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# **1.1 Report profile**

#### Reference guidelines

For stakeholders of USI Corporation (USI) to understand how we fulfill corporate social responsibility, we prepare this report to be "In Accordance – Core" with the Global Reporting Initiative (GRI) G4 Guidelines and the Corporate Social Responsibility Best Practice Principles for TWSE/TPEX Listed Companies. We also take reference from The UN Global Compact's Ten Principles and ISO 26000 Guidance on Social Responsibility as reporting frameworks.

#### Scope and boundaries of the report

This report covers USI Corporation, including the Taipei Office, the Kaohsiung Plant, the Linkou R&D Division, the Tainan Office, and the USI Education Foundation. Other subsidiaries presented in the consolidated financial statements are not covered in this report. Whenever information in this report touches upon these subsidiaries, ample clarification is given. Regarding the reporting period, this report provides a summary of the activities in year 2016 (January 1, 2016 to December 31, 2016). The report includes financial, environmental, and social management and performance. Financial information presented in this report are consistent with the financial information in the financial statement CPA-certified financial statement. Some statistics are extracted from the annual report, government agencies, and public information on the internet.



#### Editing process

The 2016 CSR Report has been proofread and revised by the USI Project Management Department and Group Planning Department.

The 2016 CSR Report has been assured (limited assurance) by Deloitte Taiwan.

### Report guarantee

This report passed Deloitte Taiwan's external assurance in June 2017 with reference to the "In Accordance – Core" of GRI G4 Guidelines and ISAE 3000 Revised. Please refer to Appendix 8.3 for the Assurance Report.

# History and time of publication



# Contact

You can download report-related information from the "Corporate Social Responsibility" section of our corporate website at http://www.usife.com.tw/. Should you have any comment or suggestion for our report, please feel free to contact us at:

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# 1.2 Message from the Chairman

There were all kinds of challenges and uncertainties in the global petrochemical market in 2016. The demand for EVA solar packaging films stagnated as ethylene supply was insufficient to support the EVA/PE prices in the first half of the year and China's reduction of solar energy subsidiary in Q3. Thanks to the strong demand rebound from the bottom in China in Q4 that the overall EVA/PE prices recovered and sales prospered. Through the concerted effort of all employees, the net profit before tax reached NT\$1.283 billion, a steady growth over the past three years. The annual EVA/PE sales reached 260,075 m.t., increased by 23,259 m.t. from last year. New EVA capacity started operation in the middle of last year and sales were smooth, creating a new high in our history. In response to the future demand for larger warehouse space, we invested in an automated storage and retrieval system (AS/RS) to increase storage capacity by 200,000 m.t. and to automate stock management with big data.

With the increasing concern for energy conservation, emissions reduction, and various sustainability issues, as a chemical manufacturer, USI has never spared effort to promote environmental sustainability. Apart from formulating regulations for environmental protection, energy conservation, and emissions reduction in respect of government regulations, we have proactively improved production processes, established annual energy saving items and annual energy saving rates, built the modified recovery treatment system and regenerative thermal oxidizer (RTO), reduced emissions and effectively processed volatile organic compounds (VOCs), planned the effluent reclamation system, and enhanced the recycling and reuse of water resources. In return, we were awarded the "2016 Enterprise with Outstanding Achievements in Allowable Reduction" by the Kaohsiung City Environmental Protection Bureau.

After the 2014 Kaohsiung gas explosions, we began paying extra attention to the safety of ethylene transmission pipelines. We have further established the "Existing Industrial Pipeline Maintenance and Operation Program", which includes a pipeline safety management system; a pipeline information management system; a pipeline integrity management plan; pipeline patrol; pipeline maintenance, repair, and check; pipeline operation and control room management; and pipeline emergency responses and tests. Thanks to the faithful implementation of all employees, pipelines 6 and 8 of the Kaohsiung Plant were rated the best in the Kaohsiung City Industrial Pipeline Regional Joint Defense Federation by the Industrial Development Bureau, Ministry of Economic Affairs.

Many changes have emerged in the global petrochemical industry in recent years. They included the rise of the petrochemical industry in emerging regions and the shale oil mining in North America, which have intensified competitions and increased challenges in the industry. In order to pursue sustainable operations against unfavorable conditions including ethylene supply shortages and increasingly stricter regulations, apart from continuously reinforcing local investments in commercial CBC plants, new EVA production lines, and AS/RS, we have established Fujian Gulei Petrochemical Co. Ltd. in Zhangzhou City, Fujian Province, in collaboration with domestic petrochemical companies. It is an integrated refining and chemical plant located in the Gulei Development Zone for the vertical integration of upstream, midstream, and downstream petrochemical products to stabilize upstream material supply and vertically integrate petrochemical refining and petrochemical intermediate raw materials and plastic products, in order to increase competition niche for deploying the Greater China market and demonstrate USI's efforts to create a future in global competitions.

Incessant care for employees and social participation are our commitments for sustainable operations. We value the health and safety of employees and their balance of work and life. After the "one fixed day off and one flexible rest day" policy was implemented, apart from making necessary adjustments to abide by the law, we did not sacrifice the work condition and benefits of employees. Our low employee turnover rate has reflected employees' recognition of our care policy. In caring for society, to extend the spirit of "giving back", we offer scholarships and grants to colleges and universities and subsidize social service groups through the USI Education Foundation to encourage outstanding students from low-income families to study hard and young students to engage in volunteer services. In addition, we continuously sponsor the Alliance Cultural Foundation and Junyi Experimental High School to express our care



for vulnerable groups as well as rural and environmental and ecology education. When Renai Elementary School in Taitung was badly damaged, including the roof and all books of the school library, by typhoon Nepartak in July 2016, we financed the hardware re-construction of the campus and recruited employees to donate up to 1,000 pre-owned children's books to rebuild the library and enrich its resources.

In support of the increasing importance of nonfinancial information disclosures, we have hired Deloitte Taiwan to conduct a limited assurance on the indicators disclosed in the fourth CSR report published in June 2017 in order to share our CSR achievements in an honest and responsible manner. Looking out into the future, we will continue to cultivate Taiwan, practice corporate governance, implement environmental protection, proactively respond to issues that concern shareholders, customers, partners, and all stakeholders, hoping to contribute to the sustainable development of Earth and to create a future with co-prosperity that favors all.

Quintin Wu Chairman USI Corporation

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# 1.3 2016 sustainability performance



# 1.4 Company profile

# About USI

USI Corporation (TWSE: 1304) was established on May 26, 1965 and established Taiwan's first LDPE plant. We primarily develop, produce, and sell polyethylene (PE) resins at our plant in Renwu District, Kaohsiung City as well as Taipei Office in Neihu District, Taiwan.

# < Basic data

Company	USI Corporation		
Industry	Plastics industry		
Headquarters location	No. 330, Fengren Road, Renwu District, Kaohsiung City		
Taipei Office	12F, No. 37, Jihu Road, Neihu District, Taipei City		
Capital	Over NT\$11.4 billion (as per December 31, 2016)		
Major products	<ul> <li>Ethylene Vinyl Acetate Copolymer (EVA)</li> <li>Low Density Polyethylene (LDPE)</li> <li>High Density Polyethylene (HDPE)</li> <li>Linear Low-Density Polyethylene (LLDPE)</li> <li>PE resins become all kinds of plastics products in daily life after processing by downstream manufacturers.</li> </ul>		
Employees	460 persons (as per December 31, 2016).		

<sup>1</sup>Employees do include 451 persons on a non-fixed-term contract and nine on a fixed-term contract.

# **Locations**

Major locations are located in Taiwan, including Taipei Office, the Linkou R&D Division, the Tainan Office, and the Kaohsiung Plant. The Kaohsiung Plant comprises Plant I for LDPE and EVA, as well as Plant II for HDPE and LLDPE.



# Major products

As a key PE manufacturer in Taiwan, we make continual improvement to improve product quality and increase product quantity and supply excellent products to numerous downstream processors to raise the standard of processed products and cultivate markets with them. Our PE range covers the following four products:



# Participation in external organizations

We exchange with various professional organizations. Through external influence and the interaction and sharhing of accociations, we promote the professional growth of technologies and competencies in various fields. We also support associations and unions to publish journals and organize activities to promote industrial development.

Name of Organization	Member	Committee member	Supervisor/ Director	Consultant
Petrochemical Industry Association of Taiwan	•	٠	٠	•
Taiwan Synthetic Resins Manufacturers Association	٠	٠	٠	
Taiwan Plastics Industry Association	•		٠	
Taiwan Synthetic Resin & Adhesives Industrial Association	٠			
Taiwan Responsible Care Association (TRCA)	•			
Chinese National Association of Industry and Commerce, Taiwan	٠			
Chinese National Federation of Industries	•		٠	
Taiwan Institute of Chemical Engineers	٠			
Taiwan Chemical Industry Association	٠			
Audit Bureau of Circulations	•			
Taiwan Technology Industry Legal Officers Association	٠			
Chinese Society for Quality	•	٠	٠	
Kaohsiung County Industrial	•			

#### Participation in Major External Organizations in 2016

# **1.5 About USI Group**

USI Corporation is one of the affiliates of the USI Group, with USI Corporation as the subject of this report. USI Corporation established in 1965 is the precursor of the USI Group. In 1997, we and UPC Technology Corporation acquired the controlling shares of the Huasu Group (USI 80% and UPC 20%). This was the onset of our leadership in Taiwan's petrochemical and plastics industries. To improve the group's business performance, the USI Group began integration with six homogeneous affiliates, i.e. petrochemical and plastics industries, including: USI, APC, TVCM, CGPC, TTC, and CGTD and promoted resources integration and planning. In March 2001, the group founded USI Management Consulting Corporation (UM) and six petrochemical affiliates. Except for manufacture, sales, and special function projects, UM takes over the general management of these six petrochemical affiliates to strengthen the synergy of integration of the group's common service functions. About US

In 2001 Q2, the group affiliates moved to the USI Offices Building in Neihu Technolory Park to cope with future development and integrate all service functions of affiliates within the group. Apart from enhancing overall competitiveness, this enables routine staffing functions to aim at strategic goals. Through effective group resource integration and with the solid foundation accumulated from years of experience in the petrochemical and plastics industries, the group successfully expanded its scope of business to electronics, materials, and venture capital.

Note1: Four USI subsidiaries, including Asia Polymer Corporation(APC), China General Plastics Corporation (CGPC), Taita Chemical Company, Limited (TTC), and Acme Electronics Corporation (ACME), have published own CSR reports as of 2015.

Note2: Please refer to the 2016 consolidated statement available on the "Investor Relations" subsection of the "Financial Reports" section on the corporate website of USI Corporation at http://www.usife.com.tw/.



# Corporate Social Responsibility

manner manner

- 2.1. Goals for sustainable operations
- 2.2. CSR Committee
- 2.3. Stakeholder identification and communication
- 2.4. Analysis and identification of material topics

2.1 Goals for sustainable operations				
	Short-Term Goals (under 2 years)	Long-Term Goals (2 or more years)		
Governance	<ul> <li>Optimizing new EVA production lines and developing products of high added value.</li> <li>Smooth commissioning and operation of the CBC plant in 2017.</li> <li>Reinforcing vertical integration.</li> <li>Enforcing ethnical management and legal compliance.</li> <li>Regularly following up all risk factors and making timely adjustments of plans.</li> </ul>	<ul> <li>Investing in Gulei Refining &amp; Chemical Plant Project to stabilize upstream materials supply.</li> <li>Developing CBC optical materials and their applications.</li> <li>Cultivating Taiwan and continuing local investments.</li> <li>Establishing a system for the management of all risk factors and supervision of operations.</li> <li>Continuing the development and research of high-value products.</li> </ul>		
Environmental protection	<ul> <li>Building solar panels for PV generation, with phase I targeted at the end of 2018.</li> <li>Continuously reinforcing ESH supervision and implementation.</li> <li>VOCs reduction and improvement plans.</li> <li>Planning the effluent reclamation system and water quality monitoring system.</li> <li>Rainwater reclamation system.</li> <li>Ensuring the transmission safety of underground pipelines.</li> <li>Reducing pollutants emission.</li> </ul>	<ul> <li>Continuously promoting energy conservation and emissions reduction.</li> <li>Continuously building solar panels for PV generation.</li> <li>Implementing the "Four Zero Targets": Zero Pollution, Zero Emission, Zero Industrial Accident, and Zero Occupational Hazard.</li> <li>Enhancing material recovery efficiency.</li> <li>Enhancing the recycling and reuse rate of water resources to reduce effluent discharge.</li> <li>Increasing the value of reclaimed value for boiler use.</li> <li>Establishing a system for long-term supervision of underground pipelines.</li> </ul>		
Social relations	<ul> <li>Continuously taking care of the mental and physical health of employees.</li> <li>Maintaining labor-management harmony and protecting labor rights and benefits.</li> <li>Reinforcing industry-academia cooperation.</li> <li>Continuously contributing to communities and offering suitable job opportunities.</li> <li>Continuously sponsoring charitable activities.</li> <li>Increasing channels for stakeholder communication.</li> </ul>	<ul> <li>Optimizing the supplier/contractor evaluation system.</li> <li>Establishing scholarships and grants, donating to the Alliance Cultural Foundation, and sponsoring Junyi Experimental High School to care for vulnerable groups, the rural, and the environment and ecology.</li> </ul>		

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# 2.2 CSR Committee

With the support of top management, USI officially established the Corporate Social Responsibility Committee (CSR Committee) in 2014. Members of the CSR Committee include the chairman as the committee chief, the president as the deputy committee chief, committee members appointed by the chairman, the project secretary, and leaders of the three CSR working teams: Corporate Governance Team, Environmental Protection Team, and Social Relations Team to ensure CSR policies are effectively managed and implemented.



Member	Prime Mission			
Deputy Chief	To host CSR Committee meetings. To decide on proposals discussed in CSR Committee meetings.			
Project Secretary	To arrange and call for CSR committee meetings. To supervise and coordinate working teams to implement tasks. To host working team meetings. To compile and write the annual CSR report.			
Three Working Teams	Corporate Governance Team Communicate with investors, customers, suppliers, and government agencies on topics we face for achieving sustainable operations to maintain trust between our company and our stakeholders. Environmental Protection Team Integrate internal resources to plan and implement measures relating to environmental protection, energy conservation, emissions reduction, and occupational health and safety; follow up and review implementation outcomes; and discuss topics in environmental protection that are key to meeting stakeholder expectations. Social Relations Team Communicate with employees, community residents, and non-profits on topics relating to employee care and social engagement to contribute to the creation of an equitable, safe, and harmonious justice.			
Working Team Leaders	Internal and communication and coordination of a team and enforcement of team-related CSR work.			
Team Members	Heads or representative assigned by related departments to gather data for relevant topics, write the report, and set goals and future planning.			

#### Operation of CSR Committee

Every year, the CSR Committee presents the CSR outcomes to BOD that supervises and reviews the processes and outcomes of the committee's governance, environmental, and social-related work. The CSR Committee also asks BOD for its comments and suggestions on major CSR topics.

# 2.3 Stakeholder identification and communication

The trust and support of stakeholders make us push even more for sustainable development. Stakeholders are those who affect or are affected by an organization's operations or whom the company is responsible and of which it is obliged to respond. Through pro-active and extensive communication with stakeholders, we can adequately understand and respond timely to the concerns and topics raised by them. These can help us sustain our improvement and growth. With reference to the AA1000 Stakeholder Engagement Standard (AA1000SES) and taking into account the opinion of all units and the experience of other plastics manufacturers, we have identified the following seven major stakeholder groups: employees, customers, shareholders/ investors, suppliers/contractors, government agencies, community residents/local groups, and nonprofit organizations (NPOs)/environmental protection groups.



# Channels of communication and concerned topics raised by stakeholders

We uncover the concerned topics raised by stakeholders through various communication channels and use these as major references for the content of our CSR reports and future CSR development. We also rely on the CSR reports to communicate with to stakeholders and promote exchange between the company and stakeholders to pursue mutual progress and growth. The following table shows the channels, frequency, and concerned topics of communication between this company and major stakeholder groups.

Stakeholder	Communication Channel	Communication Frequency	Concerned Topics	Response Summary
Employees	New employee interviews Performance interviews Labor/management meetings Union board meetings Union general meetings Employee Welfare Committee Occupational Safety & Health Committee ESH Management Committee Labor Pension Fund Supervisory Committee Internal health forums Education/training On-site tour inspections	Interviews with relevant officers of all levels Regularly Quarterly Quarterly Annually Semiannually Quarterly Quarterly Semiannually At least five times a year As planned At any time	Labor/management relations Employee benefits and rights Talent cultivation, education, training Performance management system Career development OSH Communication management and suggestion system Organizational operations and visions Ethics and integrity	At the 1 <sup>st</sup> Labor/ Management Meeting of the tenth session held on June 17, 2016, labor proposed the re-adjustment of proportion of candidates for model employee selection of each unit. A resolution was made to adjust the proportion based on the previous criteria and implement in the 2017 model employee selection (from 9 to 12 candidates).
Customers	Customer satisfaction survey Participation in trade fairs Sales visits "Contact us" on the corporate website Contact by phone/email	Semiannually At least once a year At least once a year At any time Irregularly	Product information, quality, and delivery time. After-sales service and complaint channels. Customer privacy Technological R&D	In 2016, we received 523 customer messages from "Contact Us", and all were addressed through the electronic tracking system
Suppliers/ contractors	Supplier evaluation Participation in industry exchange and forums Interviews with purchasers Contact by phone/email "Contact us" on the corporate website	Semiannually At least once a year Irregularly Irregularly At any time	Supply chain management Fair and open procurement practices OSH Ethics and integrity	To enforce ethnical management and proactively prevent unethical behaviors, we sent the "Supplier Honesty & Integrity Agreement" to all suppliers and request them to sign it in early November 2016.
Government agencies	Participation in law and regulation promotional activities or public hearings. Participation in forums or seminars Official documents, material information Market Observation Post System	Irregularly Irregularly As prescribed by law As prescribed by law	Legal compliance and policies Corporate governance and operations Transparency of information disclosure	Discussion session of the public hearing on the "Kaohsiung City Air Pollutant Emission Standards for Burning Equipment" on July 13, 2016. Awareness education activity on pollution control and emission standards of VOCs on August 22, 2016. Awareness education activity on the air pollution fee on August 24, 2016.

Stakeholder	Communication Channel	Communication Frequency	Concerned Topics	Response Summary
Shareholders/ investors	Annual general meetings of shareholders Market Observation Post System Annual reports Financial statements "Investor Service" site on the corporate website Contact information of spokespersons "Shareholder Service" section on the corporate website. "Audit Committee Email" on the corporate website CSR reports Investor Conference	Annually As prescribed by law Annually Quarterly At any time At any time At any time At any time At any time Annually Every 3 years	Status of operations and financial performance Corporate governance Risk management Disclosure of real- time information Communication channels Dividend distribution	Shareholders' meeting on June 8, 2016
Community residents/ local groups	"Contact us" on the corporate website Visits on local groups Participation in community activities Interview or phone contact	At any time At least three times a year Irregularly Irregularly	Social engagement Employment opportunities Industrial safety and environmental protection	Local residents and groups reflected the noise problem of our plant via "Contact Us". After making improvements in 2016, noise level was reduced within the standard.
NPOs/ Environmental Protection Groups	Involvement with charitable activities Participation in community activities Market Observation Post System "Contact us" on the corporate website "CSR email" on the corporate website	Irregularly Irregularly As prescribed by law At any time At any time	Cooperation with charities Befriending with neighbors and requiting society Industrial safety and environmental protection Labor rights and diversity and equal opportunity	We offered emergency financial assistance to the Zhuhou Community Development Association in Renhu District.

# 2.4 Analysis and identification of material topics



To ensure the completeness of topic inclusiveness, we collect information of concerned topics raised by stakeholders through comprehensive channels, take reference from the 46 material aspects in the GRI Sustainability Reporting Guidelines G4 and trends in industry sustainability topics at home and abroad, and check whether the information disclosed in this CSR report effectively respond to concerns raised by stakeholders through the "Stakeholder Questionnaire Survey" on the corporate website. We collected 211 valid questionnaires. In addition, we collected 24 questionnaires internally on evaluating the "impact on USI" of each topics in terms of governance, environmental, and social aspects based on the expertise the CSR Committee members.

#### Identification of material topics

After analyzing the "materiality of stakeholder concerns" and "materiality of impacts on USI" of the topics to produce the matrix of material topics in 2016 based on the results of the above two sets of surveys, we held the CSR Committee meeting for committee members to discuss and identify each topic. After collation, we completed the "Matrix of USI Material Topics 2016" and identified 15 topics of high concern and impact as the focus of priority disclosure and response in the 2016 CSR Report.



#### Matrix of USI Material Topics 2016

#### **Material Topics**



Corporate Social Responsibility

# ldentification of material topics: GRI G4 aspects

Material Topic	GRI G4 Category and Aspect	Response
Operating performance	EC: Economic Performance	4.1 Financial performance
Local major investments	EC: Indirect Economic Impacts	4.2 Major investments
Legal compliance	EN: Compliance SO: Compliance PR: Compliance	3.3 Compliance
Technology R&D	EC: Economic Performance	4.1 Financial performance
Raw material management	EN: Materials	5.2 Source management
Energy consumption and management	EN: Energy	5.4 Promoting energy conservation and emissions reduction
Water resources management	EN: Water EN: Effluents and Waste	5.5 Green production
GHG emissions	EN: Emissions	5.4 Promoting energy conservation and emissions reduction
Air pollution control	EN: Emissions	5.5 Green production
Waste management	EN: Effluents and Waste	5.5 Green production
Noise control	EN: Products and Services	5.5 Green production
Product and service responsibility	EN: Products and Services PR: Product and Service Labeling	<ul><li>4.4 Product responsibility and customer service</li><li>5.6 Green services and products</li></ul>
Recruitment and retention	LA: Labor/Management Relations LA: Diversity and Equal Opportunity LA: Equal Remuneration for Women and Men LA: Training and Education	<ul> <li>6.1 Workforce structure</li> <li>6.2 Employee turnover</li> <li>6.3 Employee rights and benefits</li> <li>6.4 Talent cultivation and development</li> </ul>
Occupational safety and health	LA: Occupational Health and Safety	6.5 Occupational safety and health

EN: Transport SO: Local communities 5.3 Industrial and public safety management

# Identification of the boundaries of material aspects

	Within Organization			Outside of Organization						
GRI G4 Category and Aspect	Taipei Office	Linkou R&D Division	Tainan Office	USI Kaohsiung Plant	Shareholders/ investor	Customers	Suppliers/ contractors	Government	Community/ Local groups	NPOs / environmental protection groups
EC: Economic Performance	•	٠	•	•	•					
EC: Indirect Economic Impacts	•	٠		٠	٠	٠	٠	٠	٠	
EN: Materials				•						
EN: Energy								•		
EN: Water				•				•		
EN: Emissions				٠				٠	٠	•
EN: Effluents and Waste				•				•	•	•
EN: Products and Services	٠	٠	٠	٠		٠	٠			
EN: Transport								•	•	
EN: Compliance				•	•			٠	٠	
LA: Labor/ Management Relations	•	•	•	•						
LA: Occupational Health and Safety	٠	٠	٠	٠			٠			
LA: Training & Education			•	•						
LA: Diversity and Equal Opportunity	٠	•	٠	٠						
LA: Equal Remuneration for Women and Men	٠	٠	٠	٠						
SO: Local Communities				٠				٠	٠	
SO: Compliance	٠	٠	٠	٠	٠			٠		•
PR: Product and Service Labeling	٠	•	٠	٠		٠		2016 USI	Corporation	CSR Report
PR: Compliance		٠		•	٠	٠	•	٠		

#### Material aspects disclosed in this report



# **Corporate Governance**



- 3.1. Governance framework
- 3.2. Board of directors
- 3.3. Compliance
- 3.4. Risk management

3.5. Audit operation and communication channels

# 3.1 Governance framework

# Framework USI's management organization



# 3.2 Board of directors

#### Composition and operation of the board of directors

At USI, the board of directors (BOD) is the highest governance body making all corporate decisions. Its duty includes the establishment of a good BOD governance system; supervision, appointment, and direction of the company's management; strengthening of management functions; and taking charge of the company's overall economic, social, and environmental performances to maximize the rights and benefits of stakeholders and lead USI to grow continuously and pursue suitable operations.

Current team	June 6, 2014-June 5, 2017
Members	Directors: Quintin Wu (chairman), King-shiu Yu, Sho-song Wu, Jerry Chang (president), Xin-hui Zhou, and Guang-zhe Huang. Independent directors: Sean Chen, Rick Tsai, and Yancey Hai
Average age	75.7 years old.
Operation	<ol> <li>BOD holds at least one board meeting a quarter in accordance with the "Rules for the Procedure for Board Meetings" to supervise and discern the execution of business plans, presentation of financial statements, audit reports, and follow up improvements.</li> <li>Six board meetings were held in 2016, and the average attendance rate (excluding attendances by proxy) of all directors was about 83%.</li> </ol>
Further education	<ul> <li>Self-organized programs in 2016</li> <li>1. Optimizing Corruption Detection and Trade Secrete Protection and Reinforcing Governance (2016.7.12)</li> <li>2. Preventing Insider Trading (2016.11.17)</li> </ul>

Note:The background data, education attainment, concurrent positions in other companies, and board meeting attendances of BOD members have been disclosed in USI's annual report. USI annual reports are available for enquiries from the MOPS website and our corporate website (http://www.usife.com.tw/).

#### Remunerations for directors (including independent directors)

Increment (NT\$)	Director
Below 2,000,000	King-shiu Yu, Sho-song Wu, Xin-hui Zhou, Guang-zhe Huang, Sean Chen, Rick Tsai, and Yancey Hai
2,000,000-4,999,9999	-
5,000,0000-9,000,000	Chengli Property Ltd., Quintin Wu
10,000,000-14,900,000	Jerry Chang

Note:Including remunerations for directors (compensation, pensions, remunerations, remuneration for directors, and pay for professional practice) and remunerations for concurrent personnel (wage, bonus, special allowances, pensions, and compensation for employees).

# Audit Committee and Remuneration Committee

To enforce governance; exert BOD's professional competencies; encourage managers to exercise due management diligence; improve management performance, core competitiveness, and short-term, medium-term, and long-term profitability; and create value for shareholders, we have established the Audit Committee under the BOD. The committee supervises and assesses USI's operational risks and the Remuneration Committee to assess the salary and remuneration policies and systems of USI directors and managers based on professional and objective judgments and give suggestions for the BOD, in order to strengthen governance with the expertise of individual functional committees.

Committee	Duties and Functions	Operation
Audit Committee	<ul> <li>Establish and revise the internal control system and supervise its operation.</li> <li>Establish and revise the operating procedures for major financial activities and supervise their operation.</li> <li>Select CPAs and supervise on their independency.</li> <li>Appoint and discharge financial/accounting/audit officers.</li> <li>Supervise the suitability of financial statements.</li> </ul>	<ul> <li>Formed by three         <ul> <li>independent directors.</li> </ul> </li> <li>Hold at least one committee         meeting a year.</li> <li>Held six meetings in 2016</li> <li>Actual attendance rate:         <ul> <li>83%</li> </ul> </li> </ul>
Remuneration Committee	<ul> <li>Establish and review systems and standards for evaluating the performance and remunerations of directors and manager.</li> <li>Review the fairness of remuneration for directors and managers at planned intervals.</li> </ul>	<ul> <li>Hold at least two committee meetings a year.</li> <li>Held two meetings in 2016Actual attendance rate: 67%</li> </ul>

# 3.3 Compliance

In addition to practicing ethical management, we emphasize legal compliance in all areas. For employees to understand compliance-related topics, we publicize information and trends regarding the latest regulatory and statutory requirements through education/training for employees and departmental routine meetings for them to acquire information regarding new laws and regulations and amendments of existing laws and regulations. The Legal Affairs Department also provides legal consultation and recommendations. Moreover, besides arranging internal training or external training courses, we further invite external legal experts to give talks or seminars to enrich employees' knowledge and competencies in business-related policies and regulations.



#### Causes and Amount of Fines for Environmental Offences in 2016

ltem	Authority	Causes of Fine	Amount (NT\$10K)	Improvement
1	Kaohsiung City Environmental Protection Bureau	Incompliance of the M01 process equipment components	20	Continuous implementation of various improvement measures, including replacement of sealless pumps, procurement of low-leakage valves, simplification of process pipelines, and reinforcement of the maintenance of process equipment components and tour inspection.
2	Kaohsiung City Environmental Protection Bureau	Incompliance of the M01 process equipment components	20	Continuous implementation of various improvement measures, including replacement of sealless pumps, procurement of low-leakage valves, simplification of process pipelines, and reinforcement of the maintenance of process equipment components and tour inspection.
3	Kaohsiung City Environmental Protection Bureau	Transportation and treatment of unverified process emissions to emission burning tower.	10	Reinforcement of equipment operation and management and personnel training, and use blind seals on pipelines before obtaining an approval.
4	Kaohsiung City Environmental Protection Bureau	Failure to report to the Environmental Protection Bureau within one hour after equipment safety valve trip	10	Reinforcing personnel training and reporting procedure and equipping environmental incident report folders in relevant units.

Note: M01 refers to the manufacturing process of other basic chemical materials.

In 2016, we were fined for environmental offences mainly because the concentration of gas emissions exceeded the Air Pollution Control and Emissions Standards for Volatile Organic Compounds due to the leakage of the process equipment. To reduce the impact on the environment and the frequency of offence, the Kaohsiung Plant continuously implemented various improvement measures, including replacement of sealless pumps, procurement of low-leakage valves, simplification of process pipelines, and reinforcement of the maintenance of process equipment components and regularly and irregularly tour inspections. In addition, the plant conducted leakage detection of key process areas with FLIR infrared cameras for gas leak detection and electrical inspections to effectively detect leakage of volatile organic compounds (VOCs) and take action to minimize VOC emissions.

# 3.4 Risk management

We have been promoting various risk management measures to cope with short-term, medium-term, and longterm risks. Currently, all execution and responsible units assess specific items and major risks and draw up countermeasures. The Audit Division follows up on the outcomes of relevant countermeasures and reports them to the internal control self-risk inspection committee to make timely corrections and improvements in order to implement the PDCA cycle to reinforce risk management. The tables below show the challenges and countermeasures of relevant risks at the present stage.



Risk	Challenge	Response
Climate change	The significant and complex impacts of climate change extend to finance, supply chain, and policy aspects. Apart from promoting adaptation and mitigation in support of government policies, we voluntarily take actions for risk management to support this.	<ul> <li>We formed energy conservation and emissions reduction teams at the plants of affiliates to synchronize practices through energy and resource integration and experience sharing. We promoted practical and effective energy conservation and emission reduction programs and reviewed the effectiveness of implementation every quarter.</li> <li>The Kaohsiung Plant built a storm water interception system in 2011 and a detention basin in 2014 to reduce damage on products or equipment and minimize the risk of production line halt due to floods.</li> <li>In 2016, we reclaimed spillage water from chip cutting and steam condensate in Plant I accumulating 27,600 m.t.</li> <li>In 2016, we completed planning the process wastewater recycling system. Construction will begin in 2017 to enhance water reuse.</li> </ul>

Risk	Challenge	Response
Industrial safety	Appropriate measures to minimize environmental pollution and the damage of property and life of people should be adopted to improve the transportation safety of underground pipelines, ensure more effective management of underground pipelines outside of the plant, and establish proper management procedures. This should prevent potential disasters caused by corrosion of pipelines within and outside of the plant or damage of pipelines due to improper excavation of non-USI units.	<ul> <li>We have drawn up the "Existing Industrial Pipeline Maintenance and Operation Program." The program covers a pipeline safety management system (PSMS), pipeline information management system, a pipeline integrity management plan, pipeline tour inspections, maintenance, repair, and inspection, pipeline operation and control room management.</li> <li>To effectively monitor and manage the transportation safety of regional underground pipelines, the Kaohsiung Plant and relevant petrochemical companies have formed the Kaohsiung Region Industrial Pipeline Regional Joint Defense Federation to continuous maintain, monitor, and manage the transportation safety of regional underground pipelines.</li> <li>In 2016, we established eight pipeline management plans: (1)Ethylene long-distance underground pipeline operation and monitoring plan.</li> <li>(2)Underground pipeline maintenance and inspection implementation reporting plan.</li> <li>(3)Pipeline patrol education and training plan.</li> <li>(4)Underground pipeline routine patrol plan.</li> <li>(5)Pipeline anticorrosion system inspection and maintenance plan.</li> <li>(6)Emergency response exercise plan.</li> <li>(7)Pipeline mapping management system construction plan.</li> <li>(8)Underground pipeline risk assessment plan.</li> <li>Progress of the "underground pipeline maintenance and inspection implementation reporting plan": 88%.</li> <li>Progress of other plans: 100%.</li> <li>Unfinished plans will be continued in 2017.</li> </ul>
Environmental pollution	Major air pollutants emitted by the Kaohsiung Plant include sulfur oxides (SOX), nitrogen oxides (NOX), and volatile organic compounds (VOCs). Fuel burning of the steam turbine is the main source of SOx and NOx detected in the plant, while flares, storage tanks, and equipment components are the main sources of VOC emissions.	<ul> <li>Building a steam turbine using clean, natural gas as the main fuel to reduce the consumption of heavy crude oil to minimize the emission of air pollutants.</li> <li>Enhancing the processing efficiency of the regenerative thermal oxidizer (RTO) to reduce VOC emissions.</li> </ul>
Major material supply	Ethylene supply reduced and prices soared in 2016 as a result of the annual repair of naphtha cracking plants in Asia.	<ul> <li>To minimize the impact of ethylene supply shortages, we have formed a task force to study and establish relevant responsive strategy and plans.</li> <li>Cultivating new sources for source diversification.</li> <li>We have signed long-term supply contracts with important suppliers.</li> <li>Analyzing market trends regularly and adjusted the optimal procurement strategy.</li> </ul>

Risk	Challenge	Response
<b>S</b> Industrial risks	Facing continuously soaring ethylene prices and the sustained slowdown at home and abroad, it is difficult to raise the price of general plastics.	<ul> <li>Investing in products of high added value in Taiwan to continuously create profitability. The mass production of the new ethylene vinyl acetate (EVA) capacity of Kaohsiung Plant started in mid-2016.</li> <li>Building the world's first commercial cyclic block copolymer (CBC) plant in Kaohsiung Plant to supply materials for touch screens, light guide plates, and optical lens, and connect the CBC plant with our optoelectronic business unit in the future.</li> <li>Investing in the Gulei Refining &amp; Chemical Plant Project in Zhangzhou, Fujian, in collaboration with domestic and Chinese petrochemical enterprises.</li> </ul>
<b>5</b> Financial risks	Financial risks include the influence of interest rate volatility, exchange rate volatility, property insurance, and endorsements and guarantees. To implement financial risk control and thereby reduce financial risks, we have implemented the relevant countermeasures.	<ul> <li>Interest rate volatility: Spreading investments of surplus capital in bank deposits, MMF, beneficiary certificates, REITs, and stocks with better yield to maturity to reduce risk from interest rate volatility. For medium-term and long-term capital demands, locking on capital cost with fixed interest rate by offering corporate bonds at the rise of interest rate to prevent the risk of interest rate rise in the future.</li> <li>Exchange rate volatility: Hedging the net new positions of foreign currencies produced by business operations. Besides closely observing the trend of the international forex market, timely hedging risks through sight sell-off of US Dollar over the market and undertaking forward exchange agreements.</li> <li>Property insurance: Buying commercial fire insurance, and so on based on the scale of operating assets and their replacement costs to avoid risk of damage and loss of operating assets due to acts of God or force majeure in order to appropriately transfer risks to insurance companies.</li> <li>Endorsement and Guarantees: We have established the "Endorsement and guarantees.</li> <li>For short-term TWD loans, keeping close track on the changes in interbank overnight call-loan rates and the interest rate for negotiable certificates of deposit (NDC) of different terms to appropriately adjust loaning days in order to effectively reduce cost. To meet medium-term and long-term capital needs, we issued the 2016-I five-year-term unsecured common corporate bonds amounting to NT\$2 billion on 2016/10/28, with a fixed rate at 0.80%, to lock on capital cost.</li> <li>Me have purchased various types of property insurance to appropriately spread local risks to insurers. Although typhoon Meranti hitting southern Taiwan on 2016/9/14 damaged our Renwu Plant, as we have purchased fire insurance and could thus spread damages to insurers.</li> </ul>

	chancinge		Response
S Investment risks Facir chan situa asses new hopi our b and o oper reinfi impr quali oper	ng the rapidly Iging international tion, we continuously as opportunities for business investments, ng to expand ousiness territory ensure sustainable ations. To this end, we orce our governance, ove employee ities, and diversify our ations.	~	Feasibility surveys of new business investments cover industry prospect assessment, market estimation, technological advantage, plant site and production feasibility, finance and return on investment, management team, R&D durability, and other required factors. We also survey all potential risks and develop countermeasures, including risks from relevant laws and regulations, supply chain change, market change and competition analysis, and the macro environment. After repeated review and confirmation, the BOD must approve an investment project before an investment begins. We have also established the "Asset Acquisition and Disposal Procedures" in accordance with the "Regulations Governing the Acquisition and Disposal of Assets by Public Companies" and do not engage in high-risk, high-leverage investments.

# 3.5 Audit operation and communication channels

#### Audit operation

Every year we hold the Internal Control Self-Assessment Committee meeting to assess the effectiveness of internal control items. The "Internal Control Self-Assessment Committee" is formed by the president with members from all units to review the design and performance of the internal control system of individual departments, divisions, subsidiaries, and investees. Based on the self-assessment results, the Audit Division will issue a statement of compliance when all parts comply with the law and submit the statement to the Audit Committee and BOD for approval before disclosing them to the public.

The Audit Division directly under BOD assists the BOD and managers on inspecting and reviewing the internal control systems as well as measuring operational effectiveness and efficiency. Being impartial, independent, objective, and fair, our internal auditors perform their duties base on the Code of Ethics they submitted. In addition, internal auditors must take audit courses offered by professional training organizations to continuously optimize their expertise.

#### Self-Assessment of Completed Improvements and Items



#### Implementing risk assessment and drawing up audit programs:



To increase the reference value of the annual audit program and its connection with the annual strategic goals of the company, in 2016 we raised the audit frequency in excess of the regulatory requirements of procurement and payment, production cycle, and industrial safety management based on the audit program approved by the Audit Committee and BOD. We also completed 53 audit reports. Moreover, all recommendations for improvement have been implemented accordingly.

#### Summary of recommendations:

Risk	Audit Cycle	Summary of Recommendations
Operational risks	Production cycle and compliance cycle	Reinforcing industrial safety check
	Control of information system (CIS)	Enhancing IT equipment safety protection.
	Control of Information system (CIS)	Strengthening information grading and control by function.
	Procurement and payment cycle and compliance cycle	Improving procurement effectiveness and efficiency
	Salary cycle	Strengthening the awareness of business ethics and employee ethics.
\$ Financial risks	Property, factory, and equipment cycle and	Strengthening equipment protection
	compliance cycle	Optimizing asset management

#### Grievance channels

The internal grievance channels are the corporate email accounts of direct supervisors, the human resources head, and the audit head. We respect all complainants and investigate every case under absolute confidentiality.

External stakeholders can make recommendations or complaints to management through the following channels over the corporate website (http://www.usife.com.tw/):

- "Contact Us" site on the corporate website: All enquiries or grievances will be recorded in the computer system and addressed and followed up by a case officer. In 2016, we received 532 cases from this channel, and all have been addressed and archived.
- 2. "Audit Committee Email" in the "Investor Relations" site: It was established in accordance with Article 6 of the "Audit Committee Organization Regulations." After assigning the audit unit to initiate an investigation, independent directors will instruct relevant units to propose improvement plans that will be implemented in operational management. Stakeholders and independent directors have good communication channels. In 2016, no corruption or unlawful conduct was discovered.

# **Operational Performance**



- 4.1. Financial performance
- 4.2. Major investments
- 4.3. Technology R&D

4.4. Sales and customer service4.5. Supply chain management
## 4.1 Financial performance

By the April 10, 2017, the stop transfer day of the 2016 annual report, both individual and foreign institutional investors are the major shareholders of USI. The name and shareholdings of shareholders holding over 5% of USI shares and the top ten shareholders of USI are disclosed in our annual report.





For shareholders and investors to get more real-time and more accurate information while making investment decisions, apart from disclosing the monthly revenue and quarterly financial statements and holding the annual general meeting of shareholders, we disclose relevant information over the "Investor Relations" site on the corporate website and the Market Post Observation System (MPOS). Furthermore, shareholders and investors can make enquires and feedback through the hotline of our spokespersons or deputy spokespersons or over the "Contact Us" site on the USI corporate website or the "Contact Us" site of the Group's stockholder service site. We will handle and address all feedback by special personnel.

#### **Summary on 2016 Business Operations**

- 1. Total EVA/PE sales reached 260,075 m.t., a new high in USI's history and an increase by 23,259 m.t. from the previous year.
- 2. Average sales prices reduced by 3% from the previous year.
- 3. Annual output reached 235,476 m.t., an increase by 8% from the previous year.
- 4. Consumption of major material ethylene reduced by 2% from the previous year.

The demand for EVA solar packaging films stagnated as ethylene supply was insufficient to support the EVA/PE prices in the first half of the year and China's reduction of solar energy subsidiary in Q3. Thanks to the strong demand rebound from the bottom in China in Q4 that the overall EVA/PE prices recovered and sales prospered.

- 6. Production: Continuous renewal and improvement of old equipment and improvement of production process.
- 7. R&D: Focus on the R&D of high-value EVA products and expansion of the scope of R&D of optical materials.

#### Financial Performance 2014-2016<sup>1</sup>

ltem	2014	2015	2016
Total assets	21,533	22,370	24,436
Operating revenue	12,210	10,798	11,458
Operating cost	11,072	9,402	9,879
Net profit before tax	749	1,012	1,283
Income tax	108	132	93
Dividend	457	571	800
Compensations and benefits for employees	540	595	632
Investments in communities <sup>2</sup>	3.32	3.71	4.31

<sup>1</sup>We began producing financial statements in accordance with the International Financial Reporting System (IFRS) approved by the Financial Supervisory Commission as of 2012.

<sup>2</sup>Investments in communities included monetary support for local communities and donations for USI Education Foundation.

#### Revenue



#### Net Profit Before Tax



Unit: NT\$1 million

## Distribution of profit

The amount of distributable earnings in 2016 was NT\$1.07 billion, with cash dividends at NT\$0.5 per share and stock dividends at NT\$0.2 per share. The table below shows the distribution of dividends in the past three years.

						Unit: NT\$1million
Year	EPS (NT\$/share)	Cash DPS (NT\$/share)	DPS (NT\$/share)	Net Profit after tax	Dividend Distribution (Cash DPS and DPS)	Total Distribution Rate
2014	0.62	0.4	-	641	457	71%
2015	0.85	0.5	-	880	571	65%
2016	1.15	0.5	0.2	1,190	800	67%

Note: The proposal for 2016 dividend distribution is pending for Shareholders' meeting approval on June 8, 2017.



Principles of approving earnings distribution:

USI is in a mature industry. In consideration of the need for R&D and business diversification:

1. Dividends for shareholders must not be lower than 10% of distributable earnings, including cash DPS not lower than 10% of total dividends.

2. No distribution when EPS is below NT\$0.1 per share.

Year	PER	PDR	Dividend Yield
2014	28.79	44.63	2.24%
2015	16.95	28.82	3.47%
2016	11.93	27.44	3.64%

Note: PER: Price-earnings ratio= Annual average closing price per share/equity per share

PDR: Price-dividend ratio= Annual average closing price per share/cash dividend per share Dividend Yield=Cash dividend per share/annual average closing price per share

## Government financial support

We actively invest in innovation and R&D activities every year, so we can set off the R&D expenses from the profit-seeking business income tax payable in the year or apply for project subsidization. The table below shows relevant information.

				Unit: NT\$1,000
Legal Basis	Item	2014	2015	2016
Article 10, Statute for Industrial Innovation	Tax Credit for Investments in R&D	2,739	8,527(註)	6,047
Regulations Governing the Subsidization and Guidance for Assistance in Innovation Activities of Enterprises	Project to Mend Shortages of Key Chemical Materials	61,027	18,030	28,650

Note: The amount of tax credit for investments in R&D in 2016 was updated and declared via CPAs on 2016/11/30. The amount was updated from NT\$3,445,000 to NT\$8,527,000.

## 4.2 Major investments

## **Gulei** Project

Many changes have emerged in the global petrochemical industry in recent years. They included the rise of the petrochemical industry in emerging regions and the shale oil mining in North America, which have brought not only huge impacts to the energy structure and petrochemical material supply but also significant changes to development of the petrochemical industry across the Taiwan Strait.



In order to get prepared for future trends and challenges, the USI Group and major Taiwanese and Chinese petrochemical companies co-established Fujian Gulei Petrochemical Co. Ltd. in Zhangzhou City, Fujian Province. In addition to being an integrated refining and chemical plant located in Gulei Development Zone, the first cross-strait cooperation project vertically integrates all parts of the petrochemical industry, covering upstream materials supply and mid-stream and down-stream products. Shareholders of Fujian Gulei Petrochemical Co., Ltd. include Fujian Refining & Petrochemical Company Limited, a joint venture formed by China Petroleum and Chemical Corporation and Fujian Petroleum and Chemical Company Limited, from China and Dynamic Ever Investments Limited, a joint venture established in a third country representing Taiwan investors.

According to the Gulei Refining & Chemical Plant Project, the complex will be built in four years, with facilities including an ethylene cracking plant and units for pyrolysis gasoline hydrotreating, aromatics extraction, butadiene extraction, ethylene vinyl acetate (EVA), ethylene oxide/ethylene glycol, styrene, and polypropylene. Appropriate optimization will be implemented based on the actual situation to ensure safety and environmental protection. Currently, both parties of the project are working at full-steam to promote various pilot projects.

Through the Gulei Refining & Chemical Plant Project, USI will produce related petrochemical projects and deepen the downstream processing facilities and supporting utilities. In this project, we will limit our investments below NT\$8 billion. By investing in this project, we hope to secure upstream material supply, achieve vertical integration of refining and petrochemical processes, intermediate petrochemical products and plastic products, reduce transportation cost, enhance competitive niche to deploy the Greater China market, and thereby enhance international competitiveness.



## Local major investments: EVA

We continuously upgrade and improve old equipment and improve production processes. We have also expanded the ethylene vinyl acetate (EVA) copolymer capacity in the Kaohsiung Plant, aiming to increase the added value of products.

Amount	Approx. NT\$3 billion to upgrade EVA equipment.
Progress	Operation and mass production started on May 13, 2016 to increase EVA capacity by 45,000 m.t. per year (2016 output: 25,000 m.t.)
Application	PV module packaging and hot melt adhesives at home and abroad.

#### Local major investments: CBC

This CBC project can be considered as one of the blueprint items for high-value petrochemical industry promotion and is the first "Project to Mend Shortages of Key Chemical Materials" approved by the Industrial Development Bureau, Ministry of Economic Affairs. After acquiring CBC-related patented technologies in 2011, we have been implementing at full steam the CBC and relevant projects in order to lead Taiwan's petrochemical industry to transform toward a high-value petrochemical industry through collaboration amongst the industry, government, academia, and research.

Amount	<ul> <li>BOD resolutions:</li> <li>1. Mar 21, 2013: Approved the construction of the world's first commercial CBC plant in Kaohsiung Plant at NT\$1 billion.</li> <li>2. Sep 23, 2014: Increased the front-end material plant and public facility system with an addition budget at NT\$1 billion.</li> <li>3. Aug 11, 2016: Adjusted complex layout with an additional budget at NT\$700 million to mark up the total investment to NT\$2.7 billion.</li> </ul>
Progress	Plant construction will be completed and commissioning and trial run will start in the second half of 2017, with an annual capacity of 5,000 m.t.
Features	Cyclic block copolymer (CBC) is a new type of molecular structure with excellent performance for producing new-generation optical materials. CBC features low specific gravity, zero optical retardation, high weather resistance (UV resistance), high transmittance, chemical solvent resistance, low moisture absorption, and easy processing. In addition, as CBC has high purity by nature and high UV penetrability, it supports gamma disinfection and high UV penetrability and passes biocompatibility test.
Application	Touchscreens, LCD optical films, light guide plates, optical lens, food packages, biomedical examinations, and medical instruments.

CBC development projects and overall marketing strategic planning:

Short- term goal:	Start operation and mass production in 2017
Medium- and long- term goal:	<ol> <li>Develop CBC application in optical and medical fields.</li> <li>Continue to improve CBC processes.</li> </ol>

### Local major investments: Automated storage and retrieval system (AS/RS)

Amount	New AS/RS construction project at approx. NT\$500 million
Progress	Commissioning completed and operation started on Mar 30, 2016. Increased storage space for 200,000 m.t. and use of big data for stock management and warehousing efficiency management. Saved at least 5 persons compared to traditional operation.



## 4.3 Technology R&D

The R&D Division aggressively develops a variety of high added value products to cope with the industrial needs in order to create market opportunities for the Company's sustainable operations.

We have been increasing R&D funds over the past three years, particularly in 2016, we increased R&D funding by 25% more than in 2015.

**R&D** Funds



#### Major Investments with R&D Funds

Developing of Energy- saving materials	To develop unique EVA grade for PV encapsulant film.
New hot melt adhesive resins	In 2016, we developed new hot melt adhesive materials with high VA content featuring high adhesion ability and high melt index (MI) which can also be used in ink application.
New foaming resins	In 2016, we developed foaming-grade EVA products with a high VA content, low MI, which exhibit high elasticity of foaming shoe materials.
High added value optical and medical resins	In 2016, Puratran <sup>™</sup> CBC passed various tests of the United States Pharmacopeia (USP) and the Japanese Pharmacopoeia. It is an optical material and a safe, reliable , novel and medical plastics.

## 4.4 Sales and customer service

As products derived from the petrochemical industry are widely used in daily life, the petrochemical industry can be considered a foundation of tertiary industries. We have a R&D Division in Linkou and an office in Tainan to develop new products and new product applications and assist customers on improving processing technologies. Their outstanding performance has won the recognition of manufacturing plants.

List of Major USI Products and Labels in 2016

Major Product	Major Label
LDPE	PAXOTHENE®
EVA	<b>EVATHENE</b> <sup>®</sup>
HDPE	UNITHENE®
LLDPE	LINATHENE®

## Product sales and markets

We mainly export products to Hong Kong, China, Japan, Singapore, the Philippines, Vietnam, Malaysia, Thailand, Indonesia, Myanmar, the USA, India, Pakistan, Russia, Australia, Macedonia, Turkey, Bangladesh, Germany, Colombia, New Zealand, Peru, Cambodia, Sri Lanka, Mauritius, South Africa, the UK, Egypt, and Poland. From high to low, the exports include EVA, HDPE, LDPE, and LLDPE. The charts below show the sales distribution and market distribution of USI products. All sales were calculated by volume.



## Sales services

Technical support	<ul> <li>Establishing the "Customer After Sales Technical Service Policy"</li> <li>Providing complete information regarding the specifications, properties, functions, application manual, and safety data sheet (SDS) of our current and new products for customers on the "Product" site of our corporate website.</li> <li>Setting up an enquiry hotline.</li> <li>No incident of or fine for non-compliance with regulations and voluntary codes concerning product labeling was reported in 2016.</li> <li>Providing customers with a small quantity of samples for test run and continuous technical support.</li> </ul>	<image/> <text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text>
Product responsibility	<ul> <li>Conformity with EU's Restriction of Hazardous Substances</li> <li>Provision of quality inspection reports as requested by cus</li> <li>Third-party analysis for special quality requirements or r customers.</li> </ul>	Directive (RoHS). tomers. new product development by



actions.

## Customer satisfaction



## 4.5 Supply chain management

With the rise of the awareness of topics relating to sustainable operations and supply chain management (SCM), apart from proactively performing social responsibilities and contributing to society, we have gradually realized the need to understand suppliers and reinforce SCM in environmental, social, and governance aspects.

As a petrochemical material manufacturer, our major suppliers are raw material suppliers, equipment suppliers, engineering suppliers, contractors, IT hardware and software suppliers, and office supplies suppliers.

In 2016, the amount of bulk material procurement (ethylene and VAM) commanded 86% of the total amount of procurement in the year.



To secure the sustainable supply of material sources and stimulate market circulation, we aggressively cultivate new material sources and increase bulk material suppliers to 14 companies, including three domestic suppliers and 11 foreign suppliers.

Locations/Materials	2016/ Ethylene	2016/VAM
Taiwan	75%	63%
Foreign	25%	37%
Source	Domestic:2, Foreign:6	Domestic:1, Foreign:5

Note: VAM is short for vinyl acetate monomer.

We always maintain integrity when trading with suppliers and conduct procurements in accordance with the internal e-procurement system to ensure transparent and fair procurements.

## **k** Risk management

Currently, ethylene and VAM are the major raw materials of USI products. In consideration of the risk of supply shortages, we have adopted the following solutions:

Туре	Potential Risk	Strategy	Practice
Material Supply Risk interruption	Source dispersion	Cultivate new sources across the world.	
	Supply Supply	Supply contract	Sign long-term supply contracts with important suppliers.
		Strategic	Analyze market movements regularly and adjust
		procurement	the optimal procurement strategy.

## Support for local procurement

Taiwan is our operational and production base. When the procurement conditions are similar, we prioritize procurements from local suppliers in order to establish long-term, sustainable cooperation, promote local economic development, and minimize carbon footprint from transportation. After the smooth operation of the new EVA production line in May 2016, the consumption of major material EVA escalated. While major supplier China Petroleum Corporation was unable to fulfill our demands, we turned to importation in order to maintain normal operations.

We also outsource contracts mainly to local contractors. The new 50KTA production line in Kaohsiung Plant and the CBC production line under progress will be completed by the end of 2017.



Proportion of Spending on Local Suppliers in Past 3 Years

## Continual improvement of the SCM mechanism

With quality, ability, and environmental policy as conditions, we perform corporate social responsibility in collaboration outperforming suppliers on a long-term basis. We also communicate with contractors and transporters our environmental policy, comply with the EU's RoHS directive, reinforce environmental education and training, and care about the safety of contractors working in our plant, in order to ensure the safety of all operations, protect the life, safety, and health of personnel, and optimize risk management with contractors and transporters together.

We establish long-term strategic partnership with raw material suppliers and determine the safety stock based on material preparation lead-time to ensure supply chain fluency. To encourage suppliers to make continual improvement, so that we can receive quality raw materials and services at the right time, in the right quantity, and at the right price, we conduct a supplier evaluation semiannually. However, we have not included environment, labor practices, human rights, and social impact as the criteria for new supplier selection and supplier evaluation.

The Procurement Section of the Kaohsiung Plant implements the supplier evaluation according to the following mechanism:

#### Management of raw material suppliers

We select qualified suppliers of raw materials and OEM products based on one of or the combination of the following:

- $\checkmark$  Suppliers with credibility or a good reputation at home and abroad.
- ✓ Suppliers certified by international systems, such as ISO 9001.
- ✓ Suppliers designated by technology suppliers.
- $\checkmark$  Suppliers with a good quality or delivery record.
- Exclusive suppliers of materials



#### We also establish a qualified supplier selection process as follows:

#### **Rating items**

🧭 Raw materials		Product transportation		
Delivery Quality Punctuality		Undertaking capacity, cost, guarantee, and claim	Work quality, efficiency, and cooperativeness	
40%	60%	40%	60%	

#### Results of raw material supplier evaluation in 2016

Complex	Plant I	Plant II
Suppliers evaluated	30	41
Pass rate	98.44%	99.15%

#### Management of construction contractors:

We outsource construction contracts to local contractors, and on-site personnel of the plant supervise and manage them during the construction period. In addition to construction projects, we care about ESH, occupational safety, human rights, and labor practices.

#### We also established a qualified contractor selection process, which is as follows:



#### **Contractor qualification items**

Authorized Capital	Total Amount of Two Major Projects in the Last 2 Years	Accumulative Amount of Projects each over NT\$200K in Last Year	Factory Scale	Amount of Equipment Investments	Total Employees
10%	20%	10%	20%	20%	20%

#### Project construction evaluation items

Construction quality	Safety and health measures	Coordination performance	Site manager	Environment maintenance	Construction progress
40%	20%	10%	10%	10%	10%

Note:The passing mark is 50 points. We will stop enquiries from contractors with a score of 30-49 points for one or two years and disqualify contractors with a score below 30 points.

#### Results of construction contractor evaluation in 2016

Complex	Plant I	Plant II
Projects evaluated	81	27
Pass rate	100%	100%

In addition to continuously promoting environmental and energy conservation policies, we have been encouraging all units to use eco-friendly and energy-saving materials in recent years. These materials include energy-saving devices (e.g., high-performance IE2 motors) and ecolabel products (e.g. LED tubes and energy-saving IT equipment). With reference to Article 96 of the Government Procurement Act, we will specify in tender documentation the preference to use ecolabel-accredited products; products or materials that are recoverable, recyclable, reusable, energy saving, or with low pollution; and other products that either increase social benefits or reduce social costs, and have the same or similar functions required in order to establish the USI green procurement mechanism and increase the proportion of green procurement. In 2016, we purchased daylight-redirecting glasses, window blinds, LED bulbs, T5 bulbs, and high efficiency motors to save more electricity. In 2017, we will install rooftop solar panels to store energy and heat for higher energy conservation.

## **Environmental Protection**



- 5.1. Environmental management system
- 5.2. ESH grievance channels
- 5.3. Source management
- 5.4. Industrial and public safety management
- 5.5. Promoting energy conservation and emissions reduction
- 5.6. Green production
- 5.7. Green services and products

## 5.1 Environmental management system

Since we established an environmental management system (EMS) in accordance with ISO 14001 in 1998, it has been 19 years now. This EMS provides the Kaohsiung Plant is equipped with

a good environmental protection framework for controlling and reducing environmental impacts, preventing accidents from impacting the environment, and ensuring legal compliance. Following international trends, we have integrated the EMS and the safety and health system to draw up an environment, safety, and health (ESH) policy:



## Environmental objectives and management plan

Policy	Objective	Program	Effectiveness
Zero emission	Reduce VOCs emissions by 2.9 m.t.	Equip RTO throughout the plant to reduce VOC emissions and recovery energy.	<ol> <li>By connecting the silo vent in Plant Il to RTO to continuously reduce VOC emissions, the estimated VOCs reduced by the end of 2016 was 88.234 m.t.</li> <li>By connecting the silo vent of line B to RTO, the estimated VOCs reduced by the end of 2016 was 8.381 m.t.</li> </ol>
	Reduce GHG emissions by 2,769 m.t.	Plant total energy conservation plan.	Total electricity reduction accumulated 3,965,461 kWh (target 5,304,325 kWh) to reduce 2,093 m.t. of GHGs.
	Reduce effluents by 25,500 m.t.	Wastewater reclamation.	<ol> <li>Reclaiming water at phase II of chip cutting spillage in Plant I at about 7 m.t. per hour, estimated at 10,752 m.t. a year.</li> <li>Reclaiming steam condensate across the plant at 6 m.t. per hour, estimated at 16,848 m.t. a year.</li> <li>Estimated accumulative effluent reclaimed in 2016 was 27,600 m.t.</li> </ol>
Zero pollution	Improve effluent quality to 60% of the discharge standard (COD<60 mg/L, SS<18 mg/L, Grease<6 mg/L)	Raise effluent quality control	The planning of the effluent reclamation system was completed. Construction of the water quality monitoring system will begin in 2017.

#### Environmental Objectives and Management Programs 2016

To effectively control VOC emissions, we have installed the regenerative thermal oxidizer (RTO), air pollution control equipment, to reduce VOC emissions to an allowable limit at 29.8 m.t. a year. In return, we were awarded the "2016 Enterprise with Outstanding Achievements in Allowable Reduction" by the Kaohsiung City Environmental Protection Bureau for our outstanding performance.



#### Environmental expenditures

Our environmental management costs include the cost for environmental management activities, environmental-related personnel expenses, and equipment maintenance cost. In 2016, the total amount of environmental expenditures was about NT40.79 million.



Environmental Expenses of Kaohsiung Plant in the Past 3 Years

Note 1: Cost for environmental management activities includes fees for air pollution control, water pollution prevention, waste disposal, noise pollution prevention, depreciation of fixed assets for pollution prevention, and others (e.g., cleaning and mowing).

Note 2: Environmental-protection-related personnel expenses include personnel expenses and environmental protection-related training fees.

Note 3: Equipment maintenance cost includes the fees of environmental related equipment and the fees for equipment maintenance.



## 5.2 Source management

## **Major raw materials**

Our main products are: LDPE, EVA, HDPE, and LLDPE. Our raw materials include ethylene, vinyl acetate monomer (VAM), and butene.



Consumption of Major Raw Materials in the Past 3 Years

Consumption of Bulk Secondary Materials in the Past 3 Years



Note: We use non-recyclable raw materials.



#### Reduction of Butene, n-Hexane and Isopentane Uses in Past 3 Years than 2013 (m.t.)

We are committed to enhancing the efficiency of process material reclamation to minimize VOCs emissions, reducing material consumption, and lowering manufacturing costs. At the end of 2013, we completed the improvement of a high-pressure gas recovery system at Plant II of the Kaohsiung Plant, with significant effect in recovering butene, n-hexane, and isopentane.

EVA containing high vinyl acetate (VA) content has gradually become the major product of the Kaohsiung Plant, and therefore the need for VA recovery also increases every year. The current recovery system, modifier recovery treatment (MRT), built in 2001, has been used for over 15 years, and both the output and purity cannot meet future requirements. In 2015, the Kaohsiung Plant thus began to plan a new MRT, which was completed in mid-2016. Currently, the new and existing towers are used together.

In addition, the Kaohsiung Plant produces wax as waste or a by-product from production activities. Even when this wax does not meet the standard quality of general products, it can be used by some downstream manufacturers. Therefore, the Kaohsiung Plant regularly re-sells wax to them to reduce waste output and turn waste into a resource.

## 5.3 Industrial and public safety management

#### Transportation safety management

Considering the safety of pipeline transportation and vehicle transportation, the Kaohsiung Plant implemented specific management systems for material transportation and product transportation, and no transportation-related accident was reported over the past three years.

#### Material Transportation Methods in 2016

#### Product Transportation Methods in 2016



## Material transportation

Transportation Methods	The Kaohsiung Plant transports 97% of its major materials via underground pipelines and 3% by tankers.
Management Plan	The Kaohsiung plant has established "Equipment Maintenance Operation", "Safety and Health Operation" and "Ethylene/VAM Underground Pipelines Management Regulations" in its internal control system. In addition to conducting emergency response training and exercise, preventive maintenance, routine tour inspections, and error management are carried out regularly to the company-owned underground pipelines within and outside of the plant to prevent pipeline corrosion and leakage.
Implementation Plan and Effectiveness	<ul> <li>Double protection including petrolatum tapes and impressed current cathodic protection.</li> <li>Outsourcing daily tour inspections.</li> <li>Outsourcing legally registered professional contractors to check the potential of cathode protection quarterly.</li> <li>To ensure pipeline safety, at least one pressure holding test is conducted every year and pressure sustaining tests from time to time.</li> <li>Establishing relevant emergency response plans and reporting mechanisms and implementing emergency response training and exercises regularly to ensure no significant on the environment and traffic.</li> <li>Since 2014, we began implementing the close interval potential survey (CIPS) every five years.</li> <li>All tankers are qualified tankers for transporting chemical substances, each contractor has good emergency response ability, and well-established emergency response plans. Transportation is implemented according to relevant control regulations and management measures.</li> </ul>

Product transportation					
Management Plan	The Kaohsiung Plant transports products through qualified contractors.				
	Legally registered transporters.				
	Passed ISO 9001 certification with trained, qualified safety and health management				
	personnel				
Implementation	Semiannual evaluation of performance, efficiency, cooperativeness, and quality				
Plan and	and proposition of improvement programs based on customer feedback at the				
Effectiveness	transportation review meeting.				
	Regular vehicle examinations according to relevant regulations. Holding safety				
	meetings quarterly to ensure contractors can safely transport products to the				
	destination to minimize environmental impacts caused by transportation.				

## Underground pipeline management

Appropriate measures to minimize environmental pollution and the damage of property and life of people should be adopted to improve the transportation safety of underground pipelines, ensure more effective management of underground pipelines outside of the plant, establish proper management procedures to prevent potential disasters caused by corrosion of pipelines within and outside of the plant or damage of pipelines due to improper excavation of non-USI units, and provide a dependable reference for personnel to follow. We have thus established the "Existing Industrial Pipeline Maintenance and Operation Program." The program covers the pipeline safety management system (PSMS), pipeline information management system, the pipeline integrity management plan, pipeline tour inspections, maintenance, repair, and inspection, pipeline operation, and control room management.

To identify and assess the hazards and potential risks of underground pipelines outside of the plant and thereby implement necessary controls, we implement "pipeline integrity management (PIM)" with reference to international specifications and have established corresponding risk control measures to eliminate or reduce unacceptable hazard risks to ensure the safe use of underground pipelines. We have conducted the overall review and risk analysis of our underground pipelines and have established mitigation measures for high-risk sections. The diagram below shows the process of pipeline management.



The risk assessment of the integrity of underground pipelines is conducted according to the Pipeline Risk Management Manual by W. Kent Muhlbauer. The overall risk assessment and grading of pipelines are implemented in terms of four risk indices: design, corrosion, incorrect operations, and third-party damage. The diagram below shows the process of pipeline integrity assessment.



Based on the results of underground pipeline risk assessment, we grade risks at different levels and establish corresponding improvement requirements according to the level of risks. For underground pipelines of lower risk, we implement inspections, tests, and maintenance according to the existing maintenance and inspection schedule. For underground pipelines of medium risk, we shorten the inspection and test cycle or increase the inspection and test frequency to follow up those pipelines. In addition, we plan improvement actions for items that can be prioritized for improvement according to the four risk assessment indices.

According to the risk assessment results, as both pipelines in use run through regions of higher population density, they bring greater impact and higher risk to both the environment and local population in case of leakage. Currently, professional contractors have completed the CIPS of the entire pipeline. Next, we grade them according to the indirect testing results and level indicators with the assistance of the Industrial Technology Research Institute, implement the error location reexamination or direct excavation for verification, and re-assess time interval.

Furthermore, to effectively monitor and manage the transportation safety of regional underground pipelines and implement continuous maintenance, the Kaohsiung Plant and relevant petrochemical companies have formed the Kaohsiung Region Industrial Pipeline Regional Joint Defense Federation. The Kaohsiung Plant also provides the chairperson of the 8th Pipeline Committee to administer the operation and emergency response of pipelines within the committee's jurisdiction.



Organization Chart of Kaohsiung Region Industrial Pipeline Regional Joint Defense

To ensure pipeline safety management, we completed the following items in collaboration with the Kaohsiung City Economic Development Bureau in 2016: disaster simulation examinations, audits, and emergency response tests; construction of a cloud platform for pipeline safety implementation and tour inspection; pipeline risk assessments; excavation verification checks; soil tests; and cathodic protection. We also optimized personnel training and requested them to pass certification; conducted spot check with government units; and collaborated with the pipeline audit/response training conducted by the Industrial Development Bureau.

In addition, based on the results of the close interval potential survey (CIPS) and the analysis and judgment of Industrial Technology Research Institute (ITRI) in 2015, we excavated pipelines located west of the pipeline bridge over the Houjing River in 2016 to verify pipeline conditions. The results of appearance inspection, ultrasonic test, and guided wave test show that the appearance and wall thickness of our pipelines are intact and normal. After discussing with experts and ITRI, we found that concrete masking may have been the cause of CIPS anomalies (toward positive). Therefore, we have installed IR-free test coupons underground based on the ITRI advice to improve and follow up the condition through periodic monitoring of the CP current of pipelines in that region, in order to ensure pipeline safety.

Our "2017 Underground Pipeline Operation and Management Plan" has been approved by the Kaohsiung City Economic Development Bureau. This will enable us to continuously implement pipeline tour inspections, pipeline mapping confirmation, and emergency response exercise. With the confirmation of a third-party certification authority, we will complete the pipeline routing area risk assessment and integrity assessment to ensure the safety of pipeline operations and maintenance, protect the public safety of citizens living near underground industrial pipelines, and assure the safety of workers.





After auditing pipelines No. 6 and No. 8 in July and August, and evaluating the effectiveness of the promotion effort of the Kaohsiung Region Industrial Pipeline Regional Joint Defense Federation, the Industrial Development Bureau awarded the operation of both pipelines the excellence awards.





# 5.4 Promoting energy conservation and emissions reduction

#### Energy management

The Kaohsiung Plant operated production steadily in 2016. As VA products were the major output of the new production line, energy consumption increased accordingly. Product energy consumption rose from 4.34 GJ/m.t. in 2014 to 4.44 GJ/m.t. in 2016.

Apart from following the policies and regulations of the government and competent authorities, in establishing and implementing policies for energy conservation and emission reduction, we present the energy saving and emissions reduction plan for the next year every year, hold quarterly ESH Management Committee meetings to follow up on the progress of different energy conservation and emission reduction programs, and periodically assess the compliance with applicable regulatory requirements of all units at the Kaohsiung Plant. Besides retaining the records and results of periodic assessments, we actively request all units to perform their duty of energy conservation and emission reduction.



Note 1: As the consumption of diesel, LPG, and natural gas is far lower than that of electricity and fuel oil, it cannot be shown in the chart. Please refer to the table below for details.

Note 2: Energy consumption unit: GJ; energy consumption per unit product unit: GJ/m.t.

Energy Type	Unit	2014	2015	2016
Fuel oil	GJ	212,417	219,337	184,452
Diesel	GJ	296	723	328
LPG	GJ	104	0	0
Natural gas	GJ	1,229	1,923	49,353
Electricity	GJ	685,677	694,162	813,659
Total consumption	GJ	899,723	916,145	1,047,792
Product	m.t.	207,318	219,573	236,133
Energy Consumption Per Unit Product	GJ /m.t.	4.34	4.17	4.44

Energy Consumption and Energy Consumption Per Unit Product of Kaohsiung Plant in the Past 3 Years

Note 1: Referring to the Energy Heating Value Per Unit Product Table announced by the Bureau of Energy (BOE), Ministry of Economic Affairs (MOEA), the conversion factor of energy consumption of fuel oil, electricity, LPG, natural gas, and diesel is as follows: 9,600 kcal/L, 860 kcal/kWh, 6,635 kcal/L, 8000kcal/m3, and 8,400 kcal/L; where 1 cal = 4.186 J.

Note 2: To reduce pollution, the Kaohsiung Plant has built a new natural gas boiler to replace fuel oil consumption. After the new production line started production, natural gas and electricity consumption increased significantly in 2016.

Note 3: The consumption of fuel oil, LPG, natural gas, and electricity and production outputs were calculated based on fuel bill statistics. Note 4: Diesel consumption was calculated based on the statistics on material collection sheets.

## **k** GHG management

On December 25, 2012, the Environmental Protection Administration (EPA) of the Executive Yuan announced the "Stationary Sources Required for GHG Reporting in Public and Private Areas." Amongst the first and second groups of stationary resources required for GHG reporting in public and private areas, as the annual emissions of Kaohsiung Plant is less than 25,000 m.t. of CO<sub>2</sub>e according to the trial calculation of stationary burning of fossil fuel, we are not one of the stationary sources required for reporting.

To understand the status of its GHG emissions, the Kaohsiung Plant conducts voluntary GHG inventory every year. The organizational boundary of GHG inventory covers the entire Kaohsiung Plant. We consolidate emissions of major emission sources with operational control. We also convert the global warming potential (GWP) of different types of GHGs into carbon dioxide equivalent (CDE, CO<sub>2</sub>e) as announced by the Intergovernmental Panel on Climate Change (IPCC) in 1996, 2001, and 2006.



#### GHG Emissions in the Past 3 Years



Note 1: Scope 1: Direct GHG emissions occurring from production processes or facilities. The data presented in the above chart covers only major emission sources (including emission from stationary burning of fossil fuel and flaring) of fuel and flare stacks. Note 2: Scope 2: Indirect GHG emissions occurring from indirect sources, such as purchased electricity.

Moreover, both the 2016 GHG emissions and 2016 GHG emissions per unit product of the Kaohsiung Plant were higher than that of 2015. This is because of the significantly higher electricity consumption for the new production line and the increase of outputs, thus raising both GHG emissions and GHG emissions per unit product.



#### GHG Emissions Per Unit Product in the Past 3 Years

#### Actions for energy saving and emissions reduction

The Kaohsiung Plant held the first energy conservation and emissions reduction meeting in 2008 and established energy conservation and emissions reduction programs for each unit and the objectives for energy conservation and emissions reduction of the plant according to the government's GHG reduction policy. These programs and objectives are also key to reducing operating cost. By forming energy conservation and emissions reduction teams at the plants of affiliates and reaching consistent practices through energy and resource integration, and experience sharing, we promote practical and effective energy conservation and emission reduction programs, which are reviewed quarterly for the effectiveness of implementation. The table below shows the programs and effectiveness of energy saving and emissions reduction of the Kaohsiung Plant in 2016, with an annual emissions reduction of 2,141 m.t. of  $CO_2e$ .

Program	Energy Saved kWh/year	Emissions Reduced (m.t. of CO <sub>2</sub> e/year)
Switching cooling water sources for process air compressors of Plant II to Plant I during an outage to shut down shut down the cooling tower pump of Plant II to save energy.	82,880	44
Management of the A/C system in the audiovisual classroom.	14,910	8
Improvement of the energy saving performance of the QC room A/C of Plant II.	92,155	49
Installation of Optibend daylight-redirecting glasses and Venetian blinds in the office buildings to save energy.	7,694	4
Replacement of LED bulbs in the factory area (LED for the factory and T5 for the office).	52,823	28
C-308 going live.	279,180	147
VFD control for RTO blowers	959,980	507
VFD control for the cooling tower fan of Plant II.	141,000	74
VFD control for the E-280C motor of the cooling tower fan of Plant I.	47,520	25
K-6024 pulley modification.	61,488	32
Office shutdown	221,642	117
Light switch control of office hallway.	5,969	3
Shortening of the blending time of 34 Silos Conveying blower.	966,816	510
Shortening the blending time of 12 Silos Conveying blower	1,019,250	538
K-8601 VFF	104,956	55
Total	4,058,263	2,141

Note 1: Electricity to emission conversion coefficient is 0.528 (kgCO<sub>2</sub>e/kWh).

Note 2: Energy conservation and emissions reduction programs fall in Scope 2—indirect GHG emissions occurring from purchased electricity.

In addition, we presented the "Report on the Annual Energy Saving Audit System of Energy Users" as scheduled and determined the annual energy conservation items, and annual energy conservation rate according to the "Rules Governing the Establishment of Targets and Implementation Plan of Energy Saving by Energy Users" announced by the MOEA. We also allocated budget for implementing corresponding items and follow up the progress quarterly, hoping to achieve the energy saving target at 1%. The 2017 energy conservation program reported to the BOE covers switching cooling water sources for process air compressors during an outage, air-conditioning system management, installation of daylight-redirecting glasses and tinted window films, replacement of high-efficiency motors, and coating ARC ceramics on motor blades. It is estimated that these measures can conserve electricity consumption by 2.66% to reduce emissions by 4,239 m.t. of  $CO_2e$ .

## 5.5 Green production

## Air pollution control

Major air pollutants emitted by the Kaohsiung Plant include sulfur oxides (SOx), nitrogen oxides (NOx), and volatile organic compounds (VOCs). Fuel burning of the steam turbine is the main source of SOx and NOx detected in the plant, while flare stacks, storage tanks, and equipment components are the main sources of VOC emissions.

VOC emissions increased significantly in 2016 because we estimated VOC emissions with reference to the announced emission coefficient. As we began processing VOCs with RTO in 2016 to control VOC emissions more effectively, we estimated emissions based on the actually tested value in order to more accurately capture the actual situation of VOC emissions in the plant.



Air Pollutant Emissions in the Past 3 Years

Note: VOC emissions increased in 2016 after processing all process VOCs to the RTO.

Over the years, emission test results of the Kaohsiung Plant have been consistently well below the EPA emission standards. The table below shows the emission test results of the Kaohsiung Plant in the past three years.

Pollutant	2014	2015	2016	Standard
SOx (ppm)	143	141	165	300
NOx (ppm)	144	146	164	250
TSP (mg/Nm <sup>3</sup> )	37	42	56	100

Note: TSP: Total Suspended Particulate

In addition to regularly testing and reporting air pollutants, the Kaohsiung Plant has planned the following reduction programs to effectively reduce air pollutants:

VOCs reduction	Create files for each equipment component in the plant for management, replace sealless pumps, purchase low-leakage valves, simplify process pipelines, reinforce the maintenance of equipment components, and seal wastewater tanks with a cover.			
Effective VOCs treatment	The Kaohsiung Plant has purchased a new regenerative thermal oxidizer (RTO) to improve the efficiency of VOCs treatment and recover heat to reduce energy consumption. The Kaohsiung Plant officially implemented the RTO in production processes in 2015.			
Reduction of pollutant emissions	Plan and build a steam boiler using clean energy natural gas as the main fuel to reduce the emission of air pollutants. This new steam boiler was completed in 2015 Q4 and relevant tests are in progress. The boiler will further reduce GHG emissions. It is estimated that about 357 tons of $CO_2e$ will be reduced each year in the future.			
Incident	An explosion occurred on November 21, 2016 when the Kaohsiung Plant transported N2 to the RTO from Plant II.			
Cause	The RTO blower was operated at a low speed to save energy. When Plant II notified an input of NOx gases, the system blower did not increase speed to dilute gas intensity. As the oil on top of the sealed water tank began to evaporate, residual VOCs in the RTO pipeline was pressurized to increase VOCs intensity in Plant II, thus causing an explosion in the RTO.			
Improvement and response	<ul> <li>On-site investigations and analysis show that RTO safety protection and monitoring were inadequate, and there is still room for improvement for the RTO design.</li> <li>After the incident investigation, the third-party investigator made the following recommendations for improvement:</li> <li>(1) Adding a flow control valve to the VOCs pipeline in Plant II</li> <li>High-flow VOCs discharge is the cause of the whole incident. It is recommended that a flow control valve on the VOCs pipeline in Plant II can prevent high-flow discharge from charging the main blower pipe to the explosion limit and thereby eliminate explosions.</li> <li>(2) Accelerating the opening speed of the dilution throttle</li> <li>Even though the inflow VOCs of Plant II may increase, if the dilution throttle can open earlier, the main blower pipe will not reach the explosion point to avoid the explosion. Therefore, it is recommended that the dilution throttle should activate faster.</li> <li>(3) Installing the dilution throttle as closer to the blower inlet pipeline as possible. In addition, as the dilution throttle is equipped on the mixing chamber that is too far away from the RTO inlet to dilute gases in the front end even it is activated. It is thus recommended to install the dilution throttle as closer to the blower inlet pipeline as possible.</li> <li>(4) Replacing the chamber mixing with in-line mixing to shorten the distance between the mixing point and the RTO inlet</li> <li>Either a mixing chamber or a long blower-RTO distance can result in prolonged gas stay and accumulation, which indirectly enhance explosion strength. It is recommended to install an explosion vent on the blower to release pressure produced by the blast so as to reduce explosion hazards. Based on the incident investigation report, we have progressively added or revised six RTO work instructions to provide more dependable instructions for operation and maintenance personnel and thereby enhance RTO operation safety.</li> </ul>			

## Water resources management and water pollution prevention

Tap water is our primary water source. The tap water consumption of the Kaohsiung Plant in 2016 was 858,271 m<sup>3</sup>, and the water volume per unit product is 3.63 m<sup>3</sup>/m.t.

Tap water consumption (m<sup>3</sup>) Water volume per unit product (m³/m.t.) 900,000 3.63 3.61 3.6 0 850,000 858,271 3.5 3.47 800,000 0 3.4 750,000 33 700,000 3.2 650,000 3.1 600,000 550,000 3 2014 2015 2016

Water Consumptions and Water Volume Per Unit Product in the Past 3 years

Note: Water consumption data were extracted from the water meter.

In wastewater discharge, wastewater is treated and discharged with criteria superior to the regulatory and statutory requirements. In 2016, the Kaohsiung Plant discharged 210,632 m<sup>3</sup> of effluents into the Huojing River in Kaohsiung. Tap water consumption increased in 2016 after the new production line started operation.

#### Effluent Volume in the Past 3 Years



Referring to the "Effluent Standards for the Petrochemical Industry" promulgated on December 1,2011, there are 24 items for controlling the quality of effluents from the petrochemical industry. Major control items of the Kaohsiung Plant include suspended solids (SS), grease, and chemical oxygen demand (COD). The value of these items is far lower than the regulatory effluent standard or even lower than the method detection limit (MDL).

#### Suspended Solids COD Grease Standard Standard Standard (unit: mg/L) (unit: mg/L) (unit: mg/L) 40 15 150 30 30 10 10 100 100 20 5.3 13.7 10.2 20.4 5 50 29.7 2.9 10 54.6 О 0.5 47.4 O 0 0 0 0 2014 2015 2016 2014 2015 2016 2014 2015 2016

#### Effluent Quality of Kaohsiung Plant in the Past 3 Years

#### Water recovery and recycling programs

Enhancing the reclamation rate of water resources	We have improved the steam condensate recovery system. After the completion and operation of the Kaohsiung Plant's new steam boiler, the condensate reclaimed from steam can be reused in the new boiler to achieve 100% in-house steam condensate recovery.
Reuse of recycled water	A new advanced wastewater treatment system will be implemented to reclaim treated wastewater for use on the cooling tower in order to reduce tap water consumption and thereby reduce process water discharge.

#### 鴤 Waste management

The Kaohsiung Plant produces both hazardous industrial waste and general industrial waste and disposes of such waste by incineration, physical treatment, and cleaning. The Kaohsiung Plant also hires licensed waste disposal contractors to dispose of and treat such waste in accordance with the "Industrial Waste Disposal Act." The table below shows the volume of disposal of different types of waste over the past the years.

Volume of Disposal of Different Types of Waste by the Kaohsiung Plant in the Past 3 Years

				(unit: m.t.)
Waste	Treatment	2014	2015	2016
Waste plastics, mixed	Cleaning	10.5	12.71	14.56
Waste wood, mixed	Incineration	20.4	22.99	18.47
Organic sludge	Incineration	22.3	10.61	19.07
Waste metal	Cleaning	33.5	30.09	34.57
Waste oil, mixed	Physical	20.2	32.83	61.26
Household waste	Incineration	216.6	128.85	92.98
Waste wax	Physical	10.3	1.92	1.82
Other flammable mixtures	Incineration	0.2	0.885	0.97
Waste wires and cables	Physical	-	6.46	-
Total annual volume of waste		334.0	247.3	243.7

The Kaohsiung Plant is also committed to implementing resource separation and recovery and hire licensed contractors to recycle waste metal. In 2016, the Kaohsiung Plant recovered 123 m.t. of waste metal and hired nearby resource recycling contractors to dispose of the plant's wastepaper.



Waste Metal Recovery Volume in the Past 3 Years

#### Waste reduction programs:

Reinforcement of awareness education	Reinforce education of the need for waste separation and labeling to increase waste recovery volume and reduce the disposal volume of general waste.
Clean production	Strengthen process management to minimize end-of-pipe treatment and reduce the output of sludge and other industrial waste.

#### Noise control

The daytime and nighttime equivalent sound levels (Leq) measured around the lower area is about 95-98db, exceeded the control standard of Cat. IV noise control zones. Based on the frequency response of the noise produced by major process equipment in operation, the noise should be transmission and diffraction noise caused by resonance at medium to low frequency. As a result, they have exceeded the daytime and nighttime control standards and even disturbed neighboring plants.

In 2016, we made improvements to reduce the noise around the blower area by building galvanized insulation walls in the area. After project completion, the Leq. measured at the perimeter of noise source is below the control standard.


#### Table Leq. Before and After Improvements

Time	Daytime	Evening	Nighttime
Standard	80	70	65
Before		95 98	
After	79	68	62

## 5.6 Green services and products

We pack products in bags or transport them by tankers. We use PE bags, bulk bags, and paper bags. Packaging Material Consumption of Kaohsiung Plant in the Past 3 Years

Marca 241	2014		2015		2016	
Material	Consumption	Recovery	Consumption	Recovery	Consumption	Recovery
PE bag (m.t.)	605	(Recovered by customers)	638	(Recovered by customers)	779	(Recovered by customers)
Paper bag (m.t.)	37	(Recovered by customers)	35	(Recovered by customers)	58	(Recovered by customers)
Bulk bag (pcs)	57,000	95.07%	65,272	71.08%	71,268	21.46%

Note 1: PE and paper bags are recovered by customers for reuse as temporary package of byproducts, customer's products, or odds. Note 2: We stopped recovering bulk bags in April 2016 and began using disposable bulk bags recovered by customers as bulk bag recovery may contaminate our products and customers can recycle bulk bags.

For large purchases and when the customer's warehousing ability allows, we recommend tanker transportation to directly reduce the consumption of packaging materials. Together with environmental considerations, products for large purchases are usually shipped in bulk bags or tankers to reduce PE or paper bag consumption.



#### Tanker Transportation Frequency in the Past 3 Years



## 5.7 ESH grievance channels

The Kaohsiung Plant has established, implemented, and maintained the "ESH Communication, Involvement, and Consultation Management Regulations" as channels and procedures for the communication, engagement, and consultation of environment-related topics for internal stakeholders (employees, industry associations, employee welfare committee, labor/management meetings, occupational safety and health committee meetings) as well as external stakeholders (customers, ESH competent authorities, community residents, and environmental groups).



Environmental Protection

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#### Kaohsiung Plant ESH Information Response Flowchart



Addressing internal ESH grievances	<ul> <li>"Management Labor Conference," "Union Board Meeting," "Safety and Health Meeting," and other meetings.</li> <li>When awareness education or responses are required, responsible departments will review the case and send a written response to the PR Office. After approving the response, the ESH responsible person will announce it within the organization.</li> </ul>
Handling external ESH grievances	<ul> <li>After receiving an ESH grievance from outside the organization over the phone, orally, or in writing, any unit of the Kaohsiung Plant will refer the case to the responsible unit to verify the content of grievance and register it in the "ESH Information Registration List." After a case has been confirmed, a proper response will be made.</li> <li>Data related to the ESH policy of USI is available at the PR Office of the Kaohsiung Plant for public access or retrieval. Such data is also registered in the "ESH Information Registration List" to achieve communication with stakeholders.</li> </ul>

ltem	2014	2015	2016
Grievance	1	5	3
Valid case	0	0	0

#### Statistics on External ESH Grievances at Kaohsiung Plant in the Past 3 Years

As none of the grievances received over the past three years were caused by production or operational activities of the Kaohsiung Plant, no valid grievance has been reported over the years.



## A Great Place to Work



- 6.1. Workforce structure
- 6.2. Employee turnover
- 6.3. Employee rights and benefits
- 6.4. Talent cultivation and development
- 6.5. Occupational safety and health

We agree that employees should enjoy both human rights and labor rights as well as the benefits described by the International Labour Organization (ILO). Thus, we treat employees with respect and without discrimination. We have also established regulations to prevent harsh and inhumane treatment, including sexual harassment, sexual abuse, physical coercion, or verbal abuse of employees. We also grant employees the right to freedom of association according to the law, conforming with various regulations regarding labor rights and human rights. We do not use child labor or forced or compulsory labor in any stage of manufacturing. We maintain diversity and equal remuneration for employees regardless of age or gender and provide reasonable opportunities for remuneration, promotion, and transfer based on work performance and potential.

## 6.1 Workforce structure

Total employees	460 persons, Male 416 persons (approx. 90%), female 44 persons (approx. 10%)
Average age	45.7 years old
Average service length	16.6 years
Summary	<ol> <li>We hire employees from Taiwan, mainly distributed in the Taipei and Kaohsiung areas.</li> <li>Except for employees of different business attributes, such as advisors (consultants) and experts with whom a fixed-term employment contract is signed, we sign non-fixed-term employment contracts with all full-time employees.</li> <li>In 2016, we hired six persons with disabilities, commanding at 1.3% of all employees.</li> <li>About 79% of employees hold a first or higher degree.</li> </ol>

2016 Personnel Data

Note 1: Due to the characteristics of the petrochemical industry where male employees are more than female employees. Note 2: To provide employment opportunities for under-represented or vulnerable groups, we hired people with disabilities at a

percentage higher than the 1% requirement prescribed in the "People with Disabilities Rights Protection Act".



#### Workforce and Distribution by Gender in the Past 3 Years

#### Distribution by Gender 2016



Note: 416 males (non-fixed-term contract 410 + fixed-term contract 6) and 44 females (non-fixed-term contract 41 + fixed-term contract 3).





Distribution by Duty 2016



## **6.2 Employee turnover**

#### Recruitment, hiring, and evaluation

To stabilize human resources, we recruit excellent talents with a fair, open, transparent, and efficient recruitment system in order to build a strong organization. In addition to maintaining diversity and equal opportunity, we do not engage in discrimination based on race, color, age, gender, sexual orientation, gender identity and expression, ethnicity or national origin, disability, pregnancy, religion, political affiliation, union membership, or marital status in hiring. In routine operations, we maintain workforce composition control and workforce structure balance, and we analyze and improve employee turnover.

When new or existing positions need to be filled or the workforce needs to be expanded due to business needs, organizational planning, or employee resignation, the workforce-requesting unit must complete the "Personnel Replenishment Request Form." After the request is approved, we will first recruit personnel within the organization or transfer eligible candidates by announcing the openings over the intranet or by email. With the approval of their current supervisors, active employees interested in such openings may voluntarily submit their resume to the human resources unit. After further screening, the human resources unit will forward the resumes of eligible candidates to the supervisor of the requesting unit to provide multiple options to the unit and a better career development mechanism for employees. We also recruit employees outside of the organization through newspapers, human resources websites, human resources consultation agents, schools, and employment service stations. For job openings of the Kaohsiung Plant, we give priority to local citizens as a way of giving back to local communities.

Except for higher management, such as vice presidents and higher-level officers, and fixedterm contract employees who do not need performance evaluation, all employees receive performance evaluations at planned intervals.

In 2016, we hired a total of 59 new employees. The tables below show their distributions by gender, age, and region.



Distribution by Age

#### **Distribution by Region**



## Turnover rate

All employees are free and have the right to leave work at any time or terminate their employment by the law. Their labor conditions are subject to local laws and regulations, including minimal wage, working hours, overtime pay, Labor Insurance, National Health Insurance, redundancy pay, and pensions. We also provide employees with group insurance and various employee benefits.

In 2016, a total of 40 employees resigned (including 22 retired), including two female employees. The main reason is that the number of employees of the Kaohsiung Plant meeting the retirement requirements increased in 2016, so the turnover rate of employees in southern Taiwan and of those over 51 years old soared. This also reflects one important thing: the vast majority of employees has high organizational commitment and organizational identification and willing to stay until they retire. This also shows our care for employees has yielded the recognition of the vast majority of employees. Therefore, they love the company and are eager to work hard in their post. Together we create better operational performance and a more harmonious work environment.



#### Distribution of Turnover Rate by Age in the Past 3 Years

0.



#### Distribution of Turnover Rate by Region in the Past 3 Years

## 6.3 Employee rights and benefits

We value employee benefits, and USI employees can enjoy the following benefits:

ltem	Content
Bonus	Year-end bonus and performance bonus
Leave	Parental, menstrual, family care, and paternal leaves.
Insurance	Labor Insurance, National Health Insurance, travel insurance for business trips, employee/ dependent group insurance, pension contributions
Food	Employee canteens and meal allowances.
Transport	Employee parking spaces and travel allowances
Entertainment	Employee gym, employee tours, and regular employee gatherings.
Allowances	Subsidies for on-the-job training, domestic/overseas further education
Other benefits	Wedding/childbirth/funeral subsidies, employee tour subsidy, citation for senior employees, bonuses for three major folk festivals, children education allowance, employee savings plan, periodic health examination and healthcare plan.

## Employee compensation plan

Upholding the belief to share profits with employees, we attract, retain, cultivate, and encourage all kinds of outstanding talents and have established a comprehensive and competitive employee compensation plan. All new employees are paid better than the statutory minimal wage. Allowances vary according to the position and education attainment of employees. The year-end

bonus is distributed according to employees' performance. Most importantly, the base salary is equal regardless of gender. Due to the characteristics of the petrochemical industry, the proportion of wage for female and male employees is slightly different. To stabilize the workforce and retain outstanding talents, apart from adjusting the pay for employees according to the consumer price index and personal performance of employees every year, we participate in a compensation survey of the petrochemical industry to estimate pay standards in the market to make appropriate adjustments and planning. We also give a special raise to employees with outstanding performance to ensure our pay is competitive on the market.



2016 Female and Male Employee Salary Structure

Note 1: The base for female employees is "1" including wage, bonuses, and benefits. The calculation does not include employees with a service length less than one year.

Note 2: The start pay for inexperienced employees is 1.61 times of Taiwan's 2016 minimum wage.

## Health care benefit

Every year we arrange periodic health examinations for employees. Our Taipei Office is equipped with a gym and the Kaohsiung Plant has qualified nurses who offer lifestyle advice and medical assistance to employees there. We provide menstrual leave and individual breastfeeding space for female employees and have cooperation with kindergartens and educational organizations to provide daycare service for employees. In addition, we periodically organize outdoor activities for employees to maintain balance between work and life.

To fulfill the need for parental leave, employees with children under three can apply for parental leave. In 2016, one employee applied for parental leave for a term of one year. As that employee has not reinstated, no further data regarding the reinstatement and leave of absence (LOA) are available. We have made perfect reinstatement plans for employees. When an employee reinstates after an LOA, we will arrange reinstatement training and education for her or him to protect their right to work and ensure she/he can smoothly return to work.

## Employee Assistance Program

We have established the Employee Assistance Program Service Center (EAPC), aiming to improve the life quality, health, and happiness of employees. We persistently promote EAP services by organizing various social activities and providing employee consultation and counseling services to provide comprehensive care and assistance for employees in psychological adjustment, career management, health promotion, and life quality improvement.





Book donation



Riddle game at Lantern Festival



Hiking along Bihu Trail

Christmas Party



**Employee Activity** 



Employee Trip

## Pension contributions

We have established a set of retirement regulations for all full-time employees and contribute every month the employee pension reserves to the personal pension account at the Labor Insurance Bureau for each employee in accordance with the Labor Standards Act.

Item Proportion	Proportion of Contribution	Employee Participation in the Retirement Plan
Pension under the Labor Standards Act (old system)	Employer contribution: 12% of the employee's monthly wage.	100%
Pension under the Labor Pension Act	Employer contribution: 6% of the employee's monthly wage. Employee contribution: 0-6% of the employee's monthly wage.	100%

## Labor union

We have a labor union and protect the right to collective bargaining and freedom of association of employees. This fully demonstrates our determination to uphold labor rights and benefits. Every year, representatives elected by employees attend the "management-labor

meeting" held periodically by the management to negotiate and discuss matters relating to labor conditions and employee welfare. In addition, relevant officers of the management attend the "board meeting" and "member representatives annual congress" held by the union to listen to the voices and appeals of employees and engage in face-to-face communication with member representatives in order to cohere into a consensus, promote management-labor cooperation, and create a win-win situation for both parties through this process.

By the end of 2016, the union had a total of 328 members, including 11 females and 317 males. Except for the unit heads and personnel affairs staff of the Taipei Office and the Kaohsiung Plant who did not participate in the union, all employees of the Kaohsiung Plant are union members, with a 100% participation rate. In addition, representatives of labor and management have formed the "Pension Reserve Supervisory Committee", the "Employee Welfare Committee", and the "Occupational Safety and Health Committee." Both committees hold meetings at planned intervals to provide a channel for both parties to communicate and thereby maintain labor rights and benefits.



2016 Labor education and training

![](_page_85_Picture_1.jpeg)

2016 Member Representatives Annual Congress

![](_page_85_Picture_3.jpeg)

## Employee Welfare Committee

Every month we contribute 0.15% of our sales turnover to the "Employee Welfare Committee." The fund is used for subsidizing employee tours, the education and entertainment and scholarships of preschoolers of employees to reward the effort and hard work of employees. In terms of employee clubs, we have 10 employee clubs so far, including a hiking club, cycling club, and various ballgame clubs. The company and the Employee Welfare Committee guide and sponsor them. Employees can relieve their work stress, promote health with club activities, and thereby improve their organizational commitment.

## 6.4 Talent cultivation and development

### Education and training

In 2016, we offered a total of 10,313 hours (including training courses participated by employees and organized by the group) of training, with a total expense of about NT\$880,000. We sponsor employees with higher learning motivation and greater development potential to receive further education in universities at home and abroad and arrange duty adjustment to give them complete training and cultivate talents for the company.

![](_page_86_Figure_0.jpeg)

#### Education and Training Hours in 2016

## R&D personnel training and planning

To cultivate important R&D talents, we will promote R&D personnel who pass the performance evaluation and with organizational management ability to managerial posts. Those who are fond of R&D can develop specialties in their R&D work. We also have a well-established job rotation system. After R&D personnel have worked in an R&D position for some time, we will transfer them to technical support to interface with customers in order to cultivate all-round R&D talents with comprehensive knowledge and skills. In addition, draftees taking R&D alternative service can enjoy equal opportunities for promotion as full-time employees. For draftees taking R&D alternative service with outstanding performance in the annual performance assessment, we will notify them of job opportunities at USI when they are released after the third year of their service.

In 2016, we hired 31 R&D staff members, which together make up 7% of all employees. All R&D personnel hold a master's degree or higher.

![](_page_87_Figure_0.jpeg)

#### Distribution of Education Attainment of R&D Personnel in the Past 3 Years

## 6.5 Occupational safety and health

In March 2001, we passed OHSAS 18001 certification for our occupational health and safety management system (OSHMS). The ESH and construction departments of the plant inspect various industrial safety items every day at planned intervals. All affiliates within the USI Group also check and balance and exchange experience with one and other according to the "Group Safety and Health Partner Area Joint Defense" system recommended and instructed by the Southern Regional Labor Inspection Office, Council of Labor Affairs, in order to further implement safety and health management.

![](_page_87_Picture_4.jpeg)

0,

A Great Place to Work

## Objectives and management programs for occupational safety

#### Objectives, management programs, and effectiveness of occupational safety in 2016 Policy Objective **Pipeline corrosion surveillance** Routine tour pipeline inspection of production personnel Completion of inspections in three zones in each of plants I and II, with 100% achievement rate. Completion of the anti-corrosion gel coating on the supports of ethylene and butene gas pipelines in Plant II. Prevention of pipeline corrosion hazards and steam injection point inspection. Inspection of 114 steam injection points on three production lines: C/D/E+F in three years. The RT-profile test was implemented when the results of steam injection point inspection were inclusive. Completion of ten steam injection points every quarter. Completion of inspection on 114 points in 2013-2015. Re-inspection of 114 points in 2016 and the annual target was achieved. Preparation of test and operation of B-line Test of interlock and rotary equipment. Completion of pipeline flush. $\checkmark$ Completion of the purge and O<sub>2</sub> analysis (<10ppm) of all systems. Completion of painting of the interior and arrow signs of pipelines. Completion of the pressure testing of all pipelines. ✓ Normal charging of water, nitrogen, air, and steam. Completion of process airtightness test. Completion of pressure valve leakage test. Incident Zero industrial rate (IR) Prevention of equipment corrosion by partial high-concentration acidic substances. accident Implementation by operation personnel in accordance with the work manual. Replacement of new sulfuric acid tanks, with tests completed on August 15. Operation and monitoring of long-distance underground ethylene pipelines [Underground Pipeline Operation and Maintenance Plan] Completion of work manual revision in Q1. Completion of education and training for underground pipeline O&M personnel in April and May. Completion of underground pipeline O&M personnel certification by the end of June. Participation in the underground pipeline emergency response training of the regional defense on April 1. Organization of the underground pipeline emergency response training on October 20. Maintenance and inspection reports of underground pipelines [Underground Pipeline Operation and Maintenance Plan] Completion of full-pipeline CIPS and reporting by expert Jin Mao Company.

- Direct inspection of pipeline 8 in the west of the Houjing River on July 22, and no anomaly was found on USI pipelines.
- Completion of re-inspection of sections with abnormal potential on the pipeline 6 according to ITRI's advice. Two zones have been selected for direct verification.

Policy	Objective	Program/Effectiveness
Zero industrial accident	Incident rate (IR)	<ul> <li>Education and training for pipeline tour inspection personnel [Underground Pipeline Operation and Maintenance Plan]</li> <li>Completion of the pipeline tour inspection instructions (WI-KEE-446-09).</li> <li>Completion of education and training in two sessions on April 29 and May 9</li> <li>Completion of the on-line test system for pipeline tour inspection personnel.</li> <li>Completion of pipeline tour inspection personnel certification.</li> <li>Routine tour inspection of underground pipelines [Underground Pipeline Operation and Maintenance Plan]</li> <li>Hiring CKS Guard to implement routine tour inspection.</li> <li>Completion of self-tour inspection and self-audit respectively in February, April, and June</li> <li>Inspection and maintenance of the pipeline anti-corrosion system</li> <li>[Underground Pipeline Operation and Maintenance Plan]</li> <li>Completion of the Q1-Q3 potential check of the anti-corrosion system of pipeline 8 by Jin Mao Company.</li> <li>Completion of the Q2-Q3 potential check of the anti-corrosion system of pipeline 6 by Li Cheng Company.</li> <li>Emergency response exercise [Underground Pipeline Operation and Maintenance Plan]</li> <li>Completion of the emergency response equipment list and checklist and setting all emergency response equipment in order for management by the ESH Section.</li> <li>Completion of the underground pipeline emergency response exercise with plants of the 6th and 8th pipeline committees on April 1.</li> <li>Construction of the pipeline mapping management system [Underground Pipeline Operation and Maintenance Plan]</li> <li>Completion of adabase update and storage in on the Sharepoint website.</li> <li>Category Coperation zone emergency response exercise for B-line</li> <li>Completion of all 16 emergency exercises for all teams.</li> </ul>
Zero occupational accident	Frequency- Severity Indicator (FSI)	<ul> <li>Slab corrosion improvement in the reaction zone</li> <li>✓ Completion on January 11 by operation personnel in accordance with the work manual.</li> <li>✓ Replacement of slabs and completion of primer coating.</li> <li>Equipment corrosion due to partial high concentration of H₂SO₄</li> <li>✓ Completion by operation personnel in accordance with the work manual.</li> <li>✓ Replacement of new sulfuric acid tanks, with tests completed on August 15.</li> </ul>

## OHS organization and operation

In addition to the "USI Kaohsiung Plant Union," the Kaohsiung Plant has an "Occupational Safety and Health Committee (OSHC)" established in accordance with the "Regulations for Occupational Safety and Health Management," with labor representatives elected or appointed by the union and holding 35% of the seats. The committee meets with management every quarter to discuss ESH topics on behalf of employees.

![](_page_90_Figure_2.jpeg)

We team up with the Taiwan Responsible Care Association (TRCA) and the Renda Industrial Park Safety and Health Promotion Association to promote industrial safety, health, and environmental protection together and learn from one another in order to improve the protection of employee safety and health. In addition, we organize fire exercises and industrial safety education and training biannually to develop emergency response skills and self-safety management of employees.

Based on the production activities of the Kaohsiung Plant, we have established emergency response procedures for raw material (chemical) leakage, fire, explosions, and earthquakes. In addition, we have classified incidents into three levels and have planned different response stages. When the level of an incident rises, the stage of response also rises. The three stages of response are as follows:

![](_page_91_Figure_1.jpeg)

1

Stage

2

Stage

3

The on-duty officer will be the site commander to instruct personnel within the unit to stop the leakage or fire

Major leakage or hazardous substances and a major fire occur within the plant, the emergency response team of the incident occurring unit cannot effectively control the situation, and it must mobilize the plant's emergency response organization to support the control.

- The on-duty officer mobilizes the emergency response organization according to the alert and reporting procedure based on the request for support of the incident occurring unit.
- Based on the emergency situation, request for support outside of the plant and notify relevant agencies as necessary.
- Determine the need to immediately shut down plant operations and isolate the incident affected area.
- The site commander can be the head of the incident occurring unit or department, until the general plant manager or his/her agent takes over the command.
- Set up a response command center to gather information regarding the latest situation for the chief commander to make decisions and notify the response organization.

#### An incident may spread outside of the plant and its impact reaches outside of the plant.

- The general plant manager or his/her agent becomes the chief commander to command the emergency plan within the plant and report the situation to the Fire Bureau of Kaohsiung City.
- <sup>1</sup> If the situation runs out of control and may threaten the life of employees, the plant is evacuated.

![](_page_91_Figure_12.jpeg)

#### Emergency response exercise and training

![](_page_92_Picture_1.jpeg)

![](_page_92_Picture_2.jpeg)

## Disability injury and absenteeism of employees

Given that "zero industrial accident" is our objective for occupational accident management, disability injury and absenteeism are two key indicators for evaluating occupational safety and health within an organization.

In 2016, no disabling injuries were reported in the Kaohsiung Plant. Between January 1 and December 31, 2016, the accumulative working hours without lost time injury of the Kaohsiung Plant was 645,156 hours. In addition, no occupational accidents were reported in the Taipei Office, Linkou R&D Division, and Tainan Office in 2016.

ltem	20	)14	20	15	20	16
item	Male	Female	Male	Female	Male	Female
F.R.	0.18	0	1.51	0	0	0
S.R.	3	0	33	0	0	0
F.S.I.	0.023	0	0.221	0	0	0

Note 1: Disabling injury frequency rate (F.R.) = Injury frequency × 1,000,000 hours worked /total hours worked. Note 2: Disabling injury severity rate (S.R.) = Injury days lost x 1,000,000 hours worked /total hours worked. Note 3: Frequency severity index (F.S.I.) =  $\sqrt{[(F.R.×S.R.)/1000]}$ 

In addition, as absenteeism is another key indicator for evaluating occupational safety and health within an organization, the table below shows the absenteeism rate (AR) of employees in 2016.

#### 2016 Absenteeism Rate

Gender	Male	Female
AR (%)	0.107%	0.197%

Note 1: Absenteeism rate (AR) = Total days lost due to absenteeism in the period/Working days available in the period  $\times$  100% Note 2: Total days lost due to absenteeism in the period: Calculated by summating the claimed sick days in the HR system. Note 3: Working days available in the period: The actual number of days worked in 2016.

## Care for employee health

Every year we commission major hospitals to give health examinations to employees to protect their physical health and report the examination results to competent authorities for reference as necessary. We also arrange special health examinations for employees of the Kaohsiung Plant engaging in dusty, ionizing radiation, and n-hexane work. After examination by physicians, they only need level one or two management. Level one management is for employees who are found normal by physicians based on the results of a special health examination or follow-up health examinations. Level two management is for employees who are found abnormal by physicians based on the results of a special health examinations, but the problem(s) does (do) not relate to work.

## Contractor safety management

At USI, the safety management of contractors and suppliers is equally important. Therefore, we have established the "Contractor Management Regulations" and the "Contractor Entry Management Manual." Both documents include industrial safety education and training for contractors, and they must pass safety certification before they can perform their contracts at USI. To strengthen safety supervision during construction, we have established the "Labor Safety and Health Tour Inspection Regulations" to implement ESH tour inspections every day within the plant to improve the safety of all processes and ensure the safety, life, and health of employees. Before implementing high-risk work, we run a risk assessment process to identify hazards, assess risk, take precautionary measures, and review the emergency response plan. We also hold communication and coordination meetings with contractors from time to time to ensure operation safety. In 2016, the accident rate per one thousand persons at the Kaohsiung Plant was zero.

![](_page_93_Figure_5.jpeg)

#### Contractor Operation Distributions by Nature in 2016

Note: Contractor accident rate by per 1,000 persons = Total number of contractor accidents/ total number of contractors x 1,000

## ESH education

Education, training, and publicity are the foundation to promote ESH awareness to employees and contractors. By establishing the "Labor Safety and Health Education and Training Regulations," we provide knowledge and skill training for different categories of employees and contractor personnel based on actual need. In 2016, we provided 134 sessions of ESH education and training for 1,661 persons, totaling 4,434 hours.

Туре	Hours/ person	Sessions	Person	Total hours
New employee training	6	19	49	294
On-the-job training	3	15	1,264	3,792
Contractor training	1	100	348	348

#### Statistics on ESH Education and Training 2016

We conduct on-site tour inspection every day and clean up the environment regularly. We close all containment facilities on sunny days and open them on rainy days to prevent water deposition. We also keep gutters dry and clean in ordinary times. Therefore, no dengue fever was reported in the Kaohsiung Plant in 2016.

![](_page_94_Picture_5.jpeg)

# **Care for Society**

- 7.1 Community involvement
- 7.2. USI Education Foundation

![](_page_95_Picture_4.jpeg)

![](_page_95_Picture_5.jpeg)

## 7.1 Community involvement

## Community care

In addition to caring for the education of the disadvantaged, education in remote areas, and environmental education, upholding the spirit of "Giving Back," we spare no effort in expressing our care for the communities, local groups, and schools in the vicinity of the Kaohsiung Plant to maintain and develop positive relationships with these neighbors.

![](_page_96_Figure_3.jpeg)

![](_page_96_Figure_4.jpeg)

#### Contributions to Communities Around Kaohsiung Plant in the Past 3 Years

#### Community Contribution in 2016

![](_page_96_Figure_7.jpeg)

## Industry-academia collaboration

In response to declining student numbers in recent years, schools are developing more sophisticated and unique education approaches and programs to provide students with a highquality and comprehensive learning environment. In the context of these population and education trends in the Renwu and Dashe districts, our Kaohsiung Plant and other 13 other plants (including Formosa Plastics Renwu, the Chang Chun Group, and the Dashe Industrial Park Enterprises Association) of Renda Industrial Park and the Renwu Senior High School have established an industry-academia collaboration model to cultivate a talent base for the future and for local schools to develop dynamic learning models and strengthen their ability to attract more top students through their linkages with enterprises.

This cooperation model among industry, government, and academia aims to develop highcaliber students with market-relevant skills and sound employment prospects. Enterprises will have direct access and warm relationships with specifically trained talent, and they can develop positive relationships with neighboring communities in a substantial way. Moreover, the government can promote local prosperity, close the urban-rural gap, bolster regional economic development, and minimize brain drains. Thus, the project will produce a win-win-win situation for the students, schools, enterprises, communities, and the local government.

Period	August 1, 2015 through July 31, 2020 (three graduation classes for five years)
Partner	Kaohsiung Municipal Renwu Senior High School
Target	<ol> <li>Students with household registrations in Renwu, Dashe, Dashu, Niaosong, and Nanzi districts near Renda Industrial Park.</li> <li>40 tenth graders a year.</li> </ol>
Internship	<ol> <li>In addition to the general tenth grade curriculum, electives relating to the petrochemical industry and professional ethics are emphasized.</li> <li>Students on the program will visit USI in summer break or on Saturday to further understand the industry and job environment.</li> </ol>
Vacancy	10 students each year, totaling 90 for three graduation classes in five years.
Scholarships and grants	<ol> <li>Three graduation classes in five years: NT\$1.08 million</li> <li>Subsidization for the hourly pay for professional courses in three years: NT\$237,600</li> <li>USI sharing for three graduation classes in five years based on the program MOU: NT\$130,000.</li> </ol>
Preferential hiring	<ol> <li>USI will recommend one student from the top-ten graduating students from relevant college departments to other Ren Da Industrial Park Service Center companies that are partners of the Renda Petrochemical Talent Stream program to serve as trainee.</li> <li>Students who choose to further their studies will be priority candidates for hiring by companies in the Ren Da Industrial Park Service Center as long as they pursue studies in relevant disciplines.</li> </ol>
Summary	<ol> <li>The first Renda Petrochemical Talent Stream officially kicked off in August 2015.</li> <li>In the exchange in Japan organized under the "2016 Kaohsiung Renda Petrochemical Talent 2. Stream Cooperation Program—Overseas Visit" in June 2016, each participant was subsidized about NT\$25,000, totaling NT\$424,320 (we shared based on the program MOU).</li> </ol>

"Kaohsiung Renda Petrochemical Talent Stream" Cooperation Program

![](_page_98_Picture_0.jpeg)

Certificate of appreciation for sponsoring overseas visits.

Presentation of 2016 scholarships.

In addition, to implement the government's high-value petrochemical industry policy, we have been aggressively developing relevant high-value products in recent years through industryacademia (also research institutions) collaboration. These academic or research institutions included the Industrial Technology Research Institute (ITRI), the Plastics Industry Development Center (PIDC), and National Chung Cheng University. The scope of research and development covers the preparation of raw materials, process optimization, product processing or modification, and development of product applications. In addition, we provide traineeship opportunities for graduate students of the Department of Chemical Engineering of National Chung Cheng University and under the preferential hiring policy we have hired a number of students from that department.

## 7.2 USI Education Foundation

The USI Education Foundation was established on December 30, 2011 funded with donations from USI and APC. The foundation officially started operations in 2012 to promote educational charitable affairs, with a focus on the care for the education of the disadvantaged, in remote areas, and environmental protection. The foundation advances its goals by establishing scholarships and grants, donating to charities, and sponsoring educational and charitable activities.

In 2016, the USI Education Foundation sponsored various activities with a total amount of NT\$4.94 million, which included NT\$1.3 million for scholarships and grants; NT\$1 million for the Alliance Cultural Foundation and NT\$1.5 million for Junyi Experimental High School; NT\$0.69 million for charitable educational groups such as Boyo Social Welfare Foundation, the "Teach for Taiwan Association, and the "Exclamation Mark Strategic Alliance; and NT\$0.45 million for service activities of colleges and universities. Since the foundation was established five years ago, it has sponsored various activities and organizations with an amount accumulated to NT\$21.186 million.

Item	Amount (NT\$10K)
Scholarships and grants	130
Service activities of colleges and universities	45
The Alliance Cultural Foundation	100
Junyi Experimental High School	150
Other educational activities	69
Total	494

#### Expenditure on Sponsoring of USI Education Foundation in 2016

## Scholarships and grants

We offer scholarships to students from low-income families with outstanding performances and specializing in chemical engineering, material science, environmental science, and ecologyrelated disciplines of over a dozen public and private universities to promote education and talent cultivation of related fields, encourage university students of related disciplines to study hard, and cultivate outstanding industrial talents for society. In 2016, we offered scholarships and grants totaling NT\$1.3 million to 28 students from 25 departments of 16 public and private universities, including six from doctoral programs, 16 from master's programs, and six undergraduates; 19 of them were from low-income families.

Since the establishment of our scholarships and grants, we have offered a sum of NT\$5.85 million, and the number of disciplines has been expanded from 19 to 25. In 2017, we will offer scholarships and grants to more students and more disciplines to benefit more outstanding students from low-income families.

![](_page_99_Figure_5.jpeg)

Distribution of Scholarships and Grants over the Years

## Sponsoring service activities of colleges and universities

To encourage college and university clubs to provide educational services for the disadvantaged, in remote areas, and about environmental protection, the USI Education Foundation sponsors clubs officially registered under colleges and universities.

The foundation sponsors a wide variety of education services, covering language, mathematics, naturel sciences, social studies, arts and culture, life counseling, physical exercise, character building, ICT, environmental education, etc. In doing so, we hope to provide more diversified education for the disadvantaged and those in remote areas through high-quality club activities and human resources of colleges and universities.

In 2016, the foundation sponsored 55 activities from 28 schools (out of 164 applications from 47 schools) for a total sum of NT\$450,000. Over the past five years, the foundation has sponsored activities for a cumulative amount of NT\$2.05 million, benefitting about 5,350 volunteers and 11,622 students as participants in or recipients of the club or college services. As the number of applications increases every year, the foundation will continue its sponsorship of these activities in 2017 to encourage students to participate in social service activities.

![](_page_100_Figure_4.jpeg)

Sponsorship of School Service Activities over the Years

# Care for Society

## Alliance Cultural Foundation and Junyi Experimental High School

When Chairman Stanley Yen of the Alliance Cultural Foundation chaired Junyi Experimental High School (now Taitung Junyi Experimental High School) in 2011, he hoped to let students in remote areas enjoy equal opportunities to education and create new education value for Taiwan with the heuristic teaching method. The Alliance Cultural Foundation gradually allocates all human, time, and other resources for education. Concurring with the care for education in remote areas of Taiwan and the sustainable development concept advocated by Chairman Stanley Yen, USI Education Foundation sponsors the Alliance Cultural Foundation and Junyi Experimental High School to support his plans for promoting and developing education in remote areas.

In 2016, USI Education Foundation sponsored the Alliance Cultural Foundation a sum of NT\$1 million and Taitung Junyi Experimental High School a sum of NT\$1.5 million. Over the past five years, the USI Education Foundation has sponsored them for a sum of NT\$9.4 million, and the foundation will continue to sponsor them in 2017.

Receiving resources and compassion from different parts of society, Junyi Experimental High School is committed to reforming Taiwan's education. After introducing Waldorf Education (Steiner Education) to the elementary school department in 2013, the school decided to extend Steiner's educational spirit to junior and senior high schools in 2015. An equal emphasis was placed on the development of character education for international campus and dormitory life, hoping to inspire children's talent, help each child fulfill his/her dreams, and provide a reference for future mainstream education with each school's educational philosophy.

To nurture children in remote indigenous communities, the Alliance Cultural Foundation established scholarships and grants in 2012 for the "Program for Cultivating Seeds in Remote Areas" and a scholarship and grant program. Every year, it reserves one-third of the vacancies of the seventh grade for new students from remote areas in Hualien and Taitung. After five years, it has supported over 100 students. In response to its establishment of a senior high school section, we have extended the scholarships and grants to the twelfth grade.

In cultivating indigenous youth to become international talents, the Alliance Cultural Foundation provides opportunities for high-potential indigenous youth to study overseas to broaden their minds through the training programs of Brigham Young University and the Polynesian Cultural Center in Hawaii, so that they can become the seeds of hope to change their indigenous communities by applying what they will learn overseas to run their communities and lead their kinsmen. The first youth receiving overseas training has returned to his native Bulau community in Yilan and established the Root Vocational Study to establish the industry-academia cooperation mechanism for community youth. The fourth Taiwanese youth receiving this scholarship is now studying at Brigham Young University. This mechanism has facilitated an investigation trip for youth who do not speak English but have influence from indigenous communities and government organizations to learn in this environment.

In August 2015, the Alliance Cultural Foundation officially established the Junyi Education Center in Taitung to devote to Taiwan's education reform. In addition to introducing in educational concepts and teaching methods that meet the trends of times and local and student needs, the center supports teachers to make instructional innovation and enforce the "student-focus" teaching concept. By the end of 2016, Junyi Education Center has opened 18 programs with 93 courses with the participation of nearly 600 teachers, educators, and parents. In the future, the center will recruit semi-teachers in order to establish a diversion and collaboration relationships with teachers across Taiwan and thereby provide a map for professional growth in education innovation for teachers in Hualien and Taitung.

![](_page_103_Picture_0.jpeg)

Junyi students participated in the social enterprise expo

![](_page_103_Picture_2.jpeg)

Volunteer service of Junyi students at the Alliance Cultural Foundation Thanksgiving Evening.

![](_page_103_Picture_4.jpeg)

Student receiving scholarship under the Program for Cultivating Seeds in Remote Areas

![](_page_103_Picture_6.jpeg)

Donation of preowned books and supplies to Taitung Renai Elementary School through EAPC

Taitung Renai Elementary School was severely damaged by typhoon Nepartak in July 2016. Both the roof and all books of the school library were ruined. We financed the hardware reconstruction of the campus and recruited employees to donate up to 1,000 preowned children books through EAPC. We also donated 400 water bottles, which were souvenirs of the 2015 Shareholders' meeting, to teachers and students.

![](_page_104_Picture_0.jpeg)

USI employees packed books for Taitung Renai Elementary School.

## Sponsoring other educational and philanthropic activities

In 2016, we sponsored other educational and philanthropic activities with a total amount of NT\$690,000. Recipients included the Boyo Social Welfare Foundation, the Teach for Taiwan Association, and the Bunun Children's Choir of Indigenous Folk Songs of Luanshan Elementary School sponsored by the TECO Exclamation Mark Strategic Alliance. To provide steady support for these units highly recognized by society and to continuously help more students, USI Education Foundation will continue to support them in 2017.

![](_page_104_Figure_4.jpeg)

Sponsorship of Other Educational and Philanthropic Activities over the Years

#### **Boyo Social Welfare Foundation**

Founded in 2002, the Boyo Social Welfare Foundation provides free after-school club services to junior high school and elementary school students from low-income families. The programs have been running for over 14 years. In pursuit of its mission of "education beats poverty" the foundation has invested a large amount of human and other resources in curriculum design and established locations in indigenous communities. At present, there are over 50 locations to provide after-school club service for over 1,000 students from 142 elementary and junior high schools in over 20 townships.

#### "Exclamation Mark" Strategic Alliance

Convened by the TECO Technology Foundation and under the supervision of the Ministry of Education, the Exclamation Mark is operated on a collaborative model combining third and public sectors by means of strategic alliance. In 2016, the alliance successfully adopted and supported over 40 educational teams in indigenous communities and raised funds and planned resources and services for the continuation of indigenous culture and arts. The USI Education Foundation began supporting the alliance in 2013. In 2014, the foundation began sponsoring the Bunun Children's Choir of Indigenous Folk Song of Luanshan Elementary School to support the training and continuation of indigenous folk songs and culture of the school.

#### **Teach for Taiwan Association**

Founded in 2013 by a group of activists caring "education inequalities", the association was inspired by the concept and model of Teach for America. Starting from "teacher qualification", the association provides teacher training for competent young with a sense of responsibility before sending them to teach at low-income communities in remote areas for at least two years in order to demonstrate the change from schools, families to communities and from classrooms to outside of classrooms. By doing so, the association hopes that provide every child with quality education and the opportunity to self-development regardless of their background. The association also aims to resolve the long teacher shortage and high turnover rate problems in remote areas.

# Appendices

- 8.1. GRI G4 Content Index
- 8.2. ISO 26000 Correspondence
- 8.3. Assurance statement

## 8.1 GRI G4 Content Index

(	Genera	Standard Disclosures	Section	Page	Remark
Strategy and Analysis	G4-1	Provide a statement from the most senior decision-maker of the organization	<ol> <li>1.2 Message from the Chairman</li> <li>2.1 Goals for sustainable operations</li> </ol>	6 14	
G4-         G4-	G4-3	Name of the organization.	1.4 Company profile	9	
	G4-4	Primary brands, products, and services.	<ul><li>1.4 Company profile</li><li>4.4 Sales and customer service</li></ul>	9 41	
	G4-5	Location of the organization's headquarters.	1.4 Company profile	9	
	G4-6	The number of countries where the organization operates.	1.4 Company profile	9	
	G4-7	The nature of ownership and legal form.	1.4 Company profile	9	
	G4-8	The markets served.	4.4 Sales and customer service	41	
	G4-9	The scale of the organization.	1.4 Company profile	9	
	G4-10	Total number of employees by employment contract and gender.	6.1 Workforce structure	71	
	G4-11	The percentage of total employees covered by collective bargaining agreements.	6.3 Employee rights and benefits (labor union)	78	
	G4-12	Description of the organization's supply chain.	4.5 Supply chain management	44	
	G4-13	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	1.1 Report profile	4	No significant change.
	G4-14	Whether and how the precautionary approach or principle is addressed by the organization.	3.4 Risk management	27	
	G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	-		No relevant initiative has been subscribed or endorsed.
	G4-16	Memberships of associations (such as industry associations) and national or international advocacy organizations in which the organization.	1.4 Company profile	9	
ldentified Material Aspects and Boundaries	G4-17	List all entities included in the organization's consolidated financial statements or equivalent documents and report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	1.5 About USI Group	11	
	Genera	Standard Disclosures	Section	Page	Rema
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	G4-18	Explain the process for defining the report content and the Aspect Boundaries.	2.4 Analysis and identification of material topics	19	
	G4-19	List all the material Aspects identified in the process for defining report content.	2.4 Analysis and identification of material topics	19	
Identified	G4-20	For each material Aspect, report the Aspect Boundary within the organization.	2.4 Analysis and identification of material topics	19	
Material Aspects and Boundaries	G4-21	For each material Aspect, report the Aspect Boundary outside the organization.	2.4 Analysis and identification of material topics	19	
	G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements.	-		No informati has been restated.
	G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	-		No significar change.
	G4-24	List the stakeholder groups engaged by the organization.	2.3 Stakeholder identification and communication	16	
	G4-25	Report the basis for identification and selection of stakeholders with whom to engage.	2.3 Stakeholder identification and communication	16	
Stakeholder engagement	G4-26	The organization's approach to stakeholder engagement.	2.3 Stakeholder identification and communication	16	
	G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns.	2.3 Stakeholder identification and communication	16	
	G4-28	Reporting period for information provided.	1.1 Report profile	4	
	G4-29	Date of most recent previous report.	1.1 Report profile	4	
	G4-30	Reporting cycle.	1.1 Report profile	4	
Design of the	G4-31	Provide the contact point for questions regarding the report or its contents.	1.1 Report profile	4	
Report profile	G4-32	Report the 'in accordance' option the organization has chosen; GRI Content Index for the chosen option; and he reference to the External Assurance Report.	1.1 Report profile 8.1 GRI G4 Content Index	4 98	
	G4-33	The organization's policy and current practice with regard to seeking external	8.3 Assurance statement	106	

	Genera	l Standard Disclosures	Section	Page	Remark
Governance	G4-34	The governance structure of the organization.	3.1 Governance framework	24	
Ethics and Integrity	G4-56 G4-56 G4-56 G4-56 G4-56 G4-56 G4-56 G4-56 Such as codes of conduct and codes of ethics.	1.5 About USI Group11(business11(business11(business11(business25(chical25(ethical31communication31channels25			
	G4-58	The internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity.	3.5 Audit operation and communication channels	31	

Specific Standard Disclosures							
Material Aspects	DMA and Indicators Section			Page	Remark		
Category: Economic							
Economic Performance		DMA	4.1 Financial performance	34			
	G4-EC1	Direct economic value generated and distributed within the organization.	4.1 Financial performance	34			
	G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	3.4 Risk management 5.4 Promoting energy conservation and emissions reduction	27 59			
	G4-EC3	Coverage of the organization's defined benefit plan obligations.	6.3 Employee rights and benefits	75			
	G4-EC4	Financial assistance received from government.	4.1 Financial erformance	34			
Indiract		DMA	4.2 Major investments	37			
Economic Impacts	G4-EC8	Significant indirect economic impacts, including extend of impacts.	4.2 Major investments	37			
Category: Env	ironmental						
Materials		DMA	5.2 Source management	52			
	G4-EN1	Materials used by weight or volume.	5.2 Source management	52			
Energy		DMA	5.4 Promoting energy conservation and emissions reduction	59			
	G4-EN3	Energy consumption within the organization.	5.4 Promoting energy conservation and emissions reduction	59			

	Specific Standard Disclosures						
Material Aspects	DMA and Indicators		Section	Page	Remark		
Energy	G4-EN5	Energy intensity.	5.4 Promoting energy conservation and emissions reduction	59			
	G4-EN6	Reduction of energy consumption.	5.4 Promoting energy conservation and emissions reduction	59			
Water		DMA	5.5 Green production (water resources management and water pollution prevention)	64			
	G4-EN8	Total water withdrawal by source.	5.5 Green production (water resources management and water pollution prevention)	64			
		DMA	5.4 Promoting energy conservation and emissions reduction	59			
	G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1).	5.4 Promoting energy conservation and emissions reduction	59			
Emissions	G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2).	5.4 Promoting energy conservation and emissions reduction	59			
	G4-EN18	Greenhouse gas (GHG) emissions intensity	5.4 Promoting energy conservation and emissions reduction	59			
	G4-EN19	Reduction of greenhouse gas (GHG) emissions	5.4 Promoting energy conservation and emissions reduction	59			
	G4-EN21	NOx, SOx, and other significant air emission	5.5 Green production (air pollution control)	62			
Effluents and Waste		DMA	5.5 Green production (water resources management and water pollution prevention, waste control)	64 65			
	G4-EN22	Total water discharge by quality and destination.	5.5 Green production (water resources management and water pollution prevention)	64			
	G4-EN23	Total weight of waste by type and disposal method.	5.5 Green production (waste control)	65			

Specific Standard Disclosures					
Material Aspects		DMA and Indicators	Section	Page	Remark
Effluents and Waste	G4-EN24	Total number and volume of significant spills.	-		No spill was reported during the reporting period.
		DMA	5.6 Green services and products	67	
Products and Services	G4-EN27	Extent of impact mitigation of environmental impacts of products and services.	5.6 Green services and products	67	
	G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category.	5.6 Green services and products(green packaging materials)	67	
		DMA	3.3 Compliance	26	
Compliance	G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions from noncompliance with environmental laws and regulations.	3.3 Compliance	26	
		DMA	5.3 Industrial and public safety management	54	
Transport	G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce.	5.3 Industrial and public safety management	54	
Category: Socia	al				
Sub-Category:	Labor Pract	ices and Decent Work			
		DMA	<ul><li>6.2 Employee turnover</li><li>6.3 Employee rights and benefits</li></ul>	73 75	
Employment	G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender, and region.	6.2 Employee turnover	73	
	G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	6.3 Employee rights and benefits	73	

	Specific Standard Disclosures						
Material Aspects	DMA and Indicators		Section	Page	Remark		
		DMA	6.5 Occupational safety and health	81			
Occupational	G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advice on occupational health and safety programs.	6.5 Occupational safety and health	81			
Health and Safety	G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related facilities, by region and by gender.	6.5 Occupational safety and health	81			
	G4-LA7	Workers with high incidence or high risk of diseases related to their occupation.	6.5 Occupational safety and health	81			
		DMA	6.4 Talent cultivation and development	80			
	G4-LA9	Average hours of training per year per employee by gender, and by employee category.	6.4 Talent cultivation and development	80			
Training and Education	G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	6.4 Talent cultivation and development	80			
	G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category.	6.2 Employee turnover	73			
		DMA	6.1 Workforce structure	71			
Diversity and Equal Opportunity	G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	3.2 Board of directors 6.1 Workforce structure	25 71			
Equal		DMA	6.3 Employee rights and benefits	75			
Remuneration for Women and Men	G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operations.	6.3 Employee rights and benefits	75			

Specific Standard Disclosures						
Material Aspects		DMA and Indicators	Section	Page	Remark	
		DMA	3.3 Compliance	26		
Compliance	G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions from noncompliance with laws and regulations.	3.3 Compliance	26	No violation of any laws and regulations was reported during the reporting period.	
Sub-Category:	Society					
Local		DMA	5.3 Industrial and public safety management	54		
Communities	G4-SO2	Operations with significant actual or potential negative impacts on local communities	5.3 Industrial and public safety management	54		
Sub-Category:	Products Re	esponsibility				
		DMA	4.4 Sales and customer service	41		
Product and Service Labeling	G4-PR4	Total number of incidents of non- compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	4.4 Sales and customer service	41	No violation of regulations concerning product and service labeling during the reporting period.	
	G4-PR5	Results of surveys measuring customer satisfaction.	4.4 Sales and customer service	41		
		DMA	3.3 Compliance	26		
Compliance	G4-PR9	Monetary value or significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	3.3 Compliance	26	No violation of laws and regulations concerning products and services was reported during the reporting period.	

# 8.2 ISO 26000 Correspondence

	Core Subjects and Issues	Section	Remark
Organizational governance	Decision-making processes and structures.	3.1 Governance framework	24
	Due diligence.	3.5 Audit operation and communication channels	31
	Human rights risk situations.	3.5 Audit operation and communication channels	31
	Avoidance of complicity.	6. A great Place to Work	70
Human rights	Resolving grievances.	3.5 Audit operation and communication channels	31
	Discrimination and vulnerable groups.	6. A great Place to Work	70
	Civil and political rights.	6. A great Place to Work	70
	Economic, social, and cultural rights.	6. A great Place to Work	70
	Fundamental principles and rights at work.	6. A great Place to Work	70
	Employment and employment relationships.	6.1 Workforce structure	71
	Conditions of work and social protection	6.3 Employee rights and benefits	75
	Social dialogue.	-	
Labor practices	Health and safety at work.	6.5 Occupational safety and health	81
	Human development and training in the workplace.	6.4 Talent cultivation and development	80
	Prevention of pollution.	5.5Green production	62
The	Sustainable resource use.	5.6 Green services and products	67
	Climate change mitigation and adaptation.	3.4 Risk management	27
environment	Protection of the environment, biodiversity and restoration of natural habitats.	-	
	Anti-corruption.	3.2 Board of directors	25
- · · ·	Responsible political involvement.	3.2 Board of directors	25
Fair operating	Fair competition.	4.4 Sales and customer service	41
practices	Promoting social responsibility in the value chain.	4.5 Supply chain management	44
	Respect for property rights.	4.3 Technology R&D	40
	Fair marketing, factual and unbiased information and fair contractual practices.	4.4 Sales and customer service	41
	Protecting consumers' health and safety.	4.4 Sales and customer service	41
C	Sustainable consumption.	4.4 Sales and customer service	41
issues	Consumer service, support, and complaint and dispute resolution.	4.4 Sales and customer service	41
	Consumer data protection and privacy.	4.4 Sales and customer service	41
	Access to essential services.	4.4 Sales and customer service	41
	Education and awareness.	4.4 Sales and customer service	41
	Community involvement.	7.1 Community involvement	89
	Education and culture.	7.2 USI Education Foundation	91
Community	Employment creation and skills development.	7.1 Community involvement	89
involvement	Technology development and access.	4.3 Technology R&D	40
and	Wealth and income creation	4 3 Technology B&D	40
development	Health.	6.5 Occupational safety and health	81
	Social investment.	7.2 USI Education Foundation	91

## 8.3 Assurance statement



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#### INDEPENDENT AUDITOR'S LIMITED ASSURANCE REPORT

The Board of Directors and Shareholders

**Deloitte** 

USI Corporation

We have performed a limited assurance engagement on the selected subject matter information (see Appendix A) in the Corporate Social Responsibility Report ("the Report") of USI Corporation ("the Company") for the year ended December 31, 2016.

## **Responsibilities of Management for the Report**

Management is responsible for the preparation of the Report in accordance with Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies and GRI G4 and Sector Guidance published by the Global Reporting Initiatives (GRI) and other applicable rules according to its sector features, and for such internal control as management determines is necessary to enable the preparation of the Report that are free from material misstatement.

## Auditor's Responsibilities for the Limited Assurance Engagement Performed on the Report

We conducted our work on the selected subject matter information (see Appendix A) in the Report in accordance with the International Standard on Assurance Engagements 3000 (Revised) (ISAE 3000(Revised)) to issue a limited assurance report on the preparation, in all material respects, of the Report. The nature, timing and extent of procedures performed in a limited assurance engagement are different from and more limited than a reasonable assurance engagement and, therefore, a lower assurance level is obtained than a reasonable assurance.

We applied professional judgment in the planning and execution of our work to obtain evidence supporting the limited assurance. Because of the inherent limitations of any internal control, there is an unavoidable risk that even some material misstatements may remain undetected. The procedures we performed include, but not limited to:

- Obtaining and reading the Report.
- Inquiring management and personnel involved in the preparation of the Report to understand the policies and procedures for the preparation of the Report.
- Inquiring the personnel responsible for the preparation of the Report to understand the process, controls, and information systems in the preparation of the selected subject matter information.
- Analyzing and examining, on a test basis, the documents and records supporting the selected subject matter information.

#### Independence and Quality Controls

We have complied with the independence and other ethical requirements of the Norm of Professional Ethics for Certified Public Accountant of the Republic of China, which contains integrity, objectivity, professional competence and due care, confidentiality and professional behavior as the fundamental principles. In addition, the firm applies Statement of Auditing Standard No. 46 "Quality Control for Public Accounting Firms" issued by the Accounting Research and Development Foundation of the Republic of China and, accordingly, maintains a comprehensive system of quality controls, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

#### Conclusion

Based on the procedures performed and evidence obtained, nothing has come to our attention that cause us to believe that the selected subject matter information in the Report are, in all material respects, not prepared in accordance with the above mentioned reporting criteria.

Deloitle & Touche

Deloitte & Touche Taiwan, Republic of China June 14, 2017

Appendix A

## Summary of Selected Subject Matter Information

#	Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies/ GRI G4 Guidance	Descriptions of Indicators	Corresponding Section	Applicable Criteria
1	Subparagraph 2 of Paragraph 1 of Article 4 of Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies	The management of the production or delivery of the raw material, supplies, end products and the relevant performance indicator.	Industrial and public safety management	The completion of regular inspections of the pipelines used for the delivery of raw materials and supplies; and the management of the delivery process of end products.
2	Subparagraph 2 of Paragraph 1 of Article 4 of Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies	The management of emergency response measures against accidents inside and outside the factories and the relevant performance indicator.	Industrial and public safety management	The completion of drills testing the emergency response measures and reporting mechanisms for accidents inside and outside the plants.
3	GRI G4-EN3	Energy consumption within the organization.	Promoting energy conservation and emissions reduction	The consumption of electricity, natural gas, diesel and fuel oil within the organization.
4	GRI G4-EN23	Total weight of waste by type and disposal method.	Green production	Total weight of general and hazardous industrial waste by type and disposal method.
5	GRI G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender.	Occupational safety and health	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender.

#### Notice to Readers

For the convenience of readers, the independent auditor's limited assurance report and the accompanying summary of selected subject matter information have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditor's limited assurance report and summary of selected subject matter information shall prevail.



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