the University of Tokyo, who originated the concept. In this system, a medium-sized (3,000-ton capacity) shuttle ship is used to transport liquefied CO<sub>2</sub> to an unmanned, offshore storage site. The liquefied CO<sub>2</sub> is injected directly into the bore hole through a flexible riser pipe. The advantages of the system include its functionality over longer distances and in deeper water than pipeline transport, its adaptability to changes in shipping volume and distance, and its ability to function with smaller onshore and offshore facilities than larger ships. Chiyoda is

developing an integrated CCS system, incorporating the separation and recovery method, for contributing to global warming mitigation.

Note: A report on the shuttle ship transport and offshore injection system is available on the GCCSI website: <http://www.globalccsinstitute.com/publications>

#### The shuttle ship and offshore injection system for CCS





## CSR Vision

## Social Contributions through Business Activities

### LNG Project in Papua New Guinea Employs Local Workers

A Chiyoda-led joint venture is currently building an LNG plant near Port Moresby in Papua New Guinea for ExxonMobil.

The project is expected to have a significant beneficial impact on the country's economy. Surrounding the LNG plant are four villages. The project employs more than 2,000 people from these villages and is actively engaged in training the local workers to improve their skills.



### Environmental Class Launched at Junior High Schools

Chiyoda has conducted environmental classes primarily for elementary school students since 2006, with emphasis on the importance of conserving water and other resources.

On February 21, 2013, we extended the program to junior high schools with an environmental class for approximately 120 first-year students at Imai Junior High School in Kawasaki. Through an experiment in which they made water clean using filter paper and activated carbon, the students learned that water, a finite resource, is being used in massive amounts, and they gained a greater appreciation of the importance of water. As of March 31, 2013, the cumulative number of students participating in the environmental classes had exceeded 1,700.



Other Activities by Chiyoda Group Companies in the Fiscal Year Ended March 31, 2013

Cooperation with university education (dispatch of instructors)	7 people
Corporate training of teachers	12 people
Training of interns	34 people
Environmental classes	406 people
TABLE FOR TWO	Ongoing
Cleanup campaigns	9 people
Disaster area support	48 people
Regional contribution activities	7 people

### Visually Impaired People Invited to Japan Philharmonic Orchestra Concert

Continuing a program begun in 2011, Chiyoda invited 56 people in 28 pairs from the Yokohama Blind Association to a concert of the Japan Philharmonic Orchestra at Yokohama Minato Mirai Hall on December 27, 2012.

We received a certificate of appreciation for our activities from the Yokohama City Council of Social Welfare. The Managing Director of the Yokohama Blind Association and one other person attended the presentation ceremony on behalf of those invited. "It was a superb performance," said the managing director. "Live music is different from CDs and other media because you can hear the full range of sounds with your whole body. I want to express our heartfelt thanks for this opportunity."



Presentation of the Certificate of Appreciation  
Ms. Hiroe Haga, Managing Director of the Yokohama City Council of Social Welfare (center) and Mr. Kazuo Obokata, then Senior Vice President in charge of CSR Unit (present Senior Advisor, right)

### In-House Sale of Goods Made by Challenged People

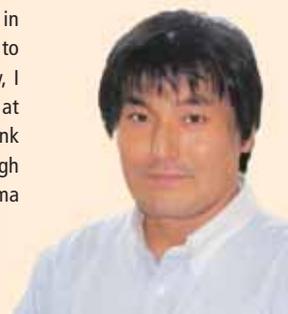
On March 12, 2013, a sale of cookies and handicrafts made at community workshops by challenged people took place at Chiyoda Global Headquarters in cooperation with the Yokohama City Council of Social Welfare. The confectioneries sold out quickly, with rave reviews for the taste of the baked goods and the designs of the small handicrafts. Proceeds from the sales helped support the people who made the items. Chiyoda plans to hold this event on a regular basis.



### Comments from a Stakeholder

I first met with Chiyoda Corporation in October 2011, about six months before the headquarters moved to Minatomirai in Yokohama, to coordinate recipients of the tickets to the Japan Philharmonic Orchestra concert that Chiyoda had offered to donate. After hearing of Chiyoda's interest in conducting social contribution activities with roots in the local community, I proposed several other ideas. Those ideas have since been implemented, including the in-house sale of goods made at community workshops by challenged people and participation in social contribution events in the Minatomirai district. I think the speed with which Chiyoda acted is a sign of the company's commitment to giving back to the community and of the high level of awareness among its employees. As a consultation office for corporate social contribution activities, the Yokohama City Council of Social Welfare looks forward to continued cooperation with Chiyoda.

Ichiro Kato  
Manager, Civic Activity Service Section, Community Service Department  
Yokohama City Council of Social Welfare



## CSR Vision

## Respect for Human Rights

### Chiyoda Family Day

On August 24, 2012, family members of Chiyoda Group employees gathered for "Chiyoda Family Day," which was held at Chiyoda Global Headquarters. The purpose of the event was to promote closer family ties and encourage and motivate employees by helping their family members gain a better understanding of the nature of Chiyoda's business and work environment.

A total of 158 members of 76 families attended the event, which got off to a lively start. The program was conducted in both Japanese and English for the benefit of non-Japanese family members.

The first part of the program was an audio visual introduction of Chiyoda, followed by participation in the project process through a simulated project based on the making of paper airplanes. This mock project was an enjoyable learning experience, especially for the children.

The second part of the program centered on an activity corner run by the PR & Recreation Section of Chiyoda Labor Union. Family members interacted with a scale model of a plant, viewed an actual construction site on Google Earth and tried on overalls and a harness like the ones worn onsite.

Finally, participants had the opportunity to see the offices where their family members worked. The visit to the offices was an interesting experience for family members and employees alike, with children exchanging their handmade business cards with employees acting as their coworkers, and other amusing experiences.

We will continue to plan and implement programs that help to strengthen relationships with the community and between families, motivate employees and enhance the sense of unity within the company.



### OHSAS 18001 Certification of Occupational Health and Safety Management System

Since the fiscal year ended March 31, 2004, Chiyoda has been implementing a self-regulated occupational health and safety management system based on OHSAS 18001. In February 2013, Chiyoda underwent an audit by a certifying body to obtain a third-party evaluation of the system and received OHSAS 18001 certification.



OHSAS 18001 certification

### Expansion of ISO 14001 Environmental Management System Certification

Along with the acquisition of OHSAS 18001 certification, Chiyoda underwent an audit to expand the scope of its existing ISO 14001 certification. As a result, overseas projects were added to the scope of certification.



ISO 14001 certification

### Career Guidance Program

An information session on career guidance was provided at L&T-Chiyoda Limited in India on April 19, 2013. A senior faculty member from the Department of Mechanical Engineering, L&T IT, spoke on career opportunities in engineering. The session was well received by parents and children, who felt it gave them good guidance and direction for their prospective careers.



### Comments from an Executive

Reflecting its commitment to fairness, Chiyoda Singapore (Pte) Limited was awarded a Certificate of Commendation for outstanding commitment and contributions to strong labor-management relations by Singapore Industrial & Services Employees' Union (SISEU). Management and staff were pleased and honored to be recognized. The certificate was presented by guest of honor Mrs. Josephine Teo, Minister of State, during SISEU's annual dinner & dance on November 9, 2012. The event was attended by top management from various multinational corporations.



Mr. Hikaru Morita  
Managing Director  
Chiyoda Singapore (Pte.) Limited



(Back row, third from left in photo above and second from right in photo at right)

## CSR Vision

## Commitment to Fairness

### Compliance Initiatives

#### ■ Enhancing Collaboration with Field Offices and Group Companies in Japan and Overseas

In addition to compliance training at overseas Group companies, Chiyoda has incorporated compliance briefings into the meetings of Group company presidents to directly familiarize those responsible for each site with compliance issues. Moreover, with our participation in the United Nations Global Compact we issued the third edition of the CSR Handbook, which contains the Code of Conduct and other guidelines, and distributed it to all employees of the Chiyoda Group.



Meeting of Chiyoda Group company presidents



CSR Handbook (3rd edition)

#### ■ Developments in the Supply Chain

Our efforts to ensure compliance go beyond the Chiyoda Group. We also involve our business partners, including equipment and material suppliers and the partners we work with in construction projects. As part of our efforts to share the importance of compliance, including CSR, we distributed the CSR Handbook to business partners at the annual meeting. In addition, we revised our standard contract terms by inserting a clause on elimination of anti-social forces.



Annual meeting of business partners

#### ■ Ongoing Compliance Training and Audits

In response to the rising global anti-corruption movement in the United States, the United Kingdom and other countries, Chiyoda has taken steps to eradicate careless mistakes, strengthen mutual checks and balances and further increase transparency.



Meeting with an executive at an overseas Group company

#### ■ Ensuring Information Security

Chiyoda established a department specializing in information security in 2001. We have since worked to make sure that all employees understand that as a plant engineering company, we deal with important technical information of clients not only in Japan but around the world. We also provide education on compliance with information security rules and conduct ongoing compliance monitoring.

#### ■ Raising Awareness of Export Control

Chiyoda has established and implements an export control system in line with the goals of international security for prevention of terrorism, regional conflicts and proliferation of weapons of mass destruction. As part of that system, Chiyoda seeks to raise the awareness of all employees by providing both general training on the basics of export control and ongoing industry-specific training that explains export control work in greater detail.

### Training Conducted by Chiyoda Corporation in the Fiscal Year Ended March 31, 2013

#### Compliance

Manager compliance training	95 participants
Executive officer compliance training	22 participants
Compliance briefings at the meeting of Group company presidents	1 time
Compliance training at overseas Group companies	4 locations
Construction industry law workshop	37 participants
Subcontract Act workshop	54 participants
Foreign corrupt practices prevention workshop	45 participants
Consultation and Reporting Hotline staff training	13 participants

Pre-assignment training for site managers of field offices	22 locations
Companywide directive (about prevention of sexual harassment)	1 time

#### Export Control

Companywide directives (export control directives)	4 times
Export control general training	4 times, 82 participants
Export control specific training	1 time, 32 participants

#### Information Security

Information security e-Learning	1 time, 366 participants
Information security training	4 times, 461 participants
Companywide directives (various reminders)	15 times

#### CSR Training

CSR training for new employees	85 participants
CSR training for mid-career hires	1 time, 14 participants

#### Reports to the Consultation and Reporting Hotline

Reports related to workplace improvements	5
Reports related to compliance with workplace rules	3
Requests for reminders	1
Other	4

### Comments from an Employee



The Consultation and Reporting Hotline is designed to facilitate the early discovery and correction or prevention of illegal or unethical conduct. The hotline is available to everyone involved in our business. I handle contacts from women on workplace relations issues, and my discussions with them have made me keenly aware of the importance of everyday communication in the workplace. I try to make people feel at ease when talking about their concerns, but I will continue to improve my approach so that issues can be quickly dealt with and resolved through consultation before they become serious.

Hiromi Sugawa  
HRM Unit  
Consultation and Reporting Hotline Staff

# Third-Party Opinion

**The Chiyoda Group receives third-party opinions from experts to raise the objectivity of its CSR Report and identify specific CSR issues. These opinions serve as reference for future reports and help guide CSR initiatives.**

In reviewing this report, I focused first on the Message from the President. The reason is that the vision that President Shibuya outlined for the Chiyoda Group 10 years from now – a group that has diversified into new business areas, deepened its contribution to local communities in emerging and developing countries, and established an operational framework for managing work globally – is closely related to CSR.

The engineering and construction of mega solar power plants, investment in concentrated solar power generation and the development of SPERA Hydrogen™ technology that enables hydrogen storage and transportation in large quantities are examples of how the Chiyoda Group's businesses are directly helping to address social issues such as resource depletion and climate change due to greenhouse gases. These activities can be considered "strategic CSR."

On the other hand, there could be an increase in cases where the Chiyoda Group is involved in engineering, construction and maintenance of LNG or other plants located in regions of higher environmental and social risk. Chiyoda will need to give more careful consideration to safety and the environment as it moves into upstream areas such as oil and gas field development surveys and other services. In infrastructure projects such as airport construction in developing countries, Chiyoda will have to pay careful attention to the possible impact of large-scale land alterations on the natural environment and nearby residents. It is imperative to strengthen "defensive CSR" by being duly aware of any negative impacts and taking countermeasures.

Moreover, contributing to local communities in emerging and developing countries must include consideration for the rights of people in communities surrounding project sites and creation of steady employment opportunities for them, in addition to the typical charitable activities and events. Efforts in the name of "secure stable supplies of natural resources" may be met with a mixed reception amid rising resource nationalism. I expect Chiyoda to study and practice "CSR that leads to genuine community development" through dialogue with stakeholders. Furthermore, I believe that the Chiyoda Group's establishment of an operational framework for managing work globally hinges on the extent to which its management is able to embrace diversity. This is strongly linked with "CSR in labor practices."

The April 2013 establishment of the Crisis Management Unit was another point in the report that caught my attention. I would like to suggest Chiyoda flesh out the various aspects of defensive CSR, CSR that leads to genuine community development and CSR in labor practices in greater depth on its website and in other media. Also, while joining the United Nations Global Compact in November 2012 was a major step forward during the past year, as a member, the company is obliged to prepare and submit a Communication on Progress (COP) every year. Assuming that this report is a COP, I would also suggest adding more mention of the rights of people other than employees on the "Respect for Human Rights" vision page and anti-corruption measures on the "Commitment to Fairness" page.

I expect Chiyoda to continue its steady and consistent efforts to provide engineering-based solutions to global issues such as poverty, the environment and the securing of resources, and to build on sustained communication with stakeholders.



**Eiichiro Adachi**

Counselor  
Head of ESG Research Center  
The Japan Research Institute,  
Limited

After graduating from Hitotsubashi University in 1986, Mr. Adachi joined the Japan Research Institute, Limited (JRI) in 1990. Currently Counselor and Head of ESG Research Center at JRI, he previously served in the Management Strategy Research Department and Technology Research Department. He specializes in industrial research and corporate assessment from the standpoint of CSR. He also serves as Director of the Mitsubishi Corporation Disaster Relief Foundation and has co-authored numerous Japanese publications, notably *CSR Management and SRI* (Kinzai, 2004), *Businesses That Grow with Global Warming* (Toyo Keizai Inc., 2007) and *Introduction to Environmental Management* (Nikkei Publishing Inc., 2009).



Mr. Adachi inspecting Chiyoda's SPERA Hydrogen™ demonstration plant

# We consolidate Group strengths in our business operations.

Major Group Companies (As of March 31, 2013)



## Overseas Group Companies

Industrial Machinery and Equipment Engineering and Construction, Etc.

- Chiyoda Philippines Corporation (Philippines)
- L&T-Chiyoda Limited (India)
- Chiyoda Singapore (Pte) Limited (Singapore)
- Chiyoda-CCC Engineering (Pte) Limited (Singapore)
- Chiyoda International Corporation (United States)
- PT. Chiyoda International Indonesia (Indonesia)
- Chiyoda & Public Works Co., Ltd. (Myanmar)
- Chiyoda Malaysia Sdn. Bhd. (Malaysia)
- Chiyoda (Thailand) Limited (Thailand)
- Chiyoda Almana Engineering LLC (Qatar)
- Chiyoda Nigeria Limited (Nigeria)
- Chiyoda Sarawak Sdn. Bhd. (Malaysia)
- Chiyoda Petrostar Ltd. (Saudi Arabia)

## Domestic Group Companies

 **CST Chiyoda System Technologies Corporation**  
Engineering, procurement, construction and maintenance of electrical and instrumentation, and of social infrastructures. Consulting, development and operation for integrated IT systems

 **Chiyoda Koshu Co., Ltd.**  
Engineering, construction and maintenance of various industrial machinery and equipment; insurance agent

 **Chiyoda TechnoAce Co., Ltd.**  
Consulting, design, procurement, construction and test operation services for pharmaceutical and other fine chemical plants, and various types of research facilities

 **Arrow Business Consulting Corporation**  
Consulting and business outsourcing services, etc., for finance, accounting and tax

 **Arrowhead International Corporation**  
Travel agent, air cargo and materials export services, etc.

 **Chiyoda U-Tech Co., Ltd.**  
General consulting on industrial machinery and equipment, regional development, etc.; review services for ISO certification renewal, temporary staffing

 **Arrow Human Resources Co., Ltd.**  
Temporary staffing, placement consulting, and education and training

Recognition by SRI (Socially Responsible Investment) evaluation bodies as a company fulfilling CSR standards

(As of August 2013)



FTSE4Good

Selected in FTSE Group's responsible investment index



Dow Jones Sustainability Indexes  
Member 2012/13

Included in the Dow Jones Sustainability Asia Pacific Index (DJSI Asia Pacific)



WE SUPPORT



Minatomirai Grand Central Tower  
4-6-2, Minatomirai, Nishi-ku, Yokohama 220-8765, Japan

Please direct inquiries about this CSR Report to:

CSR Unit Tel: (81) 45-225-7741 Fax: (81) 45-225-7224

E-mail: [csr@ykh.chiyoda.co.jp](mailto:csr@ykh.chiyoda.co.jp)



森の町内会  
協賛に寄与する紙  
[www.mori-cho.org](http://www.mori-cho.org)



Printed with mineral oil-free, non-VOC ink using a waterless process on paper made with wood from forest thinning to support sound forest management.

Printed in Japan