

# Environmental Management

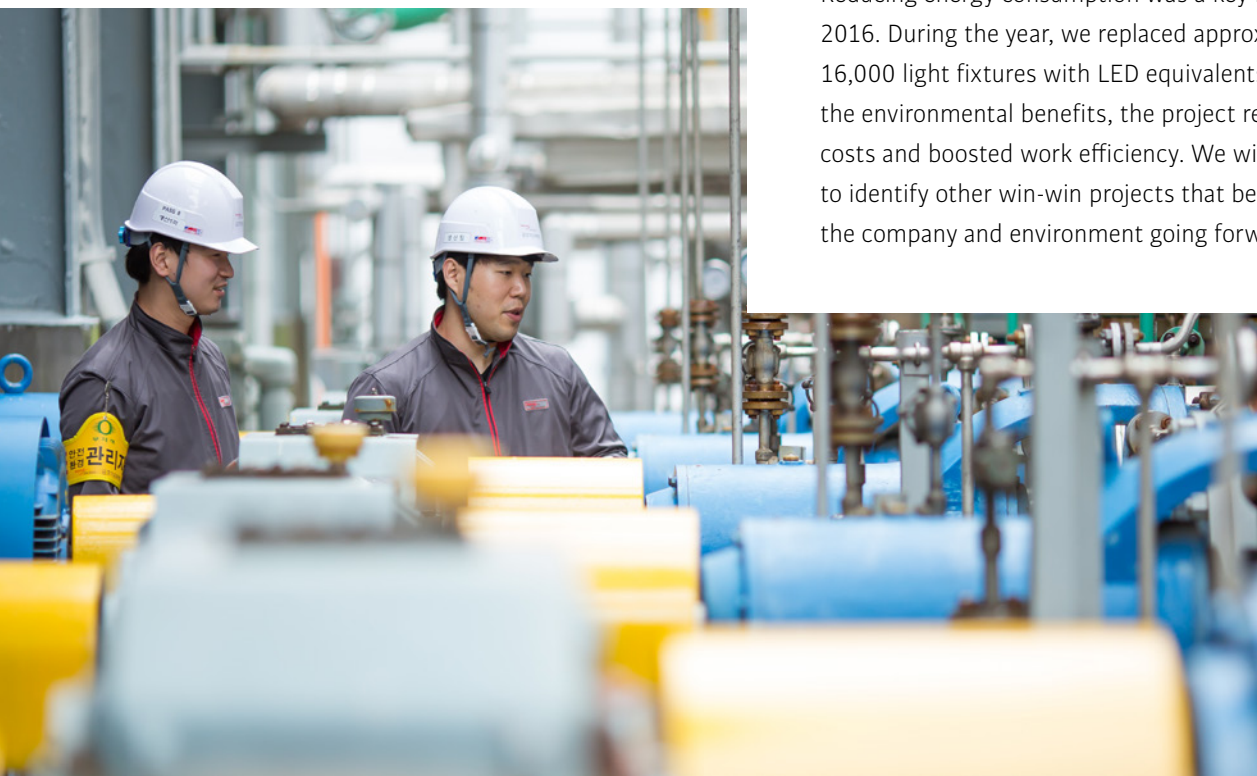
THE IMPORTANCE OF ENVIRONMENTAL ISSUES CONTINUES TO INCREASE WITH INDUSTRIAL DEVELOPMENT. WE BELIEVE THAT ENVIRONMENTAL ISSUES ARE NOT ISSUES LIMITED TO A SPECIFIC REGION OR COUNTRY. THEY ARE GLOBAL ISSUES THAT REQUIRE A COORDINATED GLOBAL RESPONSE. SINCE WE ANNOUNCED OUR ENVIRONMENTAL VISION IN 2008, ENVIRONMENTAL, HEALTH, AND SAFETY (EHS) HAVE BEEN KEY AREAS OF FOCUS FOR US. IN STEP WITH DOMESTIC AND INTERNATIONAL TRENDS, WE CONTINUE TO UPGRADE OUR COMPLIANCE, CLIMATE CHANGE RESPONSE, AND EHS SYSTEMS AND MANAGEMENT.

## EHS Initiatives

Our vision is to be a company that creates the future by meeting the needs of humanity and the environment. Toward this end, we have updated our environmental, health, and safety policies and established a long-term strategy and action plan that we are now making concrete progress on. We continued to update our policies in 2016 in response to our changing environment and business direction.

Our environmental initiatives cover a wide range of areas including air quality, water quality, and waste generation. In each of these areas, we have set performance targets that we continually monitor and manage to ensure they are met. We strictly comply with all legal standards regarding the discharge of harmful substances and voluntarily participate in off-site environmental clean-up efforts. These ongoing efforts have enabled us to maintain the highest possible certification level for our environmental management system.

Reducing energy consumption was a key focus in 2016. During the year, we replaced approximately 16,000 light fixtures with LED equivalents. Beyond the environmental benefits, the project reduced fixed costs and boosted work efficiency. We will continue to identify other win-win projects that benefit both the company and environment going forward.

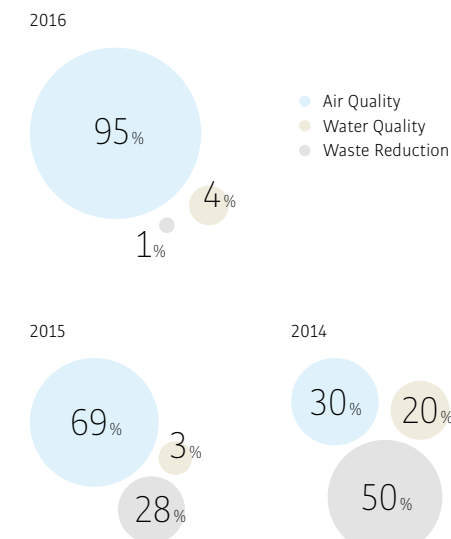


## Regulatory Compliance

We continually monitor and adapt to laws and regulations that affect the chemical industry. We have implemented a chemical management system (KCMS) that enables us to respond to and comply with both the letter and intent of Korea's Act on the Registration and Evaluation of Chemicals (K-REACH) and the recently enacted Clean Air Conservation Act.

The Clean Air Conservation Act sets clearer standards targeting the reduction of hazardous air pollutant emissions. These pollutant emissions are measured once annually. Facilities that fail to meet the standard must be upgraded and monitored to ensure they do so. We are currently in the process of putting in place the necessary facilities to ensure we are able to meet our responsibility to manage emissions and comply with legal mandates. Once the facilities are in place, we will be installing an integrated leak detection and repair system (LDAR) that will monitor components prone to leaking such as valves, connectors, and pumps. We have also upgraded all pumps to either dual mechanical seal or sealless equipment to meet target standards for all chemicals subject to control.

## Environmental Investment



### Environmental Vision

We aspire to be a company that creates the future by meeting the needs of humanity and the environment.

### Long-term strategy

- 1  Develop eco-friendly products
- 2  Reduce energy consumption and emissions
- 3  Play a leading role globally in EHS
- 4  Strengthen system capabilities

## System Overview

Our corporate-wide EHS system starts with the CEO and extends all the way down to the environmental and safety teams at each plant site. Each site operates an integrated management system covering all aspects of the environment, safety, and health for effective oversight.

In addition to the corporate safety and environment committee, which takes up major issues, plant management presides over regular meetings to focus on local issues. Beyond upgrading our emergency response system, we continue to focus on accident prevention, initial accident response, and post-accident measures as we work to ensure we are capable of providing a comprehensive, timely response to any situation.

## Investment & Oversight

In addition to ongoing initiatives to replace facilities that have reached the end of their service life, we are actively increasing investment in facilities designed to prevent environmental and safety accidents. Augmenting comprehensive inspections encompassing the machinery, piping, electrical, and instrumentation areas, we hold monthly safety inspection days to give both us and our suppliers time to conduct internal safety inspections. We also highlight local safety issues on bulletin boards at each plant as well as arranging regular third-party inspections to further enhance safety awareness.