



**CHIYODA CORPORATION**

# CSR

**Group CSR Report  
2012**

Fiscal Year Ended March 31, 2012





# Corporate Profile

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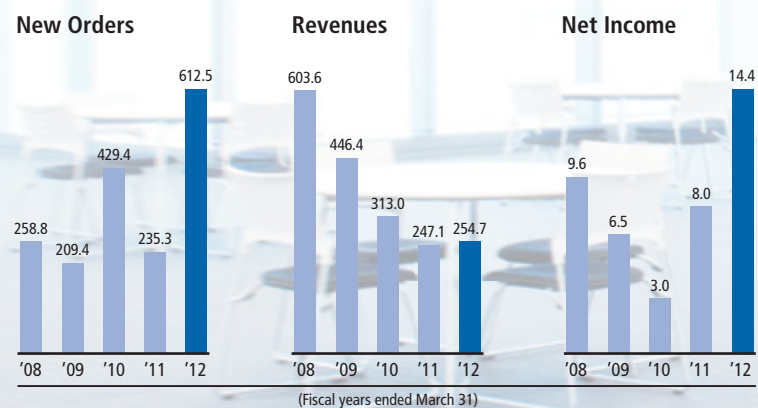
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Chiyoda Corporation is an integrated engineering company primarily engaged in the design and construction of plants and facilities in Japan and around the world. The Chiyoda Group strives to contribute to the sustainable development of society while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

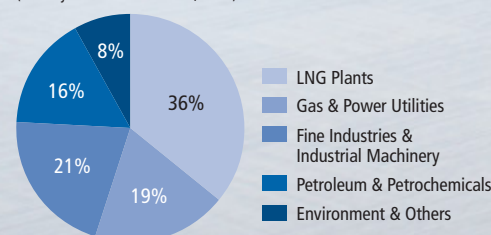
(As of March 31, 2012)

**Name:** Chiyoda Corporation  
**Address:** Minatomirai Grand Central Tower  
 (after relocation in June 2012) 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, commissioning (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 Group Companies:** Domestic: 9  
 Overseas: 12  
**Number of Group Employees:** 4,530  
**URL:** <http://www.chiyoda-corp.com/en/>

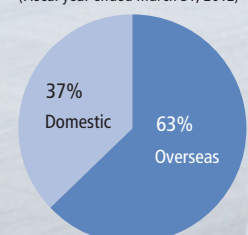
### Consolidated Financial Highlights (Billions of yen)



### Revenues by Industry (Fiscal year ended March 31, 2012)



### Revenues by Region (Fiscal year ended March 31, 2012)



### On the Cover

The cover of this report uses photos of the Chiyoda Global Headquarters, which was relocated to the Minatomirai area of Yokohama in June 2012, and diverse staff working at an overseas plant construction site.

The cover depicts the Chiyoda Group's current activities in projects around the world and expresses our determination to do even more to realize harmony between energy and the environment on a global scale.



# Editorial Policy

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

### Differentiation of Website and CSR Report Content

The diagram at the right shows the differentiation of the content reported on the website and the CSR Report. On our website we present basic CSR information and activities for each CSR Vision to facilitate the understanding of visitors to the site.



### Composition of the CSR Report

The CSR Report highlights activities in the fiscal year ended March 31, 2012.

This year, in addition to the corporate profile, a discussion between President Kubota and Ms. Mariko Kawaguchi, Chief Researcher of the Research Division of Daiwa Institute of Research Ltd., and a summary of activities for each CSR Vision, we present the wide-ranging CSR activities of the Chiyoda Group through a feature on the Chiyoda Group's unique CSR initiatives and highlights of the activities of Group companies in Japan and overseas. 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 22 Chiyoda Group companies (Chiyoda Corporation and 21 consolidated subsidiaries and companies accounted for using the equity method), unless otherwise specified.

### Applicable Period and Date of Publication

Applicable Period: Fiscal year ended March 31, 2012  
(April 1, 2011 to March 31, 2012)

Date of Publication: September 2012

### Guidelines Used for Reference

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

### "Commitment to CSR" on Our Website

The "Commitment to CSR" section of our website includes full details of the Chiyoda Group's CSR activities, including initiatives outside the scope of the report as well as environmental data and other information.



We also carry the booklet *Legacy for the 21st Century*, which can be called the DNA of the Chiyoda Group, back issues of the CSR Report and other publications.

<http://www.chiyoda-corp.com/csr/en/>

CHIYODA Commitment to CSR

### 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  
the sustainable devel  
our collective wisdom

Our Values

### Chiyoda Group CSR Visions

		ISO 26000 Core Subjects
<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
<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
<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

Basis of Our Actions

Code of Conduct of the  
Chiyoda Group



in aiming for harmony between energy and the environment and contribute to opment of a society as an integrated engineering company through the use of and painstakingly developed technology.

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.

Action Policies	Actions in the Fiscal Year Ended March 31, 2012	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 vendors, subcontractors 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. 8, 9, 12
<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. 13
<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. 14
<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. 15
<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>• Strengthening of collaboration with field offices and domestic and overseas Group companies</li> <li>• Implementation and enhancement of continuing compliance education and audits</li> <li>• Promotion of ISO 27001 acquisition and certification renewal; establishment and improvement of information security management system</li> </ul>	P. 16



**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>

# A Conversation with President Kubota

Chiyoda is aiming to be a “vigorous company with vigorous employees” to put its corporate philosophy into practice.

## Takashi Kubota

President & CEO, Chiyoda Corporation

## Mariko Kawaguchi

Chief Researcher, Research Division  
Daiwa Institute of Research Ltd.

*Mariko Kawaguchi, a leading researcher on corporate social responsibility (CSR) and socially responsible investment (SRI), spoke with President Kubota about the Chiyoda Group’s CSR.*

**Kawaguchi:** “Energy and environment in harmony” has been Chiyoda’s motto since its founding, and is also the essence of the Chiyoda Group’s corporate philosophy. Environmental and energy issues are changing significantly with changes in society today. In light of this, please explain the meaning of your management philosophy.

**Kubota:** The origin of *Legacy for the 21st Century*,<sup>1</sup> which puts forth the thoughts of Chiyoda’s founder Akiyoshi Tamaki in the 1970s, was *The Limits to Growth*, a report issued by the think tank The Club of Rome. It argued that if we continued to use energy in the same ways, the impact on the environment would be enormous. From that time, we have held the idea that we need to develop environmentally friendly technologies. Those of us in senior management took the initiative to declare that we will develop technologies to solve the problems that exist between energy and the environment, and have acted on that pledge.

Ever since, Chiyoda has conducted business with a focus on balancing stable energy supplies and protection of the environment –



in other words, “Energy and Environment in Harmony” – by developing and rebuilding the infrastructure in Japan and around the world. This philosophy will continue to guide us in conducting our business and contributing to society. I think that is what makes the Chiyoda Group’s CSR initiatives unique.

## The Meaning of Engineering

**Kawaguchi:** Although I knew the term “plant engineering,” until now it conjured up a remote and rigid image because I haven’t really had anything to do with it. Now that I understand your company’s philosophy, the term feels more familiar and organic.

**Kubota:** There has been no suitable Japanese term for plant engineering so far.<sup>2</sup> That may be what makes it hard to visualize. Plant engineering combines and coordinates various equipment and materials to build a plant that functions as an optimal system. It requires both broad technological knowledge and management capability. A plant usually takes three to four years to build. The cost of a large plant is in the order of several hundred billion yen, so a project manager is the same as the manager of a company who must shoulder all the responsibility. A project manager must have the ability to properly understand and judge both technological and management matters.

Notes: 1. A booklet issued in 1972 that described the need for harmony between the advancement of humankind and conservation of the natural environment. The booklet declared that Chiyoda would always work to develop technologies that help solve problems involving energy and the environment. Even now, this spirit is passed on to the new generation of Chiyoda people so that our DNA remains the nucleus of all our technologies.

2. On the pedestal of the memorial to Prince Albert (opened in 1872), who built the prosperity that supported Queen Victoria, are inscribed the words agriculture, commerce, manufactures and engineering, the four pillars that contributed to achieving prosperity. Of these, only engineering does not have an equivalent Japanese word.



### Mariko Kawaguchi

After completing a Master's degree in public finance and environmental economics at Hitotsubashi University Graduate School in 1986, Ms. Kawaguchi joined Daiwa Securities Co. Ltd., where she worked as a foreign securities analyst and a researcher. In 1994, she transferred to Daiwa Institute of Research Ltd., where she worked in corporate research and is currently Chief Researcher. Her primary research themes are environmental management, corporate environmental assessment, environmental accounting, environmental reporting, socially responsible investment and corporate social responsibility.

Ms. Kawaguchi's published works include *Environmental Information Disclosure and Corporate Strategy* (co-authored by Toyo Keizai Inc.).

**Kawaguchi:** You start with vacant land and put in all of the infrastructure, including water and energy, right? Would you say the strong points of Japanese engineering lie in attention to detail and high quality?

**Kubota:** That and a high level of reliability. For example, if a plant shuts down for one day, the customer may lose several billion yen, so high quality and stable operation are critical. Japanese quality, which results in much lower maintenance costs as well as initial costs, ends up being inexpensive if you think of the overall picture, and it leads to reliability.

**Kawaguchi:** Chiyoda has focused on making optimal use of energy with its technical capabilities to improve living environments and infrastructure, and on supplying energy with less environmental impact. I assume that's why you got involved in the area of liquefied natural gas (LNG) from such an early stage.

**Kubota:** In Japan, the plan to introduce LNG was formulated in the mid-1960s. At the time, the country could not keep up with demand for low-sulfur oil, though many desulfurization plants were built and much low-sulfur oil was produced. Air pollution was becoming a serious problem in the Keihin district near Tokyo. We began working on LNG plants when we received the order for engineering and construction of the Negishi Terminal in Yokohama, Japan's first LNG receiving terminal. We have since advanced into overseas markets and undertaken many LNG plant projects.

**Kawaguchi:** Chiyoda worked on the world's largest LNG plant in Qatar. What are the keys to carrying out a large-scale project and making sure the plant operates smoothly?

**Kubota:** Three things are important. The first is safety, both in operating the completed plant and during construction. Second is reliability – making sure the plant runs uninterrupted. And third is quality. If any one of these elements is lacking, the plant will not operate normally.

As a mega-scale LNG plant, the Qatar project was a completely new challenge. Since it was the first time a plant of this size had been attempted in the world, we developed and adopted new engineering techniques. We managed over 10 million plant components and mobilized a larger than normal number of engineers. Because the scale of construction was even larger than we had expected, we had to work hard to allocate skilled workers, who were often in short supply, from resources worldwide in order to complete the project. With project management capabilities that ensured thorough quality control and delivery management, we carried out construction while providing in-depth safety, environmental and health training to as many as 75,000 construction workers from over 80 countries at the peak of construction. As a result, we completed the project successfully, and received praise both in Japan and overseas.

Engineering starts with challenging our creativity. We want to continue providing abundantly creative engineering based on safety, reliability and quality.

## The Kind of People Chiyoda Needs

**Kawaguchi:** From what you say, I get a sense that people are very important in the business of engineering.

**Kubota:** Absolutely. In addition to people from various technical fields such as mechanical, chemical, electrical and civil engineering, project management requires knowledgeable people in a broad range of fields, from human resource management to finance and law. So we hire people from many different fields.

In the case of a large plant, we place orders with business partners for approximately 10 million components designed by specialized engineers. Coordination is extremely important because adjustments are necessary at all stages, from finalization of specification to fabrication and delivery. The most interesting aspect of plant engineering is that it doesn't work well without good communication skills.

**Kawaguchi:** You have long said that "vigorous employees make a vigorous company." What kind of people are "vigorous employees?"

**Kubota:** People who aspire to contribute to society and who challenge themselves to change. When you look at our company's project track record, you often see phrases like "first in the world," "first in Japan," "one of the largest," and "contributed to the region's development." As these phrases suggest, engineering and project management require innovation, a positive approach to



problem-solving and a strong desire to contribute to society. Employees with this spirit are behind our many successes.

**Kawaguchi:** How do you go about recruiting and training people who can become vigorous employees?

**Kubota:** We value students with well-balanced character, but what is really important is practical learning after they join the company. After the initial two-month orientation in Japan, we send them right to overseas construction sites. Many of them aren't yet familiar with drawings for construction, so we give them the opportunity to see the drawings at the construction site and experience how things actually change.

I personally feel that combining on-site experience with classroom learning helps a person grow, so we base our training on that fundamental idea.

Even if people excel in school, they will not grow into strong employees who see work through to completion unless they have courage as well as intellect. Since we want employees with both of these qualities, we need to attract highly motivated people to join our company and then develop them through practical training.

We also put effort into passing on our technologies. For that purpose, we established the Chiyoda Engineering Academy. Retired employees serve as the instructors and classes are held regularly so that technologies can be handed down to younger employees.

We also want our Japanese employees to have a more global perspective. To that end, we bring engineers from our Group companies in the Philippines and India to Japan, together with other foreign engineers, to create an environment where our Japanese employees can work together with as many as 300 foreign employees.

**Kawaguchi:** There is a perception that most of the well-known global companies in Japan are business-to-consumer companies, such as automo-

bile or electronics manufacturers. But in fact, companies such as Chiyoda that sell to other businesses outside Japan are more global and diverse.

Please explain in a little more detail how you approach communication with employees of such diverse nationalities.

**Kubota:** We have been promoting internationalization throughout the Chiyoda Group since the 1970s.

Our group company in Qatar, for example, has about 400 employees. They include people of some 30 different nationalities, with only about 20 permanent Japanese employees. It is a

well-managed operation. Singapore is similar. Basically, we believe in the principle of "local production for local consumption," and develop human resources so that projects up to a certain level or scale can be performed entirely by local our companies.

**Kawaguchi:** That kind of autonomous management is commendable. One characteristic of Chiyoda is that in addition to the resources the company has accumulated, it also has aspects that are missing in Japanese society today. It has employees who can play an active role globally and bring people together. I think you should communicate these qualities more to those outside the company.

On the other hand, although motivated employees who join the company at a young age have plenty of opportunities, being sent out to construction sites within two to three months must be tough for some. Recently it seems that more people quit their jobs after a short period of time, even those who secure employment right after graduation. What is the situation at Chiyoda?

**Kubota:** We have a relatively low employee turnover rate. I think one reason is that plant engineering is very dynamic work. For example, in many cases even our young employees deal with works that could involve large amounts of money, so they have to concentrate all their thoughts to handle challenging issues stemming from the scale of the business.

Another reason is that our company culture offers a very high degree of freedom, in a positive sense.

## Diversity Management

**Kawaguchi:** A growing number of companies are focusing on diversity management from the standpoint of globalization and CSR. What about Chiyoda? What is the role of female employees in your company?

**Kubota:** Women are also active at plant construction sites. Currently, about 170 of our approximately 1,600 employees are women. Of those, about 20 are in executive positions, and some



Women are active at plant construction sites.





are at the general manager level. I think more women will be promoted in the future.

In addition to areas requiring clerical skills, the percentage of female applicants has been increasing recently in the area of piping, for example, which connects plants. This kind of work benefits from women's characteristic patience and attention to detail. If we also enhance working conditions to include options such as telecommuting, I expect to see even more opportunities for women in various family situations.

**Kawaguchi:** There are more women at Chiyoda than I imagined. Until now, I had no idea what kind of work women could do in an engineering company, and in what capacity. If minor parts in piping and other components go wrong in a project, enormous losses could result. Therefore, getting those parts right is very significant. Seeing outstanding women in executive positions improves understanding of Chiyoda and changes the company's image.

Another point about the participation of women: Studies have shown that if you have female board members, they can offer opinions that reflect different perspectives than those of men, which improves management of various risks.

**Kubota:** I realize that promoting women will be an issue going forward. We will probably see female directors in the future.

In addition to female employees, we intend to use outstanding talent from around the world, regardless of gender or race, and will arrange our organization so that they can work anywhere in the world.

## Dealing with the Environment and Communities in Project Execution

**Kawaguchi:** Nongovernmental organizations are becoming more influential, and companies around the world are being scrutinized more closely. In the numerous plant projects that Chiyoda is undertaking, how does the company communicate with people in local communities?

**Kubota:** That is one of the most challenging parts of building a plant, whether in Japan or overseas. In addition to preserving the environment, how to protect the property owned by people in the local community and how to build the plant in harmony with the existing infrastructure are the biggest factors in the success or failure of a project. Therefore, we devote considerable time to these issues. When we begin a project, we stay in close contact with the customer, and our project team cooperates in addressing community concerns.

**Kawaguchi:** As Japanese companies expand their operations globally, they will need to deal with local environments and communities. Chiyoda's approach and experience in interacting with local communities serves as a good example for others.

## Ambitions for CSR Activities

**Kawaguchi:** To summarize, what are your ambitions for CSR activities?

**Kubota:** In June this year, we relocated our headquarters from Tsurumi-ku to the Minatomirai area of Yokohama. As a global group aiming for further expansion, I think we got off to an auspicious start by establishing the new headquarters near the symbolic port of Yokohama, which led Japan into the international community more than 150 years ago.

We will continue working to meet the expectations of all our stakeholders.

This includes dealing with issues that must be addressed in order to make the Chiyoda Group more global and determining what kind of company we should be in the long term. We also want to solidify our corporate brand as a company that has contributed to society based on our mission of "Energy and Environment in Harmony," and to establish our direction for the future. To achieve these goals, I want to build new Chiyoda work styles that give people the psychological breathing room to do creative work in new environments. This will involve changing lifestyles and other initiatives that also help increase work efficiency. I am confident that such an approach will lead to unique Chiyoda Group CSR initiatives by "a vigorous company with vigorous employees."

**Kawaguchi:** Based on what you've said, the plants you construct can be likened to the human body. The digestive functions are next to the lungs, and everything is connected and works systematically as a single organism. They are like living things. I had imagined engineering as being hard and metallic and unapproachable, but it is really about creating living things and is full of romanticism. I've learned from you that engineering is the business of creating something organic that benefits the world. I suppose you could say "engineering is organic."

I now understand that the Chiyoda Group is steadily expanding its efforts to contribute to society as well as business through its experience, technical expertise, management capabilities, vigorous employees, and above all, its high aspirations. It is a group with dreams. I look forward to your continued success.



# The Chiyoda Group's Unique CSR Initiatives

## Putting Our Corporate Philosophy into Practice to Achieve a Sustainable Society

The Chiyoda Group has always conducted its business with a management philosophy centered on "Energy and Environment in Harmony." In the booklet *Legacy for the 21st Century*, issued in 1972, Chiyoda declared that it would use technological development and engineering for both stable energy supply and environmental protection. This spirit is still the backbone of our business activities today.



*Legacy for the 21st Century*

Based on this spirit, we have worked to develop environmental technologies including flue gas desulfurization, exemplified by the CT-121 process, as well as wastewater treatment and heavy oil cracking. We are now steadily expanding our activities in the area of new energy. Examples include using solar, thermal and other types of renewable energy, creating a hydrogen supply chain with technology for storage and transport of large amounts of hydrogen, and developing Gas to Liquids (GTL) technology. These technologies support the realization of a low-carbon society by reducing CO<sub>2</sub> emissions.

Moreover, through plant construction, we contribute not only to local economic development and job creation, but also to technology transfer and human resource development through an on-the-job training program for local personnel and other initiatives. At the same time, we work to preserve the natural environment and ecosystems around our plants with measures such as promotion of green procurement, eco-friendly engineering and environmental monitoring during the construction period.



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



Qatargas 2, LNG Plant (Train 4) (Qatar)



Gas oil deep desulfurization plant for TOA Oil Co., Ltd.  
in Kawasaki



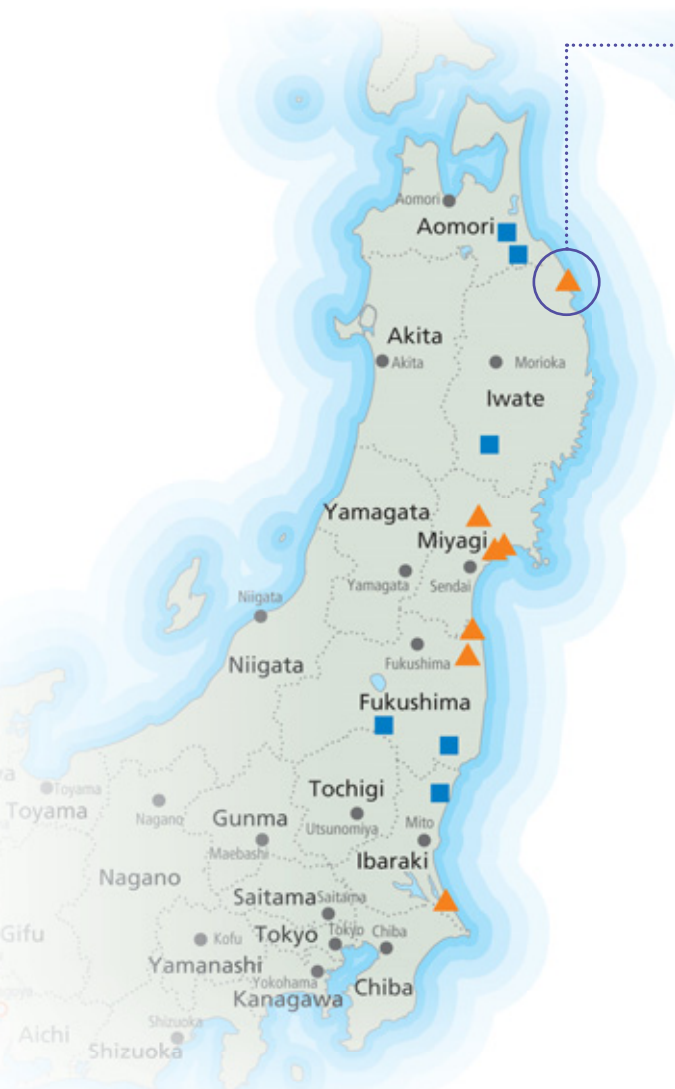
The JAPAN-GTL demonstration plant in Niigata Prefecture



## Reconstruction Initiatives following the Great East Japan Earthquake

After the Great East Japan Earthquake struck on March 11, 2011, the Chiyoda Group promptly set up a Reconstruction Support Task Team. We have done everything we can to support the restoration of our customers' production facilities in the affected areas. As of March 31, 2012, we have carried out more than 60 reconstruction projects, some of which are still in progress.

We are also supporting the volunteer efforts of Chiyoda Group employees with measures including donations from the Company, employees and domestic and overseas Group companies, as well as a newly established special paid leave system for volunteers.



### ▲ Energy-related facilities

Oil refineries/Oil storage bases/  
Power generation-related facilities

### ■ General industrial facilities, etc.

Pharmaceutical manufacturing and formulation plants/  
Airport facilities/Chemical plants/Industrial material plants

### First Step in Reconstruction of Ground Facilities Completed at Kuji National Oil Storage Base of Japan Underground Oil Storage Co., Ltd.

The ground facilities of the Kuji National Oil Storage Base in Kuji, Iwate Prefecture, which Chiyoda built, were devastated by the tsunami caused by the Great East Japan Earthquake.

The day after the quake, Chiyoda received an emergency response request from Japan Underground Oil Storage Co.,



Ltd. Even though the means of transportation were crippled, we rushed to the site to conduct a survey of the damage on March 14, three days after the disaster, and drew up a reconstruction plan with the customer. Although the underground rock cavern storage tanks themselves were unharmed, most of the above-ground maintenance infrastructure was damaged, including wastewater treatment, power and transformer facilities. The first step in the reconstruction was the restoration of the minimum required freeze-proofing facilities by the end of October to ensure the sound maintenance of the oil in the rock cavern storage tanks. Construction work began in April, the month after the disaster.

The reconstruction schedule was much tighter than normal because we had to complete the work in about 7 months, before the onset of the winter freeze. In addition, we faced many challenges in executing the work, as Japan was still in a state of confusion due to the unprecedented disaster, and materials and manpower in the Tohoku region were in extremely short supply. At the peak, work was taking place around the clock. Thanks to the tireless efforts of those involved, we finished connecting the facility to the electric power network on October 15, and completed the freeze-proofing work at the end of October.

Reconstruction of the Kuji base has just started. What happens from now will be critical for the full restoration of the ground facilities. We believe the early reconstruction of the Kuji base will contribute to the restoration of Japan, and we will therefore work to reconstruct the facilities as soon as possible to fulfill our social mission as an engineering company.

# Group Company Activity Highlights

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

## Participation in Refinery Panel Discussion Sponsored by Japan Petroleum Institute

On January 20, 2012, the 37th Refinery Panel Discussion sponsored by the Japan Petroleum Institute was held at the National Olympics Memorial Youth Center in Shibuya-ku, Tokyo.

In the session entitled "Approaches to Fostering a Safety Culture at Refineries," the safety measures of major Japanese oil refiners, and the current status and results of those measures, were presented based on the idea that safety measures in maintenance work are key to establishing a culture of safety at refineries. Safety managers also gave their thoughts on leading safety activities, as well as other topics. Mr. Satoru Takanashi, General Manager of the Safety Management Department at Chiyoda Kosho Co., Ltd., participated as the only panelist from an engineering company, and explained the Chiyoda Group's approach to safety.



**IT Engineering Limited** <http://www.ite.co.jp/>

## MES DAY Seminar

In the laws and regulations for computer systems used in pharmaceutical manufacturing, there is a marked trend toward clarification of the accountability of pharmaceutical companies and standardization of requirements in Japan, North America and Europe. In view of this, a MES\* DAY seminar was held in January 2012 with the theme of "Legal and Regulatory Compliance and the Use of MES Solutions." A total of 46 people from pharmaceutical companies in Tokyo and Osaka attended the seminar. Through multiple lectures, the event provided an opportunity for people involved in operation of manufacturing information systems at pharmaceutical plants to exchange ideas.

\* Manufacturing Execution Systems: Information systems that manage and monitor the condition of manufacturing operations in factories and provide instructions and support to workers.

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

## Contributing to the ITE Education Sector

Making a valuable contribution to society is the main objective of CSL's corporate social responsibility activities. One of these activities is contributing to reforming Singapore's ITE\* curriculum for the future. As an Engineering Services Academic Advisory Committee member, CSL Director Mr. Tham K Y reviews and comments on the suitability of the course curriculum to local industries to ensure that it remains relevant and useful.

\* Institute of Technical Education: A post-secondary educational institution established by the Singapore Ministry of Education in 1992. It consists of three colleges for the purpose of vocational skill acquisition and technical education.



ITE College Central and ITE Headquarters

**Chiyoda Keiso Co., Ltd.** <http://www.ckc.chiyoda.co.jp/>

## Lecture on "The Ideal Student as Seen from the Front Lines of the Engineering Industry"



On November 17, 2011, a lecture entitled "The Ideal Student as Seen from the Front Lines of the Engineering Industry" was held at the Shonan Campus of Tokai University. Some 30 faculty members and

students from the science department attended the lecture, which was based on one of the university's proposals that was adopted in the Fiscal 2010 University Student Career Training Support Program of the Ministry of Education, Culture, Sports, Science and Technology.

CKC Director Yoshihiro Murashige talked about his experiences working on the construction of various facilities in 18 countries. The engineering industry has a strong interdisciplinary character, and he explained to the science department students that they have the potential to play an active role as important experts in a wide range of fields. He also explained that there is a strong tendency for people in this industry to grow into experts through their jobs, and therefore the ideal student is one who has a strong willingness to grow, is flexible and has a tremendous thirst for knowledge.

In the question-and-answer session that followed the lecture, the participants asked pertinent questions on topics such as how to sharpen the communication skills that companies are looking for, and the indicators that employers use when choosing students.

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

## Japanese Language Lessons for Employees

CMSB gives employees the opportunity to learn Japanese. Classes are held weekly, and students are taught directly by CMSB's Japanese technical advisor, Mr. Azumao Kurosawa, while referring to their lesson materials. The students performed Japanese songs at a company event, proudly displaying the progress they have made.





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

### Children's Christmas Party

In December 2011, CPh held a Christmas party for less fortunate children in the nearby community. With the theme "Give Love This Christmas," the event was attended by more than 200 children from Unang Hakbang Foundation, a group that supports children in poor living conditions, and some from Barangay Addition Hills in Mandaluyong City.

The children enjoyed games and snacks, and their faces really brightened when they received toys, learning materials and other gifts donated by employees. The party was a great success, and ended with a chorus of "thank you" and big smiles from the children.



A Sarawak-born female hammer thrower from the Malaysian national team wears the "Ganbaro Japan!" T-shirt

A tag explaining the intent behind the T-shirt

**Chiyoda Sarawak Sdn. Bhd. (CSSB)**

### Supporting the Reconstruction with "Ganbaro Japan!" T-shirt

Resident volunteers from the state of Sarawak, Malaysia, where CSSB is located, designed and produced the "Ganbaro Japan!" T-shirt to support Japan's recovery from the Great East Japan Earthquake. Employee volunteers at CSSB donated some of the funds used for producing the T-shirts, and cooperated in the reconstruction support effort by purchasing many of the T-shirts. The shirts they bought were distributed to all CSSB staff, and all proceeds from the sales were donated to the Japanese Red Cross Society.

### Calendars with Local Appeal Promote Community Interaction

CSSB produced a calendar featuring photographs of local people and scenery taken by amateur photographers in Bintulu, Sarawak. In addition to highlighting the beauty of Bintulu, the calendars were given to the residents who appeared in the photographs, deepening interaction with the community and delighting the recipients.

**Chiyoda TechnoAce Co., Ltd.** <http://www.cta.chiyoda.co.jp>

### Creating a Rewarding Work Environment



At the end of September 2011, Chiyoda TechnoAce moved from an annex building in the Koyasu Office & Research Park in Yokohama, Kanagawa Prefecture to the main building on the same site.

During the move, among its various management issues, the company focused on those issues that could be improved by better arranging the office environment, and established an office concept. The key phrase of the concept was "Walk Work Place: Inducing Proactive Communication." One floor was revitalized as a space that facilitates smooth communication between people of different generations. With this and other measures, the company did more than simply move its previous functions to a new place; instead, it created a design that included various mechanisms in the floor plan to create spaces that help it make full use of its capabilities.

**Chiyoda Almana Engineering LLC (CAEL)** <http://www.cael.com.qa/>

### e-Learning Award for Top Private Organization

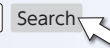
CAEL won the e-Learning Award for top private organization of 2011 registered on the Qatar National e-Learning Portal operated by the Supreme Council of Information & Communication Technology (ictQATAR). The award recognized CAEL's considerable progress in integrating e-Learning internally and demonstrating exceptional commitment to its Memorandum of Understanding obligations. The prestigious award was accepted by CAEL Operations Manager Taku Ito at the Second e-Learning Leaders Annual Event held on February 8, 2012. The award also recognized the efforts of the e-Learning Project Manager and Administrator in the smooth transition of e-Learning at CAEL. The awards ceremony was covered in the February 9 edition of the *Gulf Times*.



A report explaining our activities in more depth is available on our website. ▼



<http://www.chiyoda-corp.com/csr/en/okyakusama/>



### Completion of Pearl GTL Plant for Qatar Shell GTL

In Qatar, which is aiming to be a global center for Gas-to-Liquids (GTL) production, Royal Dutch Shell planned the construction of the world's largest GTL plant in Ras Laffan Industrial City through its subsidiary Qatar Shell GTL. The project is one of the industry's largest investments, with two trains capable of producing 140,000 barrels a day.

This enormous project was divided into eight units and orders were awarded to major contractors from around the world. Chiyoda received an order for a feed gas preparation package. We executed the project smoothly and completed it in 2011.

Because the project was divided up, differences arose among contractor designs and progress of construction for each unit, creating a number of issues requiring coordination. However, frequent exchanges of information ensured the smooth execution of the project.

Since the contract went into effect in 2006, an ongoing worldwide construction boom has led to concerns about rising prices of materials and whether the project could be completed on time. Chiyoda addressed these issues with measures such as early establishment of designs and procurement specifications and assessment of the burden on vendor shops.



At the construction site, we also placed top priority on safety for the more than 8,000 workers who were mobilized each day at the peak of construction. We provided safety education to workers from around the world in their native languages to reduce lost time incidents. By the time the project was completed, approximately 70 million working hours had been logged, but we achieved a record 23.6 million hours without a lost time incident, and met the requirements of Qatar Shell GTL without any fatal accidents.

Through this project, we not only contributed to the industrial and economic development of Qatar, but were also acclaimed for our project execution capabilities and technologies. As a result, we gained renewed recognition as a leader in the engineering industry.

### Contributing to the Expansion of Renewable Energy

The spread of the feed-in tariff (fixed-price purchases of electricity from renewable energy sources) scheme, particularly in Europe, has fueled rapid expansion of demand in the global solar cell market in recent years.

The feed-in tariff scheme also started in Japan in July 2012 amid calls for the need to supply electricity from renewable energy. Rapid growth is forecast for use of solar cells in applications ranging from private residences to large solar power generation facilities for industrial use such as solar parks.



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

Solar Frontier K.K., established in 2006, 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, this plant is one of the world's largest single facilities of its kind, and supplies products not only to Japan but to the entire world.

Chiyoda will leverage the expertise gained from this project and from building other plants to aggressively participate in businesses that increase use of renewable energy, and thus will contribute to the growth of renewable energy.

\* Thin-film solar modules using copper, indium and selenium (CIS). Since they do not use silicon, they are not affected by material supply shortages, enabling stable supplies of the product.

### Comments from a Customer

Our sulfolane extraction unit completed in November 2011 had a construction schedule that was three months shorter than usual. But Chiyoda was able to complete the engineering and construction according to plan, without any accidents. From the initial engineering stage, the project faced many challenges, including cost, but the project team maintained a serious and positive attitude, employing many of the ideas we developed with Chiyoda and practicing mutual cooperation in the area of human resources to speed up employee training and decision-making. As a result, we were able to successfully complete this exceptionally challenging project. We are extremely pleased, and deeply grateful to Chiyoda.

Mr. Yoshihide Ishida, Manager  
Engineering Division, TOA OIL Co., Ltd. Keihin Refinery





A report explaining our activities in more depth is available on our website. ▼



<http://www.chiyoda-corp.com/csr/en/kankyo/>

CHIYODA Vision 2

Search

### Countering Global Warming with Development of Next-Generation Solar Thermal Power Generation Projects

Chiyoda and Archimede Solar Energy (ASE) of Italy, the world's only manufacturer of receiver tubes using molten salts as the heat transfer fluid for parabolic trough solar thermal power plants, have signed a cooperation agreement to jointly develop business opportunities for concentrated solar power (CSP) plant projects in the Middle East, North Africa and Italy. These regions are well suited for solar power generation because of their abundant solar radiation.

Parabolic trough solar thermal power generation technology uses curved mirrors to concentrate sunlight on receiver tubes that heat a heat transfer fluid, producing steam to generate power. Conventional parabolic trough solar thermal power plants use a synthetic oil as the heat transfer fluid, which can only be heated up to 400°C. Seeking a way to generate power more efficiently, ASE established the technology for manufacturing receiver tubes that use high-temperature molten salts as the heat transfer fluid, which enables temperatures of around 550°C with excellent heat storage capacity. Besides raising the efficiency of power generation, this technology offers the added benefits of simplifying the system and

lowering power generation costs because the molten salts serve as both the heat transfer fluid and the heat storage medium.

By combining ASE's technology with Chiyoda's extensive project management experience in the Middle East, this partnership will help to counter global warming through collaboration on next-generation solar thermal power generation projects.



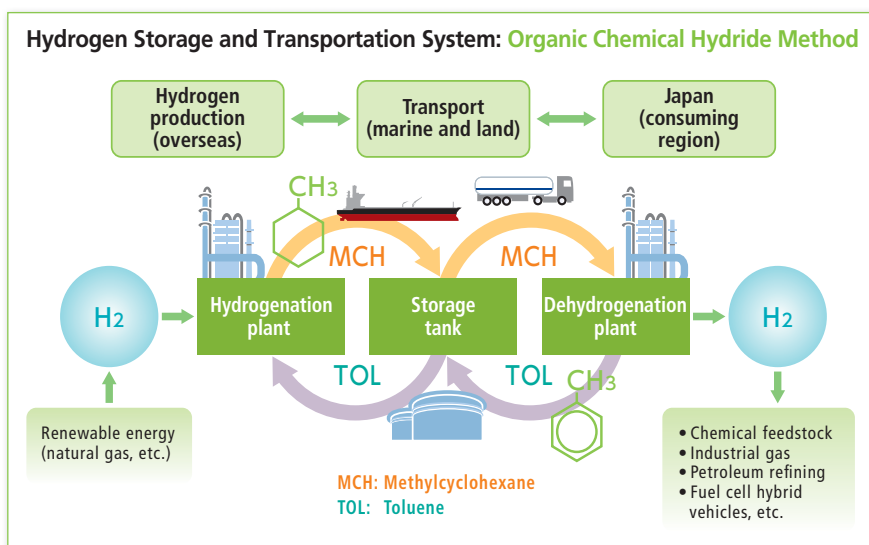
Solar concentrating system of pilot plant in Sicily, Italy

### Development of Large-capacity Hydrogen Storage and Transportation Technology

Chiyoda is developing a technology for storage and transportation of clean hydrogen energy in a large scale to broaden renewable energy utilization and contribute to the realization of a low-carbon society by reducing CO<sub>2</sub> emissions.

In this technology, hydrogen is fixed to liquid toluene with a hydrogenation reaction for easy storage and transportation as liquid methylcyclohexane (MCH) at ambient temperature and pressure. Hydrogen is then generated from MCH with a dehydrogenation reaction at the point of use. Toluene is recovered and used again as a hydrogen carrier.

Chiyoda successfully developed a dehydrogenation catalyst and process, which is a key technology of the method. Chiyoda will establish the technology for a commercial system by demonstration with a pilot plant of the whole system in 2013. It will enable the wide-ranging transport of clean hydrogen energy in large amounts over long distances.



### Comments from an Employee

"Harmony between energy and environment" has been Chiyoda's motto ever since the company was founded, and is also part of the Chiyoda Group Corporate Philosophy and medium-term business plan. Engineering itself can be considered a type of environmental activity. Therefore, consideration of the environment in EPC<sup>1</sup> operations as a matter of course is firmly rooted in our corporate culture.

As the coordinating office of the Plan-Do-Check-Act (PDCA)-based management system, the SQE<sup>2</sup> Risk Management Unit provides internal support for continuous improvement in operations and for earning customer satisfaction. In the fiscal year ending March 31, 2013, we began implementing the Health, Safety and Environment (HSE) management system, which integrates occupational health and safety with the environment. Along with our philosophy that safety is a core value, we will continue to provide support in order to further promote HSE activities in tandem with business operations.

Notes: 1. Engineering, procurement and construction of plants and other facilities  
2. Safety, quality and environment

Mr. Eiji Kitahara  
SQE Risk Management Unit

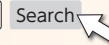


A report explaining our activities in more depth is available on our website. ▼

[http://www.chiyoda-corp.com/csr/en/syakai\\_kouken/](http://www.chiyoda-corp.com/csr/en/syakai_kouken/)



CHIYODA Vision 3



### Visually Impaired People Invited to Japan Philharmonic Orchestra Concert (Contribution to Communities by Promoting Culture)

On December 26, 2011, Chiyoda invited 46 people in 23 pairs from the Yokohama Association of the Blind to a concert of the Japan Philharmonic Orchestra at Yokohama Minato Mirai Hall.

We received letters of thanks sent by the people invited to the concert and a certificate of appreciation for our company's activities from the Yokohama City Council of Social Welfare. One participant wrote, "I could feel the live music with my whole body. It really moved me."



Presentation of the Certificate of Appreciation  
Mr. Shinichiro Yokomatsu, Managing Director of the Yokohama City Council of Social Welfare (right) and Mr. Kazuo Obokata, Senior Vice President in charge of CSR Unit, Chiyoda Corporation (center)



### Rules for Supporting Volunteers Assisting in Reconstruction following the Great East Japan Earthquake (Backup Support for Employee Volunteer Activities)

To supplement the rules of Chiyoda's existing volunteer leave system, we established a new support system in July 2011 to back employee volunteer activities for the purpose of assisting in reconstruction following the Great East Japan Earthquake.

The new system consists mainly of the following:

1. Granting of special paid time off  
Special paid time off is granted separately from employees' regular paid holidays.
2. Coverage of insurance premiums  
The Company will pay employees' volunteer activity insurance premiums.

#### 3. Material aid

The Company will supply masks, helmets and other items necessary for volunteer activities.

Eleven people used the system in fiscal 2011 for a total of 29 days.

In 2011, in addition to the Great East Japan Earthquake, torrential rains caused serious disasters in Wakayama Prefecture and other places. Responding to employees' wishes to participate in disaster relief volunteer activities, we broadened the support system to include disasters other than the Great East Japan Earthquake.



### Participation in University Career Fair Event in Local Community

As one of its activities to serve the local community, Chiyoda Almana Engineering LLC (CAEL) participated in the Texas A&M University 5th Career Fair Event in Doha, Qatar on February 15, 2012.

On the day of the event, interview sessions were held with students who were interested in CAEL's business. Over 40 students applied and 7 were selected for the company's internship program.

Through this community activity, CAEL helped to support the growth and skill development of students in Qatar.

### Supporting the CSR Activities of Chiyoda Philippines Corporation (CPh)

In the Philippines, a CSR bill has been submitted to the Senate for debate. Anticipating the passage of the bill into law, Chiyoda Philippines Corporation (CPh) has assigned a person to handle CSR issues full-time, and is making appropriate preparations. In September 2011, the person in charge of the CSR Unit of Chiyoda Corporation visited CPh to hold a CSR meeting for managers and to exchange opinions with the person in charge of CSR.

### Other Activities at Domestic Chiyoda Group Companies in the Fiscal Year Ended March 31, 2012

Cooperation with university education (instructor dispatch):	7 people
Corporate training of teachers:	10 people
Training of interns:	30 people
TABLE FOR TWO:	Total of 2,257 meals
Cleanup campaigns:	Held three times with a total of 179 participants

### Comments from a Director

The Engineering Symposium held in November 2011 had the theme of "Creation from Reconstruction" following the Great East Japan Earthquake. I was appointed executive chairman of the symposium, and in the course of planning the details, I felt it was necessary to see conditions in the disaster area first-hand, so I took part in a three-day volunteer program in Ishinomaki, Miyagi Prefecture in September.

Work was divided up into making weights for fish farm rafts, clearing mud out of the gutters of the fishing port, and cutting grass and cleaning for farm households. I felt that these activities conveyed the desire of volunteers to help the people of the region. The motivation for participating in volunteer activities varies from person to person, but participating is what is important. The Chiyoda Group also wants to provide backup support for employees, and will therefore create systems that promote participation in volunteer activities and support programs that enable employees to participate in groups.

Mr. Shogo Shibuya  
Senior Vice President





A report explaining our activities in more depth is available on our website. ▼

Web <http://www.chiyoda-corp.com/csr/en/kakawari/>

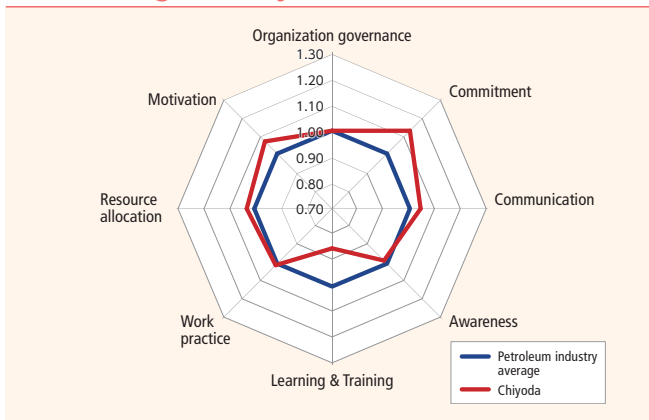
### Creating Pleasant Work Environments

At Chiyoda Malaysia Sdn. Bhd. (CMSB), employees are divided into teams to play beach soccer, water polo, netball, volleyball and other games. These tournaments are a way of strengthening employee bonds and also help to maintain health and enhance teamwork.



Beach soccer

### Establishing a Safety Culture



Results of the safety culture diagnosis

Professor Kenichi Takano of the Research Department of Keio University Graduate School of System Design and Management gave Chiyoda a safety culture diagnosis, based on the eight parameters of safety culture he advocates: organization governance, commitment, communication, awareness, learning & training, work practice, resource allocation and motivation. The results of the diagnosis, which was based on surveys of supervisors and foremen at eight Chiyoda project sites in Japan, clarified strengths and weaknesses in the Company's safety management.

We plan to carry out improvement measures for the weaknesses that were identified, and further enhance our strengths as we build a mature safety culture throughout the Chiyoda Group.

### Human Resource Development System

Chiyoda Philippines Corporation (CPh) conducts a 1-to-1.5-month internship program as part of its contribution to society. This program offers broad opportunities for students in the Philippines to dedicate themselves to studying as engineers, and is intended to help them build a strong network for the future. Some 15 to 30 students from various universities in the Philippines participate in the program each year.



Students in the internship program

### Comments from an Employee



I joined Chiyoda Almana Engineering LLC (CAEL) in October 2010 as Public and Government Relations Officer in the Business Department. My main responsibilities include obtaining business visas, work visas and residence permits for employees, extending business visas for CAEL visitors, and renewing documents related to the company register.

CAEL is a rewarding company to work for. We have seen many changes during the past two years, but with encouragement, motivation and flexibility, you will be able to grow positively through your work no matter what job or career you are moving into.

I received the Superstar Award for the first quarter of 2012. This award is part of CAEL's compensation and rewards program to recognize work and employees who have produced the best results, and is given to the person with the best job performance in the Business Operations team. I was really moved to receive this award. It has further motivated me to deliver better results.

CAEL Chairman Madoka Koda (left) and Mr. Ahmed Ibrahim (right)

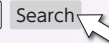
Mr. Ahmed Ibrahim  
 Public Relations Officer, Business Department  
 Chiyoda Almana Engineering LLC

A report explaining our activities in more depth is available on our website. ▼



<http://www.chiyoda-corp.com/csr/en/compliance/>

CHIYODA Vision 5



### Compliance Initiatives

Chiyoda works to ensure thorough compliance by staying up to date on the requirements of the relevant authorities, customers and other stakeholders with respect to rules and regulations governing business execution, including information security and export control. We also reflect those requirements in our business processes. As part of these efforts, we have included "strengthening collaboration with field offices and Group companies in Japan and overseas," "implementation and enhancement of continuing compliance education and audits," and "thorough information management" in our priority management objectives. Main initiatives in the fiscal year ended March 31, 2012 were as follows:

- (1) Promotion of awareness at domestic and overseas Group companies and compliance checks (including patrols at domestic and overseas construction sites)
- (2) Lecture by an outside specialist on prohibition of bribery of foreign public officials: added UK Bribery Act (came into force in July 2011) to Unfair Competition Prevention Act of Japan and U.S. Foreign Corrupt Practices Act
- (3) Revision of internal audit questionnaire concerning the Construction Business Act of Japan (addition of items related to elimination of anti-social forces)
- (4) Continuation of Information Security Check Months (February, September), internal audits, and Group training
- (5) Maintenance of Chiyoda's ISO 27001 certification, and increase in the number of Group companies with certification
  - In the external audit for certification maintenance, the lead auditor noted that "employee awareness of information security is well established" at Chiyoda.

- Group companies that newly acquired certification:
  - 1) Chiyoda Almana Engineering LLC (CAEL), in January 2012
  - 2) Chiyoda Singapore (Pte) Limited (CSL), in May 2012

In addition, as part of the eco-office activities we have conducted since the fiscal year ended March 31, 2011, we launched a campaign to reduce paper use by 30 percent when we moved to the new office in June 2012. This will not only benefit the environment, but will also contribute to more thorough information management. We plan to continue this effort together with reorganization and reduction of electronic files.

We are also taking various measures to manage information security risk in the new office, including a rigorous entry and exit control system that uses the latest IC card technology.



ISO 27001 certification (CAEL, CSL)



Information security training



Consultation and Reporting Hotline staff training

### Training Conducted by Chiyoda Corporation in the Fiscal Year Ended March 31, 2012

#### Compliance

Compliance e-Learning	2,900 participants
Manager compliance training	111 participants
Executive officer compliance training	28 participants
Compliance training at overseas Group companies	3 locations
Construction industry law workshop	63 participants
Workshop on Subcontract Act and Anti-Monopoly Law	73 participants
Foreign corrupt practices prevention workshop	37 participants
Consultation and Reporting Hotline staff training	20 participants
Pre-assignment training for site managers of field offices	25 times, 39 participants
Companywide notifications (about prevention of sexual harassment)	1 time
Companywide notifications (about laws and regulations)	2 times

#### Export Control

Companywide notifications (export control official notices)	4 times
Export control general training	7 times, 211 participants
Export control coordinator training	5 participants

#### Information Security

Information security e-Learning	1 time, 880 participants
Information security training	2 times, 162 participants
Companywide notifications (Information Security Check Months)	2 times

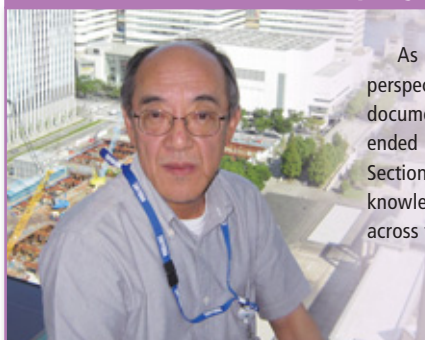
#### CSR Training

CSR training for new employees	101 participants
CSR training for mid-career hires	4 times, 41 participants
CSR training for clerical experts	4 participants

#### Reports to the Consultation and Reporting Hotline

Reports related to workplace improvements	9
Reports related to compliance with workplace rules	5
Requests for reminders	1
Other	1

### Comments from an Employee



As a consultation hotline, we provide advice to project managers on evaluating export control from the perspectives of both cargo and technology to prevent illegal exports, while reminding them to prepare the related documentation. The combined number of consultations on inquiries and contracted projects in the fiscal year ended March 31, 2012 was about 80. As one of our recent initiatives to educate employees, the Export Control Section sponsored training based on length of service to impart general knowledge on export controls and basic knowledge of Chiyoda's export control system. I feel that the necessity of export controls is becoming recognized across the Company.

Mr. Misao Tateno, Export Control Coordinator  
Cost Estimation, Project Management Unit



# Third-Party Opinion

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

In its CSR Policy, the Chiyoda Group maintains the belief of its founder that we are now at the point where corporations are expected to be socially responsible, and if they do not contribute to the welfare of society, or have its trust, their very existence is at risk.\* This foresight is eye-opening. Today, when the word "sustainability" is presented to us more seriously, it is worthwhile to reconfirm the meaning of "the welfare of society" and "the trust of society." In Japan, stable supplies of energy and resources for petrochemicals have been the cornerstone of economic development. Engineering and constructing plants for gas treatment, LNG production, petroleum refining, chemical production and other industries has certainly served the national interest. However, the declining population and consolidation of domestic industries have created an opportunity to redefine "the welfare of society" in Japan. Moreover, the Great East Japan Earthquake and nuclear power plant accident are calling into question what it is to be "a company trusted by society."

The Chiyoda Group's activities are no longer confined to Japan. Opportunities to engineer and construct plants and facilities in developing countries are likely to continue growing, and resource nationalism is sure to increase. The question of whether exports of natural resources and energy are in the country's long-term interest, even if they are creating wealth at the moment, will be constantly raised.

The Chiyoda Group's thoughts on "the welfare of society" and "the trust of society" in Japan and how it will address the rise of resource nationalism overseas are essential aspects of its CSR initiatives.

I therefore took an interest in the descriptions of research and development for a low-carbon society and hydrogen energy economy and promotion of renewable energy. In particular, I think solar thermal power is an area in which Japanese companies can leverage their strengths. I expect the Chiyoda Group to be a global leader in this sector.

On the other hand, the description of the Chiyoda Group's contributions to the regions where its plants are located could be expanded significantly. Community involvement and development includes promotion of education and culture, job creation, technology transfer and improvement of sanitary conditions. This section should also include paying due attention to the human rights of local residents and avoidance of corruption.

As a role of sustainability group, a plant engineering company in the United States raises "addressing international standards of conduct working with indigenous peoples," "designing programs that deliver training and skills that enable local workers to prepare for employment opportunities beyond construction," "designing programs that help local suppliers and contractors," and "engaging local communities in partnerships that represent both project and public interests."

While I understand that similar efforts exist in Chiyoda Group projects, Chiyoda should report more specific cases. Disclosure by plant engineering companies up to now has not necessarily been sufficient because of relationships with clients and others. However, I believe that leading such disclosure is the way to truly become "a trusted company" at home and abroad.



**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).

\* Please see the "Commitment to CSR" section of the Chiyoda Corporation website.  
<http://www.chiyoda-corp.com/csr/en/torikumi/index.html>

# We consolidate Group strengths in our business operations.

**Major Group Companies** (Chiyoda Corporation's consolidated subsidiaries or companies accounted for using the equity method as of March 31, 2012)



## Overseas Group Companies

Industrial Machinery and Equipment Engineering, Etc.

**Chiyoda Philippines Corporation (Philippines)**  
**L&T-Chiyoda Limited (India)**

Industrial Machinery and Equipment Engineering and Construction, Etc.

**Chiyoda Singapore (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 Alman Engineering LLC (Qatar)**  
**Chiyoda Nigeria Limited (Nigeria)**  
**Chiyoda Sarawak Sdn. Bhd. (Malaysia)**  
**Chiyoda Petrostar Ltd. (Saudi Arabia)**

## Domestic Group Companies



### **Chiyoda Kosho Co., Ltd.**

Engineering, construction and maintenance of various industrial machinery and equipment; insurance agent



### **Chiyoda Keiso Co., Ltd.<sup>1</sup>**

Engineering, procurement, construction and maintenance of electrical, instrumentation, control and factory automation equipment



### **Chiyoda TechnoAce Co., Ltd.**

Consulting, planning, engineering, construction and test operation, etc. for civil engineering of pharmaceutical and petroleum facilities



### **Chiyoda Advanced Solutions Corporation<sup>2</sup>**

Consulting and engineering on various analytical technologies, industrial machinery and equipment upgrades, computer-based systems, space environment, etc.



### **Arrow Business Consulting Corporation**

Consulting and business outsourcing services, etc., for finance, accounting and tax



### **Arrowhead International Corporation**

Travel agent; air cargo agent; materials export



### **Chiyoda U-Tech Co., Ltd.**

General consulting on industrial machinery and equipment, regional development, etc.; review services for ISO certification renewal, temporary staffing



### **IT Engineering Limited<sup>1</sup>**

General IT systems consulting, development and operation; ERP and Web-based systems engineering, etc.



### **Arrow Human Resources Co., Ltd.**

Temporary staffing, placement consulting, and education and training

1. Chiyoda Keiso Co., Ltd. and IT Engineering Limited will merge on October 1, 2012 under the name Chiyoda System Technologies Corporation.

2. Chiyoda Corporation will assume the business operations of Chiyoda Advanced Solutions Corporation through an absorption-type merger of the two companies on October 1, 2012.

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

(As of August 2012)



**FTSE4Good**

Selected in FTSE Group's responsible investment index



**Dow Jones Sustainability Indexes**  
Member 2011/12

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



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

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