



세상을 바꾸는

따뜻한 건설이야기

A Story of Warmhearted Construction that Changes the World

## About This Report

Daewoo Engineering & Construction Co., Ltd. (hereinafter referred to as 'Daewoo E&C') marked the year 2012 as the beginning of the company's sustainability management and established a system for fulfilling our economic, environmental, and social responsibilities. This is Daewoo E&C's first sustainability report, which discloses our sustainability strategy and activities as well as accountabilities for various the stakeholders. Through the publication of this report, we seek to enhance communication with our stakeholders such as customers, investors, employees, local communities, suppliers, government, and future generation, taking one step further to become a truly sustainable company.

**Scope & Period** | This report covers key sustainability activities and achievements from January 1<sup>st</sup>, 2011 to December 31<sup>st</sup>, 2011. As for quantitative data, data from 2009 and 2010 was included to enable time series analysis. In case of information that was deemed significant, we included data from before 2011 and the first half of 2012. Reporting scope covers corporate activities of 376 sites but excludes mutual investment companies and subsidiaries. In case of energy consumption and GHG emissions, reporting scope includes 69 buildings (under ownership or leased) and 409 sites (376 domestic and 33 overseas).

**Assurance** | Daewoo E&C's sustainability report has been assured by an independent organization, DNV (Det Norske Veritas), to increase credibility of the reporting process as well as its contents. The assurance report, which is based on internationally recognized assurance protocol (VeriSustain™), can be found on p. 80-81 of this report.

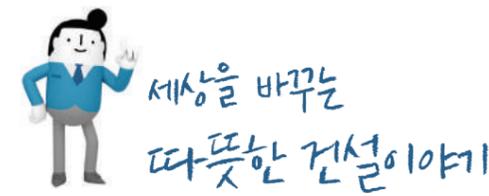
**Standard** | Daewoo E&C's sustainability report has been prepared based on the GRI (Global Reporting Initiative) G3.1 Guidelines and Construction & Real Estate Sector Supplement. Information relevant to each indicator - GRI Index - can be found on p. 84-87 of this report. The GRI G3.1 application level of this report is A\*.

### GRI G3.1 Level Check Standard

		C	C*	B	B*	A	A*
Standard Disclosures	G3.1 Profile	Output Report on : 1.1, 2.1-2.10, 3.1-3.8, 3.10-3.12, 4.1-4.4, 4.14-4.15		Report on all criteria listed for Level C plus : 1.2, 3.9, 3.13, 4.5-4.13, 4.16-4.17		Same as requirement for Level B	
	G3.1 Management Approach Disclosures	Output Not required	Report Externally Assured	Disclosure of Management Approach for each Indicator Category	Report Externally Assured	Disclosure of Management Approach for each Indicator Category	Report Externally Assured
	G3.1 Performance Indicators & Sector Supplement Performance Indicators	Output Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environment		Report on a minimum of 20 Performance Indicators, including at least one from each of: Human Rights, Labor, Society, Product Responsibility		Report on each core G3.1 and Sector Supplement Indicator with due regard to the Materiality Principle by either: a) reporting on the indicator or b) explaining the reason for its omission	

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A Story of Warmhearted Construction that Changes the World

## CEO'S MESSAGE



I am truly delighted to create a new communication channel with the customers who have cherished and supported Daewoo E&C, through the publication of our very first sustainability report as a Construction Convergence Innovator. Since its foundation in 1973, Daewoo E&C has contributed to Korea's economic development in the last 40 years; today, we are moving beyond the domestic market and to the global construction industry and leaping to become an E&C leader in all aspects of technological competitiveness, construction experience, and employee capabilities. Furthermore, our incorporation into the structure under Korea Development Bank in 2011 has helped us to completely eliminate any uncertainties in corporate governance and secure new growth engines, forming the basis for continuous development.

As a global E&C leader,  
Daewoo E&C is creating the top-tier corporate value backed by  
world-leading technologies and highly trained human resources.

In the recent years, a company's social & environmental responsibility has become as important as a company's growth; Daewoo E&C has been trying its utmost to fulfill its corporate social responsibility. With the publication of this sustainability report, I hope to inform the stakeholders of the company's such effort.

Daewoo E&C has concentrated its capabilities on maximizing its performance. In 2011, we saw new orders of 13.3 trillion KRW, sales of 7.0 trillion KRW, operating income of 364.9 billion KRW, and net profit of 226.8 billion KRW; we also improved the company's financial soundness by recording debt ratio of 167.4%, achieving drastically improved performance compared to 2010. We are creating a new business synergy by executing joint projects with KDB and with the active financial support of KDB we are reducing project financing expenses.

Daewoo E&C has also placed emphasis on fulfilling its social responsibility. Putting top priority on customer satisfaction, we are managing a team responsible for customer satisfaction, strengthening the customer support system, expanding customer service activities, and ultimately seeking to provide the highest degree of customer satisfaction by reinforcing construction quality management. In addition, we recognize the importance of win-win growth with suppliers and are practicing top-tier supplier management by establishing the organization and the management system for win-win growth, settling the fair trade system, expanding monetary/educational/technical support for excellent suppliers, and improving communication with suppliers. We are running the Daewoo E&C Community Service Corps and, at the same time, we are trying to fulfill our responsibilities and roles as local community member by promoting employees' philanthropic activities and expanding support for social welfare and culture & arts.

Daewoo E&C has newly established the green management strategy and long-term roadmap as part of our effort to fulfill its environmental responsibilities. To ensure that the strategy is in action, we are running a team responsible for environmental management and have advanced green management IT system for environmental data, waste management, and GHG inventory. As a consequence, we are seeing tangible achievements such as reduction in energy consumption and GHG emissions, thereby minimizing the company's impact on climate change.

I hope that this report, which shows Daewoo E&C's efforts to fulfill its economic, social, and environmental responsibilities, will serve as an opportunity to expand communication with stakeholders. I cordially ask for your continued interest and support.

September 2012  
CEO & President, Jong-uk Seo

A handwritten signature in black ink, appearing to read 'Jong-uk Seo', located at the bottom right of the page.

Busan-Geoje Fixed Link Project

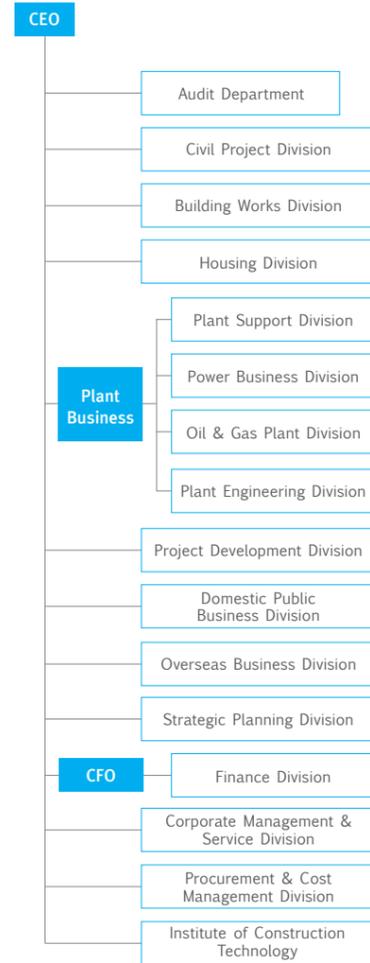


# Daewoo E&C

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# Overview

## Organizational Structure



\* As of May 2, 2012

Since its foundation, Daewoo E&C has led Korea's construction industry and contributing to domestic economic development. We provide the best technology and service based on excellent past performance and create creating the best corporate value at the global scene through fair competition. Daewoo E&C strives to achieve its vision of becoming the Global E&C Leaders, Creating the Highest-possible Values with World-leading Technologies and Highly-skilled Human Resources by fulfilling social responsibilities.

### Overview

<b>Name</b>	DAEWOO Engineering & Construction Co., Ltd.
<b>Address</b>	57, Sinmunno 1-ga, Jongno-gu, Seoul 110-713, Korea
<b>Date of establishment</b>	November 1, 1973
<b>CEO</b>	Jong-uk Seo
<b>Network</b>	Domestic : 3 branches, 92 affiliates, Overseas : 18 branches, 19 affiliates (as of July 1, 2012)
<b>Market cap</b>	4.4 trillion KRW
<b>Major shareholder</b>	Korea Development Bank
<b>No. of employees</b>	5,784 people
<b>Credit rating</b>	A+ by Korea Ratings Corporation (corporate bond)

\* As of December 31, 2011

### Subsidiaries

Key businesses of Daewoo E&C's subsidiaries include hotel, industrial complex development, and overseas project development.

	Company	Major Business
Domestic	Daewoo Steel Tech Co., Ltd.	Steel frame manufacturing, equipment rental
	Daewoo Songdo Hotel Co., Ltd.	Hotel
	Prugio Service Co., Ltd.	Construction, maintenance
	Infra Information Technology Co., Ltd.	Storage & transportation services
	Dogok-dong PFV Co., Ltd.	Building construction
	Foodream Co., Ltd.	Food & beverage
	Busan Hi-tech Industrial Complex	Real estate development, supply
	Gang-dong PFV Co., Ltd.	Building construction
	Guilin Daewoo Hotel Co., Ltd.	Hotel operation (China)
	Daewoo America Development, Inc.	Project development (USA)
Overseas	Daewoo Tripoli Investment & Development Co.	Hotel operation (Libya)
	THT Development Co., Ltd.	Real estate investment & development (Vietnam)
	Saipan Laulau Development, Inc.	Golf resort (Saipan)

\* As of May 30, 2012

\* Based on consolidated companies

# Overview

## Global Network

In order to effectively enter overseas markets and strengthen international business, Daewoo E&C is operating 37 overseas branches and affiliates as well as 40 sites in Africa, the Middle East, and Asia. At the global scene we are recognized for highly advanced technologies and excellent construction capabilities, further positioning ourselves as a leader in overseas construction.

### Overseas Branches and Affiliates

■ Overseas branch □ Overseas affiliate



#### Africa

- 01 Nigeria**
  - Daewoo E&C Co., Ltd. Port Harcourt
  - DW Nigeria, Ltd.
  - 7 ongoing sites

#### 02 Republic of South Africa

- Daewoo E&C Co., Ltd. Johannesburg

#### 03 Libya

- Daewoo E&C Co., Ltd. Tripoli
- Daewoo Tripoli Investment & Development Co.
- Gulf Eng. Const. & Contract
- 5 ongoing sites

#### 04 Morocco

- Daewoo E&C Co., Ltd. Rabat
- 2 ongoing sites

#### 05 Algeria

- Daewoo E&C Co., Ltd. Alger
- BNT Development SPA
- 8 ongoing sites

#### Middle East

#### 06 UAE

- Daewoo E&C Co., Ltd. Abu Dhabi
- 3 ongoing sites

#### 07 Saudi Arabia

- Daewoo E&C Co., Ltd. Al Khobar
- DW Arabia, Ltd.
- 2 ongoing sites

#### 08 Oman

- Daewoo E&C Co., Ltd. Muscat
- Daewoo E&C LLC
- 2 ongoing sites

#### 09 Jordan

- 1 ongoing site

#### 10 Iraq

- Daewoo E&C Co., Ltd. Basrah

#### 11 Iran

- Daewoo E&C Iran

#### 12 Qatar

- Daewoo E&C Co., Ltd. Doha
- 1 ongoing site

#### Asia

#### 13 Malaysia

- Daewoo E&C Co., Ltd. Kuala Lumpur
- 3 ongoing sites

#### 14 Vietnam

- Daewoo E&C Co., Ltd. Hanoi
- THT Development Co., Ltd.
- Vietnam Bason City 21
- Daewoo-Hanel Corp.
- Daeha Co., Ltd.
- 2 ongoing sites

#### 15 Singapore

- Daewoo E&C Co., Ltd. Singapore
- 1 ongoing site

#### 16 India

- DW Power(India), Ltd.

#### 17 Indonesia

- Daewoo E&C Co., Ltd. Jakarta

#### 18 Japan

- Daewoo E&C Co., Ltd. Tokyo

#### 19 China

- Daewoo E&C Co., Ltd. Beijing
- Guilin Daewoo Hotel Co., Ltd.
- Beijing Lufthansa Center Co.

#### 20 Pakistan

- KDS Hydro Pte., Ltd.
- 1 ongoing site

#### 21 The Philippines

- Daewoo E&C Co., Ltd. Manila
- Megaworld-DW Co.
- DW Construction Philippine, Inc.
- 1 ongoing site

#### Others

#### 22 USA

- Daewoo America Development, Inc.

#### 23 Saipan

- Saipan Laulau Development, Inc.

#### 24 Columbia

- Daewoo E&C Co., Ltd. Bogota

#### 25 Papua New Guinea

- 1 ongoing site

# Management Philosophy

## Vision

In 2010, Daewoo E&C declared a new vision : global E&C leaders, creating the highest-possible values with world-leading technologies and highly-skilled human resources. This new vision indicates our commitment to provide the best value to leap into a global leader based on the best-in-class human resources and technologies.

### Vision & Key Management Goals



## Core Value

Daewoo E&C's core value lies in Challenge & Passion and Autonomy & Accountability. We have a code of conduct following the same principle, further enhancing our commitment to these values.

### Challenge & Passion

**- We have a can-do attitude and continuously challenge our selves by overcoming fears of failure.**



- We strive for a higher goal with a can-do attitude.
- We are the first to prepare for changes and act on it.
- We constantly innovate ourselves with a creative mind and an entrepreneurial spirit.
- We try our utmost with an indomitable spirit.

### Autonomy & Accountability

**- We complete a given task with accountability and conviction.**



- We respect order and moderation and abide by the code of ethics.
- We try to be a good example with a sense of ownership in our behavior.
- We think on our feet when it comes to fulfilling tasks and immediately put things into action.
- We complete our tasks at all rates, no matter what obstacles come along the way.

## Management Principle

Daewoo E&C set a new directing point in 2012 : Construction Convergence Innovator.

### Action Plan for Converging of Construction Industry



1) IPP : Independent power plant

# Management Philosophy

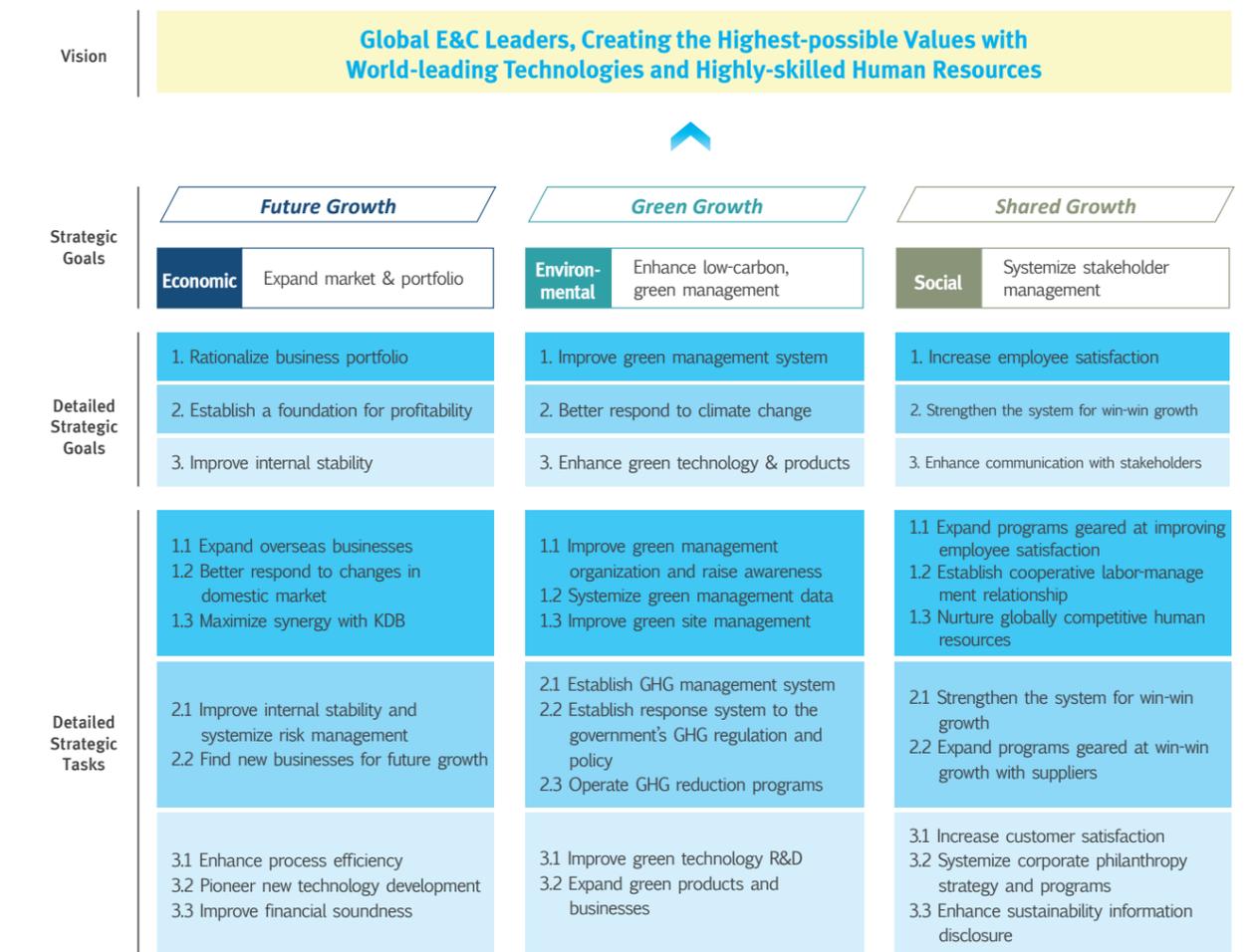
## Sustainability Strategy

Daewoo E&C put together the Sustainability Management Taskforce in 2012 to systematically pursue sustainability management and designated the teams responsible for each of sustainability areas. With the establishment of sustainability strategy, we are improving our corporate activities in many aspects.

### Sustainability Vision & Goal

Daewoo E&C's vision, Global E&C Leaders, Creating the Highest-possible Values with World-leading Technologies and Highly-skilled Human Resources, indicates our commitment to provide the best value to leap into a global leader based on the best-in-class human resources and technologies. In order to become a leader in sustainable management, we have the ultimate goal of creating the best value for stakeholders and fulfilling social responsibilities based on our corporate vision, core values, and sustainability strategy. Furthermore, we strive to become a green company that pursues both financial growth and sustainable management. Moving forward, we will regularly monitor our achievements and establish a self-rating system based on those results, thereby enhancing our sustainability management capabilities.

### Sustainability Strategy



## Business Portfolio



Shinwolsong Nuclear Power Plant Unit 1&amp;2

### Power Plant

Daewoo E&C's Power Plant Division takes pride in years of experience and accumulated technologies and is thus able to competitively obtain new orders in cogeneration plant and coal-fired power plant areas. Currently, we are pursuing about 10 power plant construction projects in and outside of Korea. In addition, we are planning a new IPP project that integrates know-how of Korea's leading bank in project financing, KDB, and technologies of Daewoo E&C. Furthermore, we are putting utmost efforts towards achieving tangible result in new nuclear power plant projects. The Power Plant Division, backed by the best-in-class plant construction technologies, is actively pioneering overseas markets.



Tongyeong LNG Terminal

### Oil & Gas

Oil & Gas Plant Division has constructed 22 LNG storage tanks, which accounts for 50% of the entire LNG storage tanks in Korea, and thus obtains the no. 1 record of construction in this field. When it comes to the area of fully protective LNG storage tank, we boast the highest record in the world; such experience and technology led us to strengthen the 30-year foundation in the West African region and enter the Middle Eastern plant construction market. The Oil & Gas Plant Division has achieved globally recognized competitiveness through various domestic, overseas projects in oil & gas treatment facility, transportation facility, and storage facility construction; based on such achievement, we plan to develop oil & gas area into our core overseas business.



Libya Tripoli Hotel

### Building Works

The Building Works Division has been with Daewoo E&C for over 40 years and, based on the technology it has accumulated thus far, is leading an advanced construction culture. The Division is at the frontier of optimized building construction through value engineering and, in the areas of high-rise building and IBS (Intelligent Building System), is recognized for its unrivaled technology and quality. Moving forward, we will position ourselves as a total solution provider who fulfills our clients' demand with perfection, based on continuous technology development, competitive strategy, communication, and trust.

## Business Portfolio



Gwanggyo Ecconhill

### Project Development

Since established, the Project Development Division has carried out development projects in various formats and a number of ODM-type projects, accumulating the best-in-class real estate & finance professionals as well as business records. We will continue to strengthen our position in project development in the areas of large-scale, complex ODM-type project, private SOC project, tidal power generation, harbor construction, industrial complex, and leisure/culture project for future growth. Furthermore, we will remain at the forefront of construction industry with discerning eyes for a wider market and through continuous self-innovation.



Busan-Geoje Fixed Link

### Civil Project

The Civil Project Division made an early entry into the global scene based on years of technology and know-how accumulated in domestic market and carried out numerous projects. Recently, we have begun to specialize and advance the civil project area in response to new issues such as green growth and new growth engine. Backed by innovative self-developed technology (e.g. resource recovery technology for high-density organic waste), high value-added technology (e.g. tidal power generation, immersed tunnel, etc.), and vast experience in constructing high-speed railroad and environmental treatment facility, the Civil Project Division will take the lead in the global construction industry, beyond domestic market.



Wirye New-city Songpa Prugio

### Housing

Having been ranked the no. 1 in the performance of the housing supply for seven consecutive years (2001-2007), Housing Division holds a firm position in the Korean housing market with vast experience and industry-leading brand awareness. In 2010, it opened Korea's first interactive Zero Energy House, ZENER HEIM, with strengthened R&D capabilities. In 2011, we launched a fully customizable house, My Premium, further leading the housing industry culture. In the future, we will continue to leap into the Global Top Brand through quality innovation (by continuous improvement), customer satisfaction innovation (aimed at communicating with and impressing customers), and environmentally friendly innovation (with creative technology R&D).

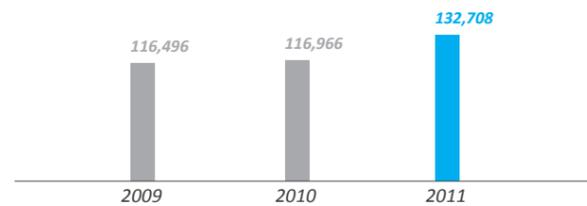
# Business Performance

## Financial Performance

### New Orders

2011 was a difficult year than ever, due to the stagnant economy and the downswing in construction industry caused by the European financial crisis, as well as increased uncertainty in overseas construction markets following the democratization movement in the Middle East and North Africa. Despite such difficult environment, Daewoo E&C continued to add weight on overseas businesses; as a result, we recorded total orders of 13.3 trillion KRW, a 13.5% increase from 2010.

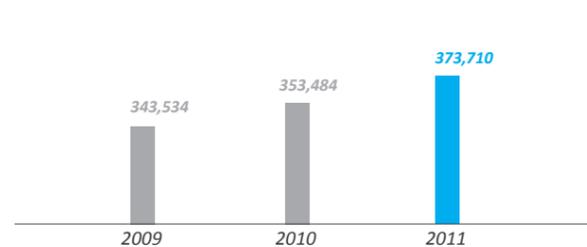
**New Orders**  
Unit : 100 million KRW



### Order Backlog

Our order backlog was 37.4 trillion KRW, a figure 5.3 times larger than the annual sales in 2011. Specifically, backlog of overseas orders is 7.6 trillion KRW, a 16.9% increase from the end of 2010. This figure reflects our efforts towards strengthening our position in overseas markets as well as re-entering and diversifying markets.

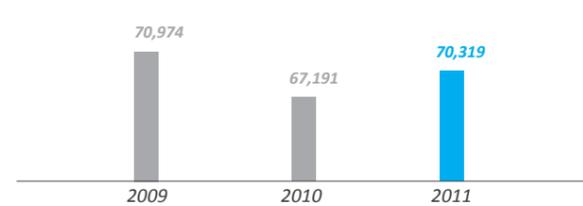
**Order Backlog**  
Unit : 100 million KRW



### Sales

We achieved sales of 7.3 trillion KRW, a 4.7% increase from 2010. Despite the overall slowdown of construction industry in 2011, the company obtained stable sales in civil engineering and construction areas; backed by increased sales from large-scale operations such as UAE RRE, Algeria Fertilizer, and Nigeria EGTL, we were able to minimize negative effect from the civil disturbance in Libya.

**Sales**  
Unit : 100 million KRW

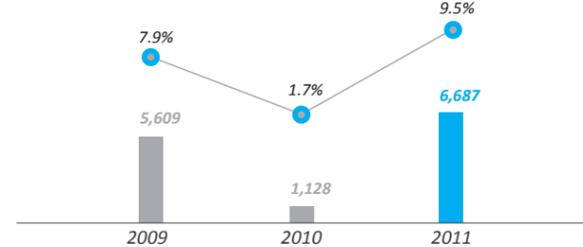


\* Based on different accounting principles  
- 2009 : based on K-GAAP  
- 2010 & 2011 : based on K-IFRS

### Gross Profit on Sales

Gross profit on sales in 2011 was 668.7 billion KRW, a sixfold increase from 2010; gross profit rate was 9.5%, a 7.8%p increase. This was a result from improving profitability in housing and overseas business areas. Contribution from overseas business areas was especially notable at 32.2%, which was a historical record.

**Gross Profit On Sales**  
Unit : 100 million KRW



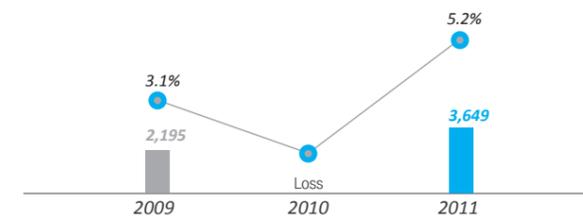
\* Based on different accounting principles  
- 2009 : based on K-GAAP  
- 2010 & 2011 : based on K-IFRS

# Business Performance

## Operating Profit

Operating profit in 2011 was 364.9 billion KRW, including gains from selling non-major assets and housing-related appropriation. Operating profit rate marked 5.2%, a significant turnaround from 2010.

**Operating Profit**  
Unit : 100 million KRW



\* Based on different accounting principles  
- 2009 : based on K-GAAP  
- 2010 & 2011 : based on K-IFRS

## Operational Performance

**Power Plant** | We have secured competitiveness at both domestic and overseas markets by obtaining new orders such as Oman SUR IPP Project and Hyundai Green Power 5-8 Boiler Island EPC Project. We successfully advanced business in the nuclear power plant area by obtaining the order for SMART-ITL, a national project.

**Oil & Gas** | We strengthened our position in the domestic oil & gas sector by obtaining orders such as S-Oil New SPM Construction Project and Tongyeong LNG SMV Project. In addition, we have prepared grounds for expanding overseas business by obtaining orders for construction of SADARA in Saudi Arabia and ODI Fertilizer in Morocco.

**Building Works** | We have recorded the first place in domestic private sector for the number of orders obtained for eight consecutive years (2004-2011). Especially, we have prepared grounds for expanding overseas business by obtaining orders such as Malaysia St. Regis Hotel and Vietnam Banpu site.

**Civil Project** | Outside of Korea, we have secured the order for Djen Djen Port Protection Project in Algeria; domestically, we have remained the first place in public civil engineering sector for eight consecutive years (2004-2011). In addition, we have again confirmed

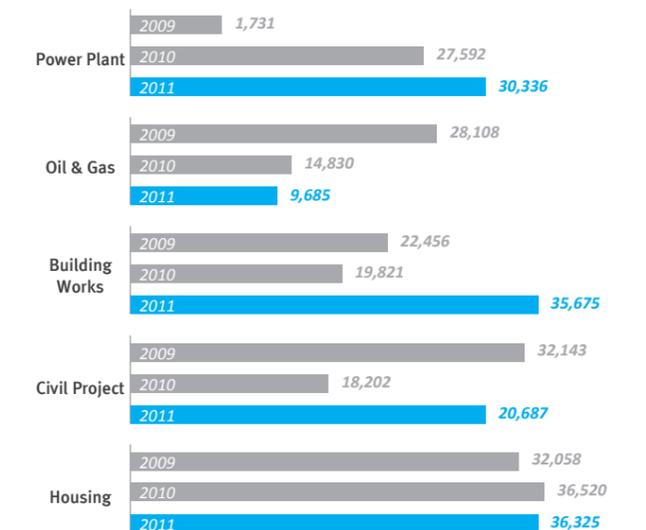
our reputation for the best-in-class technology by successfully carrying out projects such as Sihwa Lake Tidal Power Station and Busan-Geoje Fixed Link Project.

**Housing** | We have achieved the no. 1 in housing supply and successful lotting-out through strategy customized to different markets and geographic characteristics. Furthermore, we have diversified project types as a result of expanding public orders and actively pursuing projects with high profitability for stable funding.

## Construction Industry Outlook

In 2012, construction industry is expected to record 103 trillion KRW for new orders, 70% down from 2011, due to a decline in public sector and only a small increase in private sector. In civil projects, public sector continues to be stagnant while private sector is also expected to be down 12.9% from 2011 due to domestic economic slowdown. In housing, delayed recovery of consumer confidence is preventing demand for metropolitan cities in other provinces from rising, which is a turnaround from the previous year when the demand was recovering. In case of Seoul and its surrounding cities, we expect to see a more serious polarization among various products.

**New Orders by Business Division**  
Unit : 100 million KRW



# Stakeholder Engagement

## Definition of Stakeholders

Daewoo E&C put its own definition on the eight stakeholders such as customers, employees, and suppliers and established communication channels accordingly, based on the level of influence and importance of diverse economic, social and environmental issues engendered by corporate activities, in order to pursue systematic sustainability management.

Stakeholder	Definition & Responsibility	Communication Channel
<b>Customer</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>Part of Daewoo E&amp;C's family who creates a future together; foothold of the company's existence</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Provide the best residential environment and product service for customer satisfaction</li> </ul>	<p>Prugio website, model house, customer complaint center, SNS, etc.</p>
<b>Shareholder &amp; Investor</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>True owner of Daewoo E&amp;C who provides financial capital</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Disclose information in accurate and timely manner through transparent management</li> </ul>	<p>General shareholders' meeting, annual report, IR conference, analyst meeting, etc.</p>
<b>Employee</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>The most valuable human resources that compose a company; a partner for sustainable management</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Improve employee satisfaction by strengthening their capabilities and enhancing quality of life</li> </ul>	<p>Labor Union, in-house newspaper, intranet, grievance management system, etc.</p>
<b>Supplier</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>Partner who supports our operation by supplying energy and resources</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Provide technological &amp; administrative support and establish a transparent, fair relationship for suppliers' growth</li> </ul>	<p>DW-eCoS, supplier meeting, etc.</p>
<b>Local Community</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>Residents of our sites' surrounding communities and where our housing products are located; beneficiaries of sustainability activities</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Actively pursue philanthropic activities and contribute to community development</li> </ul>	<p>Volunteer Club, ethical management website, monthly volunteering activities, whitepaper on philanthropic activities, etc.</p>
<b>Academia, Association, Organization</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>Organizations with expert knowledge of construction industry; subject of continuous cooperation</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Cooperate with academic community and pursue joint R&amp;D with various associations; remain active in associations</li> </ul>	<p>Conference, seminar, association activities, etc.</p>
<b>Government</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>Provider of a stepping stone for further growth based on stable regulatory and social environment</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Create jobs, pay tax, and abide by laws and regulations; contribute to the national sustainable development</li> </ul>	<p>Government committees, participation in policy research, joint partnership programs, etc.</p>
<b>Future Generation</b> 	<p><b>Definition</b></p> <ul style="list-style-type: none"> <li>Leaders of tomorrow; all entities that should not be neglected from a long-term perspective</li> </ul> <p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>Contribute to economic growth and social stability &amp; integration</li> </ul>	<p>Job fair, career website, student ambassadors, SNS, etc.</p>

# Stakeholder Engagement

## Interviews with Stakeholders

Daewoo E&C conducted interviews with key stakeholders prior to issuing the sustainability report. By doing so we were able to hear what they had to say about our sustainability management and reflect their opinions on the report to the best we could. Daewoo E&C is planning to enhance the reliability and faithfulness of the stakeholder engagement through the interviews with each group of stakeholders once a year.

 <p><b>"Focus on enhancing the brand image"</b></p> <ul style="list-style-type: none"> <li>I recommend that Daewoo E&amp;C expands green facilities with in the residential complex where residents can participate in</li> <li>Building a high-end brand image with improved design</li> <li>Daewoo E&amp;C should reinforce communication with customers through proactive product marketing and information disclosure</li> </ul> <p>Customer / Resident of Prugio / Sohee Kim                      L related page : 64-66</p>	 <p><b>"Nurture and utilize human resources in the local areas of overseas sites"</b></p> <ul style="list-style-type: none"> <li>I suggest philanthropic activities at a global level from a long-term perspective, such as nurturing local human resources</li> <li>It is necessary to pursue and raise awareness of corporate philanthropy with characteristics of construction company</li> <li>Put greater efforts towards minimization of environmental impact</li> </ul> <p>Customer (Project Owner) / ARAMCO / Project manager Majed Ismaili                      L related page : 40-42, 54, 60, 71-72</p>
 <p><b>"Hedge domestic market risks and improve profitability through overseas expansion"</b></p> <ul style="list-style-type: none"> <li>It is expected that Daewoo E&amp;C will achieve increased financial stability through disposal of assets and reduction of PF debt guarantee</li> <li>Expansion of overseas business due to sluggish domestic market condition is a positive sign</li> </ul> <p>Stakeholder &amp; Investor / NH Securities / Research fellow Seungmin Kang                      L related page : 20-23, 27</p>	 <p><b>"Activate communication between native and foreign employees"</b></p> <ul style="list-style-type: none"> <li>I am satisfied with the company's support for foreign employees' working condition</li> <li>Greater effort on facilitating better communication between domestic and foreign employees is necessary</li> <li>Daewoo E&amp;C should improve monitoring system for environmental data such as energy and resource consumption</li> </ul> <p>Employee / HSE Team / Staff Kenny M. Yap                      L related page : 37, 55</p>
 <p><b>"Ensure transparency and fairness in selection and evaluation of suppliers"</b></p> <ul style="list-style-type: none"> <li>Transparent and fair supplier management based on principles is a positive sign</li> <li>I recommend that Daewoo E&amp;C shares its socially responsible activities with customers</li> <li>What is most important for the company is to build its very own identity</li> </ul> <p>Supplier / Kim &amp; AI / Executive vice president Kiup Choi                      L related page : 62-63, 68-72</p>	 <p><b>"Present the suppliers' role in achieving win-win growth"</b></p> <ul style="list-style-type: none"> <li>I highly appraise the company's continuous effort towards win-win growth with suppliers</li> <li>In today's stagnant domestic market, Daewoo E&amp;C must propose a solution for cooperation and survival</li> <li>I hope that suppliers' role would be emphasized when pursuing win-win growth</li> </ul> <p>Supplier / Kukyoung G&amp;M / Chairman Jaewon Choe                      L related page : 62-63</p>
 <p><b>"Share goals and values of philanthropic activities with beneficiaries"</b></p> <ul style="list-style-type: none"> <li>I recommend that Daewoo E&amp;C develops a communication channel for sharing philanthropic performance with community members</li> <li>The company must actively disclose its direct involvement in contribution to communities</li> <li>I expect Daewoo E&amp;C to lead the construction industry's corporate philanthropy culture</li> </ul> <p>Local community / Korea Disaster Safety Technology Institute / Senior researcher Daniel Bae                      L related page : 67-72</p>	 <p><b>"Reinforce the role of Institute of Construction Technology in co-development of industry-university collaboration"</b></p> <ul style="list-style-type: none"> <li>The Technology Advisory Committee should have greater responsibility and opportunities for participation</li> <li>R&amp;D on renewable energy technology must be continued and applied on projects</li> <li>Daewoo E&amp;C should actively promote its reputation as a leader in green technology</li> </ul> <p>Academia / Seoul National University of Science and Technology / Professor Gwangseop Jung                      L related page : 48-51</p>
 <p><b>"Promoting overseas environmental projects in alignment with suppliers"</b></p> <ul style="list-style-type: none"> <li>Daewoo E&amp;C must pursue a 'select and focus' strategy when it comes to entering overseas markets</li> <li>Enhance corporate image in overseas market by contributing to the local communities</li> <li>I recommend that Daewoo E&amp;C carries out overseas business along with environmental projects (in 'one package')</li> <li>Continuously put efforts towards the company's self-developed green technology</li> </ul> <p>Government / KEITI / Head of department Kihoon Song                      L related page : 22-23, 48-51, 71-72</p>	 <p><b>"Daewoo E&amp;C, which values human resources, is a very attractive company for the future generation"</b></p> <ul style="list-style-type: none"> <li>Settle a corporate culture that motivates employees' life-time education</li> <li>Daewoo E&amp;C should put more efforts on retaining global human resources</li> <li>Regular monitoring and evaluation on sustainability performance is required</li> <li>The company should enhance PR activities through various communication channels</li> </ul> <p>Future generation / University student ambassador / Chairman Jisoo Park                      L related page : 60-61</p>

# Stakeholder Engagement

## Materiality Test

GRI (Global Reporting Initiative), which provides a guidance for sustainability reporting, recommends that companies disclose information that stakeholders seek with priority. In order to do so, Daewoo E&C performed a materiality test on key stakeholders.

<p>Step 1</p> <p><b>Perform a media analysis</b></p>	<ul style="list-style-type: none"> <li>On-/off-line articles</li> <li>Cyber promotion</li> <li>In-house newspaper</li> </ul>	Analyze news articles covered in the period of January 2011-May 2012 as well as articles of in-house newspaper in the period of January 2010-April 2012
<p>Step 2</p> <p><b>Develop materiality test indicators</b></p>	<ul style="list-style-type: none"> <li>Reorganize GRI indicators</li> <li>Develop the 32 indicators for materiality test</li> </ul>	Based on 84 GRI indicators and eight Construction & Real Estate Sector Supplement indicators, as well as other sustainability indicators, select the 32 indicators that apply to Daewoo E&C and easily understood by stakeholders
<p>Step 3</p> <p><b>Carry out a materiality test</b></p>	<ul style="list-style-type: none"> <li>Select the pool</li> <li>Carry out the materiality test (visit or e-mail)</li> </ul>	Carried out a 2-week survey from May 22 to June 7, 2012 on 27 internal employees and 10 external stakeholders
<p>Step 4</p> <p><b>Assess the test result</b></p>	<ul style="list-style-type: none"> <li>Compare &amp; contrast internal/external results</li> <li>Select the top 11 indicators</li> </ul>	Compare and evaluate internal/external survey results and select the top 11 indicators that are deemed significant by stakeholders
<p>Step 5</p> <p><b>Select the 'Special Feature'</b></p>	<ul style="list-style-type: none"> <li>Conduct the Sustainability Management Taskforce workshop</li> <li>Vote for issues to be highlighted as the 'Special Feature'</li> </ul>	Members of the Sustainability Management Taskforce vote for key items to be highlighted as the Special Feature

### Where to find the 'Special Feature'



On June 8, 2012, Daewoo E&C conducted a workshop for sustainability managers from various departments. The participants voted for key activities (in each of economic, environmental, and social areas) that they wanted to promote to the stakeholders; these issues were named the 'Special Feature' and highlighted in the following pages of this report.

<b>Economic</b>	Sihwa Lake Tidal Power Station : World's Largest Clean Marine Energy Development Project	p. 33
<b>Environmental</b>	Zero Energy House, ZENER HEIM	p. 47
<b>Social</b>	Workers Safely Returns from Libya : Sharing Fate with the Foreign Workers	p. 59

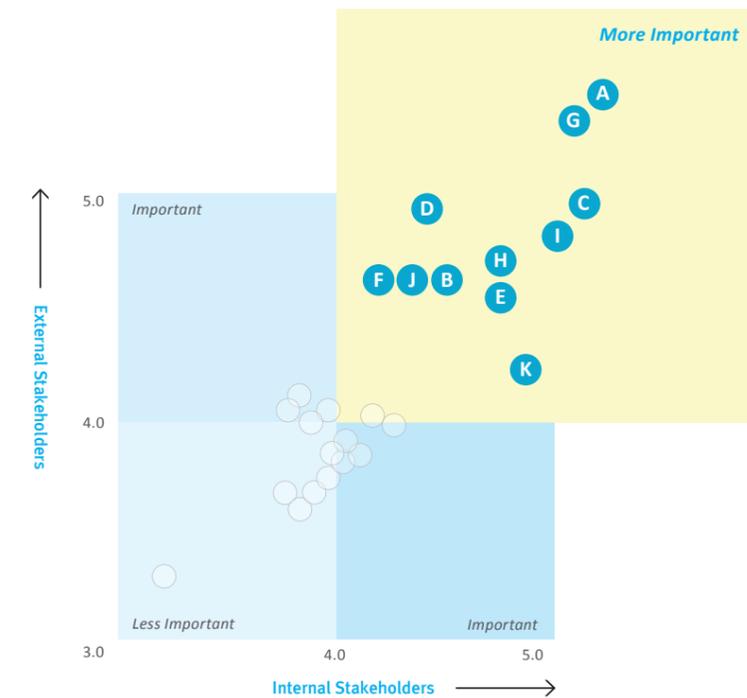
# Stakeholder Engagement

## Evaluation Results

As a result of the materiality test, Daewoo E&C disclosed information related to the most material indicators with priority and, as for other information, considered the balance of contents. Information related to the material indicators are marked with SN (Sustainability Navigator) so as to help readers easily find relevant contents.

### Result of the Materiality Test

Evaluation period : 2012.05.22-2012.06.07 / Participants : 27 employees of Daewoo E&C and 10 external stakeholders



Key Issues	Reporting Contents	Reporting Page(s)
<b>A. Economic performance</b>	Indices of profitability, growth, and stability, new growth businesses, expansion of overseas business	20-24, 27
<b>B. Risk management system</b>	Risk Management Committee, risk reporting system, risk management activities	24
<b>C. Green technology development, design, construction</b>	Environmentally friendly housing & construction, environmentally friendly construction materials, water treatment, waste-to-resource, renewable energy	46-51
<b>D. Energy consumption and energy saving plans</b>	Energy consumption and energy saving activities, GHG emissions and reduction activities	38-39
<b>E. Pollution control and reduction activities</b>	Air quality management, water quality management, waste management, asbestos management	40-42
<b>F. Establishment of an advanced environmental management system</b>	Green management organization, GHG inventory, noise monitoring system	37, 39, 41
<b>G. Increasing customer satisfaction</b>	Customer service activities, quality management, customer satisfaction survey	65-66
<b>H. Safety &amp; health policies and programs</b>	Safety organization, OHSAS 18001, safety management IT system, preventive measures of safety management	73-76
<b>I. Education and training for employees</b>	HR development system, HR development programs	60-61
<b>J. Win-win growth activities</b>	Win-win growth structure, support activities for suppliers	62-63
<b>K. Legal &amp; regulatory compliance</b>	Environmental impact assessment, protection of biodiversity, protection of human rights, fair trade, customer information security	40, 42, 55, 63-64

Song-Do ATT



# Future Growth

## Vision and Objective

In order to reinforce internal stability, Daewoo E&C is striving to systematically manage risks and develop future growth businesses. At the same time, we are diversifying our business portfolio by expanding overseas business and strengthening our response to changes in domestic market.

## Achievements 2011

Daewoo E&C put an end to the year-long M&A process and under the new structure with KDB (Korea Development Bank) we have stabilized our corporate governance. We are advancing our new growth businesses and overseas market positions based on such stability. Furthermore, we are focusing on enhancing quality competitiveness based on technology, involving all employees to take their parts in improving quality management. In the future, we will continue to settle ethical corporate culture based on trust and transparency.

## Future Plans

Daewoo E&C plans to increase financing from KDB by improving its financial structure and maximizing the synergy (of the two companies' construction and financial capabilities) when carrying out domestic/overseas development projects. In 2012, we expect to remain profitable in overseas business with the overseas order figure totaling 6.4 billion USD, 26.3% up from the previous year.

20 Securing Room for Growth

24 Maximization of Profitability

27 Reinforcement of Stability

33 Special Feature I.

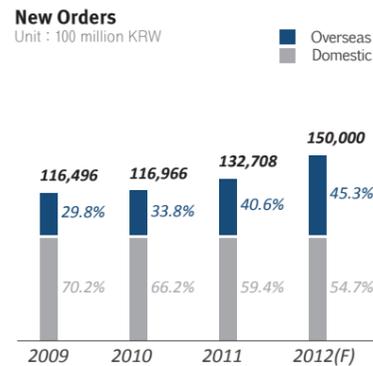
Sihwa Lake Tidal Power Station :

World's Largest Clean Marine Energy Development Project

# Securing Room for Growth

## Indicators for Growth

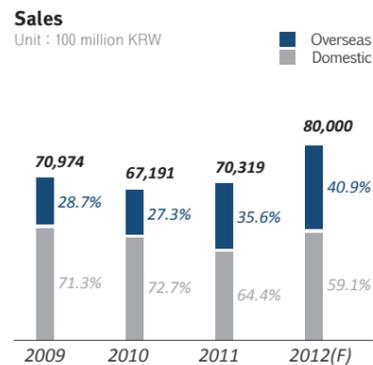
Daewoo E&C is expanding overseas business in order to overcome sluggish domestic construction market. Our order procurement activities cover Africa, a very strong market, and the Middle East, a region with large order quantities, as well as Asia and South America where investment on infrastructure is expected to increase. New orders and sales increased by 13.5% and 4.7%, respectively, and such upward trend is predominant in overseas business area. Our goals in 2012 are 15 trillion KRW (6.8 trillion KRW from overseas) in new orders and 8 trillion KRW (3.3 trillion KRW from overseas) in sales.



## New Growth Engine

### Strategic Direction

Daewoo E&C is currently constructing a business roadmap for new growth engine, so as to secure room for continuous growth and future competitiveness. Specifically, we are continuously trying to achieve tangible results from our areas of forte such as tidal and nuclear power station. Furthermore, we are striving to find a new development project model in partnership with KDB and trying to become a leader in this area.



\* Based on different accounting principles  
- 2009 : based on K-GAAP  
- 2010 & 2011 : based on K-IFRS

### Organization

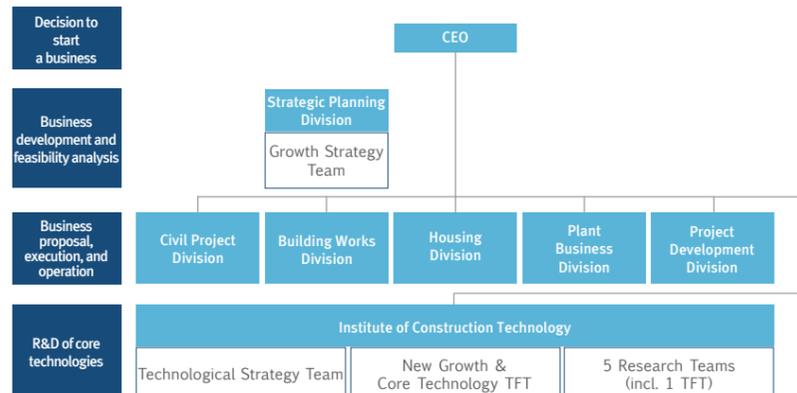
**Company-wide Organization** | Each business division is executing plans for new growth engine; in 2012, the Growth Strategy Team has been organized under the Strategic Planning Division, which is directly overseen by the CEO. The Growth Strategy Team carries out feasibility analysis of new business items, finds & assesses strategic overseas markets, and performs a research on potential subjects of M&A.

**R&D Organization** | Daewoo E&C's Institute of Construction Technology is developing core technologies that can help business divisions to take the top position in the market, with the aim of developing industry-leading, practical technologies for New Growth Engine. In 2012, the Institute of Construction Technology organized the New Growth & Core Technology Taskforce in partnership with the Technological Strategy Team, aimed at developing core technologies.

### Key Roles of Growth Strategy Team

Future market condition analysis	· Research and narrow down factors that may effect construction industry in the future
New growth business development	· Preemptively analyze the future growth areas and suggest strategies · Evaluate the feasibility of the items suggested by business divisions and the items' accordance with corporate strategy in a mid-/long-term
New market exploration	· Find strategic geographies (overseas) and analyze entry conditions
M&A opportunities	· Seek for M&A subjects to secure capabilities for new growth

### Organization



# Securing Room for Growth

## Key Areas for New Growth

**Tidal Power** | We are actively participating in domestic and overseas tidal power projects based on our technological capability accumulated from construction of Sihwa Lake Tidal Power Station. Consequently, we expect to make a significant contribution to securing the nation's renewable energy source as well as GHG reduction. In addition, we are executing preliminary environmental feasibility study and environmental impact assessment in order to minimize effects on biodiversity and the local community. We are sharing the results of our studies at information sessions with the local residents.

**Nuclear Power** | As a leader in nuclear power station construction, Daewoo E&C is seeking new opportunities for growth in this area based on the company's technological strengths. As the market size of nuclear reactors for research and education purposes is expected to grow to 10-20 trillion KRW, we plan to preoccupy a leading position through various order procurement activities.

**Environment** | In order to lead in the environmental industry, which is considered a rising opportunity, Daewoo E&C is carrying out projects in areas of wastewater treatment, bio-energy, and integrated waste processing town. Especially, we have the best record in Korea when it comes to water treatment; through continuous R&D and investment, we are recognized for our competitiveness both in and outside of Korea.

**Green Housing** | With continued interest in the Green issue, in 2009, we established the environmentally friendly product strategy, Green Premium, which is composed of five keywords and 48 core technologies. In addition, we are developing and applying green, energy-saving technologies with the goal of realizing a Zero Energy House (by means of reduction and self-generation of energy) by 2020.

**Customizable House** | Daewoo E&C launched 'My Premium,' a customizable residential product, in order to proactively respond to changing customer needs. This open solution enables customers to choose the structure and the interior design in a virtual setting. As such, we are transforming the housing trend from the existing supplier-oriented market to the consumer-oriented one.

**Complex Project Development** | We are expanding business opportunities by finding Civil-Architecture Complex Project Development as well as Proposal Project Development (Project Financing). Particularly, partnership with KDB has provided us with information on various projects in overseas markets and thus helped us further expand business opportunities. Furthermore, financial synergy with KDB enabled us to participate in large privately funded projects such as independent power projects in and outside of Korea.

## Overview of Tidal Power Projects



- Total investment : 1.2 trillion KRW
  - Project type : BOO (Build-Own-Operate)
  - Construction period : 2014-2019
  - Capacity : 420 MW
  - Under the preliminary environmental assessment
- Total investment : 354.7 billion KRW (excl. VAT)
  - Project type : T/K
  - Construction period : 2004-2011
  - Capacity : 254 MW
  - Construction completed & under operation (105% efficiency compared to the design)
- Total investment : 1.6 trillion KRW
  - Project type : BOO (Build-Own-Operate)
  - Construction period : 2013-2020
  - Capacity : 520 MW
  - Under the environmental impact assessment

## 'My Premium' UX Program

With 'My Premium App', Daewoo E&C enabled customers to virtually customize a house to their liking and view floor plan whenever they want on their smart devices. 'My Premium' UX program won the grand prize in the User Experience area at the 2011 Digital Award.



# Securing Room for Growth

## Expansion of Overseas Business

### Strategic Direction

In 2012, Daewoo E&C plans to reinforce market dominance in key markets; at the same time, the company will pursue a differentiation strategy by region to increase orders in new markets. We will maximize opportunities to obtain plant construction orders through strategic partnership with engineering companies. Furthermore, we plan to create financial synergy with KDB, our major shareholder, to pursue businesses together.

### Organization

**Company-wide Organization** | Since Overseas Business Division was established in 2008, we have been operating a multiplayer marketing organization based on separate Overseas Business Teams by region. From 2011, we have put together teams responsible for overseas business activities in each of the business divisions in order to secure timely decision-making capability and expertise.

**Affiliates & Branches** | We are operating 37 affiliates and branches in Africa, the Middle East, Asia and USA. During the first half of 2012, we newly opened offices in Johannesburg (South Africa), Bogotá (Columbia), Singapore, and Basra (Iraq).

### Key Performance in 2011

In 2011, Daewoo E&C recorded 5.4 trillion KRW as overseas orders which is 40.5% of its total order figure, truly transforming the business structure to be oriented on overseas business. Our order backlog was 7.6 trillion KRW, a 17% increase from 2010. We successfully carried out diversification strategy by region and project type, making our business portfolio more stable.

#### Order Securing Strategies, Differentiated by Region



- Select the base areas and expand the market
- Existing market : Nigeria, Algeria, Morocco, etc.
- New market : Sub-Sahara region



- Settle in the region and expedite entries
- Existing market : UAE, Oman, Qatar, Saudi Arabia, etc.
- New market : Kuwait, Iraq, etc.



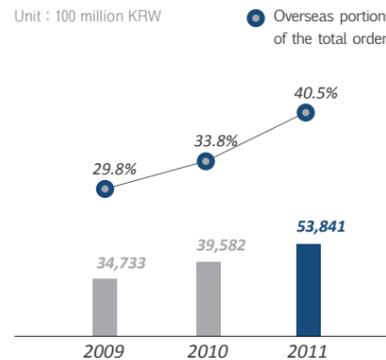
- Diversify market and project types
- Existing market : Vietnam, Malaysia, etc.
- New market : Singapore, South America, etc

#### Key Overseas Orders in 2011

<b>Sur IPP (Oman)</b>	<ul style="list-style-type: none"> <li>Country : Oman</li> <li>Project owner : Phoenix Power Company</li> <li>Amount : 1.3 trillion KRW</li> <li>Construction period : 2011.07-2014.03</li> </ul>
<b>Obite IPP (Nigeria)</b>	<ul style="list-style-type: none"> <li>Country : Nigeria</li> <li>Project owner : Total Nigeria Limited</li> <li>Amount : 826.3 billion KRW</li> <li>Construction period : 2011.01-2014.12</li> </ul>
<b>RTIP Tank Farm (Saudi Arabia)</b>	<ul style="list-style-type: none"> <li>Country : Saudi Arabia</li> <li>Project owner : Aramco &amp; Dow Chemical Co.</li> <li>Amount : 347.5 billion KRW</li> <li>Construction period : 2011.12-2015.05</li> </ul>
<b>IB Tower (Malaysia)</b>	<ul style="list-style-type: none"> <li>Country : Malaysia</li> <li>Project owner : IB Tower Sdn. Bhd.</li> <li>Amount : 210.5 billion KRW</li> <li>Construction period : 2012.02-2014.10</li> </ul>

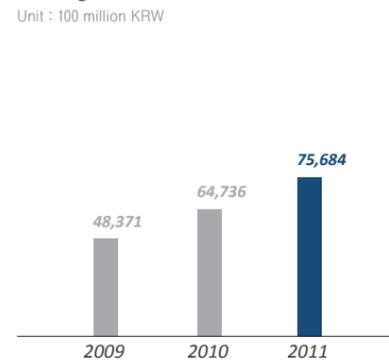
#### Amount of New Overseas Orders

Unit : 100 million KRW

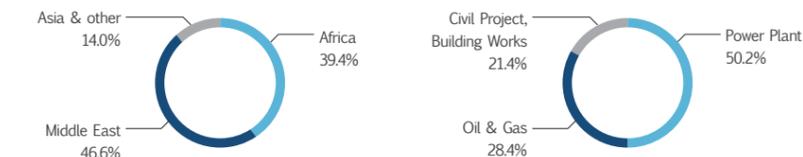


#### Backlog of Overseas Orders

Unit : 100 million KRW



#### Backlog of Orders by Region and Project Types in 2011



# Securing Room for Growth

**Competitiveness in the Power Plant Market** | Daewoo E&C has set the cogeneration power plant sector as a strategic business area and placed resources in this area. In 2011, we obtained new orders in Sur, Oman, as well as Obite and Agura in Nigeria, further solidifying our position in the overseas cogeneration power plant market. In the future, we will actively participate in privately funded plant projects by utilizing synergy with KDB.

**Overseas Market Diversification** | As a result of pursuing overseas market diversification strategy, we have added orders from Morocco, Saudi Arabia, Singapore, and Algeria in 2011. Particularly, Morocco had long been an untapped market for Korean construction companies until we obtained the order for Jorf Lasfar Power Project in 2010. Re-entering Saudi Arabian market after 10 years also holds a significant meaning as we have now secured a basis for obtaining additional orders in the future. In Singapore, which is the largest market in Southeast Asia, we hold a great expectation for securing large-scale orders in the future. As for Algeria, we have re-entered this market in 2008 (in a long time since 1989) and are currently expanding business areas from civil project and oil & gas to building works and power plant.



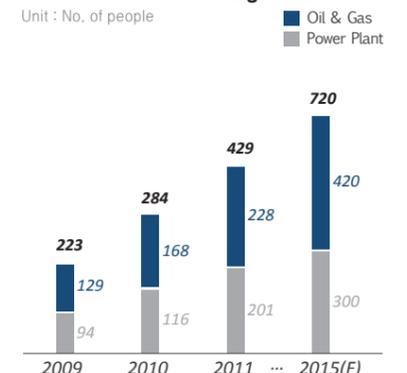
**Engineering Capabilities** | We are continuously reinforcing our engineering capabilities so as to maximize new orders in the plant sector, which accounts for the largest portion in our overseas business, and successfully complete projects. Particularly, retaining and nurturing elite human resources, establishing an effective engineering operations system, and reinforcing technical competitiveness are our priority.

#### Tasks for Reinforcing Engineering Capability

Retention and training of design personnel	Establishment of operational system	Reinforcement of technological competitiveness
1 Reinforce the design personnel	1 Secure an operations process	1 Reinforce areas of strength
2 Recruit the new design personnel	2 Specialize the organization	2 Partner with domestic, overseas engineering firms
3 Execute early training of new recruits	3 Establish an integrated engineering IT system	3 M&A with domestic, overseas engineering firms
4 Newly appoint expert members	4 Develop excellent design partners	

#### Reinforcement of the Design Personnel

Unit : No. of people

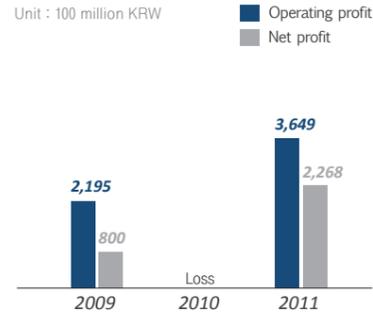


# Maximization of Profitability

## Indicators for Profitability

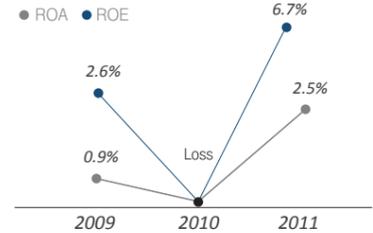
In order for a company to survive, it must remain internally stable while pursuing both growth and profitability. At Daewoo E&C, we are improving profitability by improving business risk management and cost management, while trying to continuously grow. In 2010, we saw a big loss from reflecting potential loss caused by the stagnant housing market condition; however, we immediately improved our financial performance in 2011 with operating profit of 364.9 billion KRW and net profit of 226.8 billion KRW. As a result, we recorded 2.5% for ROA (return on assets) and 6.7% for ROE (return on equity).

### Operating Profit & Net profit

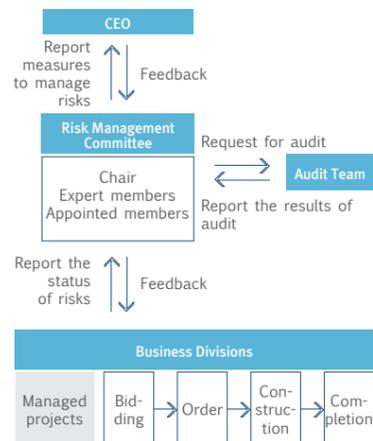


\* Based on different accounting principles  
 - 2009 : based on K-GAAP  
 - 2010 & 2011 : based on K-IFRS

### ROA & ROE



### Risk Reporting Structure



## Reinforced Monitoring of Profitability

### Regular Operation of the Risk Management Committee

Risk management is a key to stable execution of new growth and global business. As such, Daewoo E&C established the Risk Management Committee in 2011 to analyze risk factors prior to executing projects and better respond to risky situations.

**Organization of the Risk Management Committee** | The Risk Management Committee is chaired by the CFO, while executives of business divisions, the financial executive, and the strategic planning executive compose expert members of the Committee. In case an additional member is deemed to be required, the Committee Chair appoints one among employees. The Committee meetings can be categorized into regular, temporary, and sub-committee. Regular meetings are held on a monthly basis while temporary meetings are held either when the Chair feels are necessary or upon request from more than three expert members. Sub-committee meetings are held when in-depth discussion on a specific topic is required, after reporting to the Chair.

### Object of Priority Control by the Risk Management Committee

1	Projects with expected rate of cost to sales to grow by over 5%	2	PF-guaranteed projects that have passed the Investment Deliberation Committee	3	Projects of priority control by business divisions
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**Risk Management Activities** | Daewoo E&C has appointed risk managers in each of the business divisions, has defined and analyzed risk factors, and is continuously updating and monitoring key risks. Risks that have been determined undergo quantitative analysis for their significance and ripple effect are categorized by the degree of risk and the expected level of monetary loss and get reported to the Risk Management Committee monthly.

### Subjects of Risk Management

Financial Risks	Non-financial Risks
Currency risk, liquidity risk, tax risk, appropriateness of reserve fund, PF guarantees, debt management status, and cash flow	Stagnant · overheating economy risk, demand risks, legal risks, strategic risks, and safety risks

# Maximization of Profitability

## Reinforced Deliberation on Investment

Daewoo E&C ensures reasonability of construction cost through the Investment Deliberation Committee, thereby increasing profitability, minimizing PF guarantees through feasibility verification, and reinforcing the effectiveness of projects overall. In case of housing business, we double-check response plan against any case of incurring unsold apartment units prior to executing a project, so as to ensure effective risk management.

### Composition and Responsibilities of the Investment Deliberation Committee

| The Investment Deliberation Committee is held on a weekly basis; its members are composed of approximately 10 executives and team heads with thorough knowledge and vast experience in the proposed topics. The Committee pre-assess feasibility and response plan to risks before executing asset acquisition and disposal as well as development projects. Before making a final decision on a project, we seriously consider the Committee's opinion.

**Key Performance in 2011** | In 2011, the number of investment deliberated amounted to 113 cases, which was a 195% increase from 2010; this is the result of increasing the number of projects subject to deliberation and reinforcing the degree of deliberation for each stage of investment and orders. Furthermore, tightened approval standard led the rate of reexamination and rejection to increase from 7% in 2010 to 18% in 2011.

### Status of Investment Deliberation

	2009	2010	2011
Total	73	58	113
Approval	13 (18%)	31 (53%)	47 (41%)
Conditional approval	53 (73%)	23 (40%)	46 (41%)
Retrial	6 (8%)	3 (5%)	9 (8%)
Rejection (incl. returned proposals)	1 (1%)	1 (2%)	11 (10%)

## Cost Reduction

Daewoo E&C established the Cost Management Team at the end of 2011 in order to secure profitability by means of an accurate cost analysis and cost reduction plans. The Cost Management Team monitors project cost of each of the business divisions through company-wide system analysis and, consequently, draws areas of improvement at sites that require heightened management. Such sites also undergo regular check-ups.

### Major Work Related to Cost Management

1	<b>Regular monitoring of cost</b> - Monthly reporting of cost management to the executives	3	<b>Change analysis of major sites' control factors</b> - Quarterly reporting on the status of the sites that are subject to cost management to the executives
2	<b>Onsite analysis of additional cost factors</b> - Monthly reporting of under-reflected subcontracting cost to the executives	4	<b>Site inspection</b> - Inspection of cost management sites and reporting of the results to the executives

### Operational Plan of Investment Deliberation in 2012

Modify proposal procedures
· Deliberation day : Every Thursday at 3:00 p.m. by principle (due date for handing in deliberation documents is one week prior to the deliberation)
· Only propose the projects that have been analyzed through the divisions' self-deliberation
Increase participating members
· Expert member : Expand to five areas (strategy, investment · budget, finance, legal, and marketing) and obligate the attendance of the seven members including the Chair
· Appointed member : Attendance of over two members with expertise in the proposed issues

# Maximization of Profitability

## Advanced Work System

### Establishment of the Integrated Construction Management System

**Tasks for Work Process Innovation** | In 2011, Daewoo E&C selected 28 tasks for innovating domestic, overseas construction management work process in an efficient manner. Each action point will be realized through the Integrated Construction Management System.

**Integrated Construction Management System** | BAROCON is an innovative system for improving work process so as to support the management's timely and accurate decision making as well as reinforcing ease and efficiency of onsite work. BAROCON is expected to not only be very useful for improving efficiency and productivity of overall management but also bring positive changes and achievements on employee's work by providing a user-friendly system to sites.

#### Expected Outcome of BAROCON

<b>Construction Management</b>	<ul style="list-style-type: none"> <li>Enable an exact cost estimate with support of the estimate system</li> <li>Control the execution budget based on internal accounts and manage the execution records through the system</li> <li>Take a proactive approach against risks by increasing the accuracy of the expected cost of completing construction</li> </ul>
<b>Materials, Subcontracting</b>	<ul style="list-style-type: none"> <li>Improve the site management capability by establishing the subcontracting (of materials) system linked with budget</li> <li>Enhance the supplier &amp; contract management system and establish a real-time monitoring structure for procurement</li> </ul>
<b>Labor, Heavy Equipments</b>	<ul style="list-style-type: none"> <li>Establish a user-oriented integration system and establish a labor expenses analysis system (by types)</li> <li>Establish a system for sharing the status of equipments on a real-time basis and increase the efficiency of equipment management work</li> </ul>
<b>Management Information</b>	<ul style="list-style-type: none"> <li>Establish a risk warning system as well as a system that collects and provides information regarding construction records</li> </ul>

#### Tasks for Work Process Innovation

<b>Construction Management</b>	Estimate	Systemize how estimates are calculated (plus 3 tasks)
	Budget	Re-establish the budget structure (plus 1 task)
	Cost	Re-establish standards for project sales and profit (plus 4 tasks)
	Procedure	Find measures to connect procedures (of each business areas) and costs
	Document	Advance the document management structure and establish a cooperation system
<b>Subcontracting of Materials</b>	Subcontracting Plan	Establish a management structure linked with budget and subcontracting of materials
	Overseas procurement	Establish a monitoring system for overseas procurement (plus 1 task)
	Suppliers	Reinforce cooperation with suppliers by constructing a supplier management portal (plus 1 task)
	Information Analysis	Standardize codes for materials (plus 2 tasks)
<b>Labor</b>	Domestic Labor	Standardize codes for labor types (plus 2 tasks)
	Overseas Labor	Establish a HR portal system based on the labor force database (plus 1 tasks)
	Structure of Labor Expenses	Establish a system for analyzing labor expenses by types
<b>Heavy Equipments (Overseas)</b>	Heavy Equipments (Overseas)	Standardize the equipment categorization system (plus 2 tasks)

### Establishment of Mobile Office

In 2010, Daewoo E&C developed a mobile office solution based on smart phones and wireless LAN for the first time in construction industry. As a result, quick decision making, minimization of delays in work, and real-time communication and information sharing via various communication channels have all become possible.

#### Main Functions of the Mobile Office Solution

<b>Group Ware</b>	E-mail, electronic approval, work board, personal address book, etc.	<b>Daewoo E&amp;C News</b>	Daewoo Jeong Facebook, in-house newsletter, mobile Prugio, stock information, etc.
<b>Site Management</b>	Mobile PMIS <sup>1)</sup> , mobile PIS <sup>2)</sup> , site weather information, site location information, etc.	<b>Education &amp; Welfare</b>	Employee search, Baromi Talk, FMC <sup>3)</sup> (extension telephone line among employees), Baro View, etc.
<b>Work Support</b>	Application for car arrangement, route map of commuting buses, meeting room reservation, certificate issuance, etc.		

1) Project Management Information System  
2) Project Information System  
3) Fixed Mobile Convergence



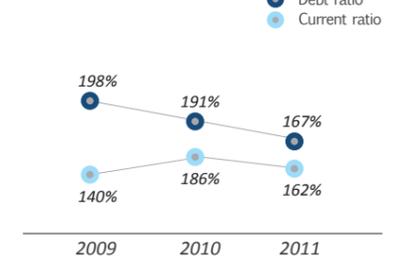
Mobile Office Screenshot

# Reinforcement of Stability

## Indicators for Stability

It is advisable for a company to enhance its profitability based on stability. Particularly in construction industry, stability of financial structure has a direct effect on new orders and project size. At Daewoo E&C, we are managing stability indicators by improving financial record and structure and transforming corporate governance for enhanced performance overall. The acquisition by KDB in 2011 stabilized corporate governance, leading our credit rating to be on an upward trend while our debt and current ratios are showing a downturn. In 2011, debt ratio marked 167%, 24%p down from 2010. Credit rating of our corporate bond has also gone up from A0 to A+.

#### Debt & Current Ratios



## Improvement in Financial Structure

Daewoo E&C is steadily improving its financial structure. The remaining balance of PF debt guarantee was approximately 3 trillion KRW in 2011, a 22% decrease from 2010. We expect to continuously reduce this figure in the future.

Besides the reduction of the PF debt guarantee figure, we are improving the financial structure in many other ways, such as the disposal of non-major assets (for business use). In 2011, we sold four non-major assets including Korea Express and Seoul Ring Expressway, securing a total of 1.1 trillion KRW of proceeds from sale, which was used to repay debt - our net debt declined by 46% from 2010. In 2012, we plan to additionally sell non-major assets including GK Fixed Link and Hanoi Daewoo Hotel (Vietnam), further reducing the amount of debt.

#### Credit Rating

	2010.12	2011.12
<b>Corporate Bond</b>	A0	A+
<b>Corporate Bill</b>	A2	A2+

#### Records and Plans of Non-major Asset Disposal

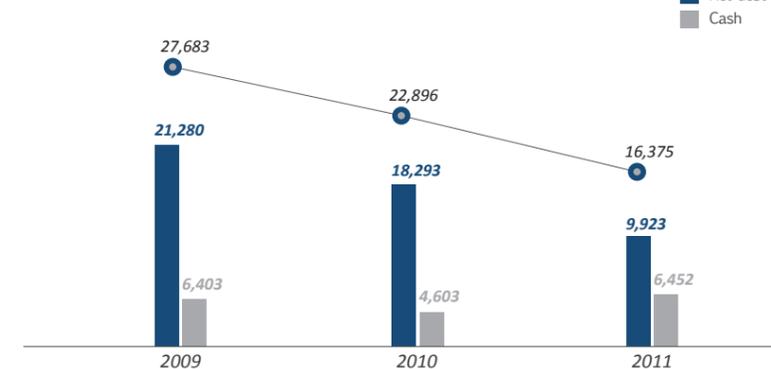
Unit : 100 million KRW

<b>2011</b>	· Korea Express	8,862	<b>2012(F)</b>	· GK Fixed Link	1,868
	· Seoul Ring Expressway	1,270		· Hanoi Daewoo Hotel (Vietnam)	1,084
	· Daewoo Entec	611		· Guilin Daewoo Hotel (China)	262
	· Kumho Tires	326		· 3rd Gyeongin Expressway	247

\* Figures of GK Fixed Link, Guilin Daewoo Hotel, and 3rd Gyeongin Expressway are book value

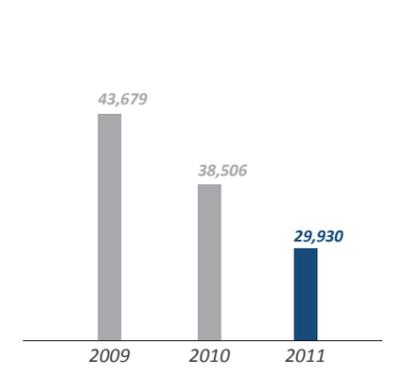
#### Debt on the Decline

Unit : 100 million KRW



#### PF Debt Guarantee on the Decline

Unit : 100 million KRW



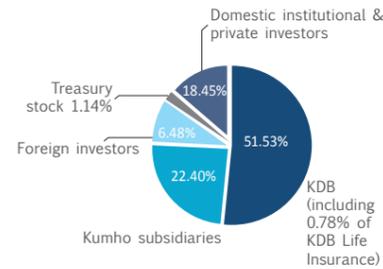
# Reinforcement of Stability

## Sustainable Corporate Governance

### Corporate Governance & Ownership Structure

**Change in Ownership Structure** | As of December 2010, the major shareholder of Daewoo E&C changed from Kumho Industrial to KDB, which now holds 51.53% of total issued stocks. We expect this change in ownership structure to stabilize corporate governance and bring greater synergy in the future, leading us to improve performance.

### Shareholding Structure



\* As of December 31, 2011

**Protection of Shareholder Rights** | We fulfill the duty of disclosure to ensure shareholder rights and strictly comply with the Fair Trade Commission's reporting requirements. Furthermore, we disclose information related to major activities in an accurate and timely manner through various communication channels such as information sessions and the IR website.

**BOD Structure & Current Status** | Daewoo E&C's BOD is responsible for resolution of key corporate issues such as disposal and transition of major assets and borrowing of large assets and oversees the executives' management performances. Articles of association state that The Number of Outside Directors Must Be Greater than Three and They Must Compose a Majority of the BOD in order to ensure transparency and independence of the BOD. As of December 2011, the BOD was composed of two executive directors, four outside directors, and one other nonexecutive director and chaired by the CEO.

### BOD Structure

Category	Name	Title	Background	Responsibility
Executive Directors	Jong-uk Seo	CEO & President, Daewoo E&C	Overview of the company's management	General management
	Hyun Eek Cho	CFO, Daewoo E&C	Overview of the financial management	General management
Outside Directors	Song Ha Park	Adviser, Yoon & Yang LLC	Legal expert	Legal advice
	Sun Jik Kwon	Chairman, MPC21	Marketing & PR expert	PR advice
	Do Ik Park	President, Sasilyoun	Media expert	Media-related advice
	No Geun Lee	Visiting Professor, Department of Public Administration, Kyungbok University	Financial expert	Financial advice
Other Non-executive Directors	Sung Tae Kim	PE Center Head, KDB	Protection of shareholders' rights	Strategy related advice

\* As of December 31, 2011

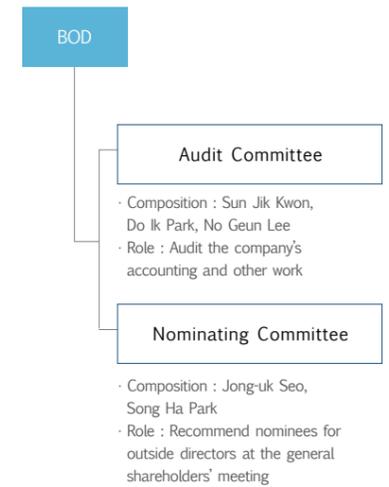
# Reinforcement of Stability

**BOD Operation & Roles** | Daewoo E&C's BOD is responsible for resolution of articles indicated in legislation or articles of association as well as the BOD code of operation. BOD meetings can be named either regular and temporary; regular meetings are held on a monthly basis while temporary meetings are called for whenever a significant issue is required to be discussed. In 2011, a total of 20 BOD meetings were held, resolving 67 items. During this period, participation rate of the outside directors was high at 96.2%.

**Committees under the BOD** | Daewoo E&C is operating the Audit Committee and the Nominating Committee under the BOD in order to reinforce expertise and transparency of the BOD and stabilize corporate governance.

The Audit Committee is responsible for internal audit. By obligation it is composed of more than three directors appointed at the general meeting and two-thirds of the Committee members must be outside directors. As of December 2011, all three members of the Audit Committee were outside directors, fulfilling their responsibilities as part of the Audit Department. The Nominating Committee is responsible for recommending nominees for the position of outside director. It is composed of one executive director and one outside director. The BOD code of operation states that the Nominating Committee must be composed of more than two members and one-half of the Committee members must be outside directors. The Committee is trying to retain a director with thorough understanding of construction industry, knowledge, and high ethical standards.

### Committees under the BOD

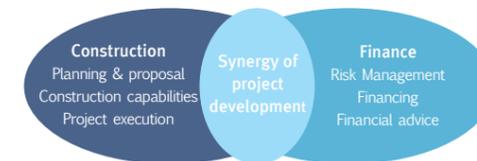


\* As of December 31, 2011

### Synergy from Being Incorporated into KDB

Following the incorporation into KDB, Daewoo E&C was able to gain synergy (of merging construction and finance) when executing domestic/overseas project development and increased corporate financing from KDB. As this synergy gets more tangible and project orders increase as a result of cooperation, we expect our corporate value to be taken to the next level and we will take this as an opportunity to grow into a truly global construction company.

#### Project Development



#### Corporate Finance



#### Status of KDB's support for corporate financing

Unit : 100 million KRW

Category	Amount
Credit line	5,460
Debt limit	2,000
Import & export financing	2,883
Performance guarantee	577

\* As of December 31, 2011

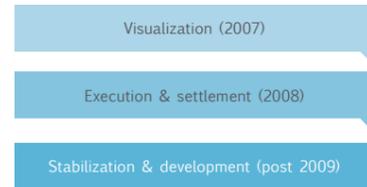
#### Achievement in 2011

Project	Role of KDB	Amount (100 Million KRW)
Guri-Pocheon Highway Project	Make financing arrangements	15,490
Heoidong Industrial Complex Development Project	Financial investment and project financing	400
Gimpo Pungmu Prugio	Project financing	500
Seosuwon Lake Prugio	Project financing	500

# Reinforcement of Stability

## Ethical Corporate Culture

### Stages of Ethical Management



### Establishment of Ethical Management System

Daewoo E&C selected ethical management as one of the core management principles with the goal of becoming a reliable company trusted by all stakeholders.

**Plan for Ethical Management** | In 2007, we established a mid- to long-term plan for pursuing ethical management in a systematic and strategic manner. We went through the visualization stage in 2007 and the execution & settlement stage in 2008. From 2009, we have been at the stabilization & development stage of ethical management, which we plan to continuously reinforce in the future.

**Ethical Management Principle** | In order to define standards of appropriate conduct and value judgment for employees, we declared the code of conduct and regulated a separate set of rules and bylaws of business ethics. Particularly, the bylaws provide a specific guidance on employees' behavior and include examples, so as to help employees better understand direction of ethical management and easily find how to respond in various situations. In the future, we plan to share our ethical management principle with suppliers and continue transparent, trustworthy relationship with stakeholders.

### Ethical Management Committee's Responsibilities

- Establish a basic plan for truly integrating ethical management culture
- Fulfill the responsibility as a Watchdog for ensuring ethical management in action
- Establish or revise policies related to ethical management; develop and interpret them
- Investigate the individual who has damaged his, her dignity as an employee by violating business ethics
- Operate the Ethical Management Execution Body and the Volunteer Club

### Main Contents of the Ethical Management Principle

Compliance with laws and corporate policies	Restricted activities among employees
Responsibilities and obligations of an employee	Restricted activities for fair trade with partners
Prohibition of receiving any illicit monetary or non-monetary gains	Refusal of special requests regarding hiring and contracting
Prohibition of unjustified work and personal usage of corporate assets	Ethical standards for employees
Prohibition of seeking unjust personal gains	Written pledge on transparent contract agreement

**Organization** | Work related to ethical management is carried out by the Ethical Management Committee, the Audit Department, and the Ethical Management Execution Body in an organic manner. The Ethical Management Committee is chaired by Head of Audit Department, who is operating the Audit Department to support the Committee and execute practical work related to ethical management. The Ethical Management Execution Body is responsible for finding obstacles of pursuing ethical management, promoting business ethics, and monitoring of company-wide ethical management.

# Reinforcement of Stability

## Ethical Management Programs

**Clean Holiday Campaign** | During the festive season, we promote the Clean Holiday Campaign to prevent employees from receiving gifts and money from suppliers. As part of the campaign, we conduct an inspection of sites and the main office so that ethical management system can be properly functioned within the company. Through the inspection we not only check the receipt of gifts and money but also use it as the opportunity to provide ethical management education and ask for support. In 2011, we carried out inspection on 10 sites and the courier service office at the headquarter. No case of accepting gifts and money was found.

**Reporting System for Violation of Business Ethics** | In 2011, we improved the internal reporting system to reinforce the employees' ethical standard and a sense of responsibility. Employees of suppliers can also report on violation of business ethics and we created an exclusive banner and system for reporting on violation of business ethics on the company intranet and DW-eCoS, a support system website for suppliers. Every information reported through various channels such as the exclusive system for reporting, hotline, fax, mail, and a personal visit gets collected by the Audit Department, which then follows the procedure for verifying the information reported and taking ex post measures. The right to access the information reported is strictly restricted to the Head of Audit Department and the Head of Audit Team only, in order to protect the identity of whistleblowers and prevent them against any disadvantages.

## Reinforcement of Employees' Ethical Standards

**Ethical Management Website** | Daewoo E&C is operating an ethical management website to provide an overview of the company's activities related to business ethics and encourage greater participation from employees. On the website, publications such as A Casebook of Public Servants Ethical Behavior (ACRC, 2011) and How to Cope with Ethical Dilemmas (The Catholic University of Korea, 2008) have been posted to raise employees' ethical standards. We are also sharing other materials related to information on protection and prevention of sexual harassment.

**Ethical Management Education** | We provide a regular on-line training on business ethics to reinforce employees' ethical standards and form a consensus. In 2011, an E-Book on business ethics was distributed to 469 employees in 25 overseas sites for the purpose of off-line training, and more than 400 higher-ranking employees of the headquarter received additional ad hoc education on ethical management. In addition, the Housing Division carried out a Skill-Up ethical management training as well as introductory education on business ethics for newly appointed site managers. In 2012, we plan to develop a new introductory course for business ethics and put greater efforts on creating wholeheartedly voluntary ethical culture, beyond obligatory and compulsory business ethics.

### Procedures in Case of Receiving Valuables



### Reporting System for Violation of Business Ethics

Employee	· Internal Reporting Center on the intranet (BARONET) · Phone, fax, mail, and in-person visit
Supplier	· Daewoo Sinmoongo (fraud reporting system) within the DW-eCoS · Phone, fax, mail, and in-person visit
Customer	· Customer Center – Cyber Audit Department on the company website · Phone, fax, mail, and in-person visit

### Completion of Ethical Management Education

Year	Contents	No. of Employees
2009	On-line training	4,051
	On-line training (domestic)	3,043
	Distribution of e-book (overseas)	469
2011	Special sessions	400
	Skill-up curriculum in 3rd quarter (Housing Division)	174
	Education of the new site managers	16

\* Educational curriculums in 2010 were delayed to the next year because contents regarding contract with the American government needed to be organized before proceeding the sessions

\* 2009 : Including contracted employees  
2011 : Excluding contracted employees

# Reinforcement of Stability

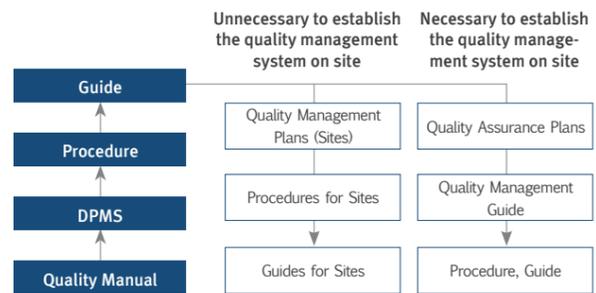
## Advancement of Quality Management System

### Establishment of Quality Management System

**Quality Management Principle** | Daewoo E&C focuses on obtaining competitiveness in quality based on excellent technology. Our basic principle for quality management is for all employees to take responsibility in continuous improvement of quality, thereby maintaining the best competitiveness.

**Organization** | Our Quality Management Team takes charge of managing company-wide quality management activities, certifying the quality management system, and continual improvement of quality, while the Quality Control Team verifies the quality of procured goods and materials and conduct a supplier quality assessment to prevent any defects. Furthermore, we set up the Quality Control Council (after grouping each site by borough) for enhanced communication between quality organizations within the companies, so as to proactively respond to onsite quality management issues.

**Quality Management System** | Our quality management system is based on the Quality Manual and is composed of DPMS (Daewoo Process Mapping System), the Procedure, and the Guide. DPMS is our unique work process schematization system for effective operation of the quality management system.



### Reinforcement of Quality Management Activities

**Evaluation of Project Quality Management Activities** | Every year, we conduct a evaluation of project quality management activities, then select and reward the Best Site and the Excellent Site, in order to promote employees' quality management standards and revitalize quality management activities.

**Quality Management Review** | We make an annual report on the performance of the quality management system to the company-wide Quality Management Review Committee. By doing so we are able to review appropriateness and effectiveness of the system, figure out operational problems, and prepare solutions and future plans.

**Quality Management Education** | We conduct an annual training session for improving site quality managers' capabilities as well as for nurturing new quality managers. In 2011, 222 employees from a total of 205 sites participated in this session. Furthermore, we hold on-line quality management training sessions to help employees' understanding on the quality management system and provide greater educational opportunities. In addition, Daewoo E&C is nurturing quality management professionals to enhance both employees' capabilities and customer satisfaction.

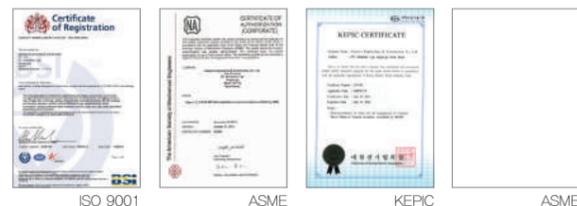
### Completion of Quality Management Education

Unit : No. of people



### Quality Management Certification

We were the first domestic construction company to be certified with ISO 9001 and have maintained certification of ISO 9001, KSQ ISO 9001 in all areas of construction. We are also certified with ASME (NA, NPT, NS), NBBI (NR), KEPIC (MN, EN, SN, MH) and thus qualified to construct nuclear power plant, which requires the highest degree of safety, in and outside Korea. Furthermore, ASME (S, U, U2, PP), NBBI (R) certification allows us to proactively respond to customers' demand related to design, manufacturing, and maintenance of various pressure vessels and boilers that are used in general industrial operations.

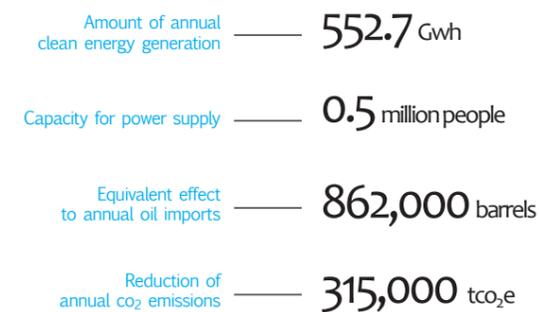


## Sihwa Lake Tidal Power Station : World's Largest Clean Marine Energy Development Project

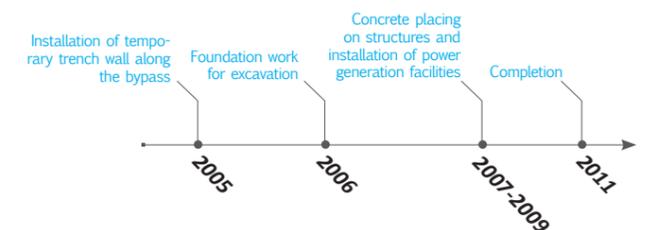


In 2011, Daewoo E&C completed the construction of Sihwa Lake Tidal Power Plant Project, Korea's first and the world's largest project of its kind. The Station is expected to not only produce green energy but also improve water quality of Sihwa Lake, as the Station continuously circulates water of Sihwa Lake with seawater as part of the tidal power generation process. In addition, we are executing a project for creating a 6.61 ha tourism complex that combines areas for ecological experience, culture & art, and recreation using the soil from the Station construction process. We are also planning to make the Station a tourist attraction, promoting the fact that this is the world's largest tidal power station. Construction of Sihwa Lake Tidal Power Plant Project was an opportunity for us to let the excellence of Korea's construction technology known to the world. Daewoo E&C, which is currently pursuing the construction of tidal power stations in Ganghwa Island and Garolim Bay, will continue to lead the domestic tidal power sector in the future.

### 1. Achievements of Sihwa Lake Tidal Power Plant Project



### 2. Year-by-year Development of Sihwa Lake Tidal Power Plant Project



ZENER HEIM



# GREEN Growth

## Vision and Objective

Daewoo E&C is active in green management for the next generation's prosperity. We do not imprudently damage the environment in the name of development; we strive for environmentally friendly construction that seeks expansion while preserving the environment.

## Achievements 2011

In 2011, Daewoo E&C self-diagnosed its green management capabilities and established the five strategic directions of green management. In response to climate change, we have carried out a number of activities for saving energy and reducing GHG emissions. We are also systematically managing green sites based on procedures and guidelines. Furthermore, we are developing green technologies for environmentally construction and actively utilizing renewable energy during construction.

## Future Plans

With the goal of becoming the Global Green Management Top Tier company, we will further strengthen our green management system and establish an organization to reinforce green management culture and processes.

36 Establishment of Green Management System

38 Green Management Activities

43 Green Performance Management

46 Green Product & Technology

47 Special Feature II.

Zero Energy House : ZENER HEIM

# Establishment of Green Management System

## Green Management Strategy

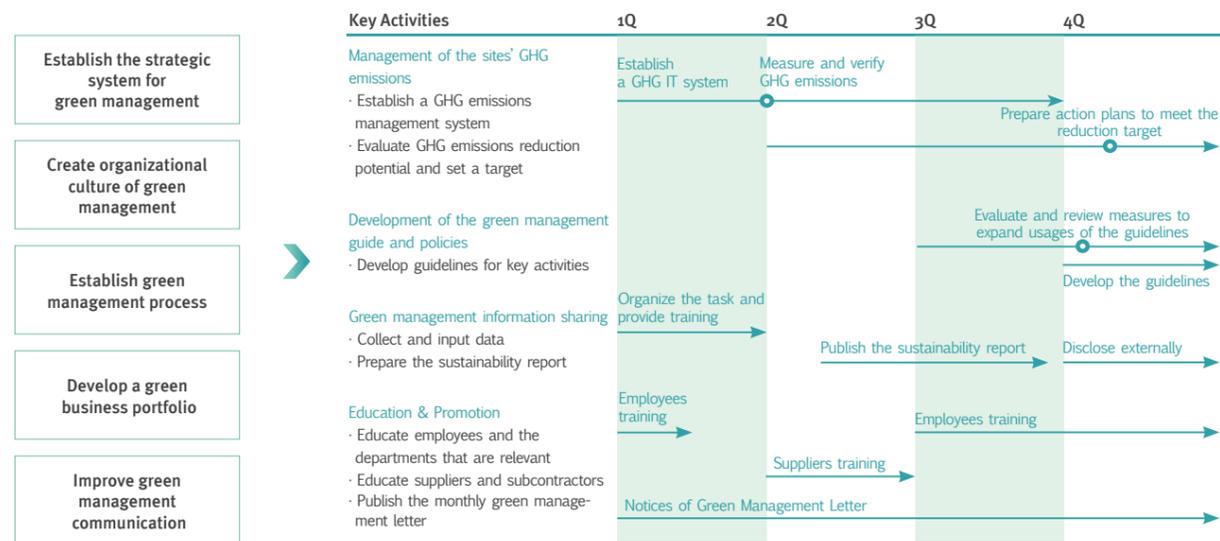
### Green Management Policy and Goal

Daewoo E&C recognizes that there is a direct causal relationship between the environment of the Earth and human survival. We have established the green management policy and goal to pass on the Earth as is to the present and future generation.

### Green Management Strategy

In 2011, we self-diagnosed our green management capability and, based on the result, established the five strategic directions of green management. We plan to declare the year 2012 as the beginning of green management and proceed with the following main tasks.

#### Five Strategic Directions of Green Management & Main Tasks for Green Management 2012



### Green Management Roadmap

Setting 2015 as the target year, we established a mid- to long-term roadmap of green management for each of the strategic directions. We are currently at the introduction stage; we will pass the growth stage from 2013 to 2015, striving to become the Global Green Management Top Tier company.

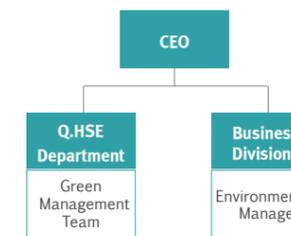


# Establishment of Green Management System

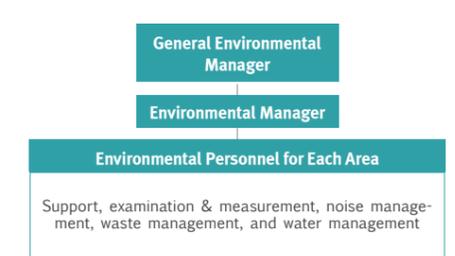
## Organization

In order to establish a Control Tower for green management, Daewoo E&C organized the Green Management Team in 2011. The Team is responsible for planning and executing company-wide green management strategies and tasks, establishing infrastructure, managing performance, and education. Separate environmental teams are organized at construction sites, headed by site managers and composed of general environmental managers and people responsible for each environmental area.

### Company-wide Organizational Structure



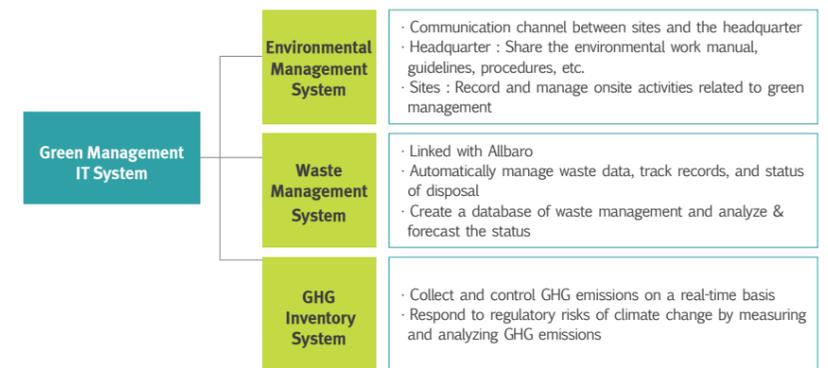
### Onsite Organizational Structure



## Advancement of Green Management IT System

Our green management IT system covers environmental management, waste management, and GHG inventory. In 2012, we plan to integrate these systems into the BAROCON as the Green Management System.

### Green Management IT System and its Roles



Environmental Management System Screenshot



Waste Management System Screenshot

### Environmental Campaign Activities of Daewoo E&C

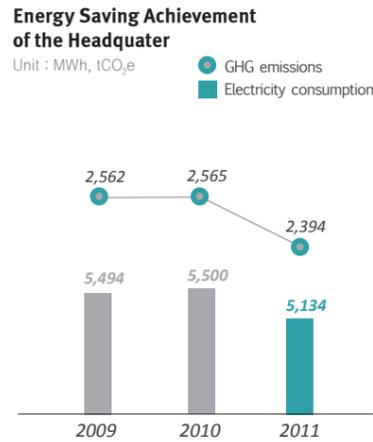
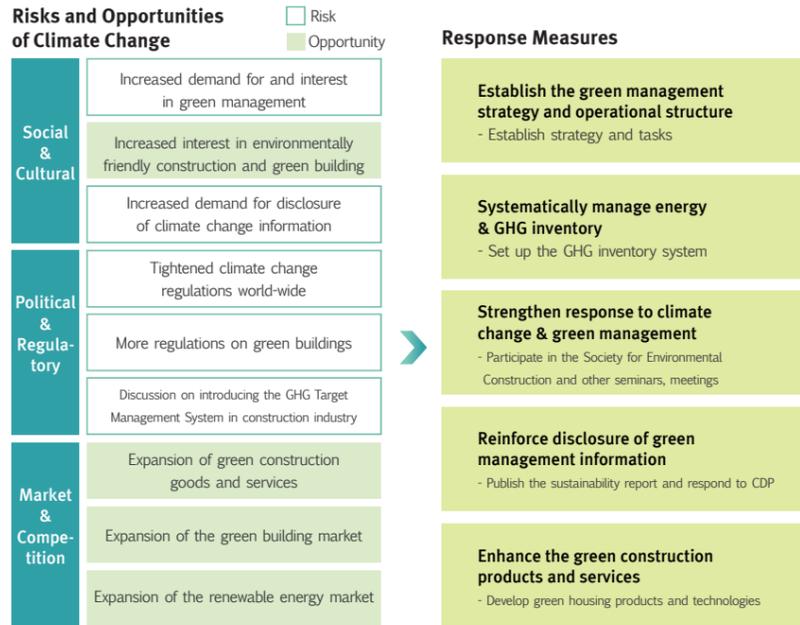


Just as clean, safe water is an essential element of healthy living, so is an activity devoted to maintaining a clean environment. This is why Daewoo E&C is promoting environmental campaigns with consideration for all members of the society to live in a clean environment. Each of Daewoo E&C's departments, teams, and sites is carrying out campaign activities in mountains, streams, public roads, national parks, reservoirs, and surrounding areas of construction sites. In 2011, total of 2,526 employees participated in the Day of Environmental Inspection event, environmental clean-up, and cleaning of surrounding areas of construction sites. In the future, we plan to establish company- or division-wide direction, procedures, and guidelines of environmental campaigns to ensure that related activities take place in a systematic manner.

# Green Management Activities

## Response to Climate Change

Construction industry is largely influenced by climate change as large emissions of GHG occur during the stages of construction, usage, and disposal. Daewoo E&C recognizes risks and opportunities of climate change and is trying to effectively respond to them.



## Reduction of Energy Consumption

**Energy Saving Activities** | Since 2011, we have been carrying out the Energy Saving Campaign as part of our efforts to reduce energy consumption across the company. Particularly, we are encouraging day-to-day energy saving activities and providing education on this matter to raise awareness. A number of energy saving plans and objectives have been established at sites, following the company-wide environmental goal. These plans and objectives are reflected in the site environment improvement plan.

**Energy Consumption** | In 2011, total energy consumption from six buildings under the company's ownership, 42 leased buildings, and 256 domestic construction sites and 25 overseas sites was 5,818 TJ. Energy consumption for every KRW was 0.08TJ/100 million KRW. Energy consumption of buildings has been on a decline in the past three years. In the future, we plan to systematically manage and reduce energy through energy saving programs.

# Green Management Activities

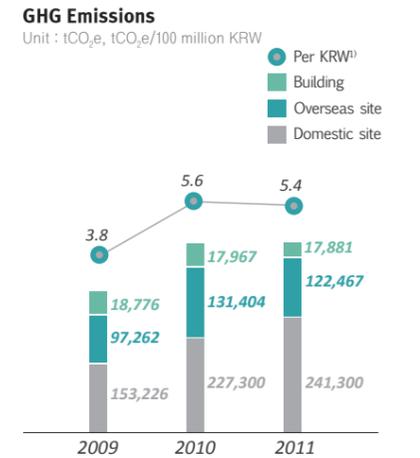
## Reduction of GHG Emissions

**GHG Emissions Reducing Activities** | In 2012, we constructed the GHG inventory system to quantitatively analyze our GHG emissions and prepare measures to reduce GHG emissions. In addition, we introduced the Guidelines to Manage GHG for consistently finding the sources of GHG emissions and measuring the amount. With the construction of the GHG inventory system we are now able to manage emissions of both domestic and overseas sites.



GHG Inventory System Screenshot

**GHG Emissions** | In 2011, Daewoo E&C's GHG emissions was 381,648 tCO<sub>2</sub>e. Since this figure is increasing every year, we need to devote greater efforts on emissions reduction. As such, Daewoo E&C plans to establish a GHG reduction target and strategies and run a system for GHG reduction performance appraisal and rewards, setting up a systematic GHG emissions reduction process.



## Green Procurement

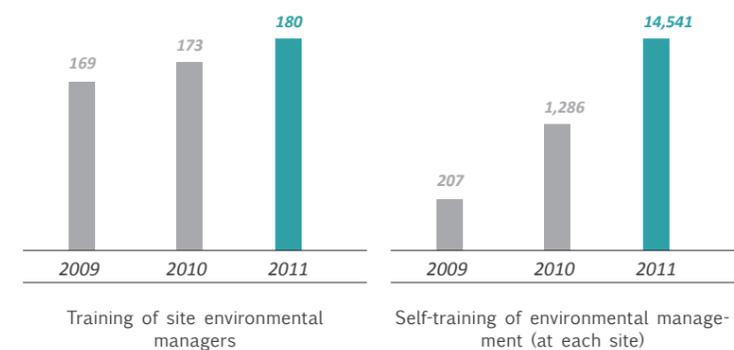
Daewoo E&C is planning to establish the Green Procurement Guidelines in the near future to promote green procurement activities. Following this, we plan to develop a system for managing procurement records of environmentally friendly supplies and products across the company.

## Green Management Education

We hold a regular educational session for environmental managers as well as site environmental management education annually. Also, we are encouraging employees to gain a basic knowledge of environment through the 4-week on-line environmental education curriculum. From 2011, we have been trying to raise environmental awareness by conducting an educational session on environmental management dissemination.

### Completion of Green Management Education

Unit : No. of people



### Results of the Environmental Management Dissemination Education in the First Half of 2012

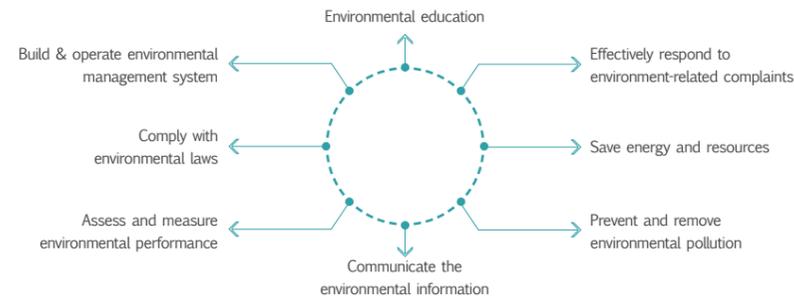
Target	No. of people
New recruits	146
Construction / housing technical manager (less than two years of experience as a manager)	505
Civil Project deputy head (or lower rank)	535
Suppliers' employees	88
Site managers	86
<b>Total</b>	<b>1,360</b>

# Green Management Activities

## Green Site Management

Daewoo E&C is minimizing environmental effects of construction sites in multidimensional ways. Each site is being strictly managed based on the site environmental management manuals as well as guidelines and procedures.

### Responsibilities of Onsite Environmental Management



### Legal Compliance

We are creating environmentally friendly sites to fulfill the requirements of the stakeholders related to environmental laws. Particularly when opening a new construction site, we conduct an environmental impact analysis, set up a site environmental management plan, and make a record of any key environmental factors for continuous management.

#### Legal Compliance Process



### Air Quality Management

In order to prevent dust creation, we installed washers and high-pressure sprinklers; in case of open storage, we are taking comprehensive measures to prevent dust creation. We frequently sprinkle water in the nearby roads and bypasses to prevent dust and maintain neatness. In addition, we station control agents at the site entrance to prevent dust creation from transportation work and to ensure soil remains within sites.

### Water Quality Management

We are managing discharged water by installing the remote water quality monitoring system and slit protectors. We have also installed basins and diversion channels to control muddy water from underground water and rainwater. Particularly, we conduct regular water quality analysis and commission experts to manage water quality of discharged water.



Remote Water Quality Monitoring System

### Legal Management Following the Progress in Construction

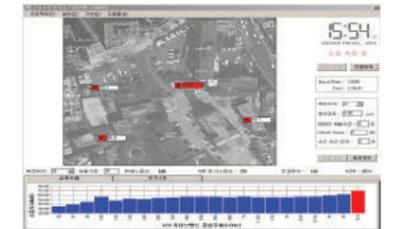
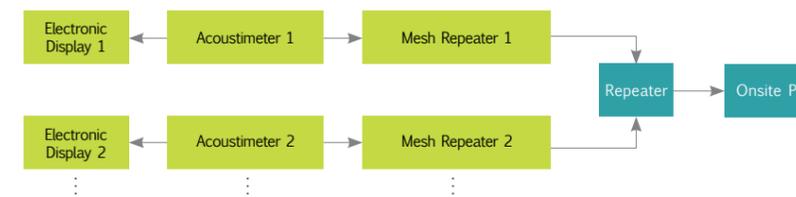
<b>Step 1 Ground-breaking</b>	<ul style="list-style-type: none"> <li>Find and report the requirements for environmental licensing</li> <li>Install facilities for environmental management</li> </ul>
<b>Step 2 Under construction</b>	<ul style="list-style-type: none"> <li>Follow the requirements for environmental licensing</li> <li>Keep a record of documents regarding environmental laws</li> <li>Report on new licensing matters or on changes, if necessary</li> </ul>
<b>Step 3 Upon completion</b>	<ul style="list-style-type: none"> <li>Report the closure of facilities for environmental licensing</li> <li>Transfer the record of documents regarding environmental laws</li> </ul>

# Green Management Activities

## Noise & Vibration Management

In 2011, we developed the DW-CNMS (Daewoo Construction Noise Management System) for the first time in domestic construction industry. With this new system, we are now able to monitor onsite noise being created on a real-time basis and thus optimize our noise management. We will continue to strive for Zero Complaints on Noise by expanding the utilization of this system.

### Conceptual Diagram of the DW-CNMS



DW-CNMS Program Screenshot

## Waste Management

In order to manage creation and disposal of waste on a real-time basis, Daewoo E&C is operating a waste management system linked with Allbaro, a government-run waste management system.

**Waste Recycling** | We store waste by types and disposal measures. As for sludge that is difficult to dispose due to its high moisture content, we handle it using a sludge dryer; as for designated waste such as waste oil, we properly handle them in a special storage area for designated waste.

**Waste Management Company Registration System** | In order to increase transparency and legality of waste management, we began the Waste Management Company Registration System in 2011, restricted to the capital area. From 2012, we plan to expand the system to cover all parts of Korea, further reinforcing our waste management.

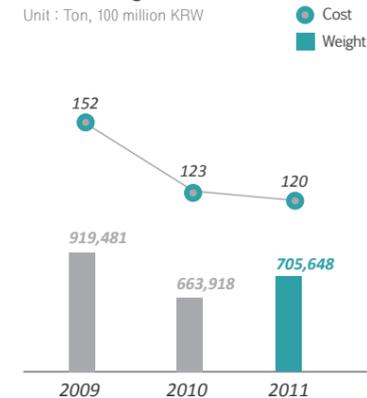


Sludge Dryer



Temporary Waste Storage

### Waste Management



### Waste Management in 2011 (by Type of Waste)

Type	Amount (Ton)
Mixed construction waste	104,590
Waste concrete	348,579
Waste asphalt concrete	133,015
Waste synthetic resins	4,764
Waste soil & stones	108,158
Other	6,542

# Green Management Activities

## Major Activities of Asbestos Management

Before the Removal	<ul style="list-style-type: none"> <li>Preliminary analysis of asbestos content and establish work plans</li> <li>Distribute promotional materials to surrounding communities</li> <li>Hold information sessions to provide explanation and receive feedback</li> </ul>
During the Removal	<ul style="list-style-type: none"> <li>Appoint managers and supervisors</li> <li>Monitor air quality in and outside of the working area</li> <li>Provide safety training to personnel responsible for asbestos disposal</li> </ul>
After the Removal	<ul style="list-style-type: none"> <li>Analyze and publish the result of onsite air quality analysis</li> <li>Establish an improvement plan in case the result exceeds the standard</li> </ul>



Community Information Session Before the Asbestos Removal

## Asbestos Management

In 2010, we signed the Voluntary Agreement for Managing Asbestos in Buildings with the Ministry of Environment, in order to prevent asbestos particles from causing any health risks to residents in surrounding communities during deconstruction of buildings and asbestos removal.

**Proper Removal of Asbestos** | When deconstructing or remodeling buildings, we ask specialist agencies to research the buildings' asbestos content, type, and amount in advance. If asbestos is found after the preliminary analysis, we commission expert agencies to remove asbestos; the removed asbestos is then properly handled by the waste asbestos management companies.

**Management of Personnel in Charge of Asbestos Removal** | Daewoo E&C is appointing supervisors for overseeing removal of asbestos. In addition, the site asbestos management supervisors undergo professional training for all stages of building use, deconstruction, and disposal.

**Community Participation and Promotion** | Prior to removing asbestos, we hold an information session to the residents to provide a thorough explanation and receive their feedback. In addition, we distribute promotional materials about our asbestos management to the local communities.

## Protection of Biodiversity

Daewoo E&C strictly complies with the Wildlife Protection Act and is carrying out a number of activities to protect endangered species living in surrounding areas of construction sites. Particularly, we installed a trench wall to minimize any damage (caused by dredging work) on fish. We are also minimizing soil erosion by segmenting construction areas.

## Wildlife Protection Code of Conduct



### Creation of Alternative Habitat for Otters as Part of the 'Save the Nakdong River' Project (Zone 24)



Within the district for the Save the Nakdong River project, Daewoo E&C designated areas of excellent biodiversity value as Preservation Area and Restoration Area to minimize any damage. In addition, we are planning to create alternative habitat such as cracks (between rocks) and man-made caves for preserving otters.

# Green Performance Management

## Green Management Performance Check-up

### ISO 14001 Certification

Since 1997, we have been maintaining the ISO 14001 certification. Following the requirements of ISO 14001, we conduct an annual green management performance check-up to evaluate performance of each team and site.

**Executive Evaluation of Green Management** | We are carrying out an executive evaluation to report the results of environmental management system, check legitimacy and effectiveness of the system, and establish improvement plans.

### Organization and Responsibilities of the Executive Evaluation

Organization (Title)	Composition	Responsibilities
CEO		<ul style="list-style-type: none"> <li>Propose corporate environmental policies</li> </ul>
Executive Evaluation Committee (once a year)	<ul style="list-style-type: none"> <li>Chair</li> <li>Members</li> <li>Assistant Administrator</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate corporate environmental management activities</li> <li>Check whether the system is in action and its effectiveness</li> <li>Discuss its problems and corrective measures</li> <li>Prepare an operational plan for the environmental management system</li> </ul>
General Management Team	<ul style="list-style-type: none"> <li>Green Management Team</li> </ul>	<ul style="list-style-type: none"> <li>Develop and maintain the company-wide environmental management system</li> <li>Ensure that the system is in action through internal evaluation</li> </ul>
Business Division Heads	<ul style="list-style-type: none"> <li>Business Division Heads</li> </ul>	<ul style="list-style-type: none"> <li>Be interested with the operation of the environmental management system (sites and the headquarter) from the CEO</li> </ul>
Executive Evaluation Committee of Business Divisions (once a year)	<ul style="list-style-type: none"> <li>Chair</li> <li>Members</li> <li>Assistant Administrator</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate the headquarter environmental management activities</li> <li>Check whether the system is in action and its effectiveness</li> <li>Discuss its problems and corrective measures</li> </ul>
Responsible Teams at Each Business Division	<ul style="list-style-type: none"> <li>Building Works CM Team</li> <li>Housing CM Team</li> <li>Civil CM Team</li> <li>Plant HSE Support Team</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the system is in action through the onsite environmental management evaluation and regular inspection</li> <li>Develop and apply the onsite environmental management system</li> </ul>



ISO 14001 Certification

**Site Inspection** | We select several sites at random (among all construction sites) and conduct an internal evaluation of the environmental management system over 20 times a year. Through self-inspection and evaluation, we are able to ensure that the environmental management system is in action and examine corrective measures.

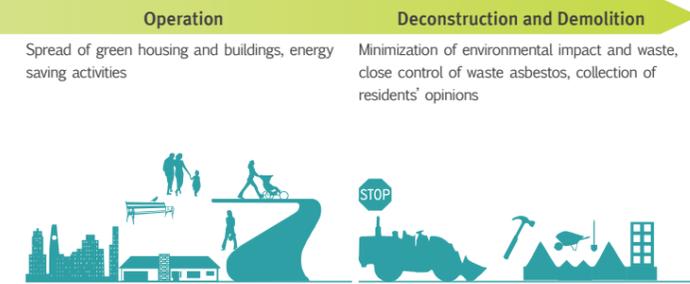
Each CM Team within the business divisions also conducts regular, special inspections of sites (which belong to the respective division), as part of the company-wide efforts to achieve Zero Environmental Penalty Points.

# Green Performance Management

## Environmental Performance in 2011

We analyzed energy consumption and GHG emissions of six buildings under Daewoo E&C's ownership, 42 leased buildings, 256 domestic construction sites, and 25 overseas construction sites. Scope of figures related to major resources, water, and waste is restricted to domestic operations.

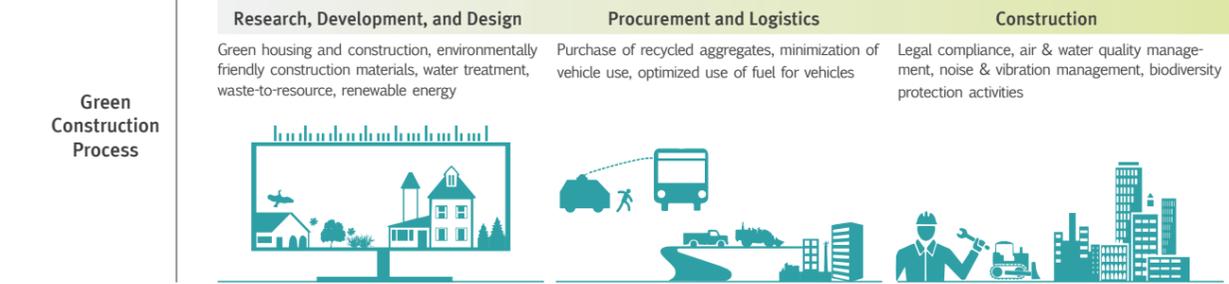
# Green Performance Management



### Measurement method of energy consumption and GHG emissions

**Energy consumption** | Scope of energy consumption from fossil fuel (diesel, kerosene, gas) used for heating boilers, oil for vehicles (gasoline, diesel), and electricity is limited to operations of Daewoo E&C, while scope of energy consumption from fuel for construction equipments includes sub-contractors.

**GHG emissions** | GHG emissions from stationary combustion and mobile combustion are based on gross calorific value as outlined in the first clause of Article 5 in the Enforcement Regulations under the Framework Act on Energy; emission factors by sources of GHG are measured based on the IPCC 2006 Guidelines.



## INPUT DATA

Major Resources		Energy		Water	
Ready-mixed concrete	2,795,812 m <sup>3</sup>	Stationary combustion <sup>1)</sup>	228 TJ	Water supply	668,974 m <sup>3</sup>
Rebar	282,354 Ton	Mobile combustion <sup>2)</sup>	259 TJ	Due to the regional characteristics of some construction sites, we are withdrawing water from nearby water sources; however, no significant impact was found. Furthermore, we are using rain-water and groundwater as well to reduce water withdrawal.	
Steel pile	59,506 m	Electricity	1,261 TJ		
Cement, asphalt concrete	633,081 Ton	Etc. <sup>3)</sup>	4,070 TJ		
Sand, gravel	469,680 m <sup>3</sup>				

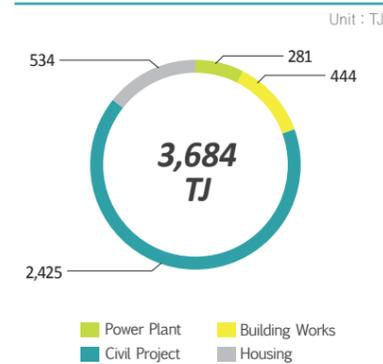
1) Fuel consumption used in company-owned stationary facilities  
 2) Fuel consumption used in company-owned vehicles  
 3) Fuel consumption used in supplier-owned equipment of suppliers

## OUTPUT DATA

Waste		Greenhouse Gas		Other	
Mixed construction waste	104,590 Ton	Scope1 <sup>1)</sup>	33,609 tCO <sub>2</sub> e <sup>4)</sup>	No. of patents in green technology	16
Waste concrete	348,579 Ton	Scope2 <sup>2)</sup>	61,226 tCO <sub>2</sub> e	No. of green building certifications	4
Waste asphalt concrete	133,015 Ton	Scope3 <sup>3)</sup>	286,813 tCO <sub>2</sub> e	No. of environmental awards	9
Waste sand & gravel	108,158 Ton				
Waste synthetic resins & other	11,306 Ton				

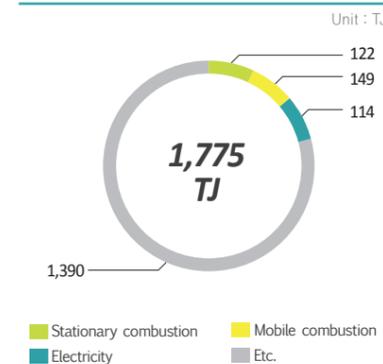
1) Scope1 : Direct GHG emitted from sources owned and controlled by the company  
 2) Scope2 : Indirect GHG from purchased electricity  
 3) Scope3 : Other indirect GHG emitted as a result of corporate activities but not from sources owned or controlled by the company  
 4) tCO<sub>2</sub>e : Weight of one Ton of CO<sub>2</sub>

Energy consumption by division of domestic sites in 2011



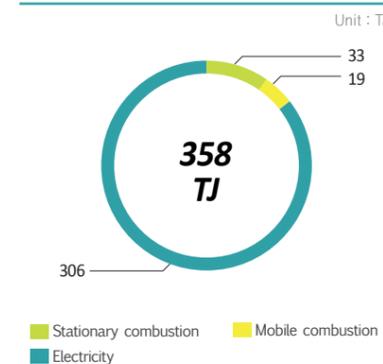
In case of domestic sites, civil project sites with heavy use of construction equipments account for the highest proportion of energy consumption (66%)

Energy consumption by usage of overseas sites in 2011



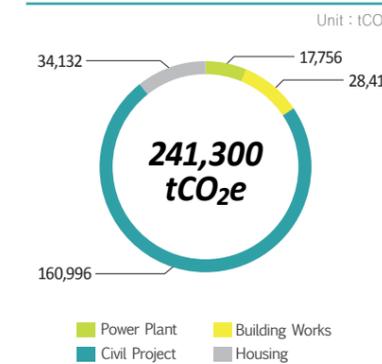
In case of overseas sites, most energy consumption occurs from use of construction equipments (78%)

Energy consumption by usage of buildings in 2011



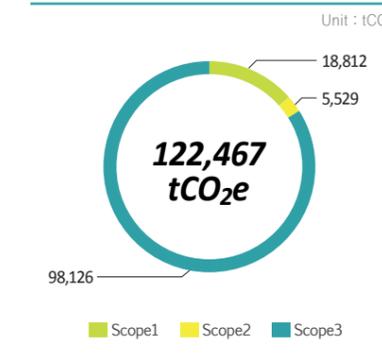
In case of buildings, most energy consumption is attributed electricity (85%)

GHG emissions by division of domestic sites in 2011



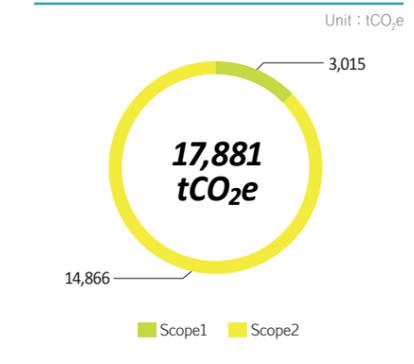
In case of domestic sites, civil project sites with heavy use of construction equipments account for the highest proportion of energy consumption (67%)

GHG emissions by scope of overseas sites in 2011



In case of overseas sites, proportion of scope3 GHG emissions is the largest due to large-scale construction sites followed by heavy use of construction equipments (80%)

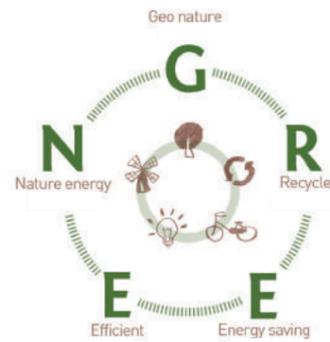
GHG emissions by scope of buildings in 2011



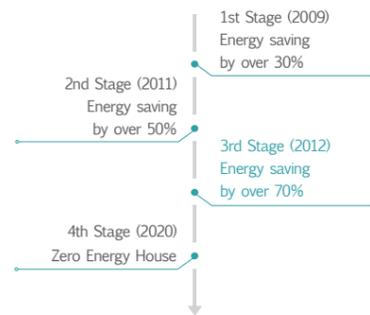
In case of buildings, scope2 GHG emissions (from electricity) accounts for the largest proportion (83%)

# Green Product & Technology

## The Five Keywords of Green Premium



## Roadmap of Green Premium



## Green Building Certification Status

Category	Building name	Date
LEED <sup>®</sup>	DONGTAN New-city PRUGIO	2011.03
	PUSAN UNIV. SCHOOL OF KOREAN MEDICINE SITE	2009.01
	2ND INTERANTIONAL CAMPUS OF YOUNSEI UNIV. SITE	2009.03
	Wolgok Dream-Forest PRUGIO	2010.06
	HIGH1 Resort Condo Mountain Site	2010.07
Green Building Formal Certification	HIGH1 Resort Condo Mountain Site	2011.03
	DAEGU JUKGOK PRUGIO 1 Block	2011.10
	DAEGU JUKGOK PRUGIO 2 Block	2012.03
	HIGH1 CASINO SITE	2012.07
	AHYEON 3 REDEVELOPMENT PJ	2009.08
Green Building Preliminary Certification	SOSAYOK PRUGIO	2010.01
	BUPYEONG 4 REDEVELOPMENT PJ	2010.09
	BUSAN DAEYEON PRUGIO	2010.11
	NOKBEON 1-3 REDEVELOPMENT PJ	2010.12
	WIRYE New-city Songpa PRUGIO	2011.07

1) Leadership in Energy and Environment

## Green Product

### Green Housing

Since adopting the concept of eco-friendliness into apartment buildings for the first time in domestic housing market in 1995, Daewoo E&C has developed differentiated philosophy and technology and come to present 'Green Premium', the industry's first eco-friendly product strategy in August 2009.

**Green Premium** | Green Premium is Daewoo E&C's eco-friendly product strategy, composed of the five keywords with the GREEN motif and 48 environmentally friendly core technologies. We set up a roadmap with the objective of supplying a Zero Energy House by 2020 and are putting utmost efforts on integrating optimized energy saving technologies and developing new technologies. As a result, we were able to develop a technology for saving 70% energy two years earlier than the original schedule (2014); we plan to apply this technology on Wirye New-city Songpa Prugio in 2012.

### Green Building

Our eco-friendly approach to design and construction of buildings is widely recognized, as shown in the number of green building certifications. We have achieved green building certification (formal or preliminary) on 15 buildings constructed during the period between 2009 and present.

### Sheraton Incheon Hotel to Become the First 5-Star Hotel in Korea to Receive the LEED Certification



Sheraton Incheon Hotel received the LEED-NC (Leadership in Energy and Environmental Design-New Construction), which is an American green building certification. Sheraton Incheon Hotel used environmentally friendly materials from the construction stage and recycled over 75% of construction waste throughout the construction, minimizing pollutants and resource consumption. In addition, the Hotel is installed with a water saving system that allows saving water by 3.4 million liters annually (by approximately 24%) and its landscape has been specially designed to not require water supply.

## SPECIAL FEATURE 1

# Zero Energy House : ZENER HEIM

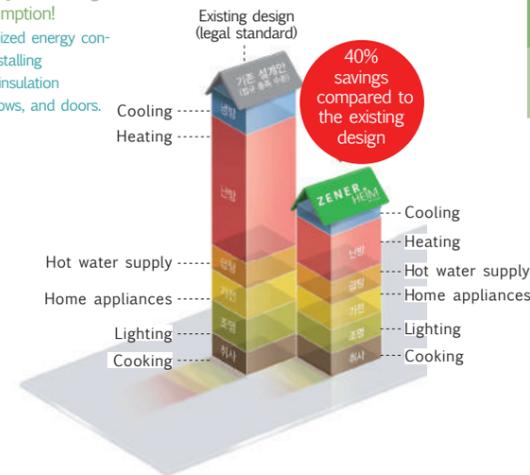
ZENER HEIM is a compound word of ZERO ENERGY and HEIM (meaning 'house' in German); it is a green residential space set up in the Unit 333 of Dongtan Prugio Heim.



### Comparison of energy consumption between the existing design and ZENER HEIM

#### PASSIVE Technological Factors

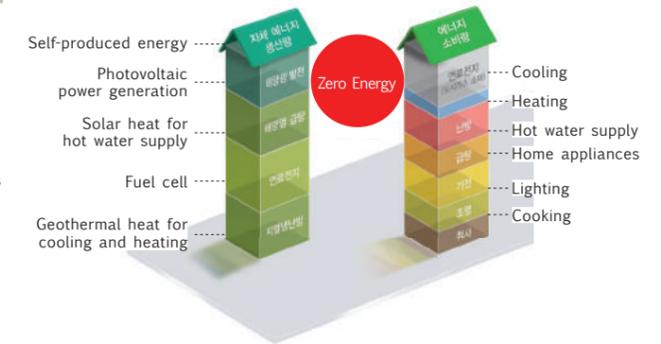
Save energy by minimizing energy consumption!  
We have minimized energy consumption by installing high-efficiency insulation materials, windows, and doors.



### Comparison of self-produced energy and energy consumption

#### ACTIVE Technological Factors

Produce energy required within a house using the renewable energy system!  
We apply various renewable energy systems to make up for energy consumed.



Daewoo E&C introduced Korea's first interactive Zero Energy House, ZENER HEIM. Backed by our Green Premium renewable energy technologies, ZENER HEIM self-generates energy to make up for energy consumed. A collection of 70 green items in total, ZENER HEIM is not only an exhibition center, but also a residential space with advanced concept where customers can experience various green technologies.

## Examples of GREEN PREMIUM Technology

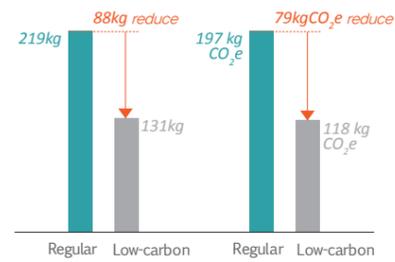
<b>Geothermal cooling, heating system</b>  A system that utilizes underground energy of consistent temperature year-round for cooling and heating buildings	<b>Green all-in-one switch</b>  A switch that combines standby power shut-off, monitoring of power use, and heating control	<b>Solar power system</b>  A system that stores electricity generated from solar power in the battery	<b>Water saving sink (operated with a sensor)</b>  A water saving sink that is operated with a light sensor	<b>AL 'Double Skin' system for windows and doors</b>  A system that creates air space between inner and outer layers to improve heating and ventilation
<b>Real-time energy monitoring system</b>  A system that enables real-time monitoring of changes in energy consumption	<b>Highly water-efficient toilet</b>  A highly water-efficient toilet, which uses variable position trap for perfect cleaning	<b>Solar thermal system</b>  A system that uses evacuated tubular solar collector to supply hot water	<b>Hybrid security light</b>  An energy-saving streetlight that uses electricity from solar or wind power	<b>Automatic blind control system</b>  A centralized control system that controls blinds of buildings by section

# Green Product & Technology

## Green Technology

### Environmentally Friendly Construction Materials

#### Effect of Applying Low-carbon Concrete



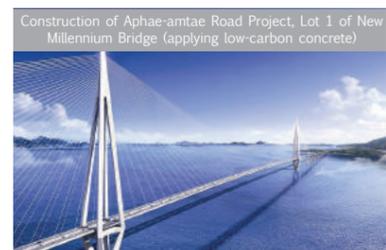
\* Based on 1m<sup>3</sup> of concrete  
 \* Assumption : 0.9 Tons of carbon dioxides are released for every Ton of cement production

**Low-carbon Concrete** | We developed a technology that reduces carbon emissions by minimizing cement use (from using a large amount of industrial by-product). Low-carbon concrete, which has excellent performance of quickly hardens even with low hydration heat, resulting in shortened construction period. In addition, we are able to secure superior economic feasibility compared to regular concrete. We are applying low-carbon concrete on a number of large-scale projects such as Cheong Na Prugio, Pyeongtaek Production base PJ, and Millennium Bridge.

**Environmentally Friendly Marine Concrete** | We developed durable marine concrete technology to ensure 100-year service life under chloride attack environment. Particularly, this concrete is designed to be anti-corrosive against saline environment and is also environmentally friendly from using the minimum amount of cement. Environmentally friendly concrete is being applied to a number of projects such as Song-do Street Mall, Songdo I-Tower, and Song-do BRC Knowledge Industry Center.

**ECO Mortar** | For the first time in the world, we developed the environmentally friendly ECO Mortar (Eliminate CO<sub>2</sub> Mortar) that does not contain cement at all. ECO Mortar uses fly ash, the cheapest construction material among cement alternates, and thus significant lower cost could be achieved. As a result, we are able to save cost compared to using regular cement. It is also easier to construct than the existing cement mortar, which helps to shorten construction period; furthermore, it creates less cracks, increasing durability by over 50%. We have completed the pilot application in So-sa-yok Prugio and LH Gang-nam Prugio Block A2 and are planning to expand its application.

#### Technology Overview of ECO Mortar



# Green Product & Technology

## Water Treatment

Having recognized the importance of securing stable water supply early on, we are actively developing water treatment technologies that we expect to be a source of future growth.

**Advanced Water Treatment Technology** | We developed the Wise-DIMS (Daewoo Integrated Membrane System) and successfully localized this core technology for design and construction. The DIMS technology is being applied to Seoul City and has the highest record in Korea for a domestic pressurized membrane filtration technology. We have also achieved the establishment of a smart integrated water supply management system the commercialization of a total solution for water supply, fulfilling our role as a leader in water treatment technology.

**Advanced Sewage Treatment Technology** | We have the record of treating the largest amount of sewage with the DNR (Daewoo Nutrient Removal), the advanced sewage nutrients treatment technology, being applied to 36 sewage treatment plants and the DMBR (Daewoo Membrane Bio-Reactor) being applied to 28 sewage treatment plants. Recently, we developed the P (Innovation 3 System), the advanced MBR (Membrane Bioreactor) technology for recreation water, to contribute to the expansion and dissemination of sewage recycle technology.

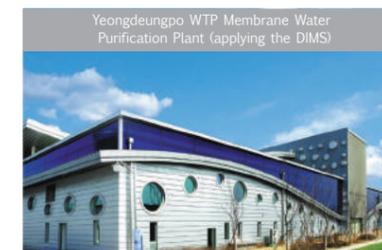
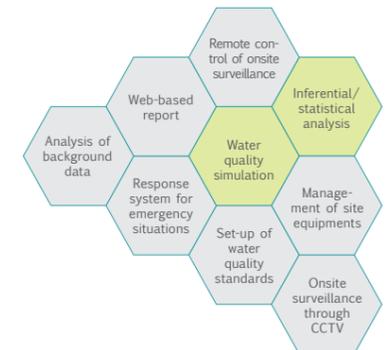
**Daewoo Environment Management Information System** | We developed the DEMIS (Daewoo Environment Management Information System), a system that manages component and equipment data of sewage treatment facilities and provides integrated information on environment. Advantages of the DEMIS are that it allows for reduced cost by systemization of maintenance work and that it is convenient as it reflects advice and know-how of operators and technicians.

**Desalination of Seawater** | We are currently developing the DFOS (Daewoo Forward Osmosis System), a next-generation desalination technology, to enter the desalination plant industry which we deem as a high value-added industry. The DFOS is a low-energy and environmentally friendly desalination technology using forward osmosis. Daewoo E&C has applied for nine patents to dominate the technology field.

#### Characteristics of the DIMS

- 1 High-efficiency, low-energy consumption membrane system
- 2 High-density, high-flux membrane system
- 3 Guaranteed stability of water quality and treatment capacity
- 4 User-oriented convenience and expert system

#### DEMIS Main Functions



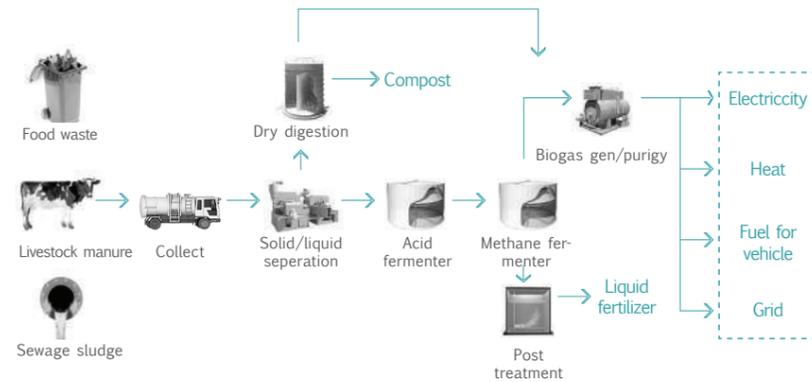
# Green Product & Technology

## Waste-to-Resource

Waste, which was once considered as a subject of disposal, is rising as a source of growth that creates new values. Daewoo E&C is at the forefront of developing waste management technologies and is expanding its interest and investment.

**Resource Recovery of High-density Organic Waste** | We have developed the DBS (Daewoo Biogas System), a technology that uses organic waste to produce biogas. The DBS can be customized to treat various types of waste according to regional conditions. We acquired the Korea Technology Grand Award in 2009 and the Ten New Technology Certification with the DBS, which has been applied at 13 domestic sites by 2011 and exported to Italy.

### DBS Process



### Characteristics of the DSM

- 1 Easy to operate
- 2 Shorter time compared to the existing process; shorter treatment time compared to existing processes
- 3 Many disposal options available after reducing sewage sludge

**Sewage Sludge Volume Reduction Technology** | The DSM (Daewoo Sludge Management using Microwave) effectively and economically reduces volume and moisture content of sludge (discharged from sewage treatment process) using microwave and hot air, allowing for recycling and easier disposal of sewage sludge.

**G-7 Incinerator Technology** | Through the Ministry of Environment's G-7 Project in 2000, Daewoo E&C developed a low-pollution domestic waste incinerator. Starting with Korea's first public incinerator in Mokdong, we completed the construction of 11 domestic incinerators in Bucheon, Incheon, Jeju, Iksan, Jinhae, and more. We plan to expand our incinerator construction business to overseas markets based on our independent technology.



# Green Product & Technology

## Renewable Energy

We are promoting the development of new technologies and businesses related to clean energy such as wind and solar power generation as our new growth engine. In the future, we plan to expand the supply of building applied with energy saving technologies such as fuel cell, small-scale cogeneration, and geothermal heat.

**Building-integrated Wind Power** | This technology introduces self-generated energy for buildings by amplifying wind acting on the building as much as possible. Wind turbines are integrated on high rise building rooftops and arranged optimally through wind resource analysis and evaluation for wind-generated energy utilization.

**Offshore Wind Power** | Daewoo E&C is continuously developing the offshore wind area, as it is secured site without height restrictions, and involves less noise and damage on nature, all of which make offshore wind power more useful than onshore wind power. In the future, we plan to participate in the Ministry of Knowledge Economy's 2.5 GW offshore wind power generation national project at the Southwest Sea and other private offshore wind power generation project at the Southwest Sea.

**Solar Power** | For the first time in domestic apartment building industry, Daewoo E&C constructed a residential complex that saves electricity with installation of solar power module. In case of Mokpo Okam Prugio (completed in 2007), we applied the technology for self-generating up to 600kW per day. In addition, we also showcased the Concentrator Photovoltaic (CPV) System that collects sunlight to light dark areas such as the underground parking lot. It was highly appraised for adopting solar power generation system for apartment buildings for the first time in Korea and as a result we received the grand prize in the green energy area at the Hankyung Housing Culture Award.

### Offshore Wind Power R&D

**National R&D of the Ministry of Knowledge Economy**

- **Project title**
- Development of offshore wind power substructure system for shallow sea (under 40m)
- **Period**
- 2011.06.01-2015.05.31 (4 years)
- **Expected outcome**
- Secure the evaluation & verification technology of offshore wind power substructure system
- Participate in 2.5 GW offshore wind power generation project at the Southwest Sea

**National R&D of the Ministry of Land, Transport, and Maritime Affairs**

- **Project title**
- Development of design standard for support structure of offshore wind power and technology development of concrete support structure
- **Period**
- 2012.08.27-2017.08.26 (5 years)
- **Expected outcome**
- Obtain a record of designing and building certification for substructure of offshore wind power

### Cases of Applying Renewable Energy at Prugio

Solar thermal system	A system that uses solar collector (installed at the outside railing) to supply hot water
Hybrid security light	A hybrid streetlight that generates solar power on a sunny day and wind power on a cloudy, windy day
Green playground	One can experience how kinetic energy turns into electricity when rotating the handle, which turns on the LED light of the Petals
Biogas fuel cell system	Operate fuel cell using biogas generated from food waste (disposed from apartment buildings)
Elevator power regenerative system	A system that generates electricity by transforming potential energy (from an elevator's vertical movement to electrical power)
Household fuel cell	Supplies power and heat by generating hydrogen from city gas and making it react with oxygen in air
Window-integrated solar power generation	Solar power generation adhering a thin, transparent photovoltaic sheet on window

Performance of foreign employees in commemoration of the company's foundation 2011



# Shared Growth

## Vision and Objective

Daewoo E&C strives to keep trustworthy standards and principles in management of human resources, win-win partnership, and customer satisfaction. Furthermore, we are fulfilling our roles and responsibilities as a corporate citizen by carrying out various and systematic philanthropic activities.

## Achievements 2011

Daewoo E&C is trying to fulfill the demands of stakeholders in a number of areas. We established various programs to increase employee satisfaction and are operating programs for growing together with suppliers. Furthermore, we are realizing customer satisfaction by guaranteeing product quality and are pursuing philanthropic activities in social welfare, culture & arts, education, sports, environment, and global issues.

## Future Plans

We plan to reinforce stakeholder communication so that we can contribute to local societies and gain greater trust in the future.

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# Employee

## Respect for Diversity and Protection of Human Rights

### Employee Status

As of December 31, 2011, 5,784 employees in total were working at Daewoo E&C, 3,827 (66.2%) and 1,957 (33.8%) of which were full-time and contracted employees, respectively.

#### Current State of Employment

Unit : No. of people

		2009	2010	2011	
Number of employees		6,013	6,116	5,784	
By type of employment	Executive	106	118	101	
	Full-time	3,473	3,599	3,726	
	Contracted	181	268	232	
	Other	2,253	2,131	1,725	
By region	Domestic	Head-quarter	1,334	1,418	1,568
		Regional offices	3,623	3,630	3,091
	Overseas	1,056	1,068	1,125	
Number of retirees <sup>1)</sup>		142	130	133	
Retirement rate <sup>1)</sup>		4.1%	3.7%	3.6%	

1) Number of retirees and retirement rate : limited to full-time employees

### Respect for Diversity

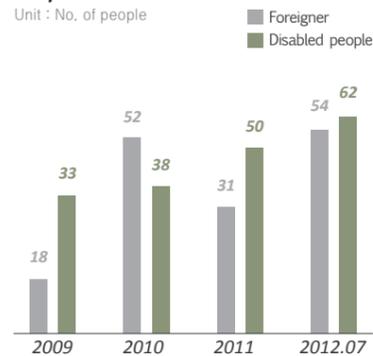
**Equal Opportunities** | Daewoo E&C provides equal opportunities to employees, regardless of their ethnicity and gender, and guarantees fair treatment. (One's position and working condition are the only factors that affect a pay level.) As of July 2012, 54 foreign employees, 35 people of national merit, and 62 disabled people were working at Daewoo E&C, which shows our commitment to non-biased hiring practices.

**Employment of Disabled People** | We are trying to create a positive brand image by expanding employment of disabled people, who are commonly less privileged in society. Our activities include granting bonus points to the disabled job applicants during the hiring process, providing financial support to the sites that hire disabled people, and executing special recruitment of disabled people on a regular basis.

**Employment without Regional Bias** | We strictly recruit personnel based on one's capabilities and avoid giving preference to graduates from universities in Seoul and Kyungki Province. As a result, 21.4% of employees are graduates from universities in regions outside of Seoul at the moment. In addition, 50 new employees (27.8%) from a total of 180 new employees recruited during the first half of 2012 were from universities in regions outside of Seoul.

#### Employment of Foreigners & Disabled People

Unit : No. of people



# Employee

**Employment of High School Graduates** | We have begun to hire high school graduates since 2011. We hired 12 high school graduates in 2011 and 10 in 2012. At Daewoo E&C, we do not discriminate them from university graduates and also provide scholarship to encourage continued education.

### Protection of Human Rights

**Protection of Foreign Workers** | As its business structure diversifies, Daewoo E&C is utilizing its global network to hire employees of various nationalities. In order to protect rights of foreign workers, we provide support services such as personal counseling, Korean language training, and cultural activities.

**Prohibition of Child & Forced Labor** | We strictly abide by the International Labour Organization's Convention Concerning the Prohibition and Immediate Actions Toward the Elimination of the Worst Forms of Child Labour as well as the domestic Labor Standards Act. As such, we strictly prohibit any forms of child labor and forced labor.

**Equal Treatment of Female Employees** | Our employment policy clearly states that we do not take unfair measures to female employees due to one's gender, position within a family, marital status, and pregnancy. We strictly abide by the Equal Employment Opportunity Law and do not discriminate against a particular gender when providing opportunities related to education, appointment, promotion, retirement, and dismissal. At Daewoo E&C, we are trying to expand female employment and, as a result, the proportion of female recruits inclined by 50% in 2012 and the overall proportion of female employees went up from 10% in 2011 to 15% in 2012.

**Protection of Female Employees** | For protection of female employees' human rights, we conduct annual training sessions targeting all employees to prevent sexual harassment. And we are trying to improve treatment for female employees and expand female employment.

#### Contents and Measures of Education for Preventing Sexual Harassment

Subject	Contents	Measures
All employees (including contracted employees)	<ul style="list-style-type: none"> <li>· Concept and scope of sexual harassment</li> <li>· Cases of sexual harassment in the workplace</li> <li>· Laws on sexual harassment in the workplace</li> </ul>	<ul style="list-style-type: none"> <li>· Domestic employees</li> <li>· Use the company's on-line training institute</li> <li>· Overseas employees</li> <li>· Conduct an onsite off-line training session and hand in the report</li> </ul>

#### Status of Using Parental Leave

Unit : No. of people

	2009	2010	2011
No. of people who took the parental leave	136	157	160
No. of people who returned	134	153	157



DMZ Tour for Foreign Employees

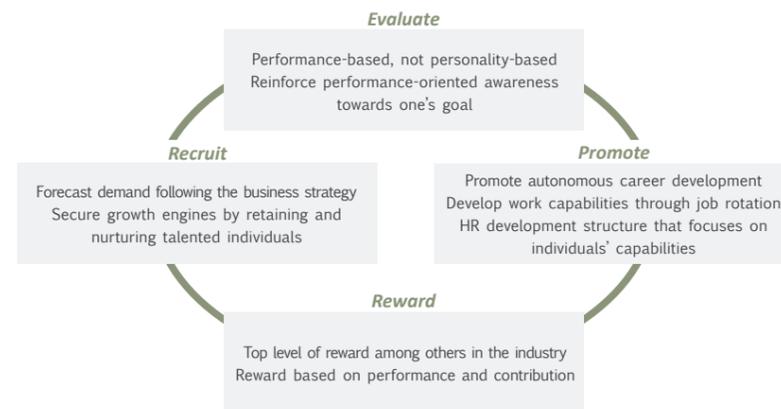
# Employee

## Employee Satisfaction

### Performance-based HR Policies

Daewoo E&C's appraisal system is strictly performance-based; we objectively measure each employee's performance and contribution and reward accordingly while providing equal opportunities for growth.

### HR Strategy



### Fair Performance Appraisal and Reward

**Performance Appraisal** | We apply reasonable appraisal standards on employees, with the aim of fair performance management. Factors consisting our performance appraisal system include one's achievement, capability, multi-dimensional evaluation, and bottom-up evaluation. In case of achievement appraisal, its system is based on organic relationship between a team (or organization as a whole) and an individual's goal. In addition, we allow flexibility in adjusting weight of each appraisal indicator for an individual, drawing the final result (score for promotion) in a more rational way.

### Performance Appraisal Structure

<b>Achievement evaluation</b>	Evaluate one's performance on MBO (management by objective) and level of contribution	<b>Multi-dimensional evaluation</b>	Co-workers make evaluation of the target person for promotion (deputy general manager → general manager)
<b>Capability evaluation</b>	Evaluate one's leadership, core capabilities, and work capabilities in a number of ways	<b>Bottom-up evaluation</b>	Team members' make evaluation of their executives and/or heads

**Reward** | We have the payment by the results system, which accounts in one's position, capabilities, role, and business achievements. Average wage of a new employee is 379%<sup>1)</sup> of the legal minimum wage, which is the highest level among the top 10 Korean construction companies.

1) Basic salary of a new recruit at the headquarter

### Wages in 2011

Total wages	Average wage per person
326.8 billion KRW	70 million KRW

\* As of December 31, 2011

# Employee

## Employee Welfare & Benefits

According to the legally regulated policy on benefits package, Daewoo E&C provides the four major public insurances to employees : national pension, health insurance, labor insurance, and occupational health and safety insurance. Furthermore, we provide financial support for medical expenses, employees' children's tuition fees, and regular medical check-ups as part of the basic benefits package, helping our employees to enjoy a stable living and better quality of life.

**Selective Benefits Package** | We allow employees to utilize Welfare Points and freely customize what to include in their benefits package. Welfare Points are determined based on one's years of service, number of dependents, and position.

**Employee Stock Ownership Association** | Daewoo E&C has introduced the ESOP (Employee Stock Ownership Plan) to support employees' welfare and wealth accumulation as well as to promote joint development of individuals and the organization to which they belong. In May 2003, the Employee Stock Ownership Association was organized; there have been three subscription opportunities thus far, inviting participation from many employees.

**Intra-company Fund and the Employee Association** | In 2004, the Intra-company Labor Welfare Fund was established with the purpose of supporting the employees' welfare and increasing their net income. In addition, we are operating the Employee Association to support expenditures for congratulations and condolences.

## Cooperative Labor-Management Relationship

**Labor-Management Council** | Daewoo E&C holds the Labor-Management Council on a quarterly basis, in order to create a labor-management relationship based on communication and win-win approach and thus prevent any disputes and conflicts in advance. The Council makes visits to domestic and overseas sites, gathers employees' grievances, and provides solutions to ultimately create a stable and harmonious culture between the labor and the management.

**Labor Union** | The Hanmaum (a Korean idiom meaning One Mind) Labor Union holds quarterly meetings to share current issues within the company and is responsible for negotiating wage level (once a year) and the collective agreement (once every two years), so as to protect the employees rights of collective bargaining. Since the Labor Union was established in 1999, Daewoo E&C has recorded zero disputes and strikes.

**Ombudsman** | Employees work-related or personal grievances are collected and taken care of via the bulletin board at the Open Room in the company; in 2011, approximately 400 grievance cases were handled. Furthermore, personal grievances that require added protection of one's identity is resolved through one-on-one interview with HR personnel. There has not been a single lawsuit brought up from personal interviews.

### Employee Welfare Programs

Category	Content
Vacation	Family vacation, special vacation for new recruits, vacations for employees with overseas job posts, special vacation for employees with long years of service
Congratulations & condolences	Monetary compensation in case of employees' and/or their family members' congratulations and condolences
Vacation for congratulations & condolences	Special vacation in case of congratulations and condolences
Support for business travel expenses	Travel expenses in case of domestic/overseas business travel
Support for moving expenses	Moving expenses in case of an employment proceeding to his/her new post
Emergency medical service (overseas)	Support emergency medical aid in case of an emergency at overseas sites
Support for personal travel expenses (for employees stationed in overseas sites for a long period)	Family trip expenses for an employee who has worked at an overseas site for over 30 months
Insurance	Accident insurance to all employees
Daewoo Royal Prime	Studio-type residential building (under the company's ownership) for single employees; various facilities are under operation
Other	Employees' children's tuition fees, medical room, commuting bus operation, etc.

### Support from the Intra-company Fund and the Employee Association

Category	Content
Intra company Fund	Housing loan (purchase or rent)
	Loan for emergency living expenses
	Loan for repayment of student loan for new recruits
Employee Association	Loan provided by the Employee Association
	Monetary compensation for congratulations and condolences such as marriage
Other	Monetary support for vacation facility expenses

# Employee

## Programs for Increasing Employee Satisfaction

**Family Events on Children's Day** | Since 2003, Daewoo E&C has been holding a number of events that invite employees' families on Children's Day, so as to promote harmony among employees and share love and friendship with families and coworkers. In 2011, we held the Family Love Walkathon at the north side of the Namsan Ring Road and in 2012, we held the Folk Village Experience event at the Korean Folk Village.



Family Love Walkathon



Folk Village Experience



Super Star D



Love Project

### Outcome of Family Invitation Events

	2010	2011	2012
<b>Location</b>	Namsan Ring Road (north side)		Korean Folk Village
<b>No. of participating families</b>	1,406	1,060	1,041
<b>No. of participants</b>	5,737	4,996	4,900

**Kkumnamu Invitation** | Every year during the elementary school summer vacation season, we invite the Kkumnamu ('dream tree' in literal translation, a Korean idiom meaning 'children') of employees to the company and provide a field trip to encourage the children to have pride in their parents and the company. Since launched in 2004, this has remained a very popular program among the employees' families. Over the two- or three-day event, the children get to better understand about their parents' workplace and have a fun time doing recreational activities with friends and families.

**Event in Commemoration of the Company's Foundation** | On November 1st, 2011, in commemoration of the company's 38th anniversary, we held the Super Star D event (a singing contest) inviting all employees' participation - a change from the same old itinerary. Planned with purpose of uniting employees and instilling employee pride, this event involved participation of approximately 2,500 employees. The 11 teams that made the finals after fierce competition received two months of professional training and the winning team was awarded a trip abroad.

**'Love Project' for Single Employees** | Daewoo E&C is on the Love Project, which sets single employees with slim chances of meeting someone new (because of working abroad or in remote regions) on blind dates. The 2011 program was arranged by professional match-makers; approximately 100 employees participated and 30 people successfully found their matches. The Love Project is aimed at taking part in the late marriage and low birth rate issues. At the same time, we sought to instill employee loyalty by supporting the employees' work and life balance.

## Workers Safely Returns from Libya : Sharing Fate With the Foreign Workers



Ship Evacuating from Libya



Foreign Workers from Libya Sites, Waiting at the Greek Port

It was 1:40 in the afternoon on March 2, 2011, when a large passenger ship of Greek nationality entered the Port of Misurata, Libya. It was the ship Daewoo E&C urgently chartered to evacuate workers from the Libyan construction sites. As the ship arrived, the workers waiting at the port shouted, "We're alive," and "We can now go home." ... A 38-year-old Egyptian worker, Mohammed, said "I could not believe that the company (Daewoo E&C) would take care of us as well." With his eyes filled with tears, "It is clear how Korean construction industry got to the top." he said. <The front page of Jungang Daily NEWS, March 4, 2011>

Daewoo E&C, which is operating the largest number of construction sites in Libya involving the largest number of workers, quickly reacted to Libya's political situation in February 2011 and safely evacuated all workers from the construction sites. The number of workers evacuated by the ships that Daewoo E&C arranged in Misurata, Tripoli, and Benghazi amounts to 2,772. All but 164 Korean workers were those from other countries such as India, Egypt, and Malaysia. Daewoo E&C also booked flight tickets for all workers to safely return home. We truly realized our slogan, 'It's Possible' by successfully arranging the return of all workers from 12 countries in a very short period of time. Spending over 6 billion KRW on flights and ship rentals was made possible because of our CEO's strong commitment

to employee safety. The reason Daewoo E&C's sites remained a Safe Zone among other Korean companies that had been attacked by the Libyans was that Daewoo E&C gained trust from the locals. With the support of the local patriarchs and the General Electricity Company of Libya, the site workers' safety was guaranteed. This was an opportunity for us to reassure our management principle which prioritize win-win growth with the local community, employee safety, and trust. On March 14, 2011, the workers who returned from Libya had a meeting with the CEO; this was an opportunity to hear the difficulties they had and present them with rewards.

### Praise from the Foreign Press and the Locals



The local newspaper of Creta, Greece, highly praised Daewoo E&C's responsible action for its foreign workers' safety. Furthermore, we received feedback from the locals that Korea's national prestige was enhanced due to this incident. President Jung-ja Nam, who runs a travel agency in Greece, wrote in his email to a Daewoo E&C's executive that "looking at Daewoo E&C safely evacuating approximately 2,700 workers from 12 countries instilled patriotism in my mind."

### Evacuation Route from Libya

Route 1	499 workers (incl. 55 Koreans) departed from the Port of Misurata	Route 2	1,310 workers (incl. 53 Koreans) departed from the Port of Tripoli	Route 3	618 workers (incl. 41 Koreans) departed from the Port of Benghazi
	345 additional workers boarded (incl. 15 Koreans) at the Port of Surte		Arrived at the Port of Chania Souda, Greece		Arrived at the Port of Chania Souda, Greece
	Arrived at the Port of Chania, Greece				

# Employee

## Nurturing Globally Competitive Construction Professionals

### Recruiting Excellent People

**Ideal Employee** | Our ideal employee – also known as the E&C Champion – is the one who acts on the company’s core values of Challenge & Passion, Autonomy & Accountability and consistently show great performances. Daewoo E&C’s employees are open to new changes and innovation and thereby lead the global scene with their creative thinking; even in the rapidly changing internal/external business environment, they maintain a proactive and dedicated attitude to create positive outcomes.

**Recruitment** | We hold open recruitment biannually and run an internship program on a regular, rolling basis. In case of applicants with previous work experience, we hold open recruitment on a regular basis while also allowing hiring of candidates for key positions through recommendation.

### HR Development

The goal of Daewoo E&C’s HR development is to nurture Individuals Who Challenge Themselves With A Strong Belief And Passion And Take Accountability For Their Given Tasks. In order to achieve this, we have established strategic directions and strategic tasks to pursue systematic HR development.



Counseling Session for the Hiring in the First Half of 2012

Objective	The one who enjoys challenges with faith and passion and take accountability for a given task following his/her own conviction			
Strategy	1. Share core values and vision and strengthen execution	2. Nurture performance-oriented leaders	3. Nurture professionals and globally competitive individuals	4. Establish a site-based education support system
Strategic Tasks	1.1 Reinforce corporate culture based on core values	2.1 Select, nurture, well-position key individuals	3.1 Nurture globally competitive market players	4.1 Establish, operate an informal learning system
		2.2 Strengthen leadership capabilities	3.2 Improve expertise and professionalism	4.2 Find measures to increase effectiveness of education
				4.3 Connect educational outcome with HR policies
				4.4 Strengthen roles, capabilities of the HR Team

### Internship Program



Daewoo E&C allows job candidates to make a decision to join our company after considering their aptitude and career goal by providing internship opportunities during the regular open recruitment. Once admitted, interns receive training and gain onsite work experience, which are opportunities for them to improve their capabilities.

# Employee

## HR Development Programs

**Training of New Recruits** | We provide step-by-step training on what one needs to know about adapting to an organization and early strategy in the first three years upon entering the company. New recruits immediately gain hands-on experience through OJT (on-the-job training); after OJT, they are placed at different divisions and construction sites to further receive professional training. We invite external agencies for training in specialty areas; as for curriculum in general management and leadership as well as the MBA course, we provide on-line training sessions.

**Education Opportunities for Key Individuals** | Employees with excellent performances receive the benefit of studying abroad and the company’s financial support for higher education, as we try to further develop their capabilities and promote employee loyalty. Based on selection criteria such as years of service, appraisal result, foreign language skills, and personality test, we select and nurture the future leaders of Daewoo E&C.

### Courses for key individuals

Overseas course	Business school, engineering school, QS course, law school, doctorate course, etc.
Domestic course	Evening class at domestic graduate schools (of management), E-MBA, etc.



Education for the New Recruits

**Leadership Training** | We provide leadership training to all employees, where curriculum differs by position. Executives receive training on project management and organizational management skills, while other employees receive training for developing general management skills.

### Leadership course

Employee	Curriculum for employees who have gone through a promotion
Executive	Curriculum for candidates for executives, curriculum for new executives

## HR Development Programs

Category	Curriculum	Category	Curriculum	Category	Curriculum
New Recruit	Introduction to business for new recruits	Key Personnel	Selection for studying abroad	Language	In-house language courses (beginners' English, intermediate English, PT, and Spanish)
	Introduction to business for interns		Selection for domestic E-MBA		Intensive Course
	F/U for interns		Selection for higher education program (domestic)		English for telephone conversation
	Hanmaum challenge for employees with over three years of service		Nominees for executives	Training for directors and site managers	
	Overseas site OJT for new recruits	Work-related	Major overseas work/labor and material management	Leadership	Performance management for newly appointed directors and site managers
	Overseas site OJT F/U for new recruits		Major overseas work/HSE		Leadership and team building for the plant business
	Domestic site OJT for new office recruits		Major overseas work/process control		New executives
	OJT for new recruits in the Design Team		Major overseas work/contract claim management		Newly promoted employees, by position
	Financial OJT for new recruits		Finance for domestic site managers	Special lecture on construction management	
	Introduction to business for employees with previous work experience		Training for domestic/overseas site managers	Chief executives	
	Introduction to business for professionals		Introduction to bond management and advanced bond management	Other	Nine courses excluding the credit system for completion of education
	Mentoring for new recruits	Overseas post			
	Introduction to business for IT personnel	LEED AP certification			

# Supplier

## Win-win Growth Strategy

### The Four Guidelines of Fair Trade and Win-win Growth

- 1 Guideline on signing a fair contract for win-win cooperation
- 2 Guideline on supplier selection and management
- 3 Guideline on establishment and operation of the Subcontracts Deliberation Committee
- 4 Guideline on issuing and keeping fair official documents

### Joint Declaration for Signing the Agreement for Fair Trade and Win-win Growth

At the Construction Companies Joint Declaration for Signing the Agreement for Fair Trade and Win-win Growth ceremony, the 10 participating construction companies declared their commitment to pursue enhanced win-win growth programs and help suppliers to increase competitiveness.



### Strategic Direction

Daewoo E&C has been leading the culture of win-win growth within the construction industry and continuously improving support programs for suppliers. Furthermore, we introduced and applied the Four Guidelines of Fair Trade so completely eliminate all factors of unfair trade.

### Organization

In 2000, we established the Business Partnership Management Team – an organization dedicated to supplier relationship – for the first time in domestic construction industry. The Business Partnership Management Team is responsible for all support programs for win-win growth and strengthening the network with suppliers.

### Supplier Management

**Selection** | We are operating the cooperation system website, DW-eCoS, to ensure fair and efficient supplier management. We hold an open call for suppliers through this website with the purpose of maintaining fair and transparent selection process and encouraging voluntary competition between potential suppliers.

### Supplier Selection Process



**Supplier Management** | We established the PRM (Partner Relationship Management) to promote coexistence with suppliers. Furthermore, we arrange a regular meeting between suppliers to support information sharing and receive their feedback for system improvement and greater supplier satisfaction.

**Evaluation** | We conduct a biannual evaluation to select and nurture excellent suppliers as well as to secure quality. For objective evaluation, we have established evaluation criteria for both sites and the headquarter and are strictly regulating the supplier management procedure.

### Supplier Evaluation Criteria

Category	Evaluation of sites	Evaluation of the headquarter			
		Safety, environment, quality, defect	Finance	Level of cooperation, contribution	Supplier appropriateness
Weights	65 points	12 points	10 points	13 points	±3 points

# Supplier

## Expansion of Win-win Growth Activities

### Fair Trade

We are training the suppliers' employees on the Fair Transactions in Subcontracting Act, the Monopoly Regulation and Fair Trade Act, and the Four Guidelines of the Fair Trade Commission. In addition, we are running a system where suppliers can voice their complaints and difficulties.

### Financial Support

We are managing the Win-win Growth Fund from which suppliers can get an unsecured loan at a low interest rate; we also provide emergency funding without interest and guarantee. Our payment is 100% cashable and we plan to expand the cash payment proportion to further improve payment terms.

### Educational & Technological Support

We provide a number of educational programs to the suppliers' CEOs and employees. Furthermore, we provide technical support (such as joint patent) to over 2,000 suppliers and subcontractors.

### Communication

Our cooperation system, DW-eCoS, has been introduced to share work process with suppliers. Through this website, we are able to handle supplier information management, bidding, contract, and payment for completed stages of construction in an efficient way. In the future, we will continue to enhance cooperation with suppliers through better communication.

### Win-win Growth Programs

	Achievements in 2011	Plans in 2012
<b>Fair Trade</b>	<ul style="list-style-type: none"> <li>Introduced the Standard Subcontract Agreement</li> <li>Collected a written pledge for transparent contract fulfillment at the time of supplier registration</li> <li>Increased the unit price of supplied goods by 76 billion KRW in total (reflecting the increase in cost of raw materials)</li> </ul>	<ul style="list-style-type: none"> <li>Introduce the Guideline For Issuing And Keeping Fair Official Documents</li> <li>Adjust the unit price of supplied goods</li> </ul>
<b>Financial Support</b>	<ul style="list-style-type: none"> <li>Supported the emergency fund of 16.2 billion KRW with no interest and no guarantee</li> <li>Created the win-win fund totaling 40 billion KRW (10 billion by Daewoo E&amp;C and 30 billion by Woori Bank)</li> <li>Rate of cash payment : improved from 35% to 40%</li> <li>Payment remains 100% cashable</li> <li>Reduced the term for payment from 30 days to 25</li> </ul>	<ul style="list-style-type: none"> <li>Support the emergency fund of 17 billion KRW with no interest and no guarantee</li> <li>Create the win-win fund totaling 19.5 billion KRW (10 billion by Daewoo E&amp;C and 9.5 billion by KDB)                             <ul style="list-style-type: none"> <li>- 2.24% lower interest than open market rate</li> <li>- Synergy between Daewoo E&amp;C and KDB</li> </ul> </li> <li>Rate of cash payment : improve from 40% to 45%</li> </ul>
<b>Educational &amp; Technological Support</b>	<ul style="list-style-type: none"> <li>166 employees of supplier companies participated in on-line training sessions</li> <li>179 CEOs of supplier companies participated in the safety education</li> <li>664 site managers participated in the safety education</li> <li>Spent 280 million KRW on training CEOs of suppliers                             <ul style="list-style-type: none"> <li>- domestic : 44 participants</li> <li>- overseas : 36 participants</li> </ul> </li> <li>Joint patent registration (4 cases), joint patent application (9 cases), joint copyright registration (1 case), joint authorization for new technology (2 cases), joint R&amp;D (2 cases)</li> </ul>	<ul style="list-style-type: none"> <li>Training of suppliers' employees                             <ul style="list-style-type: none"> <li>- 2 on-line training sessions and 2 collective training sessions</li> </ul> </li> <li>Training of suppliers' CEOs                             <ul style="list-style-type: none"> <li>- In partnership with Donga Ilbo Institution for Future Strategy</li> </ul> </li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>105 CEOs participated at the supplier meeting</li> <li>36 CEOs of supplier companies participated at the overseas site tour and local discussions</li> </ul>	<ul style="list-style-type: none"> <li>Conduct meetings with major excellent suppliers in and outside of Korea</li> <li>Receive feedback on each project type through team discussions at collective training sessions</li> <li>Expand meetings (for each department and project type) and actively reflect the result on policies</li> </ul>

# Customer

## Customer Satisfaction Management

We firmly believe that A Company Can Grow Only When Customers Choose Us and Remain Satisfied; this is why customer satisfaction is placed at the top of our management principles. We are differentiating our CS (customer satisfaction) activities in every way – personal service, system & policy, and education – to truly practice customer-oriented management.

### CS Action Plan in 2012



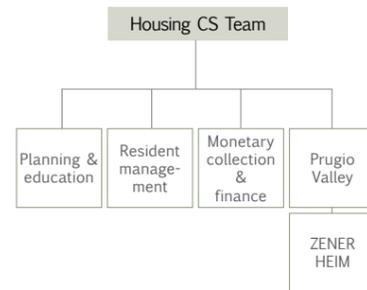
## Organization and Training

The Housing CS Team within the Housing Business Division is responsible for customer service activities. We provide customer service training to all employees on an annual basis to increase customer satisfaction and arrange additional training sessions with outside experts, targeted at CS personnel. Furthermore, we provide CS training to suppliers' employees as well.

## Customer Support System

**Expansion of Communication Channels** | We have established various digital media channels to enhance communication. In 2010, we were awarded the grand prize at the Internet Customer Satisfaction Award for the first time in domestic construction industry, solidifying our position as an excellent communicator. Recently, we have further expanded communication channels to SNS and the Prugio Valley, actively receiving and reflecting upon customers' feedback.

### Organizational Structure



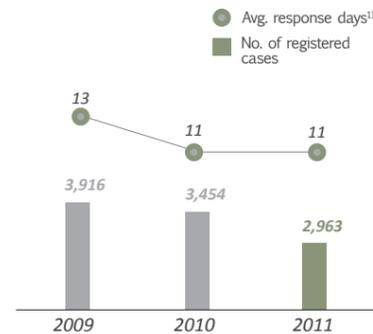
**Handling Customer Complaints** | Daewoo E&C is operating the VOC (voice of customer) system in the housing and building areas to handle customer complaints in a timely and efficient manner. The number of complaints has shown downward trend in the last three years.

### VOC Service Channel



### VOC Status

Unit : No. of cases and days



<sup>1)</sup> Average response days : number of days it takes to respond and handle a case from the day a case is registered

**Protection of Customer Information** | We are strictly managing the data related to personal information to protect our valued customers' privacy. In January 2012, we appointed the CPO (Chief Privacy Officer) and the CSO (Chief Security Officer), who are responsible for protecting the housing customer information and preventing internal information spill, respectively. With their support we plan to further strengthen customer information protection in the future.

# Customer

## Increasing Customer Satisfaction

### Customer Service Activities

**Love of Prugio Service** | Love Of Prugio is a service package – kitchen cleaning, balcony and outside window cleaning, gardening within the complex, and road cleaning – we provide to the residential complex during the first to fifth year of move-in. During the house visiting events, we provide caring services for elderly people and disabled people, as well as printing out a family picture on a high-quality photo frame or a cushion.

**Community Revitalization** | From the early days after move-in, we support the operation of communal facilities in the complex to revitalize the community and create great living conditions.

**Prugio E-book Library** | We are providing e-book library service to the residents of Prugio. Approximately 30,000 e-books of various genres are offered and the library also provides language lessons, EBS e-learning, and children's library services.

**Prugio Valley** | Daewoo E&C newly refurbished its housing cultural centre, Prugio Valley turning it into a space where the company can communicate with customers and citizens and hold a number of cultural activities. Prugio Valley serves as not only an exhibition center for the model house, but also a dynamic cultural space which includes a PR center where people can experience future housing style, a theatre, a gallery, and a café, allowing citizens to freely take a break and communicate with us.

**Prugio Family Garden** | We are operating an advisory panel composed of housewives, Prugio Family Garden to gain customers' feedback and ideas on apartment buildings and get inspiration for new residential products. Prugio Family Garden has been active since 2009, conducting regular on-/off-line surveys, carrying out official tasks, and checking model houses, all of which help us better reflect on customers' opinion during the stages of product planning and development.



# Customer

## Quality Management

Daewoo E&C ensures quality of its products even after construction is complete, through the residents' and site employees' inspection and evaluation before and after moving-in.

**Pre-construction Inspection** | Immediately preceding the completion of construction, we ensure that the apartment buildings are thoroughly inspected by the housewife monitors, from residents' point of view. We also hold a Visit My House Day a month before the moving-in, receiving actual appraisal from the residents-to-be.

**Defect Management System** | What is special about our defect management system is that we analyze demands and complaints of various customers by categories and evaluate customer satisfaction activities as a whole. From 2012, we plan to connect the defect management system with DW-eCoS so as to evaluate subcontractors who do not properly perform defect management services.

### Major Quality Management Services

Category	Content
Site Coming Day	Employees (who were at the corresponding construction site) visits the complex after one year to carry out inspection and receive feedback
Emergency Defect Management Team	Quick maintenance of defects
A/S Happy Call	A/S registration during after-work hours and on weekends
Mobile Defect Management System	Accept A/S registration and confirm whether is has been handled by visiting the household in person
Home Auto Defect Registration	Easy defect registration

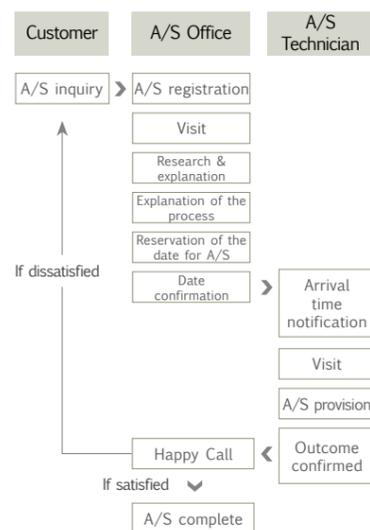
## Customer Satisfaction Survey

Daewoo E&C holds customer satisfaction surveys on a Visit My House Day or at the time of move-in as well as when a customer receives defect management service. By checking the current state of customer satisfaction, we can quickly reflect on the residents' demands; such effort of Daewoo E&C has been widely recognized by external organizations and, as a result, we have received a number of awards related to brand image and customer satisfaction.

### External CS & Brand Evaluation

- Ranked no. 1 in 2012 'Premium Brands Index (KS-PBI)
- Ranked no. 1 in 'Apartment brand awareness (surveyed by AC Nielsen)
- Won the Presidential Award from the 9th Attractive Apartment Contest
- Best Brand Award by Women consumer's Choice for two consecutive years
- Won the Ministerial Award from the Korean Representatives Apartment 2011
- Hankyung Residential Culture Award in the 2nd half of 2011
- Grand Prize in Customer Satisfaction sector
- 2011 Korean Apartment Brand Award
- Grand Prize in Best Power sector
- 2011/2012 Housing Service Award Grand Prize

### Defect Management Process



# Local Community

## Progress in Philanthropic Activities

### Strategic Direction

As a good corporate citizen, Daewoo E&C is practicing philanthropic activities in various areas such as social welfare, culture & arts, education, sports, environment, and international society.

### Structure

Major Areas	Core Values of Corporate Philanthropy	Beneficiaries	Main Activity
Environmental protection	Clean	Neglected social class	Improve infrastructure for neglected social class
Increase convenience facilities	Convenient		
Livelihood safety	Safe		

### Organization

In 2007, we organized the Daewoo E&C Community Service Corps to involve all employees' participation in volunteering activities. The Daewoo E&C Community Service Corps focuses on improving infrastructure for the less privileged class in society and continues to pursue systematic philanthropic activities.

### Achievement

In 2011, Daewoo E&C spent approximately 701 million KRW on expenditure for philanthropic activities, including donation for relief supplies in Libya, and 7,187 employees participated as volunteers. Particularly, we were recognized for our support in culture and arts, such as Puchon International Fantastic Film Festival, and awarded an appreciation plaque from the Arts Council Korea.

Content	Achievements in 2011
No. of participants in philanthropic activities	7,187 people
Average hours of philanthropic activity/employee	1.5 hours/person
Total expenses on philanthropic activities	701 million KRW

### Organizational Structure of Daewoo E&C Community Service Corps



### Promoting Employees' Philanthropic Activities

Daewoo E&C has prepared a number of support programs to promote voluntary participation from employees and ensure that volunteering activities smoothly take place.

Category	Major Contents
Vacation for volunteering activities	Allow employees to volunteer during work hours (restriction of 4 hours per day per occasion applies)
Award for volunteers	King of Blood Donation as well as an award for individuals with excellent volunteering record
Supply volunteer uniforms	Replaced the volunteer uniforms to make them reflect the new CI in 2012
Other	Raise awareness of sharing by operation of the in-house blood bank

# Local Community

## Our Philanthropic Activities

### Social Welfare

**Beautiful Playground Campaign** | This is one of our core programs, launched in November 2007 with the support of the Korea Disaster Safety Technology Institute, an agency specializing in safety of playing facilities, and the Ministration of Public Administration and Security. Through this campaign we aim to prevent safety accidents in playgrounds and create a clean and safe playing environment for children of low-income families by refurbishing playgrounds in remote areas and child welfare facilities. From the remodeling of the playground in Wadong Day Care Centre (Ansan) to the Good Samaritan Center (Yongin), we opened 14 Beautiful Playgrounds in total. In 2012, we plan to launch the New Beautiful Playground that also incorporates environmental friendliness and play value, beyond simply emphasizing safety.

**Improving Infrastructure of Welfare Facilities** | In May 2011, Daewoo E&C donated Sarangchae, a training center aimed at helping disabled people's social adaptation, to the Municipal Peace House, with which we have made alliance for continued social welfare activities since 2009. In 2012, we are actively participating in social welfare activities that feature specialties of a construction company, such as the remodeling and drainage maintenance of the Peace School.

**Relay Volunteer Activities** | Our volunteer activities are not just one-off events. In 2012, we began a relay of volunteer activities to encourage the business divisions' competition in good faith, aimed at settling relay volunteer activities as a big part of our philanthropic activities.

#### Achievement of Relay Volunteer Activities in 2012

Place	Content
Wusungwon, Wusung Sanatorium for the Disabled	Assistance for the healthy walking program, bathing of the disabled people, facility cleaning, volunteering at the training center for the disabled
Happy House	Assistance during meal time for the elderly with dementia or who lives alone, deliver goods, and assist during field trip
Seoul Municipal Peace House	Assistance during excursions, cleaning, bathing assistance, foot massage, and wheelchair cleaning
National Cemetery	Visit the National Cemetery, inscribe an epitaph, and clean the memorial hall
Korean Organ Donor Program	Provide meals to patients suffering from chronic renal insufficiency
Yongsan Municipal Day Center for the Elderly	Support the Meal Truck
Yongsan Day Center for the Disabled	Residential environment improvement activities, excursion assistance



1 Beautiful Playground  
 2 Municipal Peace House  
 3 Relay Volunteer Activity <1>  
 - Bathing of the disabled people at Wusungwon  
 4 Relay Volunteer Activity <2>  
 - Picnic to the Peace Park  
 5 Relay Volunteer Activity <3>  
 - Feeding the elderly

# Local Community

**Campaign for Saving Lives, a Group Blood Donation** | Every June or November, we host a blood donation campaign at the headquarter and domestic construction sites, inviting many employees' participation. Employees with a good record of blood donation are awarded the Daewoo E&C King of Blood Donation, as part of our effort to raise awareness of the blood donation campaign.

**Practicing Love by Collecting Coins** | Since 2008, Daewoo E&C's employees have been donating coins from their salaries (the end figure less than 1,000 KRW) towards this fund, which is used to help the less privileged people in society in the year-end. In order to help as many people as possible, the company offers the same amount of fund as matching grants.

**Volunteering Club** | Daewoo E&C Volunteering Club carries out volunteering activities with local communities every week. Its 60 members visit the three care facilities for the elderly with dementia (Jangsu Village, Myoheewon, and Jininseowon) and Jogyesa Won-simhoi (a Buddhist charity for helping the disabled) in rotation, and participate in blood donation campaigns on streets of Myeongdong (downtown of Seoul) every week.

**Donation of Personal Computers** | In January 2011, Daewoo E&C donated 200 used personal computers to the Korean Association of Persons with Physical Disabilities for expanding disabled people's opportunities to participate in cultural activities and bridging the informational gap.

**Donation of Home Appliances** | In May 2012 (in celebration of Children's Day), Daewoo E&C donated home appliances to Hanbit Sarang Nanumteo, an accommodation facility for childhood cancer patients and their families. Located in Seodaemun District of Seoul, this place was in desperate need for additional support, mainly due to the facility expansion driven by a dramatic increase of patients, when Daewoo E&C provided support for its new opening.



1 Campaign for saving lives, a Group Blood Donation  
 2 Practicing Love by Collecting Coins  
 3 Volunteering Club activity <1>  
 - Volunteering at the care center for people with dementia  
 4 Volunteering Club activity <2>  
 - Blood donation PR  
 5 Donation of personal computers

# Local Community

## Culture & Arts

**Culture & Arts Sponsorship** | Daewoo E&C is contributing to development of film industry by sponsoring Puchon International Fantastic Film Festival and Jecheon International Music & Film Festival and has also sponsored the opera Lucia, the musical Maria Maria, and Boney M's concert. In addition, we are contributing to cultural development of communities and enriching citizens' cultural appetite by sponsoring Korea International Art Fair, exhibitions at Sungkok Museum, Venice Biennale Architectural Exhibition in Korea, and Global Fair & Festival Incheon.



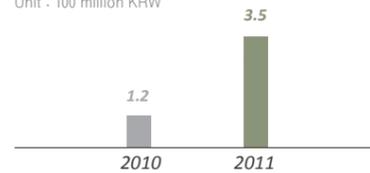
Holt Choir's Voices of the Soul in 2011

**Holt Choir Sponsorship** | Since 2008, Daewoo E&C has continuously sponsored the annual performance of the Holt Choir (composed of members with physical disabilities), Voices of the Soul, held by the Holt Ilsan Center in Ilsan, Kyungki-do.

**Active Donation in Culture & Arts** | In 2011, Daewoo E&C was included on the list of top 16 companies with largest donations in culture & arts and received an appreciation plaque from the Arts Council Korea. We plan to expand Mecenat programs, moving beyond simply donating money, utilizing the art hall at our headquarter building. Examples would include free admissions to various culture & arts performances to citizens of the neglected social class and allowing university students to use our art hall as a space for conferences and seminars.

### Culture & Arts Donation

Unit : 100 million KRW



## Partnership with Army

Daewoo E&C has continued its partnership with the Capital Defense Command since 1996. Beyond simple donation of goods, we made the most of our specialty as a construction company by improving the fitness center and the gymnasium building of the Capital Defense command. Particularly, from 2012, we are introducing programs such as career consulting and special lectures for soldiers.



Signing of the MOU

# Local Community

## Global Philanthropic Activities



**Morocco** | Through the Daewoo-Youth Morocco Program, Daewoo E&C is providing a number of goods to orphanages and children's welfare facilities in El Jadida region. In May 2012, we participated in the Free Eye Camp organized by a non-for-profit organization composed of Korean ophthalmologists, Vision Care, and volunteered in areas including accommodation, food and beverage, and language interpretation in Tanger region.



Daewoo-Youth Morocco Program



**Nigeria** | We are improving community infrastructure by installing solar streetlights in the province of Delta, Nigeria; such activity of Daewoo E&C was even covered by the local press. The Port Harcourt branch installed a well in the town of Eleme, trying to provide a solution to Africa's chronic water shortage problem. In the province of Bayelsa, we are supporting construction and refurbishment of schools to expand educational opportunities; in the province of Warri, we are providing a scholarship every month. In general, we put continuous efforts towards improving the communities' quality of life by providing antimalarial drugs, daily necessities, home appliances, and clothing.



Well Installation in Eleme



**Algeria** | We held the spring cleaning event with the local residents to create a clean and pleasant living environment. In February 2012, we delivered relief supplies and equipments to the heavy snowfall victims of the province of Jijel, helping the people recover from such natural disaster and support the reconstruction of villages. In Oran, we are providing uniforms and soccer balls to the local soccer club (soccer is a very popular sports to the locals). In Hasasna, we have delivered play rides, books, and school supplies to local schools for children.



School Supply Delivery in Hasasna



**Libya** | Daewoo E&C is carrying out a number of activities to form a cooperative relationship with the locals. Particularly, all employees at the construction site of the Tripoli Waterfront Hotel (which will be Libya's landmark) thoroughly cleaned the surrounding areas of the construction site on a quarterly basis, helping to create a clean and pleasant city center of Tripoli.



Cleaning Activity in Tripoli

# Local Community

## Global Philanthropic Activities



**Oman** | In June 2012, Daewoo E&C signed the agreement for the Oman SQU Internship Program at Oman's royal Sultan Qaboos University, preparing a stepping stone for further cooperation between academia and private sector. Four excellent SQU students in commerce program worked as interns at Daewoo E&C's headquarter with their flights and living expenses fully supported.



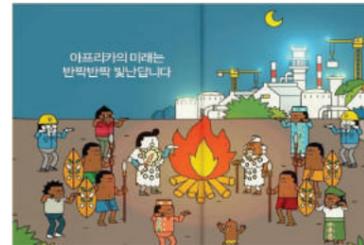
Signing Ceremony of the SQU Internship Program



**Malaysia** | In May 2012, Daewoo E&C donated 110 million KRW to the Malaysian Olympic Committee for construction of the cricket field in Puchong.



**Kenya** | In our corporate advertisement Africa, we used the traditional music Jambo sung by the Kenya Jirani Children's Choir as a background music and sponsored the children (in the Choir) with the payment for using their music in our advertisement. The Kenya Jirani Children's Choir was started by Korean missionaries and its members are children from slums.



Daewoo E&C's Corporate Advertisement 'Africa'



**Overseas Missions** | Daewoo E&C sent missions – who are full of spirit and passion – to Papua New Guinea in 2010 and Columbia in 2011 to deliver goods to local children. The missions have become a part of the new Korean wave, promoting Korea and Daewoo E&C to the local communities.



Daewoo Challenge Generation, Daewoo E&C's Overseas Mission



Daewoo E&C was the sole sponsor of the calligraphy exhibition featuring excerpts from Ho Chi Minh's prison diary held in Ho Chi Minh, Vietnam, in 2010. We also provided donation to Japan, which became an earthquake victim in March 2011. As a global company, Daewoo E&C will continue philanthropic activities in the future.



Calligraphy Exhibition Featuring Excerpts from Ho Chi Minh's Prison Diary

# Safety

## Safety Management Strategy

### Safety Management Policy and Goal

Daewoo E&C is committed to safety and health throughout all stages of its projects and our goal is to be a model in safety not only in the region but worldwide.

A safety & health issue is directly linked with human lives, hence safety is our absolute priority. We strictly apply the Internally Stable Safety Management Policy in all project sites, worldwide. Consequently, we value and welcome our stakeholders' feedback on safety and health for our continual improvement in our HSE Management System.

### Organization

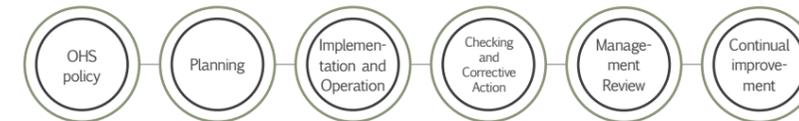
Headed by the HSE Team and considered as the central point of reference, through which our company will implement the HSE Management System. All projects shall be mobilized of an adequate health and safety professionals to oversee HSE performance and assist our Frontline Managers implementing health and safety, effectively. As practice, we organize the Health & Safety Committee to define the most optimized measures in health and safety management.

Since we organized the team responsible for overseas HSE management in 2007, we have put together a pool of over 400 foreign employees and are making the most of the human resources through the biannual HR information collection and database construction.

### OHSAS 18001 Certification

Daewoo E&C is now certified in OHSAS 18001 and recorded as the first company that received the said certification among all engineering and construction companies in the country. Furthermore, we are gaining international recognition through regular post-certification evaluation (every year) and revalidation (every three years).

### OHSAS 18001 Execution Model



### Safety Management IT System

In reference to the company's safety and health management system as well as to the OHSAS 18001 requirements, we integrated all data-processing work related to safety and health such as safety system, planning documents, training, inspection, and performance management into the PMIS (Project Management Information System), through which we are able to maximize data-sharing synergy between project sites and the headquarter. We integrate the safety management system by upgrading the features and modules of DW-PMIS into a more efficient and organized IT system. BAROCON, an integrated construction management IT system, allows further integration with standardized categorization system and let the end-users at sites share and apply the test known methods available in the system.

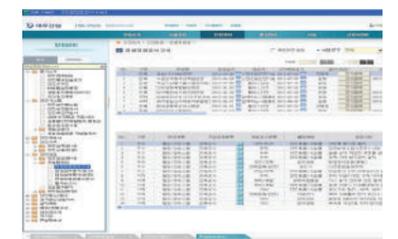
### Strategic Direction of Safety Management in 2012

Operational policy	HSE support centered on prevention and preliminary assessment
Target	Zero Incident Rate (Management standard : domestic 0.15, overseas LTIR 0.05)
Slogan	We construct the future with technology and safety.

### Organizational Structure



OHSAS 18001 Certification  
- First certified in 2000.11  
- Re-certified in 2012.04



Safety Management Module within DW-PMIS

# Safety

## Health and Safety Management<sup>D</sup>

### OHS Audit and Inspection

In 2011, we have conducted a total of 1,008 Occupational Health and Safety Audits (domestic and overseas projects). As part of this Audit, we reviewed the OHS Management System and the Supplier/ Subcontractor Safety Evaluation and carried out special audits in addition to the regular support/consulting audits for each business division in all domestic projects. In overseas sites, each project is being audited by our IRCA certified auditors from the HSE Team in accordance to the established audit schedule and procedure. The audit is focused on assessment of project management, subcontractor's OHSMS, and activities.

### Subcontractor Safety Management

In order to reinforce subcontractors' autonomous safety management, we record and manage subcontractors' Violation Index during the site audit and inspection. Disciplinary action shall be issued against subcontractors with poor safety management.

### Subcontractor Safety Management

We gained two additional points in the incident rate area at the Public Procurement Service's Preliminary Examination Of Companies' qualification to enter a bidding process' for three consecutive years (2009-2011). In 2011, there were six fatal incidents in domestic operation and zero in overseas operation, showing a downward trend. In the future, we plan to adopt an incident research & analysis tool and the unsafe act & condition observation management program at overseas sites.

### Subcontractor Safety Management Process



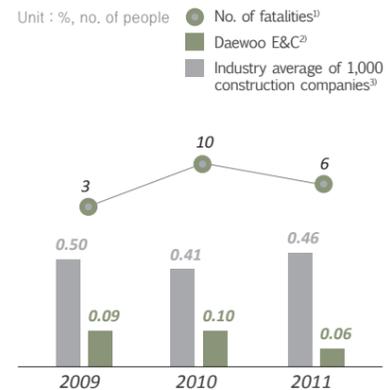
### Standard of Disciplinary Action for Subcontractor

Management of Violation Index
· Violation index = (no. of inappropriate cases / no. of people) x 10
· If ranked in the lower 10% : 1 penalty point
· If ranked in the lower 5% : 2 penalty points

### Disciplinary action depending on total points

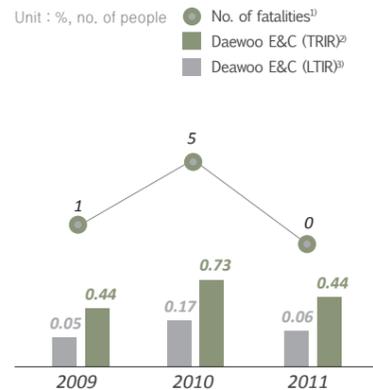
- 1 penalty point : caution
- 2 penalty points : warning (official document)
- 3 penalty points : request for submission of safety improvement plan and the report on the outcome
- 4 penalty points : limit the bidding (2 months)

### Domestic Incident Rate



1) No. of fatalities from incidents in construction sites  
 2) (No. of Casualties, Converted / No. of Regular Workers) x 100 people  
 3) Source : Ministry of Employment and Labor, 2012

### Overseas Incident Rate



1) No. of fatalities from accidents in construction sites  
 2) Total Recordable Incident Rate = (Fatality + Lost Workday Cases + Restricted Work Cases + Medical Treatment Cases + Occupational Illness) x 1,000,000hours / Total Man-hours Worked  
 3) Lost Time Injury Rate = (Fatality + No. of Lost Workday Cases) x 1,000,000hours / Total Man-hours Worked

# Safety

### Systematic HSE Training

Daewoo E&C is keen on the safety awareness of its personnel and ensures of their competency prior to mobilization on site. Hence, we developed a HSE training program that integrates the characteristics of construction industry, and provide HSE standards or the best known method that will boost every individual's knowledge in Health and Safety. In 2011, total of 2,799 participants completed the session through the company-wide training program (excluding safety training separately carried out by sites). Furthermore, we held the NEBOSH (The National Examination Board in Occupational Safety and Health) training session to domestic and overseas safety managers, providing them the opportunity to acquire international HSE certification and gain on advanced knowledge.

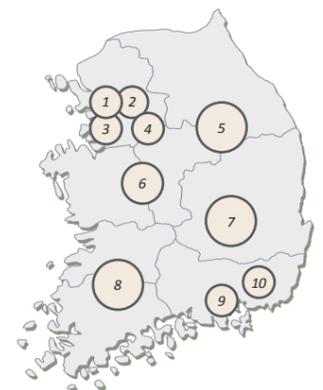


HSE Training for Senior Engineers & Supervisors in 2011

### Safety Management Council

Since 1997, we have been operating the Safety Management Council in 10 bureaus across Korea in order to establish a safety consensus between the headquarter and sites and eliminate risk factors through site inspections by safety managers. Thanks to the Council activities such as benchmarking of exemplary cases and continuous site inspections, we are taking our safety management to the next level.

### Safety Management Council by region



- ① Northwest of Gyeonggi
- ② Seoul
- ③ Incheon and Gyeonggi
- ④ Southeast of Gyeonggi
- ⑤ Gangwon
- ⑥ Chungcheong
- ⑦ Deagu and Gyeongbuk
- ⑧ Jeolla
- ⑨ West of Busan and Gyeongnam
- ⑩ East of Busan and Gyeongnam

### Distribution of Safety Guidelines

**Safety Manual for High-risk Work** | Daewoo E&C has established the OHS Management System that includes the OHS plan, guidelines and manual. A total of 88 OHS procedures (31 domestic, 57 overseas) are readily available for distribution to use as reference and guidelines in implementing OHS management effectively, for the company's continual improvement and an excellent OHS performance.

**Safety Handbook for Foreign Employees** | We are distributing portable, pocket-sized educational handbooks on safety for easier communication with foreign employees; onsite employees can refer to the safety handbooks when discussing safety-related matters, increasing a sense of affinity with the foreign employees.



### Publication of Safety Handbook for Foreign Employees

Language	Chinese, Thai, Vietnamese, Mongolian, Filipino, Uzbek
No. of copies	7,000 copies

# Safety

## Corporate Safety Culture

### Prayer Ritual for Safety

Every January of each year, Daewoo E&C is offering a prayer ritual for safety of all domestic and overseas sites, headed by the CEO and attended by the Division heads and personnel in charge of OHS management.



Prayer Ritual for Safety in 2012

### Corporate Safety Inspection Day

We are conducting Corporate Safety Inspection Day on a quarterly basis where the CEO makes a personal visit to sites and carries out safety inspection. This event is an opportunity for declaring the CEO's firm commitment to health and safety, promoting OHS awareness to all level of site personnel including its subcontractors, and creating an advanced safety culture. At overseas sites, we carry out the Management HSE Walkthrough where project owners and contract managers take a tour of the entire site, finding areas for improvement.



Corporate Safety Inspection Day, Honam High-Speed Railway Project, Lot 1-4

### The Five Safety Principles

	1	Fasten the chin strap of a safety helmet
	2	Fasten the safety harness
	3	Cover manholes
	4	Install safety railing
	5	Install scaffoldings

### Current State of Reward Programs

Reward upon the environmental management evaluation	<ul style="list-style-type: none"> <li>· Excellent Site</li> <li>· Best Site</li> </ul>
Reward for the sites that have achieved zero Incident	<ul style="list-style-type: none"> <li>· Competed the Zero Incident site</li> <li>· Building a Zero Incident site</li> </ul>
Reward for individuals	<ul style="list-style-type: none"> <li>· (Super) Safety Champion</li> <li>· (Super) Safety Winner</li> </ul>

### Presentation of Exemplary Cases of Safety Management

Every year, we are presenting the Exemplary Cases of Safety Management competition to seek and recognize sites with an excellent safety management. The winning site will be awarded of a plaque, prize money, and bonus points during site inspection; by doing so, we are promoting OHS awareness to all site personnel. In 2011, at approximately 40 sites participated in the competition to demonstrate innovative safety management activities and as a result we were able to learn and share to other sites of an exemplary methods that can help for continual improvement.

### Operation for 100 Days without an Incident

Operation for 100 Days without an Incident is a safety campaign launched by Daewoo E&C management in line of this, both domestic and overseas sites have established their own HSE campaign program. In 2011, domestic sites introduced their safety campaign with a title of Let's Adhere to the Basic! The Five Safety Principles, where a safety badges were given away to all personnel a motivation strategy by the management and to reinforce onsite safety management activities.

At overseas sites, we launched the Zero Fall Incident campaign and carried out special safety training and inspection at least once a month.

As a result, both domestic and overseas sites achieved their goal and objectives during the safety campaign period. Thus, we planned to expand the Five Safety Principles into Six Safety Principles during the next safety campaign for further strengthening of our safety management.

### Reward Program

At Daewoo E&C, we are implementing various OHS Incentive scheme such as reward for individuals and teams. We aim is to motivate employees to voluntarily practice Zero Incident activities and comply with all OHS requirements in order to achieve a safety culture within the company.

# Appendix

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## Sustainability Management Performance

### Economic Performance

Indicator	Unit	2009	2010	2011
New Orders	100 million KRW	116,496	116,966	132,708
Domestic	100 million KRW	81,763	77,384	78,867
Overseas	100 million KRW	34,733	39,582	53,841
Backlog of New Orders	100 million KRW	343,534	353,484	373,710
Domestic	100 million KRW	295,163	288,748	298,026
Overseas	100 million KRW	48,371	64,736	75,684
Sales	100 million KRW	70,974	67,191	70,319
Domestic	100 million KRW	50,570	48,823	45,281
Overseas	100 million KRW	20,404	18,368	25,038
Gross Profit on Sales	100 million KRW	5,609	1,128	6,687
Operating Profit	100 million KRW	2,195	Loss	3,649
Income Before Income Taxes	100 million KRW	1,329	Loss	2,602
Net Profit	100 million KRW	800	Loss	2,268

\* Based on different accounting principles  
 - 2009 : based on K-GAAP  
 - 2010 & 2011 : based on K-IFRS

### Social Performance

Indicator	Unit	2009	2010	2011		
Employees	No. of people	6,013	6,116	5,784		
Type of Employment	Executive	No. of people	106	118	101	
	Full-time	No. of people	3,473	3,599	3,726	
	Contracted	No. of people	181	268	232	
	Other	No. of people	2,253	2,131	1,725	
Employment by Region	Domestic	No. of people	1,334	1,418	1,568	
	Regional branch	No. of people	3,623	3,630	3,091	
	Overseas	No. of people	1,056	1,068	1,125	
Female Employees <sup>1)</sup>	No. of people	197	209	214		
Disabled People	No. of people	33	38	50		
Foreign Employees	No. of people	18	52	31		
Retirees (Retirement Rate)	No. of people (%)	142 (4.1)	130 (3.7)	133 (3.6)		
Voice of Customers	No. of cases	3,916	3,653	2,860		
Training Hours per Employee	hour/person	98	93	90		
Expenses on Ethical Management Education <sup>2)</sup>	No. of people	4,051	-	3,043		
Accident Rate	Domestic	%	0.09	0.10	0.06	
	Overseas	LTIR	%	0.05	0.17	0.06
		TRIR	%	0.44	0.73	0.44
Labor Union Membership	%	35.1	32.8	32.4		

1) Regular employees  
 2) Educational curriculums in 2010 were delayed to the next year because contents regarding contract with the American government needed to be organized before proceeding the sessions  
 - 2009 : including contracted employees  
 - 2011 : excluding contracted employees

## Sustainability Management Performance

### Environmental Performance

Indicator	Unit	2009	2010	2011
Resource Consumption (domestic sites)	-	-	-	-
Ready-mixed Concrete	m <sup>3</sup>	3,378,821	3,298,645	2,795,812
Reinforcing Bar (Rebar)	Ton	368,086	304,460	282,354
Steel Pile	m	184,610	61,495	59,506
Cement	Ton	268,110	239,812	181,754
Asphalt Concrete	Ton	666,901	655,439	451,327
Sand	m <sup>3</sup>	363,269	1,126,891	210,819
Gravel	m <sup>3</sup>	190,115	242,311	258,861
Water Consumption (domestic sites+buildings)	m <sup>3</sup>	403,220	490,193	668,974
Water Intensity of Buildings <sup>1)</sup>	m <sup>3</sup> /m <sup>2</sup>	6.04	6.10	5.69
Energy Consumption (domestic & overseas sites+buildings)	TJ	4,147	5,749	5,818
Stationary combustion	TJ	105	130	228
Mobile combustion	TJ	201	222	259
Electricity	TJ	1,014	1,250	1,261
Etc.	TJ	2,827	4,147	4,070
Energy Intensity of Buildings <sup>2)</sup>	MWh/m <sup>2</sup>	0.14	0.13	0.12
Waste (domestic sites)	Ton	919,481	663,918	705,648
GHG Emissions (domestic & overseas sites+buildings)	tCO <sub>2</sub> e	269,264	376,671	381,648
Scope1 (direct)	tCO <sub>2</sub> e	20,606	23,506	33,609
Scope2 (indirect)	tCO <sub>2</sub> e	49,241	60,695	61,226
Scope3 (other indirect)	tCO <sub>2</sub> e	199,417	292,470	286,813
GHG Intensity of Buildings <sup>3)</sup>	tCO <sub>2</sub> e/m <sup>2</sup>	0.08	0.07	0.07
GHG Emissions per KRW <sup>4)</sup>	tCO <sub>2</sub> -e/100 million KRW	3.8	5.6	5.4

1) Water intensity of buildings = Annual water consumption/gross floor area  
 (Headquater, Institute of Construction Tecnology, Prugio Valley, Residential building in Dangsang, Busan Milliore, Daegeon Zioplace)

2) Energy intensity of buildings = Annual electricity consumption/gross floor area  
 (Headquater, Institute of Construction Tecnology, Prugio Valley, Residential building in Dangsang, Busan Milliore, Daegeon Zioplace)

3) GHG intensity of buildings = Annual GHG emissions/gross floor area  
 (Headquater, Institute of Construction Tecnology, Prugio Valley, Residential building in Dangsang, Busan Milliore, Daegeon Zioplace)

4) GHG emissions per KRW = Annual GHG emissions/sales

# 3<sup>rd</sup> Party Assurance Statement on Sustainability Report

## Introduction

Det Norske Veritas Certification Ltd. (hereinafter referred to as 'DNV') has been commissioned to carry out assurance engagement on Daewoo Engineering & Construction Co., Ltd. (hereinafter referred to as 'Daewoo E&C') Sustainability Report 2011 (hereinafter referred to as 'the Report'). This engagement focused on the information provided in the Report and the underlying management and reporting processes. This Assurance Statement is intended for the readers of the Daewoo E&C's Sustainability Report. Daewoo E&C is responsible for the collection, analysis, aggregation and presentation of all information within the Report. DNV's responsibility regarding this Assurance Engagement is to the management of Daewoo E&C only, in accordance with terms of reference and scope of work agreed. DNV disclaims any liability or responsibility to a third-party for any decisions, whether investment or otherwise, based upon this Assurance Statement.

## Scope of Assurance

This Assurance Engagement covered data from the calendar year 2011. The scope of DNV's Assurance Engagement, as agreed with Daewoo E&C included the verification of :

- Sustainability policy, goals, initiatives, practices and performance for the calendar year 2011, as described in the Report. These were verified at company level.
- The Health & Safety, Social and Environmental data management systems, and associated processes and tools for collecting, analysing, aggregating and reporting quantitative and qualitative information provided in the Report.
- The extent to which the principles and requirements of the Global Reporting Initiative (GRI) Guidelines for Sustainability Reporting (GRI G3.1) is reflected in the Report.

Daewoo E&C's reporting boundaries include all operations in Korea over which Daewoo E&C management exercises significant control.

## Limitations

The engagement excluded the sustainability management, performance and reporting practices of Daewoo E&C's suppliers, contractors and any third-parties mentioned in the Report. DNV did not interview external stakeholders as part of this Assurance Engagement. Economic performances including financial data were cross-checked at head-office with internal documents and the financial statements audited by another 3rd party. Overseas activities are not included in this Assurance Engagement.

## Statement of Competence and Independence

DNV provides sustainability risk management services through specialists worldwide. This engagement was undertaken by a multi-disciplinary team of suitably qualified and experienced sustainability professionals. DNV was not involved in the preparation of any information presented in the Report. DNV did not provide any services to Daewoo E&C during 2011 and 2012 that could compromise the independence or impartiality of our work.

## Verification Methodology

This Assurance Engagement was carried out between July and August 2012, and in accordance with the DNV Protocol for Verification of Sustainability Reporting. In reaching our conclusion, we have undertaken the following work;

- Interviewed Daewoo E&C executives and management representatives from different divisions and functions.
- Visited Daewoo E&C's Head office in Seoul and 2 project sites in Republic of Korea.
- Examined relevant documents, data and other information requested by DNV and made available by Daewoo E&C.
- Reviewed the mechanisms implemented by Daewoo E&C to promote and oversee its sustainability-related policies as described in the Report.
- Reviewed a selection of internal communication and external media reports relating to Daewoo E&C's sustainability management approach, performance and adherence to its policies.

# 3<sup>rd</sup> Party Assurance Statement on Sustainability Report

## Conclusions

In DNV's opinion, and based on the scope of this Assurance Engagement, the Report provides a reliable and fair representation of Daewoo E&C' sustainability strategy, policy, practices and performance in 2011.

Based on the work undertaken as part of this Assurance Engagement, DNV believes that the Report generally meets the principles, content and quality requirements of GRI G3.1. Further conclusions and observations on the adoption of reporting principles and specific performance information are made below;

Regarding the level of adherence to reporting principles, we conclude the following:

**Inclusivity and Responsiveness** | Daewoo E&C has continued to adopt a structured approach to stakeholder consultation and engagement, described in detail in the Report. The Report sets out the governance structure, strategy and systems for managing sustainability issues across the organization.

**Materiality** | Daewoo E&C has continued to systematically map out and prioritise those sustainability issues most significant to Daewoo E&C and its stakeholders. The results have informed the focus and content of this Report.

**Reliability** | No material errors have been detected for data and information. Information in the Report is presented so as to allow comparison of year-on-year performance.

**Completeness** | Within the reporting boundary and scope defined by Daewoo E&C, we conclude that the Report does not omit information that would significantly influence stakeholders' decisions.

**Neutrality** | In general the Report provides a fair and balanced representation of Daewoo E&C's approach and performance in 2011.

## Opportunities for Improvement

The following is an excerpt from the observations and opportunities reported to Daewoo E&C management. However, these do not affect our conclusions on the Report and are provided to encourage continual improvement.

- Improve the accuracy of the reported data.
- Conduct internal verification to ensure the accuracy and reliability of reported information.
- Expand the boundaries of the reporting and the related assurance to overseas operations.

Seoul, Korea  
14th September 2012



Young Keun Kim  
Lead Verifier  
DNV Certification., Ltd.

In Kyoong Ahn  
Country Manager  
DNV Certification., Ltd.

Note : Assurance engagement was conducted based on the Report written in Korean. In the event of ambiguity or contradiction in the Report between English version and Korean version, Korean one shall be given precedent.

# 3<sup>rd</sup> Party Assurance Statement on Greenhouse Gas Inventory

## Introduction

DNV Certification, Ltd. (‘DNV’) was commissioned by Daewoo Engineering & Construction Co., Ltd. (‘Daewoo E&C’) to verify the Daewoo E&C’s Greenhouse Gas Inventory Report for the calendar year 2009-2011 (‘the report’) based upon a limited level of assurance. Daewoo E&C is responsible for the preparation of the GHG emissions data on the basis set out within the WRI/WBCSD GHG protocol : 2004 and the principles set out in ISO 14064-1:2006. Our responsibility in performing this work is to the management of Daewoo E&C only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decisions, whether investment or otherwise, based upon this assurance statement.

## Scope of Assurance

The emissions data covered by our examination comprise Direct emissions (Scope1 emissions), Energy indirect emissions (Scope2 emissions) and Other indirect emissions (Scope3 emissions) :

- Reporting period under verification : Calendar Year 2009-2011
- Organizational boundary for reporting : Daewoo E&C

Organizational Boundaries	Address/Remark			Verification activity
	Year 2009	Year 2010	Year 2011	
Buildings	46 Buildings (Including 41 rental buildings)	50 Buildings (Including 44 rental buildings)	48 Buildings (Including 42 rental buildings)	Desk Review, Site visit, Process & data verification
Domestic construction sites	258 construction sites in Korea	252 construction sites in Korea	256 construction sites in Korea	Desk Review, Site visit, Process & data verification

## Verification Approach

The verification has been conducted by DNV from 20th August through 10th September 2012 and performed in accordance with the verification principles and tasks outlined in ISO 14064-3 :2006. We planned and performed our work so as to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a limited verification opinion concerning the completeness of the emission inventory as well as the reported emission figures in Ton CO<sub>2</sub> equivalent. As part of the verification process :

- We have reviewed and verified the Daewoo E&C’s Greenhouse gas Calculation Tool
- We have reviewed the GHG inventory Report dated on 6th September 2012.
- We have reviewed and verified the process to generate, aggregate and report the emissions data

# 3<sup>rd</sup> Party Assurance Statement on Greenhouse Gas Inventory

## Conclusions

As a result of the work described above, in our opinion nothing has come to our attention that would cause us to believe that the GHG emissions data set out in Daewoo E&C’s report are not fairly stated. The GHG Emissions of Daewoo E&C for the year 2009-2011 were confirmed as below;

### Greenhouse Gas Emissions of Daewoo E&C from Year 2009-2011

Unit : tCO<sub>2</sub>e

Operational Boundary (Period)	Direct emissions (Scope1)	Indirect emissions (Scope2)	Other indirect emissions (Scope3)	Total emissions
Year 2009	16,591	48,992	106,418	172,002
Year 2010	17,392	57,695	170,181	245,267
Year 2011	14,797	55,696	188,687	259,181

※ In order to report the GHG emissions as an integer, the rounded number on the statement might be different from the number on the system with ± 1 tCO<sub>2</sub>e.

※ Total emissions = Scope1 + Scope2 + Scope3

Seoul, Korea  
10th September 2012



Byoung-Wook Park  
Lead Verifier  
DNV Certification., Ltd.

In-Kyoon Ahn  
Country Manager  
DNV Certification., Ltd.

# GRI Index

● Reported   ● Partially reported   ○ Not reported

GRI Indicator	Description	Level of Disclosure	Page(s)
<b>Strategy and Analysis</b>			
1. 1	Statement from the most senior decision-maker of the organization	●	2-3
1. 2	Description of key impacts, risks, and opportunities	●	2-3
<b>Organizational Profile</b>			
2. 1	Name of the organization	●	6
2. 2	Primary brands, products, and/or services	●	10-11
2. 3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	●	6
2. 4	Location of organization's headquarters	●	6
2. 5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	●	7
2. 6	Nature of ownership and legal form	●	28
2. 7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)	●	7, 22
2. 8	Scale of the reporting organization	●	6, 12-13, 27
2. 9	Significant changes during the reporting period regarding size, structure, or ownership	●	28
2. 10	Awards received in the reporting period	●	21, 64, 66, 67
<b>Report Parameters</b>			
3. 1	Reporting period (e.g., fiscal/calendar year) for information provided	●	About this report
3. 2	Date of most recent previous report (if any)	●	First publication
3. 3	Reporting cycle (annual, biennial, etc.)	●	First publication
3. 4	Contact point for questions	●	Back cover
3. 5	Process for defining report content	●	14-17
3. 6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance	●	About this report
3. 7	State any specific limitations on the scope or boundary of the report (See completeness Principle for explanation of scope)	●	About this report
3. 8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	●	About this report
3. 9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report	●	About this report, 45
3. 10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods)	●	First publication
3. 11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	●	First publication
3. 12	Table identifying the location of the Standard Disclosures in the report	●	84-87
3. 13	Policy and current practice with regard to seeking external assurance for the report	●	About this report
<b>Governance, Commitments, and Engagement</b>			
4. 1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight	●	28-29
4. 2	Indicate whether the Chair of the highest governance body is also an executive officer	●	28
4. 3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and or non-executive members	●	28
4. 4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	●	29
4. 5	Linkage between compensation for members of the highest governance body, senior managers, and executives	●	56
4. 6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	●	28-29
4. 7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	●	28-29
4. 8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation	●	9
4. 9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles	●	29
4. 10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	●	29
4. 11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	●	24-25
4. 12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	●	43, 62, 73
4. 13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations	●	89
4. 14	List of stakeholder groups engaged by the organization	●	14-15
4. 15	Basis for identification and selection of stakeholders with whom to engage	●	14-15
4. 16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	●	14-15
4. 17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	●	15, 17

# GRI Index

● Reported   ● Partially reported   ○ Not reported

GRI Indicator	Description	Reference	Level of Disclosure	Page(s)
<b>Economics</b>				
Disclosure on Management Approach				19
EC1	Direct economic value generated and distributed	Economic performance; employee wages; financial support for suppliers; expenses on philanthropic activities	●	12-13, 56, 63, 67
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Risks and opportunities of climate change; responses to climate change	●	38-39
EC3	Coverage of the organization's defined benefit plan obligations	National pension	●	57
EC4	Significant financial assistance received from government	n/a	●	85
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation	Standard entry level wage compared to legal minimum wage : 379%	●	56
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	Favorable policies for locally-based suppliers not available	●	85
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	Current employment state of local and/or foreign employees	●	54
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	Construction of public infrastructure in and outside of Korea; improvement of social infrastructure for the less privileged class	●	68, 70
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	Creation of indirect economic, social, and environmental values	●	13, 48-51, 63, 67
<b>Environmental</b>				
Disclosure on Management Approach				35
EN1	Materials used by weight or volume	Resource consumption	●	44, 79
EN2	Percentage of materials used that are recycled input materials	Recycled aggregates are used but the amount of use is not being managed at the moment	○	85
EN3	Direct energy consumption by primary energy source	Direct energy consumption	●	44, 79
EN4	Indirect energy consumption by primary source	Indirect energy consumption	●	44, 79
EN5	Energy saved due to conservation and efficiency improvements	Energy saving campaigns at the headquarter	●	38
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	Green housing, green materials; renewable energy projects	●	46-48, 51
EN7	Initiatives to reduce indirect energy consumption and reductions achieved	Energy saving campaigns at the headquarter	●	38
EN8	Total water withdrawal by source	Water consumption	●	44, 79
EN9	Water sources significantly affected by withdrawal of water	None of the company's water resources incur environmental effects	●	44
EN10	Percentage and total volume of water recycled and reused	Reuse of groundwater and rainwater	●	44
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Save the Nakdong River Project (Zone 24)	●	42
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Concern for ecosystem (in tandem with business operation)	●	42
EN13	Habitats protected or restored	Save the Nakdong River Project (Zone 24)	●	42
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	Compliance with the Wildlife Protection Act; Wildlife Protection Code of Conduct	●	42
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	Otters, wildcats, mandarin ducks, Korean buzzards, etc.	●	42, 85
EN16	Total direct and indirect greenhouse gas emissions by weight	Direct and indirect GHG emissions	●	45, 79
EN17	Other relevant indirect greenhouse gas emissions by weight	Other indirect GHG emissions	●	45, 79
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Energy saving campaigns; GHG inventory system	●	38, 39
EN19	Emissions of ozone-depleting substances by weight	n/a	●	85
EN20	NOx, SOx, and other significant air emissions by type and weight	Efforts to reduce air pollutants such as dust	●	40
EN21	Total water discharge by quality and destination	Discharged water management	●	40
EN22	Total weight of waste by type and disposal method	Waste discharge	●	41, 45, 79
EN23	Total number and volume of significant spills	One vessel accident in 2011 which led to oil spill into the ocean	●	85
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	None of the company's hazardous waste are exported overseas	●	85
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	Management of discharged water by installing the remote water quality monitoring system and slit protectors	●	40
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Green construction material development; green housing & construction businesses	●	46-48
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	n/a	●	85
EN28	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	Total fines of 3 million KRW from three environmental accidents; four administrative measures	●	85
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	Noise and vibration	●	41
EN30	Total environmental protection expenditures and investments by type	Expenses on waste treatment	●	41

# GRI Index

● Reported ◐ Partially reported ○ Not reported

GRI Indicator	Description	Reference	Level of Disclosure	Page(s)
<b>Social: Labor Practices and Decent Work</b>				
Disclosure on Management Approach				53
LA1	Total workforce by employment type, employment contract, and region	Current state of employment	◐	54, 78
LA2	Total number and rate of employee turnover by age group, gender, and region	Number of retirees and retirement rate	◐	54
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations	Employee welfare and benefits; employee satisfaction programs	●	57-58
LA4	Percentage of employees covered by collective bargaining agreements	Union membership : 32.4% of total employees (as of 2011)	●	78
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	Immediate notification regarding operational changes	◐	86
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	The Labor Union (which represents the entire employees) operates the Occupational Safety & Health Committee, where quarterly meetings are held	●	86
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region	Domestic/overseas accident rate	◐	74
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	Preventive measures against any risks on employees' and local residents' health due to asbestos removal activities; medical aid for employees	●	42, 57
LA9	Health and safety topics covered in formal agreements with trade unions	Assessment of harmful factors, potential causes of accident by each site, and basic working conditions; activities to improve work safety and environment	◐	86
LA10	Average hours of training per year per employee by employee category	Average training hours per employee : 90 hours (as of 2011)	◐	78
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Encouragement of employees' continuous education in areas such as language, leadership, and other non-work-related programs	●	61
LA12	Percentage of employees receiving regular performance and career development reviews	Performance appraisal and rewards, which is subject to all employees	●	56
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	Current state of the BOD and employees	◐	28, 54
LA14	Ratio of basic salary of men to women by employee category	No gender discrimination when determining wage level	●	86
LA15	Return to work and retention rates after parental leave, by gender	98% of employees who take their parental leave return to work	●	86
<b>Social: Human Rights</b>				
Disclosure on Management Approach				53
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	None, but there are plans to include human rights clauses in significant investment agreements	●	86
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	None, but there are plans to include human rights clauses in significant investment agreements	●	86
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	Educational sessions on prevention of sexual harassment are held more than once a year, targeting all employees	●	55
HR4	Total number of incidents of discrimination and actions taken	None	●	55
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	In-house communicational channels; the Labor Union; the Labor-Management Council	●	57
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	Compliance with the Labor Standards Act, the International Labour Organization's conventions	◐	55
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor	Compliance with the Labor Standards Act, the International Labour Organization's conventions	◐	55
HR8	Percentage of security employee trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	No human rights training on security personnel at the moment	●	86
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	None	●	86
HR10	Percentage and total number of operations that have been subject to human rights views and or impact assessments.	None, but there are plans to execute human rights reviews and or impact assessments on operations	●	86
HR11	Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanisms.	Approximately 400 employee grievances related to human rights resolved in 2011	◐	57

# GRI Index

● Reported ◐ Partially reported ○ Not reported

GRI Indicator	Description	Reference	Level of Disclosure	Page(s)
<b>Social : Society</b>				
Disclosure on Management Approach				53
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting	Minimization of impacts on local communities by undertaking site environmental impact assessment and executing environmental improvement plans	◐	40
SO2	Percentage and total number of business units analyzed for risks related to corruption	Establishment and execution of ethical management policies and action plans	◐	30-31
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures	Current state of employees who have gone through ethical management education	●	31
SO4	Actions taken in response to incidents of corruption	Zero incidents of corruption found after inspection	●	31
SO5	Public policy positions and participation in public policy development and lobbying	Participation in the 'Agreement for Fair Trade and Win-win Growth'	◐	62
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	No such contributions have been made	●	87
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	One case of bid rigging in 2008 (which resulted in fines)	●	87
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Fines of 6.27 billion KRW as a result of bid rigging in 2008	●	87
SO9	Operations with significant potential or actual negative impacts on local communities	Efforts to minimize effects on local communities through systematic environmental management	◐	40-42
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	Efforts to minimize effects on local communities through systematic environmental management	◐	40-42
<b>Social : Product responsibility</b>				
Disclosure on Management Approach				53
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	Environmental impact assessment; asbestos management when demolishing buildings; green housing	◐	40, 42, 46-47
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	None	●	87
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	Green building certifications	◐	46
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	n/a	●	87
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Customer satisfaction activities; customer satisfaction survey	◐	65-66
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	Declaration of the code of ethics to show our commitment to ensuring customer satisfaction and earning customers' trust	◐	30
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes	One warning for exaggerated advertisement of Duryu Outlet in Daegu in 2008	●	87
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	None	●	87
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	None	●	87
<b>Construction and Real Estate Sector Supplement</b>				
Disclosure on Management Approach				19, 35, 53
CRE1	Building energy intensity	Energy intensity of the headquarter and other buildings under Daewoo E&C's ownership	●	79
CRE2	Building water intensity	Water intensity of the headquarter and other buildings under Daewoo E&C's ownership	●	79
CRE3	Greenhouse gas emissions intensity from buildings	GHG intensity of the headquarter and other buildings under Daewoo E&C's ownership	●	79
CRE4	Greenhouse gas emissions intensity from new construction and redevelopment activity	GHG intensity of construction sites	●	79
CRE5	Land remediated and in need of remediation for the existing or intended land use, according to applicable legal designations	No land remediation plans from the application of laws	●	87
CRE6	Percentage of the organization operating in verified compliance with an internationally recognized health and safety management system	OHSAS 18001 certification for the first time in domestic construction industry	◐	73
CRE7	Number of persons voluntarily and involuntarily displaced and/or resettled by development, broken down by project	Plans to establish a management system for tracking such persons are currently under consideration	○	-
CRE8	Type and number of sustainability certification, rating and labeling schemes for new construction, management, occupation and redevelopment	Green building certifications	◐	46

# GRI Statement



## Statement GRI Application Level Check

GRI hereby states that **Daewoo Engineering & Construction** has presented its report “Daewoo E&C Sustainability Report 2011” to GRI’s Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 17 September 2012



**Nelmara Arbex**  
Deputy Chief Executive  
Global Reporting Initiative



The “+” has been added to this Application Level because Daewoo Engineering & Construction has submitted (part of) this report for external assurance. GRI accepts the reporter’s own criteria for choosing the relevant assurance provider.

*The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world’s most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. [www.globalreporting.org](http://www.globalreporting.org)*

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 5 September 2012. GRI explicitly excludes the statement being applied to any later changes to such material.

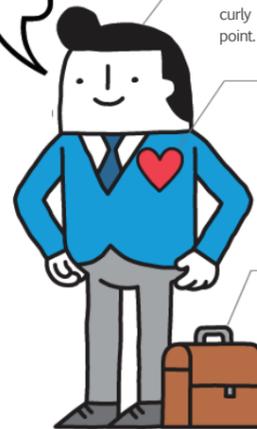
# Membership

Division	Association
<b>Strategic Planning</b>	Federation of Korean Industries, Korea Chamber of Commerce and Industry, Korean Institute of Directors, 21st Century Top Management Club, International Institute for Corporate Management Development, Korea Institute of Construction Culture, Korea-China Friendship Association, Construction Managers Forum, Korea Federation of Construction Contractors, Engineering Financial Cooperative
<b>Corporate Management &amp; Service</b>	Seoul Integrated Disaster Prevention Association, National Emergency Plan Association, Korea Construction Quality Association, Korea Society for Construction Quality, Society for Environmental Construction, Construction Safety Officer Committee, Association of Construction Safety Manager, Korea Industrial Safety Association, Maekyung Safety & Environment Institute, Korea Occupational Safety and Health Agency, Korea Business Council for the Arts, Korea Advertisers Association
<b>Domestic Public Business</b>	Korea Federation of Construction Contractors, Construction & Economy Research Institute of Korea, Construction Association of Korea, Korea Electrical Contractors Association, Korea Information Communication Contractors Association, Korea Fire Construction Association, Korea Specialty Contractors Association, Korea Facilities Maintenance Association
<b>Overseas Business</b>	Korea International Trade Association, Korea Plant Industries Association, Korea-Middle East Association, Korea-Vietnam Friendship Association, Korea-Arab Society, Korea-Algeria Friendship Association
<b>Civil Project</b>	Korean Society of Civil Engineers, Korean Tunneling and Underground Space Association, Korean Society for Rock Mechanics, Korean Geotechnical Society, Korea Road & Transportation Association, Korean Society of Road Engineers, Road Engineering Association of Asia & Australasia, ITSKOREA, Korea Road Forum, Korean National Committee on Large Dams, Korean Wetlands Society, Korea Water Resources Association, Korean Society of Water and Wastewater, Korean Society for Railway, Korea Railway Association, Korea Port & Harbor Association, Korean Society of Coastal and Ocean Engineers, Korean Institute of Landscape Architecture, Korean Society of Hazard Mitigation, Korea Engineering Association, Computational Structural Engineering Institute of Korea, Korean Society for Advanced Composite Structures, Korean Society of Steel Construction, Korean Society of Transportation, Korean Geo-environmental Society, Korean Geo-synthetics Society, Korea River Association
<b>Building Works</b>	Korea Construction Value Engineering Research Institute, Korea Military Supplies Cooperative, Korean Institute of Illuminating and Electrical Installation Engineers, Korean Institute of Electrical and Electronic Material Engineers, IBS Committee, Society of Air-Conditioning and Refrigerating Engineers of Korea, Korean Association of Air Conditioning Refrigerating and Sanitary Engineers, Korean Society of Living Environment System, Korea Institute of Ecological Architecture and Environment, Korea Green Building Council, Korea Society of Geothermal Energy Engineers, Korea Institute of Architectural Sustainable Environment and Building Systems, Korean Institute of Fire Science & Engineering, Korean Institute of Electrical Engineers, Korea Institute of Construction Engineering and Management, Korean Recycled Construction Resource Institute, Korea Institute for Structural Maintenance Inspection, Korean Society of Disaster Information, Architectural Institute of Korea, Council on Tall Buildings and Urban Habitat, Korea CPTED Association, Korea Institute of Building Construction
<b>Housing</b>	Korea Housing Association, Korea Remodeling Association, K-Housing Association, Korean Institute of Female Architects, Korean Institute of Landscape Architecture, Korea Society of Environmental Restoration Technology, Korean Institute of Traditional Landscape Architecture, Korea Association for Eco-environmental Greenspace on Artificial Ground
<b>Plant</b>	Korea Institute of Plant Engineering & Construction, The Korean Institute of Electrical Engineers, Korea Plant Industries Association (PEA Club), Korea Plant Industries Association (Plant Friendship Association), Korea Gas Union, Automatic Waste Collection Technology Association, Korea Organic Resource Recycling Association, Korea Association of Waste to Energy Technology, Korea Society of Waste Management, Korean Society of Mechanical Engineers (Energy Power Sector), Korean Offshore Wind Power Society, Korea Atomic Industrial Forum, Korean Institute of Power Electronics, Korea Institute of Project Management Technology, Korea Nuclear Society, Korean Radioactive Waste Society, Korea Coating Experts Society, American Nuclear Society (Korea Branch), Korea Nuclear Association for International Cooperation, Korea Electric Engineers Association
<b>Finance</b>	Korea Listed Companies Association, Listed Companies CFO Forum, Korea CFO Association
<b>Procurement &amp; Cost Management</b>	Korea International Trade Association
<b>Institute of Construction Technology</b>	Korea Industrial Technology Association, Korea Construction New-Technology Association, Korea Concrete Institute, Earthquake Engineering Society of Korea, Korea Institute of Construction Technology, Korea Institute of Science and Technology Information, Architectural Institute of Japan, Information Society of Japan Construction Information Center, Japan Association of Wind Energy, Japan Society of Civil Engineers, American Concrete Institute, American Society of Civil Engineers, Federation Internationale du Beton, Building SMART Korea

**Mascot of Daewoo E&C**

Hello!  
Would you like to hear  
**the story of  
Daewoo Jung?**

**Name:** Daewoo Jung  
- Born in 1973 (40 years old)  
- Family members:  
wife, son(6 years old),  
daughter(4 years old)  
- Blood type: A  
- Facebook:  
[www.facebook.com/  
JungdaewooStory](http://www.facebook.com/JungdaewooStory)



He's interested in the future, the environment, nature, and children. He has a sense of humor, despite the smart and gentle looks! He has a habit of resting his chin on his hand while swinging his body sideways when he is deep in thought. He believes that his naturally curly hair is a source of his energy and a charming point.

He enjoys to think outside of box and loves challenge. He has an optimistic attitude and finds happiness in making the impossible possible!

He is honest and does not put up with injustice; at the same time, he is an affectionate, warm-hearted humanist.

He was born in 1973, when Daewoo E&C was founded. He is a sales engineer with 11 years of service and has three years of work experience at the operation in Nigeria.

**Contact Us**

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