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## Oriental Union Chemical Corporation

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2023 ESG Report





## About this Report

## **Editorial Policy**

Welcome to the 2023 ESG Report of the Oriental Union Chemical Corporation (stock code:1710, hereinafter referred to as the "OUCC") published in 2024. We would like all the stakeholders that care for us to better understand the challenges of sustainable development faced by the chemical industry, as well as our efforts and achievements in Environmental, Social, Governance (hereinafter referred to as the "ESG" or "Sustainability") aspects. This ESG Report is issued in both Chinese and English versions. You are welcome to download them from our official website: https://www.oucc.com.tw/

## **Reporting Period and Organizational Boundaries**

The ESG Report discloses the ESG management policy, material topics, responses, and action performance of the OUCC in 2023(Jan. 1 to Dec. 31). Some issues tracing back to 2021 or 2022 have been included to ensure a comprehensive report of project performance and outcome.

The financial performance described in this report is from the data of the OUCC's individual financial statement. The environmental and social performance covering OUCC Headquarters and the Linyuan Plant will be indicated in the paragraph if the scope of disclosure differs from the above.

- Date of last publication: June 2023
- Date of next publication: June 2025

## Writing Reference and Guarantee

The ESG Report relevant information and data, composed in line with the corporate spirits of sincerity, diligence, thrift, prudence and innovation as core structure, were guaranteed by SGS-Taiwan and integrated by the Secretariat of the ESG Committee, to ensure its conformity with relevant sustainability international framework. The final version of information is reviewed and authorized by the top management prior to publication.



## Feedback

We shall welcome any of your comments on the "Oriental Union Chemical Corporation 2023 ESG Report," and appreciate your valuable comments and advice to keep us moving further towards the implementation of sustainable governance.

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## Chairman's Message

## Agility and Resilience Create Sustainable Competitiveness

Embracing sustainable development has become an inevitable trend for enterprises nowadays. OUCC has always aspired to become a sustainable materials chemical company from the beginning and envisioned being committed to aligning itself with the most competitive team members of the chemical industry, which is essentially reflected in technological innovation and business operations of the company, and also runs through the organizational structure, cultural construction and commitment to social responsibilities.

Prior to the intensified and deteriorated global climate change, the company has realized the importance of carbon emission control and reduction early on, based on which the company's R&D and production team have been actively committed to the development and commercial operation of carbon capture and utilization technology, with a major breakthrough in converting successfully the carbon dioxide captured in the manufacturing process into high value-added products in recent years, which not only reduces CO<sub>2</sub> emissions, but also produces high-quality circular economy effects, and brings benefits to the company, a win-win situation for society, environment and economy.

With a specific commitment and responsibility for sustainable development as its goal, the company continues its investment in R&D resources, targeting "green • carbon reduction • new materials". Through internal and external designs for revamp, the project team continues to optimize existing high-energy-consuming and high-emission processes and develop a variety of environmentally friendly new green materials and products. To achieve the carbon neutral in 2050, the company shall leverage its strength and further strive for the breadth and depth of technological innovation and the adjustment of product structure. Without the sustainable Earth, there lies no foundation or significance to the company's existence.

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ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING

With the vision of sustainable operation, the innovative technology, applications, and concepts have become the driving force for OUCC's accelerated growth; the diligent team is actively using artificial intelligence (AI) technology to conduct data analysis to improve production and process efficiency. The application of big data combined with AI in the production process help the production site better understand resource utilization, improve equipment production capacity and product quality, while reducing energy consumption and carbon emissions. In line with trends and advantages in innovative technologies and AI, the company shall improve its industrial competitiveness in local production as well as its resilience to future challenges.

OUCC started with the production of ethylene oxide and ethylene glycol, the upstream raw materials for polyester chemical fiber, and participated in and shared the achievements of Taiwan's economic take-off. With the in-depth attention to environmental protection and the requirements for practical improvement actions, the company is committed to investing manpower and material resources in energy conservation and carbon reduction at an early stage. Among them, the established "ESG Promotion Committee" plays a key role. Through the promotion and operation of such professional organization, it ensures that the company's ESG develop comprehensively in all aspects

We firmly believe that only through the joint efforts of all employees, supply chain partners and other stakeholders can we achieve the set sustainability goals and gradually complete our master plan for arduous transformation. In the process, we share selflessly, openly, and positively our experiences and methods for improvement, research and development, and transformation, and set a road model for the industry. Facing the challenge of time, we have no right to stop for rest, but endeavor and head forward relentlessly.

Chairman Oriental Union Chemical Corporation

徐旭束

OUCC ONE

## OUCC Sustainable Development Strategy



Innovation

The Sustainable Development Goals (SDGs) are the guiding global principles for sustainable development. OUCC, being a global citizen, establishes a sustainability team to discuss and align the expectations of stakeholders with the Chemical Sector SDGs Roadmap in order to assess and identify the SDG issues and related sub-goals to be prioritized, based upon which the sustainability development strategies and actions are implemented. We pledge to continue developing innovation strategies and corporate sustainability goals to deliver

## Innovative OUCC

Keep up with the developing world, gain insight on trends with value, circulation, R&D and process innovations as foundation for sustainable development.



sustainable development.

### Short-term Goal (2024)

- Continue to invest in R&D and actively develop high-quality and high value-added new EOD/POD product lines
- Increase the sales volume of specialty chemicals to 5,000 MT/month
- Develop further processing techniques for ethyleneamine coproducts and polyetheramine related products and set up mass production factories

- Develop products with low energy, recyclable plastics, biodegradability, and environmental-friendliness
- Step into the domain of high-tech, high-value specialty chemicals
- Become the most comprehensive production factory for amine products domestically

ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING



Sincerity

## **Ethical Governance**

With trust highlighted as corporate culture, the company fully upholds the spirit of self-discipline in corporate governance.



#### Short-term Goal (2024)

- Establish an information management backup mechanism
- Continue to propose solutions on key ESG issues

- Continue to improve internal risk management system
- Continue to enhance the ESG negotiation mechanism and action plan







## **Diligent Partners**

Uphold "Diligence excels all work, become diligent-oriented", work together with suppliers to provide high-quality and reliable services, as a trustworthy company for both customers and partners.





#### Short-term Goal (2024)

- Implement factory-wide staff forum
- Conduct human rights training courses of the Responsible Business Alliance (RBA)
- Implement a new performance bonus system

### Mid-/Long-term Goal (2025-2032)

• Conduct training courses in cooperation with the vocational training center

## Satisfied Customer

#### Short-term Goal (2024)

Continue to effectively implement the ISO management system

#### Mid-/Long-term Goal (2025-2032)

• Continue to improve customer satisfaction

## **Chemical Supply Chain**

#### Short-term Goal (2024)

- Achieve 100% of new suppliers signing the "Suppliers' CSR Commitments"
- Complete the on-site or written evaluation of existing suppliers

- Achieve 100% of freight forwarders introducing and acquiring ISO 45001 certification
- Achieve 990,000 safety man-hours with zero-accident of contractors at Linyuan worksite

ETHICAL GOVERNANCE

SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING

## **Solid Contributions**

Through sustainable, "down-to-earth" attitude, and genuine actions, we strive to create a sustainable future of symbiosis between environment and society.



### Short-term Goal (2024)

- 1% annual carbon reduction
- Five years of cumulated power saving rate of 5%
- Daily water saving rate of 2%
- Wastewater recycling rate of 70%

### Mid-/Long-term Goal (2025-2032)

- Cumulated power saving rate of 10%
- Daily water saving rate of 20%
- Water footprint calculation
- Focus on the study of technologies in low-carbon or carbon-free heat application as well as greenhouse gas storage



## Social Inclusion

### Short-term Goal (2024)

- Participate in blood donation activities
- Continuous donations to the disadvantaged groups
- Volunteer services to social care

### Mid-/Long-term Goal (2025-2032)

• Applying core competencies to achieve social inclusion.







ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING



HA-Prudence

## **Prudent Thinking**

Incorporate risk management into sustainable operations of various businesses with concept of precaution and safety. We are committed to a working environment of zero pollution, zero injury and zero accident.



### Short-term Goal (2024)

- Optimize the sludge dryer and continue the sludge reduction
- Establish PI system, real-time monitoring of environmental protection data of each plant
- Conduct contingency drills for all plants and suppliers
- Results of on-site inspections of the freight forwarders are listed as the allocation standard

- Promote waste management reduction KPI
- Optimize prevention and control of equipment, as well as emission quality
- Build a notification platform for high-risk operations
- Construct a chemical plant that adheres to the concept of "zero pollution, zero injury, and zero accident"

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**OUCC** aims to be "the most distinguished materials chemistry company" by continuing its investment in R&D, innovation as well as transformation. Through the cumulation of new technologies, OUCC can advance the high value-added ethylene oxide derivatives and specialty chemical products.

We provide a one-stop integrated service to various industries, customers, and specialty chemical project teams. An on-line information management platform also provides global customers with comprehensive technical services and highquality products.

OUCC targets to be a diversified, specialty chemicals centered chemical company as well as a green, sustainable enterprise that achieves profitability and growth at the same time.

- Business Operations : Production of petrochemical raw materials and high value-added chemicals widely used by end products.
- Products and Services : Product areas include ethylene oxide (EO) and ethylene glycol (EG) and the like, covering traditional chemicals, specialty chemicals, and high-tech chemical materials.
- Service Market : Supply of ethylene glycol and EO derivatives petrochemical products to major manufacturers in Taiwan and the Asia-Pacific region.





- Promote circular economy to generate profit of NT\$ 8.93 million per year
- R&D investment of NT\$ 168 million
- Innovative technologies developed and international patents applied (4 patents of domestic validity, 12 of international validity)



# Implementing the Circular Economy

OUCC continues to strengthen green production and high value layout. Besides proactively developing various high-valued EOD products, we also improve production procedures, invest in equipment, and promote the innovative proposals of circular economy based on the concept of green circular production, to reduce the impact of production on the environment.

## Circular Economy Strategy: Minimize the Environmental Impact and Maximize the Resource Value

We adopt a "circular economy" strategy and aim to implement the core concept of "minimizing environmental impact and maximizing resource value" through technological innovation in our processes. We strive to establish a circular economy model.

OUCC has independently developed the "Potassium lodide (KI) Recycling Technology." Through this recycling technology, the potassium iodide is efficiently recovered and reused, thereby reducing the generation of waste. This transformation converts the potassium iodide waste solvent from "waste" to a "usable renewable resource," creating additional economic value. In addition to saving waste treatment costs, the by-products generated during the process also contribute to the company's revenue.

Traditional Thinking		Circular Economy Thinking
Traditional Thinking		Circular Economy Miniking
EC process $\rightarrow$ KI waste solvent $\rightarrow$ Outsourcing	Process	EC process $\rightarrow$ KI waste solvent $\rightarrow$ Reuse resources $\rightarrow$ Input of a new process
In the production of ethylene carbonate (EC), potassium iodide (KI) is used as a reaction catalyst, and the waste solvent produced during the production process contains 5% potassium iodide (KI), which used to be outsourced for treatment.	Description	Increase the concentration of potassium iodide (KI) produced in the ethylene carbonate (EC) plant, then upgrade it into a product of reusable resource to be reused in another production process.
NT\$5.59 million/year	Outsourcing costs	NA
outsourcing processing costs NT\$5.47 million (Note)	Economy benefits	1.Save KI procurement costs NT \$2.06 million 2.MEG recycled benefit approx. NT\$1.29 million 3.Save approx. NT\$5.59 million for outsourcing
NA	Total	Total benefit approx. NT\$8.93 million
NA	Environmental benefits	1.Reduce waste solvent transportation of 279 MT 2.Reduce carbon emissions of 25.86 t- $CO_2e$ 3.The production and synthesis process of KI may require a significant amount of energy consumption. However, efforts can be made to reduce energy consumption during the production process, thereby lowering the carbon footprint and greenhouse gas emissions.
NA	Social benefits	<ol> <li>The income generated from reusing the byproduct contributes to the upgrade of employees' occupational health, safety and welfare.</li> <li>It decreases the risk of leakage from the transportation of waste solvent, which secures the safety of community residents (such as causing skin rashes).</li> </ol>

Note: 1. The disclosure period for the above economic benefits is set for the year 2023.

2. the actual potassium iodide (KI) produced in 2023 totaled 279 MT, with an outsourcing cost of approximately NT\$5.59 million.

The Circular Economy - Air Separation Units

OUCC's utilized sales strategies of circular economy, by way of investing in the Air Separation Units to supply excess industrial gas to factories, has created a win-win by turning trash into gold, and waste gas into revenue.

#### Past method

 Due to the saturated demand of industrial gas in Linyuan industrial zone, the remaining industrial gas can only be emitted, and the emission volume used to reach 7,500MT/month.

#### New circular economy method

- The original 7,500MT/month discharged industrial gas have all turned into operating income, adding approximately NT\$10 million of benefits every month, contributing to around NT\$120 million of revenue each year.
- FPG (Linyuan Plant) therefore decommissioned the old air separation unit to reduce the overall energy consumption.
- From 2020 to 2023, there was a cumulative reduction of approximately 360,000 MT of industrial gas emissions, contributing to a cumulative revenue of approximately NT\$480 million.



#### Innovative Process, Circular Sustainability

The development and design of the "distillation/hydration equipment" allows potassium iodide (KI) waste solution produced by the ethylene carbonate (EC) plant to be concentrated to upgrade the originally paid "external waste" into reusable resource products, which can then be utilized in new production processes. The potassium iodide (KI) waste solvent was successfully concentrated up to 15% for recycling with the simultaneous production of a by-product, monoethylene glycol (MEG).



#### Taiwan's Pioneer in Carbon Capture Technology

OUCC's ethylene carbonate (EC) plant was completed in 2002. Through the recycle of  $CO_2$  from the process exhaust of EOG plant and purification, the EC plant employs the high purity  $CO_2$  as feedstock for EC production, which highlights the efforts of OUCC in circular economy by reducing  $CO_2$  remission and recycling exhaust resource from the process.

Implementation outcome of 2023 CCU project: 26,600 t-CO<sub>2</sub>e.





OUCC SUSTAINABLE DEVELOPMENT STRATEGY

## **Innovative R&D**

Vision of OUCC's Innovative R&D

- Become the helmsperson in the petrochemical and specialty chemical industry; accelerate the development of core technologies and advanced high value-added products to enhance the competitive advantage in the industry.
- Increase domestic and international exchanges and move towards the development of multiple domains including specialty chemicals, biodegradable polymer materials, and medical biotechnology to create new value in the industry.
- Nurture talents, strengthen R&D capabilities, strive towards the enterprise of excellence.

With highly talented R&D team, OUCC invested in the high-tech research fields to expand core business applications, as well as to adapt to market changes and future development trends of the chemical materials in terms of new product development of diversified domains.

As to the R&D, in addition to the existing team, we have also established a product development department to accelerate the development of advanced high value-added products with the strongest configuration to strengthen our competitive edge and create new value.



#### **R&D** Performance

With main product focused on EG, OUCC also develops proactively the specialty chemicals for diversified operations to mitigate product risks.

In recent years, the R&D has continued its customization development in high quality EOD/POD products, within which PEGR/PEGR1 products possess the outstanding properties of yellowing resistance and non-explosive polymerization; surfactant products have excellent functions such as moisturization, penetration, emulsification, dispersion, and cleansing. Other products can also be developed, according to customers' requirements, into low foam, low pour point, low scent, and biodegradable properties.

More tailored products on the current base will be developed and provided, which include:

In response to the 2050 net-zero carbon emission target, we are developing a range of carbon-captured products, including environmentally friendly products and technologies such as recycled materials, carbon capture agents, and biodegradable materials.

As to the construction chemical domain, OUCC successfully developed the air-entrained foam stabilizers JFA03 for lightweight concrete, WR series of powder-type water reducing polycarboxylate admixture PWR01, highly efficient 6-carbon type HWR01, replacement of WR04, as well as the monomer EPEG3000, feedstock of HWR01.



Developed recycled polyester polyols (rPET), which have been validated by customers, with up to 50wt% recycled PET as raw material, in line with the 20% recycled PU developed by the Far Eastern New Century Corporation for the use of fabric.

Developed recycled polyester polyol RPN02, containing more than 30wt% recycled PET and applicable to PU infusion glue.

Developed PEGXC/UC of different molecular weights containing 10%-30% CO<sub>2</sub> from EC derivation synthesis, and XC/L7XC series of environmentally friendly solvents/non-ionic surfactants, currently tested and promoted for downstream applications.

Polycarbonatediol (PCDL) series, further developed with CO<sub>2</sub> as feedstock, are applicable to high value products such as battery electrolyte.

Completed the basic technology development of CO<sub>2</sub> capture agent N-methyldiethanolamine (MDEA), which will be based as feasibility studies reference for its market benefit in terms of mass production.

With the sustainable transformation undergoing currently, OUCC strives to produce high-valued fine chemicals, connecting upstream petrochemical raw materials with downstream high-value fine chemical products. Additionally, OUCC is expanding its product chain beyond ethylene by utilizing a series of advanced processing technologies to enhance the application of its core products and obtain the market share in innovative application domain.



#### Innovative Technology

Name of Technology	Description	Progress in 2023
EO/PO derivatives synthesis technology	<ol> <li>EO/PO/EC ring-opening technique</li> <li>EO/PO/THF ring-opening technique</li> <li>Free radical polymerization technique</li> <li>Glycolysis/esterification/ transesterification/polyester techniques</li> </ol>	<ul> <li>New EOD/POD products developed include: Refined-grade trihydroxypolyoxypropylene ether GLX10R used in PU coatings/ foaming; reactive-grade monomers (TM3.8/4.0/4.5, GLX3.5) used in PU/UV curing resins; tallow amine polyoxyethylene ether TA7, stilbene phenol polyoxyethylene ether DSP6 and polyethylene glycol monomethyl ether MPEG3000 used in textiles/pesticides/ construction materials as emulsification/dispersion aids; and, the SPAN series (SPAN20/80) sorbitol monofatty acid ester used as key raw material for emulsifiers.</li> <li>Powder-type water reducing polycarboxylate admixture PWR01 and highly efficient 6-carbon type HWR01, replacement of WR04, as well as EPEG3000, feedstock of HWR01.</li> <li>Recycled polyester polyol RPN02, containing more than 30wt% recycled PET and applicable to PU infusion glue.</li> <li>PEGXC/UC of different molecular weights from EC derivation synthesis, containing 10%-30% CO<sub>2</sub>, and XC/L7XC series of environmentally friendly solvents/non-ionic surfactants, currently tested and promoted for downstream applications.</li> </ul>
EO/PO derivatives formulated modulation technology	The products can be applied to textile dyeing, agricultural chemicals, construction materials, electronic chemicals, personal and household cleaning, etc.	<ul> <li>Developed air-entrained foam stabilizers JFA03 for lightweight concrete, foam-suppressing defoamer JDF05, and the formulated white oil emulsifier EMWO01.</li> </ul>
Special ring-opening polymerization	Continue to establish the special ring-opening polymerization technology for the development of low-saturated, high molecular weight, high activated and high valued polyether polyols, applying to high or special spec's resin products.	<ul> <li>Fireproof insulation materials and PU formulation containing recycled polyol: rPET041/121/201</li> <li>PU formulation and textile additive: PCH101/201, PCBH101</li> <li>Epoxy resin curing agent: DH021/022/ 062/092/201/205, EH041</li> <li>PU modified materials: MH103, ADH103</li> <li>Fuel additive: MH172</li> <li>Electroplating solution formula and grinding solvent: EDH692</li> <li>Bridging agent and PU formulation: EDH031/032</li> <li>Construction material, cement grinding aid and strength enhancer: DEIPA85</li> <li>PU formulation and epoxy resin formulation: TH701/702, HH602</li> <li>Low expansion, waterproof, breathable, and PU formulation: DT102</li> <li>Carbon reducing PU formulation: DHC503, PEC901/902</li> </ul>
Catalysis and process technologies, and product development required for polyetheramine (PEA)	Establish the catalysis and process technologies required for the mass production of PEA, and continue developing various PEA series, to be used in wind blades, waterproof and anti-corrosion coatings, high- strength, wear-resistant, and weather-resistant structures.	<ul> <li>Completed mass production tests and continuing production and sale.</li> <li>Currently developed products: MA204(molecular weight 2000, monoamine), DA021(molecular weight 230, diamine), DA041(molecular weight 400, diamine), DA201(molecular weight 2000, diamine), and EA041(molecular weight 400, triamine).</li> </ul>
Catalysis and process technologies of amination required for ethyleneamine series	Establish the catalysis and process technologies required for the production of ethyleneamine and build a mass production plant for the output of related products.	<ul> <li>Completed mass production tests and continuing production and sale.</li> <li>Continuing optimization of the catalysis and process to improve product value.</li> </ul>
Mass production technology and new product development of polycarbonate diol (PCDL)	Establish technology suitable for mass production of PCDL and relevant product development. The PCDL series can be applied to the composition of soft segments in the molecular structure of polyurethane (PU) to improve the flexibility and resilience of PU.	<ul> <li>Trial run completed in 2023, yet the process parameters are kept optimized. Currently developed products include PCH101(molecular weigh 1000, C6), PCH201(molecular weigh 2000, C6), PCBH101(molecular weigh 1000, C4&amp;C6)</li> </ul>
Alkylation technology of ethanolamine	Establish N-methyldiethanolamine products used in $CO_2$ capture, petrochemicals, textiles, pharmaceuticals, ink or paint, and other fields.	<ul> <li>Basic technology development completed to be applied as market efficiency assessment base for the feasibility study of the plant construction.</li> </ul>
Selective hydrogenation technology development	Establishment of reaction systems and proprietary technology.	Main technology includes olefin-to-alkane, nitro-transamination, cyano-transamination, imine-transamination, ester-to-alcoholization, and ether-to-alcoholization, which of the former four have established basic reaction systems and applied correspondingly, while the latter two are under continuous development.

#### Innovative Product

Category	Subject	Contents		
	Surfactants	<ul> <li>Downstream applications of EO/PO derivatives include nonionic surfactants, cement wate reducing agent, oil agent, detergent, and various intermediates.</li> <li>Development and application of fine chemicals, mainly covering plastic rubber, textile dyein coatings, pesticides, electronic semiconductors, metal processing, building construction and da chemicals.</li> </ul>		
EOD/POD	Refined MPEG/PEG	<ul> <li>Used in polyurethane (PU) processing, and widely applied to adhesives, coatings, low-speed tires, washers, car mats, etc.</li> <li>PU is also used in the manufacture of a variety of foams and plastic sponges for household use.</li> </ul>		
	EO/PO/THF Copolymers	<ul> <li>Copolymers are mainly used to adjust the physical properties of PU such as flexibility, hydrophilicity/ hydrophobicity, moisture permeability, dyeing affinity and low-temperature elasticity.</li> <li>The products are mostly made into waterproof air-permeated fabrics or used in products such as clothing, functional sportswear/footwear, furniture, etc.</li> </ul>		
	Concrete admixtures	<ul> <li>Concrete admixture is a substance which when added to a concrete mix improves the properties of the concrete</li> <li>Polycarboxylate Superplaticizer as a cement water-reducing agent helps to reduce water consumption and improve the strength of the concrete. Also, the admixture will reduce cement consumption while workability and strength maintained</li> <li>Heat suppression agents for mass concrete: Addressing various quality and engineering durability issues associated with temperature control in mass concrete</li> <li>Grinding aids for cement/slag: Functionality that reduces production energy consumption and enhances product strength.</li> </ul>		
EOD/POD Derivatives	Daily chemicals/industrial detergents	<ul> <li>Develop daily chemical agents with hydrophilic and soft, moisture-absorbing and quick-drying, antibacterial and anti-mite, such as fabric protection lotions, and zinc oxide antibacterial detergents</li> <li>Develop low foam, high efficiency surface cleaners for metals and recyclable plastics</li> </ul>		
	Dyeing and finishing auxiliaries	<ul> <li>Develop functional agents such as scouring, soaping, reduction, dye dispersion, and hydrophilic softening for post-finishing in textile dyeing processes</li> </ul>		
	Formulation of functional surfactants	<ul> <li>Non-ionic emulsifiers to be used in agriculture chemicals (e.g. herbicides, insecticides), mineral oil, silicone oil, etc.</li> <li>Inorganic powder (e.g. carbon composites, TiO2) and dye dispersants</li> <li>Silicon anti-foaming agents, water/oil repellents and agriculture spreading agents</li> <li>Demulsifiers for crude oil and latex</li> </ul>		
Polyetheramine	Monoamines, diamines, polyamines and polyetheramine derivatives	<ul> <li>OUCC holds the technology proprietary for amination of alcohols and ethers, which retains the excellent properties such as low viscosity, high permeability, anti-yellowing and heat resistance</li> <li>Applicable to high-performance composite materials, polyurea, waterproof and anti-corrosion, anti-scratch and weather-resistant materials, for high-strength structures such as wind turbine blades, dams, bridge piers.</li> <li>Achieve the goal of localization and key raw materials for domestic production.</li> </ul>		
Ethyleneamine	Ethylenediamine, diethylenetriamine, triethylene tetramine, aminoethylethanolamine, piperazine and related co-products	OUCC holds the technology proprietary for amination of alcohols and ethers, and its co-products applicable to bleach activator, chelating agent, corrosion inhibitor, etc.		
PU Raw Materials	EOPO polyether polyols of special spec's	<ul> <li>All series of polyether polyols have the properties of low degree of unsaturation, low VOC and uniform molecular weight</li> <li>Applicable to waterproof air-permeated fabrics, adhesives, sealants, elastomers, rigid foams and soft foams, to improve the quality and physical properties of the products</li> </ul>		
	Polycarbonate diols (PCDL)	Polycarbonate Diols (PCDL) are useful to improve the softness and resilience of PU and possess better performance in many aspects such as hydrolysis resistance, heat resistance, weather resistance and oxidative degradation resistance, and are commonly used as soft segment modifiers to adjust the physical properties of PU products		
CO <sub>2</sub> absorbent	N-methyldiethanolamine	<ul> <li>Used mainly as the gasification agent that absorbs/removes H2S and CO<sub>2</sub>, also as polyurethane catalyst, fabric softener, pH adjuster, epoxy resin hardener.</li> </ul>		



OUCC adheres to the concept of sustainable innovation, increases investment in innovation, research and development year by year, and actively seeks strategic cooperation with internationally renowned companies to develop customized products with advance technologies to meet the needs of our customers.

We invest corporate resources and cooperates with relevant R&D units to carry out various research technologies and create a new pattern of green fine chemistry. The annual investment deduction project has also been approved by the government (2023 investment subsidy totaled NT\$9 million,) and develop gradually in the direction of high value-added industries.

Items	Unit	2021	2022	2023
R&D amount	Million (NT\$)	157	157	168
Total annual revenue	Million (NT\$)	14,674	12,770	10,347
Ratio	%	1.0699	1.2294	1.6237

Note: Individual operating income

#### 2023 R&D Collaborations

Category	Research Program/Unit	Description
Trial production plant	Development of trial production technology and verification plan of polyetherdiamine, of the technology development project of Ministry of Economic Affairs	With experiences in technology and process, OUCC establishes the polyesterdiamine plant for trial production, as basis for the establishment of the mass production plant, quality assurance, downstream applications and pre-marketing .
		A 2-year project(2021/7/1-2023/6/30), with the subsidy of NT\$30 million.
		Projecting to establish mass production of 6,000 MT within the year to start the product sale, targeting mainly the markets of domestic, America, Canada, India, and Pacific areas. A total product of 300 MT was sold within 4 months after the project had finished, fulfilling the goal of domestic sourcing and localization of key raw materials, like curing agent for wind blades.
Industry & academy cooperation	Performance verification and promotion plan of hydration heat inhibitors for mass concrete, with Taiwan Construction Research Institute	Evaluate the contribution of the project cost and construction timetable of the mass concrete that employs hydration heat-controlling agents.
		Host expert symposiums and publish research results in professional journals to achieve publicity and promotion.
	Carbon capture absorbent development and CO <sub>2</sub> solubility measurement, with Chemical Engineering Dept. of National Tsing Hua University	Develop absorbent with high absorbing volume to reduce the required circulation flow for absorbing $CO_2$ , reducing the equipment cost, recycling energy consumption, and demand volume of absorbent.
	Direct synthesis of β-propiolactone from epoxide and carbon monoxide, with Chemical Engineering Dept. of National Chung Hsing University	Prepare for the bimetallic heterogeneous carbonylation catalyst, which is highly effective for epoxide carbonylation, with catalysis activation comparable to that of a homogeneous one. The heterogeneous catalyst shows good recyclability in continuous or batch reaction cycles.
	Design of heterogeneous catalysts for selective hydrogenation of methylallyl alcohol, with National Cheng Kung University	Develop heterogeneous catalysts of high activation for the application in MAOH, the aqueous phase hydrogenation of methyl methacrylate(MMA). The technology possesses potential features such as recyclable catalysts, low production cost, and environmental friendliness.

ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION

Taiwan's First Reductive Amination Process Invented As deeply engaged in specialty chemicals, OUCC has been the only one in Taiwan, even rare in Asia, with the "reductive amination technology" and production capabilities. In respond to the government's policy of domestic sourcing and localization of key raw materials, we produce materials used in high-end composite applications such as wind turbine blades, yachts, waterproof and anti-corrosion coatings, durable and weather-resistant building structures, which also possess carbon reduction capabilities.

#### Reductive amination technology for polyetherpolyol :

- This technology has been granted by Ministry of Economic Affairs a 2-year subsidy (2021-2023) amounting NT\$30 million, for the establishment of the trial production plant, fulfilling the goal of domestic sourcing and localization of key raw material.
- In 2023, the polyetheramines completed mass production tests and have been in production and sale. Currently available items include MA204(molecular weight 2000, monoamine), DA021(molecular weight 230, diamine), DA041(molecular weight 400, diamine), DA201(molecular weight 2000, diamine), and EA041(molecular weight 400, triamine).

#### Reductive amination technology for alcohol amine molecules :

- The mass production tests completed in 2023. Currently available items include ethylenediamine, diethylenetriamine, triethylenetetramine, aminoethylethanolamine, and piperazine, which are in production and sale.
- The R&D continues optimizing the proprietary catalysts and production process to enhance product value.

#### Global Patent - cumyl-hydroperoxide propylene-oxide (CHPPO)

With no full calibre and technology for the PO production domestically, the PO market demand depends on imports. In response to this, OUCC has exerted its innovative R&D ability to develope four independent catalyst-related technologies, applied for multinational patents, as well as passed the inspection and gained certifications of Taiwan and the United States.

In addition to its excellent catalytic activity (CHP conversion >99%, PO selectivity >97%,) the production process and recycling procedures are more streamlined and require simpler equipment, which result in a significant production cost down, in comparison with the key suppliers in Japan.

#### Promote Independent and Sustainable Development of Domestic Industries

Through independent R&D and technological breakthroughs, OUCC broke domestic dependence on imported propylene oxide, promoted the technological improvement and competitiveness enhancement of domestic chemical industry, and achieved sustainable development goals with more efficient and environmentally friendly production methods.







OUCC leverages sustainable and environmentally conscious thinking in terms of design to actively explore innovative products that reduce energy consumption while achieving high value.

#### Highly efficient functional additives

- We have successfully developed high-efficiency water-reducing agents, slump retainers, and functional additives with properties such as retardation and high flowability, which can be widely used in the construction industry and suitable for concrete applications in downstream formulation and precast plants.
- Developed products in 2023 include powder-type water reducing polycarboxylate admixture PWR01 and highly efficient 6-carbon type HWR01, replacement of WR04, as well as EPEG3000, feedstock of HWR01, in addition to the airentrained foam stabilizers JFA03 for lightweight concrete, and foam-suppressing defoamer JDF05.

#### Innovative breakthrough in environmentally friendly detergent

In 2022, we innovatively developed an environmentally friendly detergent with 20wt% recycled PET content, low foaming, high biodegradability (>95%), and excellent cleaning ability. It has been tested in laundry capsule products by downstream customers, and initial estimates suggest that this product can reduce carbon emissions by approximately 35% compared to AEO with the same cleaning effect.

#### **Development of recycled polyether polyol**

• In 2023, the recycled polyester polyol RPN02 was developed, containing more than 30wt% recycled PET with application to PU infusion glue.

#### High value-added fine chemicals

• We have also successfully developed and mass-produced a series of specialty detergents with special features such as hydrophilicity, softness, quick-drying, antibacterial and anti-mite properties, and cooling sensation. These products bring high-value fine chemicals into daily life and create additional application value.

ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING



#### In 2023, the newly developed EOD/POD products include:

- The refined-grade trihydroxypolyoxypropylene ether GLX10R used in PU coatings/foaming, with excellent stability and performance to meet the needs of high-end market.
- The reactive-grade monomers (TM3.8/4.0/4.5, GLX3.5) used in PU/UV curing resins, with excellent reactivity and curing performance, providing a new solution for UV curing technology.
- The tallow amine polyoxyethylene ether TA7, stilbene phenol polyoxyethylene ether DSP6 and polyethylene glycol monomethyl ether MPEG3000 used in textiles/pesticides/construction materials as emulsification/dispersion aids, enhancing product performance and stability.
- The SPAN series (SPAN20/80) sorbitol monofatty acid ester used as key raw material for emulsifiers, possessing excellent emulsification and a wide range of applications.

#### **Respect Intellectual Property Rights**

Fully aware of the importance in intellectual property rights protection, OUCC has established a comprehensive and robust mechanism accordingly to safeguard the innovative technologies and intellectual property.

To protect the acquired patent technologies, OUCC has established the "Document Management Procedures for External Procurement of Process Technology" to ensure the research, development, and purchase of innovative technologies. In contracts, we include provisions for patent rights, copyrights, intellectual property rights, and confidentiality clauses to ensure the integrity of our technological rights. This strengthens our competitive advantage in existing products and enhances the long-term competitiveness of the company.

In addition, in order to prevent the misuse or leakage of intellectual property, we ensure that every technical detail and confidential information is within control through strict internal supervision mechanisms. Relevant measures include regular reviews and updates of internal processes to ensure that protection mechanisms are up to date and able to respond to rapidly changing technology and market environments.

Furthermore, we enforce strict internal oversight and provide education to employees on intellectual property rights. We conduct training and education related to intellectual property rights to enhance employees' awareness of intellectual property protection, and prevent improper use or disclosure of the company's intellectual property.



## Green Chemical and Smart Manufacturing

With dedication to the R&D of green chemistry technologies, OUCC implements smart manufacturing and drives the transformation of chemical industry through eco-friendly practices and technologies. Envisioning the sustainable development of chemical industry, OUCC has adopted the "stable, safe and environmentally-friendly" approach for product development, established and promoted green chemistry strategies and actions to reduce the likely risks for human health, safety and the environment via assessment based on the concept of product life cycle.



In order to reduce the above risks, we formulate and implement green chemistry strategies and actions, including developing more environmentally friendly processes and raw materials, and optimizing and improving existing production processes to ensure that every stage meets the highest environmental and safety standards.

In terms of smart manufacturing, we introduce automation technology and AI data analysis tools to implement intelligent management of production processes to specifically improve production efficiency and effectively reduce resource waste and pollutant emissions. Through continuous exploration, research and development of emerging environmentally friendly technologies and strict compliance with environmental standards, we are committed to creating a more sustainable and safer chemical industry.

### Green Chemistry and Smart Manufacturing

**Promotion Strategy** 



### Green and Innovative R&D :

Innovative technology development must meet the requirements of environmental protection stipulation, and the R&D are encouraged to strive for the reduction of resource consumption from the environmentally friendly perspective.

Development and design stage :

Remove toxic substances from the environment and avoid residual substances contained in products or polluting the environment.

Production stage :

Reduce the loss of energy and resources and the emission of harmful substances.

Product inspection :

For newly developed and produced items, we conduct third-party inspection in accordance with customer's specifications.

## Regulation compliance :

Procured technologies are the technologies developed in conformity with relevant regulatory requirements.

## Promote smart logistics and services :

Build a real-time database system (PI), actively incorporate new elements of "Internet of Things" and implement smart logistics and services.

Cultivate Al management talents :

Cultivate a new generation of AI management talents and create new value.

ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION

#### Self-developed Operational Intelligence System

OUCC is keen on digital transformation by developing its own Operational Intelligence System. Such succinct, visualized cloud platform provides statistical data to the managers in all operational units to facilitate their decision making.

This powerful Operational Intelligence System helps the management and employees with no information background to benefit from learning. Decision making can be carried out effectively and reliably even without the assistance of IT personnel, marking a milestone for digital transformation.

#### Improving Customer Services with IoT

Take liquefied gas for example, OUCC is strongly promoting its Smart Logistics and Services. The storage tank monitoring system installed at the customer site can analyze the usage status in real time. Automated delivery scheduling is implemented using AI technologies and big data, providing the customers with thoughtful and expeditious services.

To cultivate AI workforce for chemical industry, OUCC has selected its employees for training at the Taiwan AI Academy, in the hope of combining theory and practical knowledge, as well as bringing back solutions through interaction and experience exchange with other participants within the industry. Other benefits include improving operational efficiency with AI technologies, lowering production risks, and creating new values of smart manufacturing.

#### Curbing the Spread of Pandemic Using Technologies

Developed by OUCC, the Enterprise Information Platform (EIP), featuring in digital bulletin board, document managing system, healthcare, and the like, can be accessed via computers and smartphones, which is helpful in reducing the in-person contact and minimizing transmission risks.

In particular, the "Health Care System" has been instrumental in enabling OUCC to track and safeguard the health of employees during the pandemic. Additionally, by fully digitizing administrative forms, a total of 58,956 documents were processed using electronic workflows in 2023, resulting in significant carbon emission reduction benefits.

Furthermore, during the pandemic, OUCC actively promoted the work-from-home mechanism and leveraged technology to reduce employee commuting and business travel (with 3,300 hours of video conferencing in 2023). This not only ensured the health of employees but also contributed to energy-saving and carbon reduction efforts.





Project Highlights Al Projects of Operation Management Team - Linyuan Plant

## Al for catalyst efficiency optimization – EOG Plant

By way of the further process and deep learning of AI through the experiencebased operation data cumulated over the years, the optimized catalyst operation data provided by AI shall benefit future operation with effective succession, promptly and precisely locating the optimized point for catalyst, saving the cost of raw material.

### Al for process reaction optimization – Process Development Dept.

The AI established model may help the researchers to quickly converge variables to seek the trends, improving R&D efficiency by lessening the number of experiment groups and saving cost, which differentiate the current formulation ratio adjustment of each batch through multiple experiments and experiences.

### Al for new product process optimization – Material Development Dept.

By way of AI deep learning to converge variables and forecast the trends of process parameters. It helps not only shortening new product development timespan, but reducing carbon emission by lowering the production energy consumption.

### Al for preliminary maintenance of GAS compressor — Maintenance Dept.

It aims to discover the abnormality rates of equipment by the AI model established through the deep learning from compressor vibration data to predict the key factors that trigger the abnormal vibration and future maintenance timetables, and check for instant maintenance when the abnormal factors appear unstable.

SINCERE AND DILIGENT PARTNER

## Al for customer's order forecast – GAS Business Dept.

To optimize production line schedule and number of dispatch vehicle to avoid the likely non-loading dispatch rates by integrating AI deep learning model and customer's storage tank level gauge data, usage and delivery frequencies to deduct the forecast model of customer demand.

## Al for deduction of reactors' molecular weight parameters – EOD Plant

The purpose is to set the raw material intake amount according to the theoretical amount during the batch production operation, and conduct sampling and testing during the reaction process. If there is a shortage, additional raw materials will be added until the specifications are met before entering into the next stage.

Through the establishment of AI deep learning models to predict whether the product molecular weight meets product specifications, it is expected to reduce the number of samplings (or even eliminate the need for sampling), shorten reactor idle time, and improve product quality.

## Al for production conditions optimization – EC Plant

The purpose is to establish an AI deep learning model for the production parameters of HPEC & semiconductor  $CO_2$  to find out the factors for causing unstable quality. Such applied manufacturing process can stabilize operating conditions and methods, gradually reduce the work duplication and emissions, and stabilize product quality.

#### Enterprise Internal Platform – M365

With active deploy in digital transformation, energy saving and carbon reduction, OUCC introduced M365 platform of Microsoft cloud service in 2023, which not only facilitates the employees' access to MS office, but also provides real-time communications, and on-line meetings via TEAMS. A significant step towards the goal of energy saving and carbon reduction by the riddance of hardware servers.



# Chapter 02 ETHICAL GOVERNANCE

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i i t s r d r d r d r t r t

**THE** "Integrity and morality" is the enterprise's foundation for sustainable operation. OUCC adheres to the principles of integrity and transparency and demonstrates the highest ethical standards to internal employees, shareholders, customers, and all stakeholders related to the Company. Such perseverance not only helps to keep the Company running smoothly, but it also adheres to corporate governance concepts and helps to maintain the trust of consumers and shareholders.

OUCC has established a sound corporate governance system, formulated policies such as the "Best Practice Principles of Ethical Corporate Management," "Reporting and Punishment Measures for Violations of the Code of Ethical Conduct and Best Practice," and established a sound risk management system to comprehensively monitor the supply chain and market development. The goal is to conduct a comprehensive assessment and monitoring of the supply chain and market development to ensure all operations' legality and ethical compliance for the implementation of corporate integrity governance.

2023 Sustainable Performance



- Conducted performance evaluation of the Board of Directors, and the assessment results indicated "overall good operational performance".
- 2023 revenue of NT\$10.35 billion.
- Continue to strengthen the information security mechanism with Business Continuity Planning (BCP).
- OUCC was ranked among the top 6~20% of listed companies in the Corporate Governance Evaluation conducted by TWSE.





## About OUCC

Head office : 13F, No. 101, Fu-Hsing N. Road, Taipei City Telephone : (02) 2719-3333 Factory : No. 3, Industrial 3rd Road, Linyuan District, Kaohsiung City Telephone : (07) 641-3101 Number of employees : 392 Manufacturing location : Kaohsiung & Yangzhou

Note : The OUCC production base for joint venture locates in Yangzhou, China.

Established in 1975, OUCC is the key player of the Far Eastern Group's petrochemical energy business. The company was listed in TAIEX since 1987 (stock code 1710, of capital of NT\$8.86 billion). The company owns two production sites located in Kaohsiung and Juangsu, China.

The OUCC has been producing ethylene oxide (EO) and ethylene glycol (EG) related products for more than four decades, with continuous deploy in the domains of surfactants and performance chemicals, daily chemicals, construction chemicals, and fine chemicals of specialty chemicals, and by way of the value-oriented business model to integrate sale, production, R&D to promote outstanding and differential products and services. Moreover, the company shall expand the sales domains in food and electronic grade gases to further product value, as well as special chemicals and materials of battery, electronic chemicals, and high-purity gases with one-stand solution and services.



ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION



#### The Sustainable Development Philosophy of OUCC

With sustainable strategies in Green, Carbon Reduction, and New Materials, OUCC builds a sustainable development organization, successively advances in the development of products and technology capability, systematically plans and implements various sustainable strategies and actions, and sets annual qualitative and quantitative performance evaluation indicators to ensure that the sustainable target is duly fulfilled.

- E
- Drive transformation through R&D: Dedicated in the green products and technology of low-carbon CO<sub>2</sub> chemicals, plastics recycling & reuse, and biodegradable materials to deal with global CO<sub>2</sub> emission issues, in addition to the production of ethanolamine and ethyleneamine of excellent carbon capture solvents to assist customers with carbon capture in line with the global action.
- Implement circular economy and advance in green products: Develop the process of carbon capture and reuse by means of recycling CO<sub>2</sub> from process prior to producing high-purity CO<sub>2</sub> for industry, food and electronic manufacturers, and further process to produce ethylenecarbonate for manufactures of polycarbonate, synthesis materials, and lithium battery electrolyte.
- Target of sustainable environment: Continue product and technology development, and implement process management in circular economy, energy transformation and low carbon production to achieve sustainable goals of 35% carbon reduction and carbon neutral in 2035 and 2050 respectively.

.....

 OUCC values the importance of industrial safety & health and human rights, obtains ISO 45001:2018 certificate to build a friendly and safe working environment.



- OUCC considers its personnel the most valuable assets, provides salary and welfare superior than the average associates and safety and health work place, by way of building a work place of ESG values and culture, equipping the personnel with the code of conduct to deal with stakeholders, supplying customers the best quality and services.
- OUCC adheres to the core spirit of the "Universal Declaration of Human Rights," the "ILO Declaration," and "The United Nations Global Compact" and "Responsible Business Alliance Code of Conduct." We abide strictly by all labor-related laws and regulations. The company has also formulated internal labor-related rules and management mechanisms to achieve equality and create a friendly working environment.



- In addition to pursuing economic stability, OUCC continues to integrate and develop core competencies, actively seeks strategic collaboration with global companies, and introduces the most advanced chemical technologies with the aim of creating new profits.
- In view of corporate operative responsibility, the safeguard of shareholders' lawful rights as well as other stockholders' interests, OUCC implements the robust governance, improves business operation to maximize shareholders' interests.
- For the continuous strengthening in corporate governance and management system, the corporate governance officer was installed, accountable for the work promotion.
- Adherence to the OUCC spirit of entrepreneurship "sincerity, diligence, thrift, prudence, and innovation" to steadily cope with future challenges and achieve sustainability.

## The Chronicles >>> of OUCC

The company was authorized for

incorporation with a share capital

of NT\$569,250 thousand.

1975

Completed the construction of the ethylene glycol wastewater treatment plant in compliance with national standards.

## 1992

Obtained certifications of ISO 9001 (Quality Management System) and OHSAS 18001 (Occupational Health and Safety Management System).

2002

Completed the multi-functional pilot plant that was designed and constructed by OUCC as a good foundation for future technology development, process design, as well as new product pilot runs.

2005

Won the "National Industrial Zone Safety Partnership Excellence Award - Premium Business Unit" medal from the Council of Labor Affairs, Executive Yuan.

### 2009

Stock approved for sale.

1998

Obtained ISO 14001,

and achieved a record

of 2 million consecutive

incident-free man-hours.

1987

## 1978

Ethylene glycol plant construction completed.

## 2000

Implemented an enterprise resource planning system (ERP).

## 2004

Received the 2004 Taiwan Industrial highest award "Industrial Sustainability Elite Award," which is a symbol of sustainable development for enterprises.

## 2012

- Completed the Oriental Petrochemical (Yangzhou) Corp. ethylene oxide derivatives plant with an annual capacity of 60,000 MT.
- Investment Commission approved by MOEA in PPL investment in Far Eastern Union Petrochemical (Yangzhou) Ltd.

#### SINCERE AND **DILIGENT PARTNER**

SOLID CONTRIBUTION

- Obtained ISO 50001:2018 Energy Management System certification. •
- System certification.

- Obtain ISO 45001 Occupational Health and Safety Management

- Rewarded the 2020 Sustainable Elite Award by SGS CSR Awards
- Completed the gas plant with annual output of 2020
- 340,000 tons at Linyuan site. · Far Eastern Union Petrochemical (Yangzhou) Ltd. officially started commercial operation of the ethylene oxide and ethylene glycol plants with respective annual output of 400,000 and 500,000 tons.
- Completed construction of the CO<sub>2</sub> plant III at Linyuan site with an annual output of 40,000 tons.

### 2016

Completed the reconstructure of the ethanolamine plant I into an ethylene glycol monobutyl ether plant with an annual output of 20,000 tons.

2017

#### Continue to maintain the validity of ISO 14001 Environmental Management System certification.

- Continue to maintain the validity of the ISO 45001 Occupational Safety and Health Management System certification.
- Linyuan Plant was awarded the "Outstanding Manufacturer of Industrial GHG Reduction of the Year 2021" by the Industrial Development Bureau, MOEA.
- Rewarded the ESG report Gold award by TCSA in 2021.

### 2021

Rewarded the in 2022 ESG report Gold award by TCSA.

TWSE

Weekly.

Carbon Management.

TCSA in 2023.

2022



Scored 98.25 and ranked among the top 6~20% of listed companies in the Corporate

Governance Evaluation conducted by

Rewarded the ESG Awards by SGS for

Rewarded the ESG report Gold award by

Rewarded amidst the top 100 emblems

of Carbon Competitiveness by Business

Rewarded the silver award by EcoVadis.

### 2019

- · Introduced ISO 45001:2018 Occupational Health and Safety Management System certification.
- Far Eastern Union Petrochemical (Yangzhou) Ltd. was rewarded the second annual Jiangsu Province Zi Feng Award for "Growth Type Enterprise."
- Accumulated 4.31 million incident free man-hours in 2019.
- Rewarded the CSR report award by TCSA in 2019.

## 2018

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- Obtained ISO 14001 Environmental Management System certification
- Completed the technical revamp of EOD plant at Oriental Petrochemical (Yangzhou) Corp., increasing EOD annual output to 66,000 tons.
- Awarded the "Outstanding Import Manufacturer Certificate" by the Bureau of International Trade, Ministry of Economic Affairs.
- Obtained ISO 50001 Energy Management System certification.
- Obtained ISO 9001 Quality Management System certification.


# **Financial Performance**

With the impact of newly launched ethylene glycol (EG) production capacity and shutdown inspection of oil refinery facilities, EG profit margin diminished as EG price plunged while raw material price hiked, which resulted in a balance between profit and loss for EG business. Specialty Chemicals and Gas, on the other hand, generated a record high revenues and earnings thanks to the implementation of high-value and green products strategies.

Based on the operative principles for basic competitiveness improvement and high-valued product transformation, OUCC gained an operating income of NT\$10,347,248 thousand, decreasing 19% compared to 2022, with the relentless efforts of all our colleagues. The net profit before tax was NT\$295,568 thousand; the net profits after tax was NT\$265,724 thousand. And a cash dividend NT\$ 0.2 per share is to be distributed with the approval of the Board.

				Unit: NT\$ Thousand
		2021	2022	2023
	Operating income	14,673,731	12,770,275	10,347,248
	Operating cost	12,620,091	11,426,269	9,075,293
	Staff salaries and benefits	503,147	448,810	505,284
	Dividend paid to shareholders	-	619,992	177,141
	Dividend paid to government	61,028	41,829	70,510
	Community Investment	3,755	3,882	3,942
n	Economic value retained	1,485,710	229,493	515,078
d	Total debt	10,359,750	10,927,952	10,972,334
	Total asset	23,232,530	22,918,839	22,755,080

#### Note:

1. The information from the above form is obtained from unconsolidated financial reports

2. Please refer to 2023 Annual Report p.82 for annual net sale an sale volume.

3. Please refer to 2023 Annual Report p.62 for shareholder structure

Company website : https://www.oucc.com.tw MOPS : https://mops.twse.com.tw/mops/web/index

## **Open and Transparent Communication Channel**

The OUCC complies with the information disclosure regulations, and communicates with stakeholders via diversified channels per below:

- 1. The suggestions or questions raised by the shareholders are dealt with by the President Office, also by the Spokesman and Deputy Spokesman of the company, or by the "Oriental Securities Corporation" that provides stock services to the OUCC. The investors meetings are held irregularly, with relevant information disclosed to the public.
- 2. All the relevant information is on the MOPS and the Company website in accordance with government provisions and regulations.



Stakeholder	Contact	Communication Channels
	Spokesperson Daniel Yu, Assistant VP of HR & Administration	02-2719-3333
Shareholders and	Acting Spokesman David Chiang , Assistant VP of Finance	02-2719-3333
Investors	IR Director Jason Chen, Senior Manager	02-2719-3333
	Stock Services Oriental Securities Corporation	02-7753-1699
Employees	Jessie Lin, Deputy Manager	02-2719-3333 #286
Suppliers/Contractors	Calvin Chen, Deputy Manager	02-2719-3333 #302
Business Clients	Mason Chen, Assistant Manager	02-2719-3333 #235





## Board

The Board of Directors is our highest organization, which consists of 11 Directors, including 3 Independent Directors. The Directors of OUCC all exercise their powers in accordance with the company law and the regulations. We have established the "Corporate Governance Principles," which is approved by the Board of Directors, and continue to strengthen all aspects and mechanisms of corporate governance and lay a solid foundation of OUCC's sustainable management.



In conformity with the modification of the Securities and Exchange Act, article 10 and article 23 of Corporate Governance Principles stating that when a Director, on behalf on himself or others, deals business of importance with the company, a negotiation and full discussion should be held by the Audit Committee to assign a representative of the company in advance, were revised and reported at the Board Meeting held at 10 August 2023.

Director Election	<ul> <li>The Director nomination and election are performed according to the candidate nomination system outlined in OUCC's "Corporate Governance Principles." The Directors are elected via the cumulative voting and candidate nomination systems, and the qualities of nominees are carefully reviewed according to the Company Act.</li> <li>In addition to evaluating each member's academic experience and strictly adhering to the "Election Procedures of the Board" and "Corporate Governance Principles," we also consider the Directors' diversity, independence, and stakeholder opinions during Director election.</li> </ul>		
Member Capacity and Diversity	<ul> <li>The Board of Directors serves for a three-year term. A candidate nomination mechanism is used to select and nominate Board members, and the academic experience of the nominated candidates is also evaluated to ensure diversity, independence, and comprehensive consideration of stakeholders' opinions.</li> <li>All Directors are equipped with seasoned knowledge in business management, leadership decision-making, and related industries. Their academic experience includes law, finance, economics, and business.</li> <li>Regarding cultivating the collective knowledge of Directors, we have invited them to participate in continuing education courses such as sustainability/ESG according to Chapter 3, "Strengthening Directors' Functions" of the "Corporate Governance Principles." The Directors also regularly attend external professional training courses on Board operation practices, corporate governance seminar, and sustainable development, etc.</li> </ul>		
Performance Evaluation and Sustainability Management	<ul> <li>We regularly conduct the Board of Directors performance evaluation, and the 2023 results show "the overall good in operation."</li> <li>The external Board of Directors performance evaluation will be conducted once every 3 years.</li> <li>The OUCC's Board of Directors is the highest supervision unit for sustainable development. The Directors regularly review the sustainable development implementation results and future plans and advocate for the strategic promotion of sustainable development.</li> </ul>		
Board of Director's meetings	A total of 4 Board of Directors meetings were held to set management objectives for corporate sustainability management and strategies.		
Professional Training Seminars	Directors and Independent Directors of OUCC participated in external education and training courses on topics for corporate governance on a regular basis, which included the Operational Practices of the Board of Directors and Corporate Governance Seminar, Operational Practices of the Audit Committee, and the like in 2023. (Please refer to page 48-49 of the 2023 Annual Report.)		
Major Results	<ol> <li>Performance evaluation and remuneration of Board of Directors (incl. Independent Directors) and Managers</li> <li>Operation of production, sell, and finance</li> <li>Audit business</li> <li>Operative status of reinvested companies</li> <li>Acquisition and disposal of assets</li> <li>Addit business are defined as corporate governance, health and safety, and carbon emissions related.</li> </ol>		

# Management of Conflicts of Interest

OUCC's Directors, Managers, and employees must operate in the firm's best interests to prevent conflicts of interest and implement Board of Directors' circumvention for conflicts of interest management according to regulations. Should any Directors, Managers, and other interested parties attending the Board of Directors meeting have a conflict of interest with the Board of Directors themselves or the legal person they represent, said persons shall be excused from the meeting and refrain from participating in the discussion and voting.

- According to OUCC's "Code of Ethics," the Company's personnel must handle official duties objectively and efficiently. They shall not gain improper benefits for themselves, spouse, parents, children, or relatives within the second tier of kinship by means of their positions in the Company.
- When OUCC has a fund loan or guarantee, a large asset transaction, or a purchase (sale) relationship with individuals mentioned in the preceding paragraph, the relevant Company personnel must take the initiative to explain whether they have potential conflicts of interest with the firm and resolve the issues according to the Company's code of conduct to prevent conflicts of interest.

The operation standards for financial business between the company and its related parties per below :

On 9 November 2023, the company's Board of Directors revised and passed the "Rules Governing the Financial and Business Matters between the Company and Its Stakeholders", stating that regulations should be formulated for transactions between the company and related parties in order to prevent irregular transactions and improper transfer of interests among related parties, such as purchase and sale transactions, acquisition and disposal of assets, endorsement and guarantees, capital loans, and the like.

Board of Directors Cross-membership	During the 8th meeting of the 16th term of Board of Directors, Directors Humphrey Cheng, Kao-San Wu, Thomas Chou, and Justin Tsai's non-competition and restriction to serve as the Directors of Far Eastern Union Petrochemical (Yangzhou) Ltd. were lifted, and Directors Johnny Shih and Humphrey Cheng serve as Chairman and of Supervisor respectively of Fu-Ming Transport Corp. practiced voluntary recusal as regulated.
Cross-shareholding with Suppliers and Other Stakeholders	<ul> <li>OUCC has established the "Procedures for Acquisition and Disposal of Assets of Oriental Union Chemical Corporation," according to the "Regulations Governing the Acquisition and Disposal of Assets by Public Companies" promulgated by the FSC, identified the related parties according to the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and published the list of related parties on its website.</li> <li>According to the "Procedures for Acquisition and Disposal of Assets of Oriental Union Chemical Corporation," if the transaction amount with a related party exceeds NT\$300 million, the relevant transaction information should be submitted to the Audit Committee and then to the Board of Directors for approval to ensure the stability of the transaction contract and payment. The relevant information shall be announced and reported on the website designated by the FSC according to the declaration deadline regulated.</li> </ul>
Controlling Shareholders	No conflict of interest between OUCC and major shareholders may damage the rights and interests of investors.
Related Parties, their Relationships, Transactions, and Outstanding Balances	The disclosure requirements of related party are met using notes in the financial statements of the annual report.





# **Remuneration Management**

Item	Highest governance body (Board of Directors)		Senior executives		
Fixed and Variable Payrolls	<ol> <li>According to the provisions provided by the Company Act and the Company's Articles of Incorporation, no more than 1% shall be allocated as Director's remuneration if there is any profit at the end of the fiscal year.</li> <li>The Board of Directors shall determine the actual distribution ratio and amount for Directors' remuneration and report to the Shareholders' meeting. Independent Directors receive fixed remuneration.</li> <li>The process for Director remuneration evaluation is to determine fair compensation according to the findings of the "Board Performance Evaluation Rules." The Remuneration Committee and the Board of Directors review relevant performance appraisals and remuneration rationality, and the remuneration system is reviewed at any time depending on the actual operating conditions and relevant laws and regulations to balance the Company's sustainable operation and risk control.</li> </ol>		<ol> <li>According to the provisions provided by the Company Act and the Company's Articles of Incorporation, 1% to 2% shall be allocated as employee remuneration if there is any profit at the end of the fiscal year.</li> <li>Employee remuneration can be stock or cash, and the actual distribution ratio, amount, and number of shares issued shall be determined via a resolution adopted by a majority vote at a meeting attended by over two-thirds of the Directors. A report of such distribution must also be presented at the Shareholders' meeting.</li> <li>The remuneration standards, structure, and system for the President, Vice Presidents, and Managers will be reviewed and adjusted promptly depending on the operating conditions and relevant laws and regulations changes. It is mainly distinguished based on job duties, personal performance achievement rate, and contribution to company performance as well as factors such as the overall environment, business environment risks, and market standards. Work performance remuneration is correlated to the Company's business performance.</li> </ol>		
Separation Payment	There is an appointment relationship between the Board members and the company, and there are no conditions for resignation/retirement/benefits and other severance payments.		between the Board are no conditions d other severance	For ser the sep provision	nior managers subject to labor-employment relationships, aration payment shall be handled according to the relevant ns of the Labor Standards Act.
Retirement Benefits Not applicable			For sen retireme relevan retireme	ior managers subject to labor-employment relationships, the ent benefit plan applies to all employees according to the t provisions of the Labor Standards Act or the company's ent regulations.	
Item		2022	2023		Increase / Decrease ratio of 2023
Annual tot compensatior	tal n ratio	4.37%	4.55%		8.9%

Note:

1. The annual total compensation ratio : Annual total compensation for the organization's highest paid individual / Median total annual compensation for all the organization's employees

2. The annual total compensation ratio of the highest paid-individual : (The highest paid compensation this year - the highest paid of last year) / the highest paid compensation last year

3. The median total annual compensation of all employees (excluding the highest paid individual):(The median compensation this year-the median compensation last year) / the median compensation last year

## Remuneration Link to ESG Indicators

OUCC has a Remuneration Committee tasked with assisting the Board of Directors in formulating remuneration-related policies, systems, and reviewing the performance assessment of Directors and Managers. The Committee is chaired by an Independent Director and held a total of two meetings in 2023, with 83% attendance rate of committee members.

The process for determining Director remuneration follows the "Board Performance Evaluation Rules for Oriental Union Chemical Corporation." It assesses operation performance, future business risks of the industry, management performance, and strategic goals of sustainable operation. It also considers individual performance achievement rates and contributions to the company's performance to provide reasonable compensation. The performance evaluation and reasonableness of remuneration are reviewed by the Committee and the Board of Directors. The remuneration system is periodically reviewed based on actual operating conditions and relevant laws and regulations to achieve a balance between sustainable operations and risk management.

# **ESG** Promotion Committee

In order to effectively coordinate and manage various ESG affairs, OUCC established " ESG Promotion Committee." The President was regularly appointed as the Commissioner responsible for final decision making, action plan review, and approval of the final reports (e.g. ESG, TCFD, SASB.) The Secretariat under the Committee is accountable for the organization and promotion of the task execution of each department, and report twice annualy to the Board of such progression status.

- Committee structure: Department heads serve as steering committee members, and senior managers are responsible for the committee's operations, formulating relevant ESG policies, action plans, and cross-departmental coordination.
- Supervision and management responsibility of the Board of Directors: The Board of Directors is the highest management unit for sustainable development. It regularly reviews the sustainable development implementation results and plans and assigns the "ESG Promotion Committee" to coordinate the review and management of sustainable action plans. The Commissioner (also a representative of the Board of Directors) regularly summarizes the implementation progress and reports to the Board of Directors.

Meeting convention: If there are specific ESG issues in the current year, unscheduled meetings will be held to ensure that ESG issues
are discussed and addressed as soon as possible, and the management process, evaluation results, and overall ESG information will
be shared with the stakeholders via the ESG website and other communication channels. The goal is to maintain good interaction and
negotiation relationships with multiple stakeholders. In 2023, three meetings were held respectively in April, July and November for the
promotion of the committee affairs listed below:

Functional Team	Reporting Issue
Sustainable Environment	Carbon emission, water resource management, product carbon footprint & certification, energy saving measures
Product Responsibility	Green procurement, ESG supply chain management
Social Inclusion	Employee relation, talent development, friendly workplace, vocational safety & health, social care
Corporate Governance	Information security management
Secretariat	Committee affairs promotion, participation and preparation of ESG competition







OUCC places great emphasis on risk management. In addition to the daily information security, defense of hacker attack, the company has incorporated the geopolitical risks and had removed all the data to the cloud data center as a countermeasure.

For critical operational issues and risks, we conduct systematic evaluations and analyses. We implement relevant management systems, develop well-defined risk strategies and actions, and integrate them with sound operational management practices. This ensures the balance between business operations and risks, establishing a solid foundation for sustainable business practices.



INNOVATION OUCC ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING



 OUCC continues to observe the changes in interest rates and engage in short-term and long-term financial planning to reduce overall capital cost.





Task Force on -Climate related Financial Disclosures (TCFD)

Governance

To transparently disclose climate change-related risks and opportunities, and to ensure that stakeholders understand OUCC's efforts and strategies in addressing climate change.

OUCC adopted the "Recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD)" framework in 2023 to measure and evaluate the impact of climate change through the four major frameworks of governance, strategy, risk management, and metrics and targets, evaluate and disclose the potential business impact of climate change issues on OUCC, and develop countermeasures to reduce the potential impact of climate change risks on our operations.

#### Task Force on Climate-related Financial Disclosures (TCFD) comparison table

#### The Board of Directors' oversight of climate-related risks and opportunities

- The Board of Directors has realized the importance of climate change issues. In addition to daily operations, which include the development of a sustainable environment as governance policy, the management team reports to the Board of Directors on climate-related issues such as greenhouse gas emissions, energy consumption, and water consumption on a quarterly basis.
- The Board of Directors also supports the promotion of climate change-related issues, such as the annual budget, the setting business goals, as well as the monitoring of important capital expenditure and other climate risk assessments including water and power resource risks. The management team holds discussions and reviews all the relevant risks and opportunities at the annual ESG committee meeting. The findings are reported to the Board of Directors for the evaluation of ESG performance.

The responsibility of the management team to assess and manage climate-related risks and opportunities

- The Environmental Sustainability Team was set up under the ESG Committee to assess the risks and opportunities arising from related climate issues through the company's risk management process.
- A cross-departmental "Energy Saving and Carbon Reduction Committee" has been established, and chaired by Chief Plant Director of Linyuan to set targets for electricity saving, greenhouse gas reduction and water resources management, and to plan and implement various energy saving and carbon reduction measures.
  - Regular task meetings are held quarterly to track the progress and the effectiveness of energy conservation and carbon reduction measures and review the regulation trends and policy announcements on energy conservation and emission reduction, to evaluate and plan accordingly.





# **OUCC Material Climate Risk Matrix**

#### Physical Risks Matrix

3 Physical Risks		Impact Subject
Acute (severity of extreme weather events such as typhoons and floods)	Short-term	Drop or interruption of services and production
Chronic (changes in rainfall patterns and extreme changes in climate patterns)	Long-term	Drop or interruption of services and production
Acute (earthquake)	Short-term	Drop or interruption of services and production



- Short-term (0-3 years)
- Medlum-term (3-5 years)
- Long-term (5-10 years)

#### **Risk Factor**

- 1. Acute (severity of extreme weather events A such as typhoons and floods)
- 2. Acute (earthquake) В
- c 5. Chronic (changes in rainfall patterns and extreme changes in climate patterns)

#### Impact Subject

- D 1. Service/productivity decline or interruption
- E 3. Damage to assets
- F 4. Increase in operating costs
- G 5. Increase in infrastructure costs

#### **Trasitional Risk Matrix**

3 Physical Risks	Time Frame	Subject
Policy and regulation (carbon tax increase: e.g. carbon costs, carbon pricing and ETS impact of finance)	Medium-term	Increase in operating costs
Market (increase in raw material costs)	Medium-term	Increase in energy resource costs
Technology (low carbon transition costs: e.g. product development efficiency, costs, market launch and R&D succeeding ratio)	Medium-term	Low carbon technology R&D expenditures



Short-term (0-3 years)

Medium-term (3-5 years)

Long-term (5-10 years)

#### **Risk Factor**

- A 1. Policy and regulation (carbon tax increase)
   B 5. Technology (low carbon products and services)
   C 7. Technology (low carbon technology transition costs)
- D 10. Market (increase in raw material costs)
- E 12.Reputation (industry stigmatization)

#### Impact Subject

- F 1. Policies and regulations (increase in operating costs)
- G 5. Technology (low carbon technology R&D expenditures) Market (decline of demand and order due to consumer and customer preference)
- H 8. Market (decline of demand order due to consumer and customer preference)
- J 0. Markets (increase in energy resource costs)
   J 10. Markets (increase in processing costs)

#### **Business Integrity**

To implement the integrate management and eliminate improper business practices, the OUCC has formulated the "Best Practice Principles of Ethical Corporate Management " and "Code of Ethics" and provided regular education and publicity to regulate the business conduct of Directors, Managers, and employees. In 2023, 396 employees participated in 354 hours of training.

We require Directors and senior management to issue a statement of compliance with the integrity management policy. It stipulates that Directors, Managers, and employees shall not directly or indirectly provide, promise, request, or accept any improper benefits, engage in dishonest acts that violate integrity, or breach fiduciary obligations while engaging in business conduct.

The preceding policies and provisions are published on the company website to communicate and publicize to relevant stakeholders. OUCC shall issue punitive actions for any violation of the preceding provisions according to law. We also provide multiple communication channels. If there is a violation of the integrity management regulations, the illegal behavior can be reported through the appropriate channels, which will be handled confidentially.

Management Policy	"Best Practice Principles of Ethical Corporate Management," "Code of Ethics," "Meeting Rules of Board of Directors," "Procedures for Handling Material Inside Information," and "Whistle-blowing System and Discipline Measures against Violation of the Codes of Ethics and Best Practice Principles"
Supervision Mechanism	The dedicated department regularly reports the implementation status to the Board of Directors.
Reporting Channel	<ul> <li>Confidentially handle whistleblowing cases to protect whistleblowers. Members of the investigation team and relevant parties shall keep the investigation process and relevant materials confidential and shall not disclose them to the public without authorization.</li> <li>Whistleblowing reporting channels:         <ul> <li>Anti-corruption mailbox (auditcommittee@oucc.com.tw): accept reports from whistleblowers such as shareholders, investors, customers, suppliers, contractors, etc.</li> <li>Human Resources Department (hrtaipei@oucc.com.tw): accepts reports from OUCC's employees.</li> <li>Stakeholder contact channels: https://www.oucc.com.tw/csr-99-page470</li> </ul> </li> </ul>
Relief Procedures	<ul> <li>Once the report is verified to be true, the relevant unit shall be instructed to review the relevant internal control system and operating procedures to propose improvement measures.</li> <li>Should the report be accepted, and the information is complete, an investigation team will be established within 5 days of receiving the written information to start the investigation. The investigation team shall conduct investigations based on the facts, and the accused and the relevant parties are obligated to cooperate with the investigation.</li> <li>Confidentially handle whistleblowing cases to protect whistleblowers. Members of the investigation team and relevant parties shall keep the investigation process and relevant materials confidential and shall not disclose them to the public without authorization.</li> </ul>
Management Results	<ul> <li>In 2023, there were no integrity/ethics-related violations</li> <li>According to Taiwan government regulations, if the competent authority imposes a penalty or other administrative punishment that will significantly impact the Company's finances or business, the major information shall be disclosed at the "Market Observation Post System" (MOST)</li> <li>In the past 3 years (2021 to 2023), OUCC has not disclosed any major information regarding punishment by the competent authority or taking other administrative sanctions at the MOST.</li> </ul>



# Sound Internal Control System

Designed by the managers and approved by the Board of Directors, the internal control system of the OUCC is to be implemented by the Board, the management, and other employees and is designed to provide sound management and to achieve objectives of the internal control system.



# **Internal Audit**

Effective operation of the internal control system is ensured by an independent audit department which is subordinate to the Board of Directors. In addition to regular business audit reports to the Audit Committee, the audit officer also reports at the Board of Directors meetings.

OUCC places high value on ESG related issues, internal control, and the internal audit. The 2023 audit plan included reviews on corporate governance, financial operations, environmental and labor safety, as well as information, R&D and other related operations, which were conducted to ensure the company operations and information disclosure met with the expectations of all the stakeholders.



# Information Security Risk Management

To safeguard the information from the impact of unendurable risks, OUCC adopts the cloud data center offer from AWS, through migrating databases of the company to the cloud data center of Amazon Web Services (AWS), which service indicator topped 99.99999999, ensuring the sustainable operation of the company and the security of customer information.

#### (1) IT Security Organization

For the "IT Security Management Organization," OUCC has set up an IT security manager as an information security management representative to supervise information security, and a IT personnel accountable for IT policy implementation.



#### (2) Management Approach

Risk Assessment	OUCC adheres to "confidentiality, integrity, and availability" for identification of asset value at each stage of information management, to determine the scope of information security risk management.
Risk Transfer	<ul> <li>Multiple security defenses: these include firewalls, an enterprise VPN and remote access, encryption, intrusion detection &amp; prevention, and anti-spyware software.</li> <li>Application of an authorization mechanism: a user must fill in the online application form and await the authorization upon the completion of the electronic procedure.</li> <li>Management of hardware devices: OUCC is equipped with uninterruptible power supplies and has inspections of safety control facilities carried out regularly.</li> <li>Data transmission Lines are set up between Taipei Office and Linyuan Plant: An MPLS Virtual Private Network (VPN) was established using two 300MB private data lines. The two private lines are used in combination to allow continuous backup.</li> <li>Two-tier identity authentication was employed using SSL VPN encrypted connections to reduce the risk of hacker attacks when the application system needs remote login.</li> <li>Established privileged account management to manage the highest authority passwords and execution permissions with a backup recording to prevent hackers from illegitimate access to the privileged account and reduce information security risks.</li> <li>The usage control of USB flash drives on personal computers was strengthened. Only USB flash drives that have been certified and registered by the IT Department can be used on computers of the company. Upon return, the borrowed notebook PC will need to have the USB formatted first upon return, then complete with the scan of virus.</li> <li>The database hub of the company was migrated to the cloud data center of AWS, which service indicator topped 99.99999999, guaranteeing the sustainable operation of the company and the safety of customers' information.</li> <li>The GoTrust password-free zero-trust system is introduced, and coupled with the access gateway device (vAPV) of Array Network (3664.TWO) used as the access portal, to provide reverse proxy technology with mechanisms such as loading balance and attack prevention of Service int</li></ul>
Emergency Response	<ul> <li>Backup and restore mechanism: A mutual IT system backup mechanism has been established between the Taipei office and the Kaohsiung Linyuan Plant. In the event of an emergency, the system can be switched immediately to synchronize and sustain continuity of the IT system. System operations can be resumed within 4 hours.</li> </ul>
Maintenance Audits	<ul> <li>Electronic Administration Operations: OUCC has established a comprehensive electronic documentation system and has set up an administrative process control and electronic mechanism, reduces unnecessary resource consumption.</li> <li>File security control and maintenance: maintenance for fire and moisture protection of hardware and media devices.</li> <li>Systems security audit management: an initial audit startup procedure has been built into the information system, and user account permissions are reviewed on a regular basis.</li> </ul>



# (3) Action Plans

In 2023, we implemented the two-tier authentication mechanism for personnel external login for business purposes, and introduced the GoTrust password-free zero-trust system coupled with the access gateway device (vAPV) of Array Network (3664.TWO) used as the access portal, to provide reverse proxy technology with mechanisms such as loading balance and attack prevention of service interception, allowing the front-end users to log in without password through their mobile phone or GoTrust security key (Idem Key), highly reducing the security loopholes (phishing and social attacks) of traditional password systems, and providing also the hiding and protection functions for the back-end RP application system. For relevant business information security, we also introduced SSL certificates to establish a standard specification for a password link between the website server (host) and the website browser (client), so that clients' and internal information can be secured and without being monitored.

Strategy	Goal	Program	Description
	Enhance system defense mechanisms	Upgrade computer firewall and antivirus software	<ul> <li>The new sandbox technology is used to ensure a safe application environment and isolate computer virus attacks, to avoid information leakage from advanced cyber attacks.</li> <li>OUCC upgrades antivirus software, which includes the filtering of remote command execution attacks, the prevention of malicious email attachment attacks, the modification and auditing of system configuration, and a cloud-based analysis of unknown programs.</li> </ul>
		Email filtering	• Strengthen email filtering to identify and filter out spoofed emails, reducing the risk of infection.
Risk Transfer	Enhance login Security	Remote terminal login via two-tier authentication mechanism	<ul> <li>Before introduction: Should the account and password of remote users be stolen, the illegal entrance may get direct access to the information.</li> <li>After introduction: In addition to the account and password, the remote user also needs to enter a verification code from a mobile phone to access the terminal server and data.</li> </ul>
·	Cloud hub	Data center cloudification project	To safeguard the information from the impact of unendurable risks, OUCC migrates databases of the company to the cloud data center of Amazon Web Services (AWS), which service indicator topped 99.99999999, ensuring the sustainable operation of the company and the security of customer information.
	Enhance resilience	Establishment of a remote backup mechanism	The establishment of a comprehensive remote backup mechanism which consists of a total four backup processes to enable information from OUCC head office and Kaohsiung Linyuan plant to be simultaneously backed up bilaterally.
Emergency Response	Confidentiality	Cookie Policy Statement	OUCC incorporates a "Cookies Policy Statement (Data Confidentiality Policy)" to its official website and establishes information security policies to secure customer information and intellectual property rights.
	Keyword Dete	ection	The DLP function performs in-depth content analysis through keyword matching, dictionary matching, regular expression evaluation, and other content inspections to detect content that violates the organization's DLP principles and notifies the sender of information that violates the principles.

# Management of Employees' Privately Owned PCs

The following measures are adopted to manage the employees' privately owned computers at workplace:

- Controlling devices' unauthorized access to the company intranet (802.1X)
- Setting different policies and rules according to different management rules
- Assigning the end equipment to designated VLAN based on the identity of the user
- Supporting the management with switches of different vendors
- Using unified management interface to simplify IT work
- Identifying and monitoring the connected devices in the company and their status instantly
- Creating audit logs of the company intranet

# Management of Privileged Accounts

To prevent data breach disguised as legitimate actions, OUCC uses a Privilege Access Management (PAM) system to avoid credential theft and the threats caused by privilege abuse. To manage the user accounts of the system, the random one-time passwords are generated, and become invalid upon the completion of each task to prevent or reduce the risk of lost or hacked passwords.

# Future Planning: Cloud Server

With Green IT as the ESG ultimate goal to net-zero emission, the Data Center Cloudification Project in 2023 was scheduled as follows:

- 1. Only network equipment remained at the IT hubs in Taipei and Kaohsiung.
- 2. All servers in the original IT hubs were transferred to the Cloud.

Note: The total of electricity cost from self-purchased green energy: before transfer was NT\$3.8 million, after transfer was NT\$1.36 million.

## Effects:

- The space of the IT hub could be reused
- Achieve the ESG net-zero emission target
- Resources may be swiftly adjusted at the cloud according to needs
  - » Cloud service offers the purposes of no equipment procurement, easy expansion or removal by demand, cost effective and quick introduction.
  - » Cost is charged based on the amount of usage with more flexibility.





# Information Security Enhancement Projects After Cloudification

Project	Description
Web Application Firewall, WAF	<ul> <li>Introduce Web Application Firewall (WAF) the external information services of cloud to filter and isolate the inter and outer information respectively, to avoid the exposure of intranet to the internet, lowering the risks of hacker attack.</li> </ul>
Multi-Factor Authentication, MFA	<ul> <li>The GoTrust Password-Free Zero-Trust System</li> <li>The GoTrust password-free zero-trust system is introduced, and coupled with the access gateway device (vAPV) of Array Network (3664.TWO) used as the access portal, to provide reverse proxy technology with mechanisms such as loading balance and attack prevention of service interception, allowing the front-end users to log in without password through their mobile phone or GoTrust security key (Idem Key), highly reducing the security loopholes (phishing and social attacks) of traditional password systems, and providing also the hiding and protection functions for the back-end RP application system.</li> </ul>
Taipei & Kaohsiung Network Safety Check	<ul> <li>FSC's Information Security Guidelines Project</li> <li>OUCC comprehensively improves information security management by setting up a Security Operations Center (SOC), regularly conducting network environment vulnerability scan and social engineering drills.</li> <li>SOC's real-time monitoring and analysis can effectively prevent information security threats, while vulnerability scan ensures the security of network infrastructure; and social engineering drills can enhance employees' security awareness and adaptability, forming an information security culture in which all employees participate.</li> </ul>
Data Loss Prevention, DLP	<ul> <li>Formulate the information leakage prevention mechanism for file access of users, aiming at no document transfer and duplication to the outer disk and internet hardware.</li> </ul>

SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING

# Stakeholder Communication and Material Topics

OUCC attaches great importance to communication and interaction with various stakeholders. Only by understanding the needs of stakeholders, implementing, and responding transparently to the issues which are valued can the company truly internalize its sustainable operations into corporate management and fulfill corporate sustainability commitment.



# **Diverse Stakeholder Communication**

OUCC adopts the five major principles of AA1000 Stakeholder Engagement Standard (SES) to identify through the dependence, responsibility, emergency, influence, and diversified perspectives of OUCC's stakeholders, which include employees, suppliers, corporate customers, shareholders and investors, local communities, the government and competent authorities, etc.

With substantial analysis, stakeholders' concerned issues are identified, and relevant performance and improvement are disclosed in the Report. We maintain communication and discussions with multiple stakeholders, actively listen and respond to the expectations of employees, investors, suppliers and community residents on OUCC's ESG implementation, which will serve as an important reference of the company for improving ESG performance and sustainable innovation and growth.

Stakeholder	Meaning for OUCC	for OUCC The Main Communication Concerned Issues Channel and Frequency		GRI Material Topics
Shareholders and Investors	The shareholders and investors are OUCC's stockholders, to whom we must be responsible.	<ol> <li>Shareholders' meeting (annually)</li> <li>Investors conference (quarterly)</li> <li>Annual report (annually)</li> <li>Corporate investors' forum (occasionally)</li> <li>Spokesman hotline and mailbox (occasionally)</li> <li>The company website (permanent)</li> <li>MOPS (permanent)</li> </ol>	<ul> <li>Corporate Governance</li> <li>Industry Trends</li> <li>Economic Performance</li> <li>Risk Management</li> <li>Dividend Policy</li> </ul>	<ul> <li>Economic Performance</li> <li>Water and Effluents</li> <li>Emissions</li> </ul>
Employees	The employees are the cornerstone of OUCC's sustainable operation, and the driving force of our continuous growth.	<ol> <li>Employee Welfare Committee (occasionally)</li> <li>Labor/Management meetings (quarterly)</li> <li>Occupational Health &amp; Safety Committee (quarterly)</li> <li>Performance appraisal (annually)</li> <li>Group activity (occasionally)</li> <li>Education training (occasionally)</li> <li>Grievance mail box (permanent)</li> <li>Employee communication (annual)</li> </ol>	<ul><li>Employee Welfare</li><li>Work Environment</li><li>Labor Rights</li></ul>	<ul> <li>Market Presence</li> <li>Labor-Employer Relationships</li> <li>Occupational Health and Safety</li> </ul>

# Stakeholders' Communication Results



# Stakeholders' Communication Results

Stakeholder	Meaning for OUCC	The Main Communication Channel an Frequency	d Concerned Issues	GRI Material Topics
Corporate Customers	Satisfied customers are the key to the development of our business and services.	<ol> <li>Customer satisfaction survey (annually)</li> <li>E-mail (occasionally)</li> <li>Distribution meeting (occasionally)</li> <li>Customer visitation (occasionally)</li> <li>The company website (permanent)</li> <li>The ESG website and report (annually)</li> </ol>	<ul> <li>Industry Trends</li> <li>Emission</li> <li>Customer Privacy</li> <li>Law and Regulation Compliance</li> <li>Occupational Health and Safety</li> </ul>	<ul> <li>Emissions</li> <li>Occupational Health and Safety</li> </ul>
Suppliers / Contractors	We have quite a few products and service chains, all of which are dependent on the support from suppliers and contractors.	<ol> <li>Supplier periodical evaluation (annually)</li> <li>The ESG website and report (annually)</li> <li>Transportation meeting (occasionally)</li> <li>Supplier/Contractor safety meeting (monthly)</li> </ol>	<ul> <li>Supply Chain Sustainability Development</li> <li>Water Resource Management</li> <li>Waste Management</li> <li>Occupational Health and Safety Management</li> </ul>	<ul> <li>Procurement Practices</li> <li>Occupational Health and Safety</li> </ul>
Local Community	As a good neighbor of the local community, we are committed to protecting the environment ideal for dwellings.	<ol> <li>Charity donations (occasionally)</li> <li>Event sponsorship (occasionally)</li> <li>Telephone contact (occasionally)</li> <li>The ESG website and report (annually)</li> </ol>	<ul> <li>Environmental Pollution Management</li> <li>Toxic Substance Management</li> <li>Environmental Compliance</li> </ul>	<ul><li>Water and Effluents</li><li>Emissions</li></ul>
Government Agency / Non- government Organization	All of our products, services and operational activities abide by the inspection and supervision of governmental and non-governmental agencies.	<ol> <li>Requested reports of government agencies (occasionally)</li> <li>Regulatory audit (occasionally)</li> <li>Academic research cooperation (occasionally)</li> <li>Social participation of related Union / Association (occasionally)</li> <li>The ESG website and report (annually)</li> </ol>	<ul> <li>Law and Regulation Compliance</li> <li>Energy Consumption</li> <li>Award Engagement</li> </ul>	<ul> <li>Market Presence</li> <li>Emission</li> <li>Occupational Health and Safety</li> </ul>

# **Material Topics Determination**

# Process for Determining Materiality

- Frequency: once a year.
- Materiality process/material topics review and signature: Approved by the President (representative of the highest governance unit).
- Types of stakeholders participating in the assessment: Members of each department's ESG team collect issues concerning the stakeholders in respective business.

# Material Topics Identification Procedure

#### Continue to collect / identify various sustainable issues

Collect international sustainable issues, disclose frameworks/ standards (such as GRI guidelines, TCFD, SASB), and OUCC's news in 2023, and identify ESG-oriented issues according to the short-, medium-, and long-term ESG goals.

#### Impact prioritizing

After the ESG team representatives have evaluated the significance of topics, the final topic analysis and discussion are conducted according to the internal considerations, industry practices, and benchmarks to set the "significance threshold" for actual and potential impact issues. The goal is to sort and complete the "Annual Material Topic Matrix."

#### Confirmation of results / matrix of material topics

After the "Annual Material Topic Matrix" is established by the ESG Promotion Committee, it is sent to the "President (representative of the highest governance unit)" for review and approval. The goal is to plot a matrix according to the identification results of the current year to serve as an important reference for ESG report disclosure/action planning.

# Results of Material Topics Determination

Assessing material topics, OUCC considers the impacts (positive/negative) of each topic on the economy, environment, and people to fully identify the internal and external effects of the issues.

Actual Positive Impacts				
ESG	Material topics	Principles of Materiality Impacts on the Economy, Environment, and People	Sources of Impact	Targets of Impact
E	<b>Emissions</b> (Impact Scale: 4.4/Impact Duration: 4.4)	We formulate short-, medium-, and long-term goals for OUCC's energy resource management based on energy consumption status and according to laws and regulations as well as international environmental and energy management trends to capitalize on commercial opportunities in low-carbon industries.	Operational Activities Product/Service Business Relationships.	Customers
S	Labor-Employer Relationships (Impact Scale: 4.7/Impact Duration: 4.6)	Employees are the most important assets of the company, and we value their opinions to enhance bilateral trust and centripetal force.	Operational Activities Product Service Business Relationships	Employees
	<b>Occupational Health and Safety</b> (Impact Scale: 4.3/Impact Duration: 4.3)	Under the principle of "there is no safest, only safer," we have been dedicated to developing a chemical safety management system, establishing the ISO 45001 international standard, and providing a healthy and safe working environment through continuous inspection and improvement.	Operational Activities Product/Service Business Relationships.	Employees Suppliers
G	Market Presence (Impact Scale: 4.7/Impact Duration: 4.5)	We keep track of the associates' remuneration level and provide remuneration superior to average to retain and attract new talents as well as the existing employees.	Operational Activities Product/Service Business Relationships	Employees
	Economic Performance (Impact Scale: 4.3/Impact Duration: 4.2)	Stable economic development is the foundation of corporate operation, the base of our sustainable development.	Operational Activities Product/Service Business Relationships.	Employees

Actual Negative Impacts				
ESG	Material topics	Principles of Materiality Impacts on the Economy, Environment, and People	Sources of Impact	Targets of Impact
	<b>Emission</b> (Severity: 4.3/Impact Areas: 4/ Improvement Potential: 3.3)	High carbon emission shall not only cause direct or indirect commercial cost, but also lessen the climate-related resilience and transformation adaptation ability.	Operational Activities Product/Service Business Relationships	Customers
E	Water and Effluents (Severity: 4/Impact Areas: 4/ Improvement Potential: 3)	Wast water from operation and process need to be treated properly to avoid the contamination of local water source and fluvial ecosystem.	Operational Activities Product/Service	Employees Customers
G	Procurement Practices (Severity: 4.2/Impact Areas: 4.1/ Improvement Potential: 2)	Single supply chain or no local venders create no local job opportunities of local economic development.	Operational Activities	Suppliers

Potential Negative Impacts		ntial Negative Impacts				
	ESG	Material topics	Principles of Materiality Impacts on the Economy, Environment, and People	Sources of Impact	Targets o	of Impact
	E	Water and Effluents (Severity 4.3 Likely Occurrence 4.1)	The lack of water resource management mechanism may result in the increase of production cost from the water resource shortage, and cause the usage amount deficiency of reclaim and recycling water	Operational Activities	Employees	Customers

Note: Material topics changes: Additions of "Labor-Employer Relationships", "Economic Performance", "Procurement Practices"; deletion of "Forced or Compulsory Labor".





Sources of Impact: Actual Positive Impacts

Sources of Impact: Actual Negative Impacts



Sources of Impact: Potential Negative Impacts



SINCERE AND DILIGENT PARTNER

SOLID CONTRIBUTION

# List for Material Topics

ESG	Material Topics	Policies and Commitments	Audit and Tracking Mechanism	Targets	Progress Update for 2023
E	Water and Effluents	Without strict management, the chemical industry of OUCC may cause actual or potential negative environmental impacts on local communities. Regarding environmental issues, we have established the "Procedures for OUCC production process wastewater discharge" and "Environmental Safety and Health Policy" to grasp environmental protection	<ul> <li>Responsible Unit: Engineering Design Dept.</li> <li>Contact Mr. Yeh / Mr. Wu for environmental protection issues: (07) 6413101 #2302</li> <li>The cumulative daily record of water metering data at plant site is regularly reported to the Industrial Development Bureau according to the regulations.</li> <li>Implement water resource management mechanism via innovative technology to improve efficiency rate and reduce the risks in water shortage and recycling discharge.</li> <li>Introduce ISO 46001</li> </ul>	<ul> <li>Safety concepts: zero accidents, zero injuries, zero pollution</li> <li>Strive to save the water of 2% daily</li> </ul>	<ul> <li>Maintain zero pollution</li> <li>Conserve 100 metric tons of water daily</li> </ul>
		Emission	environmental protection data to ensure that the implementation rate and operational conduct conform with environmental laws and regulations.	<ul> <li>Responsible unit: S.H.E Dept.</li> <li>Contact Mr. Yeh/ Mr. Wu for environmental protection issues: (07) 6413101 #2302</li> <li>Pass and obtain external certifications annually: ISO 14064-1, ISO 14001, ISO 50001</li> <li>The Energy Saving and Carbon Reduction Committee holds regular meetings quarterly.</li> </ul>	<ul> <li>Safety concepts: zero accidents, zero injuries, zero pollution</li> <li>Strive to implement an average annual carbon reduction rate of 1%</li> </ul>
S	Labor- Employer Relationships	We deem the employees our most valuable assets, and provide complete training, welfare and work environment to secure their labor rights and interests, with the establishment of labor unit and grievance mechanism in line with the "Best Practice Principles of Ethical Corporate Management" and "Codes of Conduct and Ethics of Employees" and "Responsible Care Global Charter".	<ul> <li>Contact for employee issues: (02) 27193333 #280</li> <li>In conformity with relevant domestic social, economic and labor regulations and laws.</li> </ul>	<ul> <li>Sound and superior responsible care for employees</li> <li>Friendly work environment</li> <li>Zero employee injury</li> </ul>	<ul> <li>Average salary of baseline new employee is 1.56 times the Taiwan basic salary, in which male is 1.55 times, female is 1.66 times, and female is 1.07 times the male.</li> <li>Employee welfare expenditure totaled NT\$79 million, with subsidy of NT\$18 million.</li> <li>Employee training totaled 11,836 hrs, with average 30.2 hrs and NT\$5,962 per person.</li> <li>The resigned employee totaled 65, of a turnover rate 16.58, and total of new employee rate 23.72%.</li> <li>Ratio of employee's participating in Labor Unit: 73%</li> </ul>

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OUCC | 2023 ESG Report

ESG	Material Topics	Policies and Commitments	Audit and Tracking Mechanism	Targets	Progress Update for 2023
S	Occupational Health and Safety	Established the "Environmental Safety and Health Policy" and the "Guidelines for Consultation and Participation of Workers and the Management Procedures of Occupational Safety and Health Committee" to strengthen the performance of the occupational safety and health management system.	<ul> <li>Responsible unit: S.H.E. Dept.</li> <li>Join the Taiwan Responsible Care Association (TRCA)</li> <li>Maintain the validity of the ISO 45001 Occupational Safety and Health Management System.</li> <li>Execute hazard and operability analysis and 5S safety inspection</li> </ul>	Precautionary thinking: zero accidents, zero injuries, zero pollution, conduct regular inspections on safety, health, and environmental protection-related actions, and create a safe workplace environment.	No occupational injury occurred
	Economic Performance	We have established a sound corporate governance structure and transparent communication channels to secure the relevant interests and rights of stakeholders as well as to enhance operation performance, in line with the "Best Practice Principles of Ethical Corporate Management" and "Code of Ethics" and "Responsible Care Global Charter".	<ul> <li>Contact for shareholders &amp; IR 02-27193333 #221</li> <li>Independence Directors and relevant assessment institutes</li> </ul>	<ul> <li>Transparent governance</li> <li>Stable and continuous profit</li> </ul>	Report to the Board of Directors (quarterly) and shareholders' meeting (annually).
G	Market Presence	We have a "Remuneration Committee" to ensure that the salaries meet the employee rights and interests required by government regulations.	<ul> <li>Responsible unit: Human Resources Department</li> <li>We have a Remuneration Committee and labor union to supervise and review related events.</li> </ul>	In conformity with government policies, we refer to the usual industry standards, and provide local salaries that are superior to the Labor Standards Act.	All comply with relevant laws and regulations
	Procurement Practices	We focus on green procurement, with priority in the product selection of environmental labeled and energy saving certified.	<ul> <li>Responsible Unit: Responsible Product Team of ESG Promotion Committee</li> <li>In conformity with the green procurement guidelines: environmental labeled and energy saving certified</li> <li>ESG assessment for supply chain</li> </ul>	Green procurement amount proportion 50% of the total procurement by 2035.	A total of NT\$1.35 million meets the green procurement, with 100% of green procurement in LED and rotary machinery.

SOLID CONTRIBUTION

## Association Membership List

OUCC keeps interacting with many external organizations across the industry. In addition to active participation in annual meetings, summits, and general assemblies of international, national, and regional organizations. The company promotes mutual exchange among the same and different industries. Through instant communication, OUCC is able to understand the suggestions of relevant stakeholders to the chemical industry and help OUCC march toward the sustainable development goals.

Association and Union Name	Membership	Annual / Membership Fees Paid
Petrochemical Industry Association of Taiwan (PIAT)	Director, Member	NTD 240,000
Taiwan Chemical Industry Association (TCIA)	Director, Member	NTD 200,000
Taiwan Responsible Care Association (TRCA)	Director, Member	NTD 100,000
Taiwan Institute of Chemical Engineers	Member	NTD 50,000
Taiwan Industry Gas Association (TIGA)	Director, Member	NTD108,000
Industrial Gas Association of R.O.C	Member	NTD 14,400
Industrial Safety and Health Association (ISHA) of the R.O.C	Member	NTD 5,400
Kaohsiung Chamber Of Industry	Member	NTD 10,800
Chinese Arbitration Association, Taipei	Member	NTD 12,000
Chinese National Association of Industry and Commerce, Taiwan (CNAIC)	Member	NTD 50,000
Kaohsiung Economic and Trade Development Association	Supervisor, Member	NTD 80,000
Taiwan Supercritical Fluid Association	Member	NTD 10,000
Taiwan Concrete Institute	Member	NTD 10,000
Taiwan Society for Circular Economy	Member	NTD 20,000

# Chapter 03 SINCERE AND DILIGENT PARTNER

- 62 PARTNERS OF OUCC
- 77 SATISFIED CUSTOMERS
- 80 CHEMICAL SUPPLY CHAIN MANAGEMENT

AS human-centered, OUCC treats its employees as the company's most valuable assets. It is committed to creating a safe and healthy work environment, and integrating ESG (Environmental, Social, and Corporate Governance) values into its business operations and corporate culture. OUCC provides compensation and benefits superior to industry standards, assuring employees to work with peace of mind.

OUCC pledges to defend the workers' rights, comply with labor standards and treat each employee fairly. OUCC also offers proper workplace facilities (both software and hardware) and employee welfare so that the employees can work, learn and grow at the workplace and maintain balanced between career and personal life. The goal is to help the workers demonstrate integrity to the job and the stakeholders and provide the customers with the best products and services.



# Solid Partnerships

- Employee benefits expenditures totaled NT\$ 74.64 million.
- Employee average compensation was NT\$ 1.03 million.

# **Satisfied Customers**

- A EO & EG customer satisfaction survey scored 33.6 points out of perfect score of 35 points
- A GAS customer satisfaction survey scored 4.68 points out of perfect score of 5 points
- A SC customer satisfaction survey scored 4.66 points out of perfect score of 5 points (100% questionnaire recollection)

# **Chemical Supply Chain**

- 100 % of suppliers followed the OUCC environmental policy
- The total number of on-site audits on suppliers was 718 (incl. 7 transport suppliers)
- 100 % of freight forwarders passed the transportation safety, quality, and hygiene on-site audits



# Partner of OUCC

OUCC is committed to protecting the rights and interests of laborers. It selects outstanding talents with a fair, open and impartial recruitment system, provides remuneration and benefits that are better than the industry average, builds a safe and healthy workplace, and provides diversified and smooth communication channels to strengthen corporate identity, ensure the stability of new recruits and existing employees, retaining and attracting outstanding talents.

In 2023, our company did not have any significant risks of forced or compulsory labor in its operational locations or suppliers. Our practices in this regard comply with the regulations set forth by the labor laws of the country, and we have not incurred any major penalties in this regard.

# Equal Employment Rights

To safeguard the labor rights of the employees, our staff management system is based firmly on the equipped techniques and capability of the employees. There is no discrimination based on gender, religion, nationality, or ethnicity with respect to employment, salary, performance evaluation, promotion, education and training, or personal benefits.

In addition to prohibiting child labor, OUCC also adheres to the principle of fair and impartial recruitment, imposes no unreasonable restrictions (such as detaining ID cards, passports, receiving improper benefits, etc.), and treats employees in the language that they can fully comprehend when complete the employment agreements.

#### Recruits of diverse talents

The head office of OUCC is established in Taipei City, and the factory is located in Linyuan Industrial Park, Kaohsiung City. To promote and increase local employment opportunities, most of the employees employed in Linyuan plant are given priority to local residents.

In 2023, the total number of OUCC employees in Linyuan was 345. There were 92 people registered in Linyuan, with the proportion of local employment reaching 28.7%, which showcases the support and encouragement of OUCC in terms of employment of local talents.

In addition to local staff, OUCC employs 2 Indonesians, 1 Chinese and 1 Hong Konger, showing the diverse employee composition. Foreign employees are given assistance with work visa applications, resident IDs and admission to National Health Insurance (NHI). The company also helps employees to acquire admission to the additional group insurance, jointly established by the company and the employee welfare committee, which supplements basic business insurance.

The company helps employees with transportation to Taiwan, relevant law compliance, and living assistance before they report to work, fully demonstrating the company's emphasis on diversity and inclusion by way of caring for its foreign employees at all times and reaching out in time of need.

#### Percentage of Local Residents at Linyuan Plant

Job title	Local Residents	%
Engineer / Administrator and above (incl. up to deputy manager/sr. specialist level)	22	6.3768%
Operation-foreman	16	4.6377%
Operation-operator	61	17.6812%
Subtotal	99	28.6957%
Total of employee at Linyuan plant	345	

Note:

1.In terms of nationality, OUCC hires 98.8% of domestic employees. Therefore, the ratio of local employees at Linyuan is used as the basis for calculation. 2.Ratio = Number of employees located in Linyuan area/ total of employees at Linyuan plant.

# OUCC Employee

OUCC full time (non-fixed term contract) employees totals 391, excluding 1 short-term contractual staff. Due to the industrial nature, on-site production work requires a physical foundation, so the employment ratio of male employees is higher than that of female.

In 2023, the total number of OUCC employees was 392, with 349 male employees (89%) and 43 female employees (11%). However, OUCC values and cares as always for the needs of female employees equally and does not differentiate genders in terms of compensation and benefits, career and life development, and upholds the principle of equal rights for men and women in performance evaluation and promotion.

## Employee structure

	Male (person)	Female (person)	Total
Total number of employees	349	43	392
Number of non-fixed contractual employees	349	42	391
Number of short-term contractual employees	0	1	1
Number of non-hour-guaranteed employees	0	0	0
Number of full-time employees	349	43	392
Number of part-time employees	0	0	0

Category	Age	Male (person)	Male (%)	Female (person)	Female (%)
All employees	Total number of all employees: 392	349	89.0306	43	10.9694
	≤29	52	13.2653	8	2.0408
General Staff	30~50	193	49.2347	22	5.6122
	>50	46	11.7347	8	2.0408
	≤29	0	0	0	0
Middle Management	30~50	17	4.3367	3	0.7653
	>50	31	7.9082	1	0.2551
	≤29	0	0	0	0
Senior Management	30~50	2	0.5102	0	0
	>50	8	2.0408	1	0.2551
	≤29	29	7.398	0	0
DL	30~50	92	23.4694	0	0
	>50	20	5.102	0	0
IDL	≤29	23	5.8673	8	2.0408
	30~50	120	30.6122	25	6.3776
	>50	65	16.5816	10	2.551

Note:

2. "Indirect personnel" includes 1 short-term contractual personnel, rest are non-fixed contractual personnel (full time).

3. Definition of employee: General employee-grade 8 and down, mid-level management-grade 5-7, senior management-grade 4 and up.

4. Number of employees in service as of December 31, 2023.

<sup>1. &</sup>quot;Direct personnel" refers to plant production unit employees of grade 8 and down. "Indirect personnel" refers to plant non-production unit employees of grade 8 and down, and midlevel management and up. Both are included in the "non-fixed term contract" employees (full time).



#### New Recruits

Age	Male (person)	Male (%)	Female (person)	Female (%)
≤29	40	10.2041	2	0.5102
30~50	38	9.6939	10	2.551
>50	2	0.5102	1	0.2551

Note: %= Number of new recruits/ total number of employees of the year

#### Employee Turnover

Age	Male (person)	Male (%)	Female (person)	Female (%)
≤29	18	4.5918	0	0
30~50	30	7.6531	9	2.2959
>50	7	1.7857	1	0.2551

# Note: %=Number of employee turnover (including retirement and non-involuntary leave)/ total number of employees of the year

#### Non-employee Worker

Item	Description
Most common worker types	Filling personnel of the logistics, cleaning personnel, security personnel, cast film worker, engineering contractor
The contractual relationship with the Company	Filling labor contract Manpower dispatch contract Engineering contract
Type of work performed	Filling operation, security, cleaning, maintenance, transportation, engineering temp

Note: The number of non-employee workers in 2023 totaled 148.

#### **Multiple Communication Channels**

The OUCC pays careful attention to the voices of the employees, promotes right communications with the employees via various approaches. In addition to regular labor-management meetings, the Company communicates and discusses the labor/management coordination by means of special internal meetings, employee seminar and timely manner, to establish effectively the concordant relationships, as well as a good working environment.

	•	The OUCC Union was established in 1988 to protect the interests of members. Collective bargaining agreement has been approved since 1995, with 100% coverage in 2023. Union members constitute 73% of the employees in 2023.				
000		Item	2023			
ראָרָיָזאָ ארווואר		total employees covered by the collective bargaining agreement	100%			
Labor Union	•	Protect the employees' rights to the freedom of association and collective bargaining power without any involvement in the establishment, operation, or management of an organization or collective bargaining. Through the union's communication, it promotes harmonious labor relations and creates a good working environment.				
	•	The regular labor-management meeting appropriately reflects the employe financial status of OUCC or the important decisions concerning the interests solve the issue.	es' opinions on the operation and of employees, so as to effectively			
Labor/Management Meeting	•	Should the company find it necessary to make any major changes that affect period shall comply with the relevant regulations of the Labor Standards Act.	OUCC employees, the notification			

# Manpower Diversity

Age	2021	2022	2023
Aboriginal employee	1	1	2
Disabled employee	1	1	4

Note:

OUCC values the employment rights of the indigenous and disabled and abide by labor regulations. The differential subsidy for insufficient number of disabled people in 2023 has been paid according to the law. Recruitment for suitable candidates is still underway. The quota for the disabled was fully filled by 1 May 2023.

INNOVATION OUCC	ETHICAL GOVERNANCE	SINCERE AND DILIGENT PARTNER	SOLID CONTRIBUTION	PRUDENT THINKING
Internal Meeting	<ul> <li>Pursuant to the collective operational changes, the staff meetings, plant operational changes, the staff meetings is 12 (monthly), and plant operational changes in the number of meetings is 12 (monthly), and plant operational changes in the number of meetings is not plant operational changes in the number operational changes in the number operational changes in the number operationa</li></ul>	e bargaining agreement and relevant company shall communicate with the ation meetings, or through other suital held in 2023 totaled 64, including labo peration meeting 44 (weekly).	t laws and regulations, when the employees and union represent ble channels. br-management meeting 4 (quar	here are significant itatives through the terly), staff meeting
Employee Seminar	<ul> <li>There has been no major</li> <li>We advocate internal rule each responsible unit for i</li> </ul>	change in business operation that mig es and regulations, collect and reorga improvement and tracking.	gnt nave affected employee rign	en forward them to
Occupational Safety & Health Committee	<ul> <li>A total of 7 labor represent</li> <li>All health and safety issue</li> </ul>	ntatives accounts for 50% of the Occu es are regulated by the Occupational \$	pational Safety & Health Commi Safety & Health Committee.	ttee.
Timely Manner	<ul> <li>Human Resources Dept</li> <li>Taipei Office: (02) 2719-33</li> <li>Linyuan Plant: (07) 641-3</li> </ul>	<b>t</b> 333 101		

# 2023 Employee Seminars in Linyuan

Туре	Times	Person	Participation rate
Labor union representatives' communication	4	21	58%
New-employee seminar	2	56	76%
President seminar	1	74	87%

Important labor- management resolutions		In 2023, OUCC reached relevant ESG resolutions with employees via labor-management meetings:			
01	01 Convert the special leave system from a calendar year system to an annual system to make employees' use of special leave more flexible.				
02	12 Implement a new version of the performance bonus system. Supervisors can manage and evaluate the performance of their subordinates on a rolling basis and provide timely feedback. This also enhances the centripetal and cohesive forces of employees.				
03	03 Consolidate employees' compliance with work standards, safety control cards, cold work, and hot work, relevant tests and trainings are successively arranged to enhance personnel safety awareness.				
04	<b>04</b> Strengthen the promotion of policies such as leave regulations, individual shift and factory entry and exit control during breaks, to improve management perfection.				
05	05 Continuously evaluate the equipment in the factory and plan to strengthen training and use video recording to preserve the company's important experience and technology.				
Grieva improv	ance & vement methods 	The complaining employee held different opinions on the work assignments of the unit supervisor, which resulted in a communication gap between the two parties. The case was not established after the investigation conducted, but the improvement measures were proposed based on the content of the complaint:			
01	Provide and guide supervisor to use the self-checklist for illegal violations in the workplace to independently understand the status of management in a timely manner.				

02 Strengthen publicity: When supervisors conduct work performance coaching, they should provide work improvement goals and coaching records so that employees can clearly understand the goals that their supervisors hope to achieve and avoid cognitive gaps between the two parties.



#### Human Rights Protection

OUCC actively adheres to the core spirit of the "Universal Declaration of Human Rights", the "ILO Declaration," the "The United Nations Global Compact" and "Responsible Business Alliance Code of Conduct." We abide strictly by all laborrelated laws and regulations. Human rights issues are included in the assessment and consideration of all aspects of our operations. OUCC has established a diversified work environment where everyone receives fair treatment and is given equal rights and opportunity. This includes all employees, suppliers, and community members.

# Information Security Enhancement Projects After Cloudification

OUCC actively adheres to the core spirit of the "Universal Declaration of Human Rights", the "ILO Declaration," the "The United Nations Global Compact" and "Responsible Business Alliance Code of Conduct." We have established the "Human Rights Policy of Oriental Union Chemical Corporate" and strictly comply with government regulations on labor and human rights. In all aspects of our operations, we incorporate human rights considerations and assessments, covering employees, suppliers, community members, etc. We strive for fair treatment, equal opportunities, and a diverse working opportunities and environment where everyone is respected.

Relevant regulations are available to employees, which include "Work Rules," "Rules Governing Personal Information," "Rules Governing Employee Grievances," and "Act of Gender Equality in Employment and Sexual Harassment Prevention, Grievance, and Discipline."

## Human Rights Training

We include the courses of human right issues to safety and health training to help employees understand the basic principles and value of human rights and strive to improve employees' understanding and awareness of the importance of human rights. In 2023, OUCC's human rights-related advocacy education included gender-friendly care and labor rights. A total of 423 employees participated in 267 hours of training. In addition, we have published the relevant measures in the document system, such as the "Work Rules," "Rules Governing Personal Information," "Rules Governing Employee Grievances," and "Act of Gender Equality in Employment and Sexual Harassment Prevention, Grievance, and Discipline" for employees to inquire.

# Standardize Employees' Ethical Behavior

We value the ethics and integrity of our employees who are requested to sign a "Letter of Consent" when joining the company. This document becomes part of their personnel profile and the declaration for complying the company rules and regulations, personnel management stipulation, as well as the commitment for non-disclosure of the company business confidentiality. The document content is published at the company website and is available for examination and reference of all employees.

At new employee orientation, the education, training and tests on the Code of Ethics are conducted. More, all employees are required to participate the annual training on Code of Ethics and the Best Practice Principles of Ethical Corporate Management, so to strengthen employees' moral behavior.



ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER

SOLID CONTRIBUTION

# Human Rights Protection Mechanism

Fair employment	<ul> <li>Provide open, fair, and impartial job opportunities to all applicants in accordance with the Employment Service Act.</li> <li>The Human Resource Evaluation Committee has been established to administer the Rules Governing Human Resource Evaluation and matters that involve commendation or disciplinary action.</li> </ul>
Labors' freedom and rights	<ul> <li>Domestic and foreign employees are respected for their freedom of choices and occupational rights and are not forced or pressured to conduct labor activities, nor will their freedom of movement be limited.</li> <li>Employment agreements with foreign employees are written in their native language, in which the terms and conditions of employment are in accordance with local laws and regulations or better provided, and no arbitrary changes are made to the content of an employment contract.</li> <li>All employees are treated with equal care and protection irrespective of their nationality.</li> </ul>
Gender- friendliness	<ul> <li>The "Act of Gender Equality in Employment and Sexual Harassment Prevention, Grievance, and Discipline" and "Mechanism for Handling Complaints of Sexual Harassment" are stipulated to maintain gender equality in employment.</li> <li>Education and training on gender equality in employment and sexual harassment prevention.</li> <li>All the appropriate preventive, corrective, and disciplinary measures against sexual harassment are firmly applied and all employees have unimpeded access to a clear grievance channel to ensure their best interests.</li> <li>OUCC is vigorous in its advocacy and promotion of the anti-gender discrimination policies and mechanism to prevent workplace violation of sexual harassment.</li> </ul>
Personal data security	• The Rules Governing Personal Data have been clearly set down for the preservation of confidentiality and the management of personal data, as well as to ensure the safety and legality of OUCC for the collection, processing, usage, and international transmission of personal data.
Multiple grievance channel	<ul> <li>Abide strictly by the Rules Governing Employee Grievance and establish a smooth grievance channel.</li> <li>Stakeholders may file for appeal through the "Anti-corruption mailbox" on OUCC's official website.</li> <li>There were no complaints in terms of human rights in 2023.</li> </ul>
Stakeholder Types	<ul> <li>Such as consumers, customers, employees, other workers, and local communities</li> <li>High-risk or disadvantaged groups: such as children; human rights defenders; indigenous peoples; migrant workers and their families; ethnic or racial; religious and linguistic minorities; people who may be discriminated against due to sexual orientation, gender identity, gender expression, or sexual characteristics; and people with disabilities or women.</li> </ul>
Prohibition of child labor	<ul> <li>The company follows labor-related laws and regulations when employing workers and takes appropriate measures to verify their age.</li> <li>"Child labor" means the employment of any person who is under the age of 15, or who has not reached the age for completing compulsory education or the minimum age for employment in the country/region (whichever of the three is the lowest specified age).</li> <li><b>Compensation measures for misuse of child labor:</b></li> <li>Once the misuse of child labor is discovered, the child worker should be removed from the job immediately, and the supervisor of the responsible unit should be notified. The nature of the work and the working environment should be evaluated to determine whether there are any concerns about the impact on physical health.</li> <li>If there is doubt about the impact on physical health after assessment, an occupational health inspection agency for a physical examination must be arranged immediately to confirm the health status; if the health is affected due to work, the child must receive medical treatment, and the medical expenses will be borne by the company.</li> <li>The head of the relevant responsible unit should immediately launch an investigation and review preventive measures.</li> <li>Clearly communicate to our suppliers that we must abide by labor rights and human rights protections stipulated in labor-related laws and regulations.</li> </ul>



#### **Talent Training**

To help employees maximize their potential, we have established a complete education and training system which maps out plans for short-, medium-, and long-term professional career development. In addition to increasing internal cohesion, the professional potential of employees is inspired and enhanced, and grow simultaneously with the company.



# **Employee Training Hours**

Type of		2021		2022		2023	
Employee	Gender	Total (hour)	Average (hour)	Total (hour)	Average (hour)	Total (hour)	Average (hour)
All		7,582	25.88	9,951.5	30.71	10,741.5	30.78
Employee	° ■	666.5	18.51	785	19.15	1,094.5	25.45
Senior		107.5	11.94	99.5	9.95	106	10.60
Management	°	23	7.67	28.5	14.25	16	16.00
Mid-Level Management	°	1,001.25	23.84	988	20.16	1,038.5	21.64
	Ê	56.5	18.83	42	14	130.5	32.63
General Staff – Indirect Labor	°	3,822.75	22.49	2,858.5	18.44	3,996	26.64
	Ê	587	19.57	714.5	19.85	948	24.95
General Staff – Direct Labor		2,650.5	36.81	6,005.5	54.6	5,601	39.72

Note:

1. Definition of employee: General employee-grade 8 and down, mid-level management-grade 5-7, senior management-grade 4 and up.

2. Average hours in training: Total hours of training for the employee category / Total number of employees in the category.

# **Training Investment Statement**

Item	Unit	2021	2022	2023
Total employee training hours	Hour	8,248.5	10,736.5	11,836
Average employee training hours	Hour	25.0714	29.4151	30.1939
Total employee training amount	NT\$ million	0.676	1.226	2.337
Average employee training amount	NT\$	2,054.7112	3,358.9041	5,961.7347
The proportion in the current year's total revenue	%	0.0046	0.0096	0.0226
Total Revenue	NT\$ million	14,673.731	12,770.275	10,347.248
Total number of employees	Person	329	365	392

Note:

1. Total revenue is calculated by individual revenue statistics.

2. Average employee training hours = Total employee training hours / Total employee

3. Average employee training amount = Total employee training amount / Total employee

4. The training proportion in total revenue = Total employee training amount / Total revenue





#### **Professional Talent Training**

A potential talent and leader nurturing mechanism has been implemented to search for competent successors for existing supervisory and management posts. We encourage talented personnel to register for MBA degree programs at domestic universities to improve their management skills.

Although the epidemic continues to have an impact on industrial operations and turnover in 2023, the company persists in promoting employee training programs to ensure that employees can continue to grow and progress in a changing environment.

## Assistance to Youth during the Pandemic: The Flagship Employment Program

The outbreak of the global COVID-19 pandemic since 2020 has caused many companies to tighten their employment plans, which have an impact on new graduates and youngsters with little experience in the seeking of employment.

To properly fulfill our corporate social responsibilities, OUCC has participated in the Workforce Development Agency's Youth Flagship Program. Our recruitment efforts remain the same under pandemic pressure, and our main recruitment targets at new graduates and those within five years of experience. This provided employment opportunities for young people in domains of chemical research & development, methodology design, production process, logistics, environmental protection and the like.

- Comprehensive industry fundamental training, work safety training, general core knowledge courses, as well as various professional OJT training allow new employees with little experience to learn from practice, and practice from learning. By incorporating the bi-weekly work journal, the real-time learning status can be tracked to provide feedback to the manager for further course adjustments proceeding in line with the aim of practical learning.
- Throughout this Program, 41 young people aged under 29 were hired, and results were outstanding in both training and work performance, and a total of 52 authorized licenses were obtained within 3 years.
- In 2024, we have applied to the Department of Labor for an increase of 13 available posts, continuing to serve as a cradle for new talents training in the industry.

# **2023** Featured Programs and Applications

# **AI Program**

OUCC has anticipated the AI development trend and invested in artificial intelligence and big data analysis. We expect our senior executives to take lead in strengthening OUCC's competitiveness.

#### Sr. executives training

- Senior executives were organized to participate in the courses the Taiwan AI Academy offered since 2019.
- We have dispatched 9 officers to participate in the Taiwan AI Academy courses. The training period is up to 3 months, and the cost per person is approximately NT\$50,000. The Company fully subsidizes the fee, and the total cost of the course is NT\$432,000.

#### Professional training for IT personnel

- A 1-day training of the Amazon Cloud management console for IT was provided by Nextlink Technology.
- A total of 4 IT personnel attended the courses, which include the management of cloud servers, system backup, renewal, and functional adaptation at the Amazon Cloud.
- A total of IT maintenance cost NT\$450,000 per month for outsource was saved.

#### Al software applications

- Optimization of process operating conditions: R&D personnel use AI tools to quickly adjust recipes to achieve expected goals.
- Customer demand forecast: Use past sales data to build a customer demand forecast model to accurately predict market demand.
- **Preventive maintenance of equipment:** Preventive maintenance and upkeep of equipment are carried out through instrument data to ensure stable operation of equipment and the extension of service life.

INNOVATION OUCC ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION

02

# **Consensus Camp for New Product Sales Techniques**

- A consensus camp of New Products Sales Techniques was held for the preparation of Green, Carbon Reduction, New Material product development.
- Based on the OUCC's transformation highlighting innovative product development and business-oriented, especially in the domains of low-carbon technology and new materials. We integrate down-stream customers' requirements to provide differential green products and services with great quality to fulfill the market demand.



- The 1-day consensus camp targeted all the sales personnel of Specialty Chemicals, Gas and EOG, of a total 17 personnel, who are expected to be fully aware of the future new normal of technical innovation, best practice of business, customer development, and multi-diversification.
- Our sales team shall shoulder the mission, as the backbone of the industry, to closely integrate with as well as contribute to the relevant industries upon the new product launch.

# 03

# **ESG Training Series of Sustainable Talents Cultivation**

For the sustainable talents cultivation, the company has listed ESG as the key subject for education and training plan in 2024. The ESG series courses, organized by the ESG Promotion Committee and HR department, are focused on ESG development trend, strategic planning, risk management, and lowcarbon transformation, and open to all the personnel in Taipei and Linyuan, with goal of establishing talents of professional capability in net zero, who may incorporate the climate issues into governance strategy and risk management, with the required knowledge, tool and technology learned, to enhance the edge in net zero trend.

Up till Q1/2024, a total of 61 personnel attended ESG related internal and external courses, of 145 hours in total. The courses shall equip our employees with required knowledge and techniques for the control of climate related issues, as well as the incorporation of governance strategies and risk management to enhance our advantage in the net zero.

## **Professional Training Course**

## Specialty Chemical (SC) business sales & negotiation workshop

Strengthen the sales negotiation skills for SC businesses and improve service capabilities as the mass production for new products such as polyetheramine (PEA), ethylenediamine (EDA), semiconductor-grade carbon dioxide (sel-CO<sub>2</sub>), and ethylene oxide formulation (EODII) have successively completed.

# 02 Electronic-grade product training plan

Through training, employees will be equipped with relevant knowledge to enhance their professional knowledge, and well prepared for the electronic-grade product targeted customers.

## (0) 3 AI training plan

Launch the AI training plan, arrange for senior executives to understand the AI and big data operations, and lay a solid foundation for digital transformation.


## Campus Recruitment - To End with the Start and Build the Company Brand

In 2023, OUCC participated in 8 of the campus talent recruitment activities including "Enterprise Briefing Session" and "Talent Recruitment Expo" to enable students to understand OUCC's corporate culture, job vacancies, and

development opportunities, to forge closer ties between businesses and students.

In addition, the corporate image, products, business philosophy, etc., were conveyed to the participated students through the booth displays. The event also allowed students to fill in their resumes online. On the same day, OUCC's R&D personnel was on hand to solve the students' intractable problems on site, with active and vibrant interaction to totally overturn their perception of the chemical plant.



## Industry Academia Collaboration - Learning from Each Other

OUCC highly esteems the development of diversified talents and supports the industry academia collaboration, in hope of contributing to the cultivation of professional chemical talents.

In 2023, OUCC collaborated with National Chung Hsing University to coimplement the TEEP (Taiwan Experience and Education Program) of the Ministry of Education, by way of providing a 2-month period of internship for foreign students, with schedule focused on the interaction and discussion of chemical industrial related "production management big data analysis", "circular economy", "green products" and "ESG of chemical industry", and a result which benefited bilaterally in professional knowledge and international perspectives.



#### Return on Investment (ROI) of Talent Training

#### Behavioral Level (L3): Reaping the results of learning

- Program for the enhancement of the power of reading: A book The Foundations of Industrial Safety Rudiment is selected for key units such as R&D and production, which is aimed for them to integrate the knowledge gained into daily operations.
- The Youth Flagship Program: Emphasizing hands-on learning through on-the-job training provided by each unit to nurture seeded talent and instill OUCC culture.

Result Level (L4): Changes and contributions made to the organization by the employee

- Program for electronic-grade product training: Through the diversification of products and customers over the years, electronic-grade customers are to be one of the key targets in the future. The personnel can be equipped with required know-how via introduction, applications from the course to improve their professional knowledge and be prepared for target customers of next phase.
- Al Program: The Al program has been activated for the unit managers to understand the operation of Al and big data, as a foundation for the digital transformation ensued.

#### Performance and Remuneration Evaluation

OUCC has developed a comprehensive and diverse performance evaluation system with clear regulations on employee performance evaluation, rewards, and punishments, to keep balance of the fairness and employee development and ensure that each employee's performance is consistent with the company's overall goals.

OUCC has established the "Rules Governing the Payroll" as the basis for compensation evaluation and salary adjustment for all employees. By actively grasping the salary level of the industry market and regularly reviewing the salary policy of OUCC to share bonuses with employees when there is profit, the measures have effectively attracted and retained outstanding talents. In 2023, 100% of employees participated in the performance evaluations, which covered employees of all levels.

#### Performance Evaluation Management Mechanism

Personnel	Item	Frequency
Now Pooruita	Employees who have passed the probation period, yet with an evaluation period less than one year	Base on the date
New Recruits	New recruits are evaluated for qualification after a 6-month probation period	reporting to work
All Employees	An annual comprehensive evaluation resulted from each employee's absent status, leadership, work capability and performance, etc.	Annually

Note: All employees do not include new recruits

#### Sound Pension Mechanism

OUCC convenes regular Retirement Reserve Supervisory Committee meetings to review the allocation and use of pensions and fully protect the rights of retired employees according to the "Labor Standards Act" and the "Labor Pension Act." In addition, a retirement system covering 100% of employees has been formulated to ensure that employees can maintain a certain quality of life after retirement.

In 2023, a total of NT\$19,607 thousand in retirement reserves were deposited into the special account. By the end of 2023, the amount in the special account for labor retirement reserves reached NT\$171,590 thousand. We comply with the provisions of the Labor Standard Act to regularly evaluate the retirement reserve every year, which is sufficient to cover the retirement preparations for retired employees.

We support our employees and help them to start new lives after retirement. Before retirement, we share and exchange all the information they need to facilitate the proper planning of their finances, social and leisure lives as well. In addition, various communication channels for our retired employees to keep in touch with each other are established for them to share health management and ideas, which tighten the emotional bonds of the retired employees and the company, indirectly providing a channel for retirement life planning and communication, so that employees can live a more colorful and worry-free life when retired.

Labor Per	ision Syst	em
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Old system	New system
10% of the total salary is allocated to the pension fund every month and deposited to the Bank of Taiwan Trust Fund Special Account designated by the government.	According to the law, 6% of the monthly pension is paid to the employee's account in the Bureau of Labor Insurance according to the salary scale.

#### Sound Pension Mechanism

OUCC's total value of payable pensions	NT\$331,157 thousand
Percentage of retirement fund set aside by the company	10%
Percentage estimation basis	Actuary report
Time of evaluation (annual)	2023
The response strategy while the existing retirement fund being insufficient to pay its debts	Pay from company account
Level of participation in retirement plan	Employees of old pension system



#### **Employee Compensation and Benefits**

OUCC leads the industry in the provision of double group insurance. The coverage includes life insurance, accident insurance, hospitalization & medication, and cancer. Employees do not need to pay to be covered by the comprehensive benefit. In 2023, the employee benefits expenses totaled approx. NT\$79 million with a welfare subsidy of NT\$18 million. In 2023, the average salary of OUCC's new employees was 1.56 times the minimum wage in Taiwan, amongst which male

is 1.55 times, female 1.66 times, and female 1.07 times to male.

In addition to paying a salary above local minimum wage, pay raise is also offered based on the results of annual performance evaluation. The company is willing to share the profits with its employees.

Basic salary ratio with Taiwan	Male	Female
Taiwan : OUCC	1:1.55	1:1.66

Note:

The average salary of contractors is also higher than the minimum salary of Taiwan.

#### Full-time Employee Benefits for Non-supervisory Positions

Item	2022	2023	Compared to the previous year
Number of full-time employees	324	350	8%
Average salary	1.009 million	1.030 million	2%
Median salary	0.928 million	0.977 million	5%

Note: The numbers are calculated based on the filed salary data for full-time non-managerial employees of listed companies requested by Taiwan Stock Exchange.

#### **Employee Benefits Explanation**

The OUCC Employee Welfare Committee, which in addition to the lawful benefits, arranges welfare activities for the employees that include an annual banquet, scholarship grants, subsidies for activity, birthday, meal allowance, wedding, funeral, childbirth, and monetary gifts for three public festivals and the year-end. In addition to health checkups and group insurance for employees and their families, we also organize annual employee trips and other activities for employees' physical and mental health.

The year-end banquet, which is widely popular among the employees, has been cancelled since 2020 due to the pandemic, yet resumed in 2023. In the meantime, OUCC still insists on holding recognition and appreciation ceremony for senior employees. Service awards are presented based on the employees' seniority. Besides the ceremony, a personal web page of the award for each employee is created and award presentation pictures are taken. All of these activities and awards are meant to honor their glory.

#### The OUCC Employee Benefits Expenses

Item (Unit: NT\$)	2021	2022	2023
Pensions	19,766,617	20,321,735	22,386,126
Insurance expenses	32,056,952	32,341,681	34,636,816
Employee (profit) recompense	16,724,265	1,154,937	6,094,182
Special bonuses	14,895,240	4,490,332	4,539,056
Shuttle bus	9,562,050	10,319,094	10,229,331
Employee health checkup	1,282,618	1,029,050	1,620,000
Total	94,287,742	69,656,829	79,505,511

Note: Employee benefits include regular appropriation (pensions, insurance, business transportation, and private healthcare), as well as other employee subsidies, such as housing subsidies, interest-free loans, public transport subsidies, educational grants, and dismissal subsidies, but exclude education and training, protective equipment, and staff costs or expenses directly related to the job.

#### **Parental Leaves**

Year	Туре	Male	Female	Total
	Number of qualified applicant (A)	18	5	23
	Number of actual applicant (B)	0	2	2
	Parental leave application rate (B/A)	0%	40%	8.6957%
2023	Number of employees who should reinstate (C)	0	1	1
	Number of reinstatement (D)	0	1	1
	Reinstatement rate (D/C)	0	100%	100%
	Total of reinstatement (E)	0	1	1
2022	Number of the reinstated employee, with 1-year duration of work in 2022 (F)	0	1	1
Retention rate (F/E)		0%	100%	100%

Note:

1. The number of eligible applicants for parental leave in 2023 is calculated based on the number of employees who have taken maternity leave and paternity leave within 3 years (2021-2023).

2. The number of employees to reinstate employee from parental leave include the applicants in 2021 - 2023, who should reinstate in 2023.

3. The number of reinstated employees in 2023 include the parental leave applicants in 2021-2023, who have reinstated in 2023.

4. The reinstatement rate in 2023 = the number of reinstated employees in 2023 / the number of employees who should reinstate in 2023.

5. The retention rate in 2023 = the number of reinstated employees in 2022 who continued to work for a year/the number of reinstated employees in 2022

#### Welfare Measures List

Welfare Measure	Description	Subsidy Amount (NT\$)	Number of Beneficiaries (Person)
Marriage subsidy	Staff marriage subsidy, NT\$2,000 / person	12,000	6
Childbirth subsidy	Employees childbirth subsidy, NT\$1,000 / per birth	6,000	6
Hospitalization subsidy	Staff hospitalization subsidy, NT\$1,000 / time	4,000	4
Staff travel subsidy	Full subsidy for each employee	688,520	164
	Lineal family members, NT\$1,600 / person (maximum 3 people)	113,600	71
Self-reliant tour	Self-reliant tourism and academic events	8,616,169	409
Club activity	Encouraging employees to organize social group activities, each social group for NT\$10,000 / year, Taipei Office social group for NT\$12,000 / year	22,000	70
Birthday celebration subsidy	Staff birthday subsidy, NT\$2,000 / person	764,000	382
Retirement Benefits Application	Employee retirement gifts	93,194	4
	Staff NT\$50,000	-	-
Funeral subsidy	First degree of kinship NT\$5,700 / per person	11,400	2
Group insurance	Life insurance, personal accident insurance and medical insurance, hospitalization insurance	940,204	387
Festival Bonus	A festival bonus of NT\$5,000 for each of four holidays (New Year, Dragon Boat, and Moon Festivals, Labor Day)	7,170,900	429

Note:

1. New Employees' welfares are provided on proportion.

2. The total amount of employee welfare subsidies invested was NT\$18,441,987 in 2023.



#### Employee Transportation Fee Subsidies

OUCC provides transportation fee subsidies for Linyaun employees and employees in areas where shuttle buses don't reach. A total of more than NT\$1,625,186 was subsidized in 2023.

	2021	2022	2023
Subsidy amount (NT\$)	1,539,136	1,500,818	1,625,186

#### Activities Highlights



We held a grand family day event at Chengching Lake on 23 Dec. 2023, allowing everyone to gather together and experience warmth and happiness. The total of approx. 400 employees and their relatives and friends at presence fully demonstrated the cohesion of the big family of OUCC. At the beginning of the event, students from Nanying Sr. Commercial & Industrial Vocational School gave

us a vibrant opening performance. The entire scene was immersed in a joyful vibe. After a simple warm-up, the colleagues walked in succession toward to Hiking trails by the lake, with their special Family Day jackets and gloves on, and garbage bags and cleaning tools in hand, to fulfill the themed activity for the day, the Health & Lake Cleaning, through relaxed and lively walking to the lake cleaning while enjoying the beautiful scenery. We materialized our care for environment by restoring the cleanliness of lakeside surroundings.

The entire Family Day activity not only stimulates emotional exchanges within the company, it also bonds the family members, which successfully showcased the company's humanistic care and the warmth of family for employees, a great activity of joy and unity every member of the big family shall look forward to.



The Xiao Liuqiu island travel of employees

The Xiaoliuqiu staff trip in 2023 was the first trip to an outer island in recent years. It attracted enthusiastic participation from colleagues from the beginning. The total number of participants of the four sections exceeded the 200 mark (compared to the previous average of 170~180 participants).

In addition to achieving the purpose of participating in activities and promoting mutual exchanges among colleagues, we also implement the concepts of sustainability and environmental protection in travel-related planning, including: choosing accommodation locations that do not provide disposable supplies to reduce waste and marine pollution; through snorkeling and night guided tours, participants can fully understand the beauty of natural ecology and the importance of conservation, and hope to spread the sustainable ideas to the care for environment and daily actions.

#### **Club Activity**

The OUCC does not have a great number of employees, but we are as close as family. Our employees develop all kinds of associations for exercise and stress relief. When a club is formed, the Director of the club files an application and a prospectus for annual club activity and a budget, a club members list, the purpose of the new club, and an introduction of the club to the Employee Welfare Committee for a resolution. Grants are provided to the officially established clubs.

INNOVATION OUCC ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING

# **Satisfied Customers**

The OUCC regards "meeting customer needs and serving" to be a vital necessity. In addition to providing high quality products and technical services, OUCC actively listens and responds to customers' difficulties and problems in application, provides customized services, promotes customer-oriented product development and technical innovation, and builds a close and trusting relationship with each other.

We take great care to protect the security of data and intellectual property rights of our customers. We have a meticulous control mechanism and no incidents of leakage or infringement of customer privacy occurred in 2023.

#### **Customer Satisfaction Management**

We value customers' satisfaction. In addition to irregular customer visits, annual customer satisfaction survey and irregular dealer (sales) meetings, the quality management meeting is held every six months to ensure customer satisfaction, and the demands and requests of customers on product quality are properly responded.

Product Type	Satisfaction Rate	Survey Questionnaire Recovery Rate
Gas	Average score 4.71 points (out of 5 points)	80%
EG&EO	Average score is 33.4 points (out of 35 points)	100%
Specialty Chemicals	Average score 4.66 points (out of 5 points)	100%

### Introduction to Customer Feedback / Comments Handling Form

OUCC enhanced customer service efficacy through IT, specifically improving the "customer complaint handling procedure." Currently, we have completed the development of the new "Customer Feedback / Comments Handling Form" on the online official document system to enhance the service satisfaction.

Item	New form	Old form
Change of name	Customer Feedback / Comments Handling Form	Customer Complaint Handling Form
Printed format	Yes	No
Online discussion with processing staff	Yes	No
Allocation of responsible unit	Confirmed by the applying unit and approved by the manager after discussion with processing staff	Distributed by Technical Services Department
Method of reporting to the President	Whether or not reporting a case to the President is decided by the department manager	All such cases must be reported to the President immediately
Applicable unit	All EG, GAS, EOD product departments	All EOD product department
Response time to customers	Fast	Slow

## Remote Storage Tank Monitoring System

OUCC independently developed the "remote customer storage tank monitoring system," which enables us to grasp the liquid level information of customers' storage tanks in real time through IoT technology, so that we can properly schedule the delivery of tanker trucks. The system, which is developed to increase the efficiency of customer service, is also increasing the unloading capacity, shortening delivery time and avoiding supply interruption, providing more stable customer services.

Since the number of trips can be effectively evaluated and counted, by way of combining the delivery, not only the transportation costs can be significantly saved, the greenhouse gas emissions generated by transportation can also be greatly reduced. The estimated GHG emissions reduction is 3602 t-CO<sub>2</sub>e in 2023.

	Total numbers of deliveries	Average MT / truck
Before installation	9,072	10.04
After installation	8,602	11.87
Difference	(470)	1.83
Annual savings on delivery fees	NT\$4,592,370	

Note:

1. Calculation of carbon reduction: 0.961 \*470 trips \* 11,87MT \* 837KM = 4,487,427 Kg/MT-KM

2. Calculation of savings on delivery fees: 470 trips \* 9,771 = NT\$4,592,370 per year

3. Average delivery fees in 2023: NT\$9,771; Carbon emissions of delivery: 0.961 Kg/MT-KM; Average delivery distance per vehicle in 2023: 837KM

4. "Before installation" refers to the year 2014, "after installation" refers to the year 2023.
5. The total number of trips of delivery in 2023 (estimated)=total volume delivered in 2014 (actual)/average quantity (MT) in 2023/total trips of delivery, for fair comparison

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#### **Rigorous Quality Management**

#### **Quality Management**

OUCC have obtained ISO 9001 certification, and we exclude the use of heavy metals such as lead and cadmium in accordance with "Restriction of Hazardous Substances Directive (RoHS)." Under a strict quality management, we win the trust of customers with the stable product standards, and no occurrence of significant quality events during 2023.

In addition, in order to meet the requirements of our customers and to ensure the compliance of our quality management system, we regularly conduct internal audits every six months and third-party external audit once a year and draw up improvement measures for any deficiencies during the audits to effectively maintain the validation of ISO 9001 Quality Management System.



Note: "Emitted into the atmosphere" refers to Company gas plant products - nitrogen, oxygen, and argon. These are non-toxic and are emitted directly into the atmosphere in the event of failing the finished product inspection. Also, gas is not pumped into the storage tank until it passes analysis. Any gas in a storage tank that fails analysis will also be emitted into the atmosphere. However, the latter has never happened.



# Chemical Supply Chain Management

OUCC strengthens the supplier partner selection mechanism and strives to reduce the negative impact on the environment or society, so as to ensure the labor conditions, environmental behavior and business integrity of suppliers, and to fulfill the supplier's responsibility for sustainable management.





# 023 Management Results

- 100% of suppliers conform with the OUCC environmental policy
- The total number of evaluation audits on suppliers was 718 (including 7 freight forwarders)
- 100% of freight forwarders passed the evaluation audit

# 2024~2028 short-term targets

- 100% of freight forwarders must sign the "Supplier ESG Commitment Form"
- Future evaluation planning of freight forwarders is to be divided according to ESG risk ratings, and lists of the high, medium, low risk the forwards are distinguished
- Existing suppliers must complete an on-site or written evaluation

## **Chemicals Supply Chain**

The petrochemical industry chain covers the entire process from extracting raw materials such as oil and natural gas to manufacturing final products.

- Upstream: Crude oil, light oil, gasoline, diesel, kerosene, fuel oil, lubricating oil refined from crude oil, and related drilling equipment.
- Midstream: basic petrochemical raw materials such as ethylene, propylene, butadiene, benzene, phenol, etc., produced by pyrolysis of upstream raw materials as well as the chemical raw materials such as plastics, rubber, and artificial fibers made of the above-mentioned raw materials through chemical reactions such as polymerization, esterification, and alkylation.
- Downstream: daily necessities used in food, clothing, housing, and transportation made of plastic, rubber, artificial fiber, and other chemical raw materials. They include plastic products, rubber products, cleaning agents, artificial fibers, color dyes, adhesives, plasticizers, pesticides, cosmetics, etc., with a wide range of applications.

#### OUCC Supply chain

- Supplier type: engineering, equipment, raw & auxiliary materials, main raw materials.
- The number of Tier-1 suppliers:
- » Engineering (including labor): 191 (tier 1 of 37%, important tier 1 of 15%, important non-tier 1 of 48%)
- » Non-engineering (equipment, spare materials): 425 (tier 1 of 29%, important tier 1 of 5%, important non-tier 1 of 66%)
- » Raw and auxiliary materials (including chemicals): 102 (tier 1 of 41%, important tier 1 of 19%, important non-tier 1 of 40%)
- » Major raw materials (ethylene & specialty chemicals raw materials): 61
- » Ethylene: 4 (1 of tier 1, 1 of important tier 1, 3 of important non-tier 1)
- » SC raw materials: 57 (33 of tier 1, 10 of important tier 1, 24 of important non-tier 1)

Category	Description	No. of provider	% of total procurement amount
Tier 1 provider	Specialty chemical raw materials	33	72%
Important tier 1		10	71%
Important non-tier 1		24	28%
Total of important provider		34	99%

## Sustainable Supply Chain Management

To ensure the integrity and sustainability of business cooperation, OUCC has set up management policies such as "Rules Governing Suppliers" and "Environmental Safety and Health Policy" for supplier management. Suppliers must comply with the "Petrochemical Industry Code of Conduct," ensuring that our suppliers comply with the relevant regulations, set higher environmental and occupational safety and health standards for the petrochemical industry, and build a solid and sustainable chemical supply chain.

- Before contract signed: review the "Supplier ESG Survey Form" during the audit phase, and inform them to refer to OUCC's code of conduct and publicize it to their internal employees.
- After contract signed: understand and evaluate the integrity management or code of conduct implementation status via the "on-site audit."

## Strengthen Sustainable Communication and Promotion

To strengthen the awareness and execution of ESG of the suppliers and contractors, whom we have worked closely with on labor, health and safety, environment, management, and business ethics to establish a comprehensive supply chain mechanism, aiming to lead supplier partners to commit to sustainability.

We proactively communicate with our suppliers, encourage them to enhance their sustainability management in breadth and depth, and make every effort to contribute. In the future, we will continue to maintain a good partnership with our suppliers, and actively invite our suppliers to respond to social welfare activities and join hands as a positive force in society.

## 2 Sustainable Management Mechanism

To ensure that suppliers can understand and assist OUCC to strive for supplier sustainable development, we have designed a CSR self-assessment questionnaire for all our new suppliers, who are required to sign a letter of commitment, so to join us in a commitment to ESG and its implementation.

Sustainable Commitment Management Mechanism	Implementation Ratio (%) in 2023
Contractors must sign the "Contractor's Operation Safety Commitment to OUCC while Working at the Plant Site" to ensure that the contractor understands all the regulations of OUCC upon entry.	100%
New suppliers must sign the "Suppliers' Corporate Social Responsibility Commitments," which covers labor and human rights, environmental protection, and business ethics. A total of 83 new suppliers signed the commitment statement in 2023.	100%
Contractors must sign an agreement with OUCC, committing to the conditions set out in the "Environmental Safety and Health Policy Handbook" and pledging their commitment to safety, health and the promotion of environmental protection.	100%

Note: 2023 Supplier Implementation Ratio = number of suppliers who signed the commitment in 2023 / total number of suppliers in 2023.

## **3** Evaluation Management Audit

This OUCC audit process includes record and on-site evaluations to ensure that suppliers are complied with all the relevant laws and regulations. Existing suppliers must receive and complete an annual evaluation, which consists of company management, quality, delivery time, price, service, and environmental safety. Suppliers will only be listed as qualified only if their rating score reached a specific standard.

Should an evaluation or material incident occur that rated disqualification and resulted in damage to the company's reputation, labor safety, product quality, or manufacturing operation, the supplier would be listed as disqualified and suspended. In 2023, 718 trading suppliers underwent written evaluations with 2 disqualified, and the qualification rate is 99.7%.

#### Transportation Contractor's ESG Audit

OUCC | 2023 ESG Report

The flammable, explosive and sometimes very toxic nature of chemicals carried by tankers makes their transportation a high-risk operation that can be hazardous. Negligence can lead to serious disaster. An accident can cause loss of life or serious injury, as well as damage to people's property and severely impair the image of the company.

OUCC continues to strengthen transportation safety and crisis management capabilities through contracts and audit mechanisms with outsourced transportation providers, and to ensure the safe transportation of chemicals. In 2023, a total of 7 transportation suppliers signed the "Environmental Safety and Health Policy Handbook" and agreed to undergo on-site audits. By the end of the year, all of them successfully completed the audit with a 100% pass rate.

#### Contract Specification

- Contracted transport service providers must participate in the Kaohsiung City-Kaohsiung County-Pingtung County diesel self-management program and receive their qualification mark.
- 2. Establish environmental and safety standards.
- A regular "Outsourcing Transportation Safety and Health Quality Audit and Survey" is performed for all the main transport service providers. The transport service provider will not be renewed if the evaluation score is below standard.

#### **On-site Audit**

- 1. Transport company profile and transport policy
- 2. Security system and policy
- 3. Work procedures and emergency response
- 4. Driver qualification (employment / training)
- 5. Driver qualification review (evaluation)
- 6. Equipment safety
- 7. Vehicle management
- 8. Internal and external safety audit (to be formulated by 2024)
- 9. Others (incl. corporate energy saving and eco-friendly policy) (to be formulated by 2024)

#### Management Results

All the contracted tankers of OUCC have passed the inspection performed by the National Accreditation Body. To enhance comprehensive safety management, we continue to communicate with contracted tankers with the target of all forwarders completing the signing of the "Supplier's CSR Commitment". There are total 7 contracted tanker forwarders in 2023, with the obtainment of the international system as follows :

International management system	Number of contracted tanker forwarders	Obtainment Rate (%)	Freight Delivery Ratio(%)
ISO 9001	7	100%	100%
ISO 14001	4	57%	81%
ISO 45001	6	86%	96%

Note: Freight Delivery Ratio = transaction amount of contracted tanker with introduction of international management system in 2023 / total transaction amount of all contracted tankers in 2023.

#### **Future Goal**

In response to ESG management trend, contracted tanker or transport companies will be requested to follow environmental safety and other health-related matters stated in their contracts. They must obtain environmental management system accreditation or be free of any industrial safety accident within the previous five years. All suppliers are invited to participate in ESG management and development.

#### Tank Truck Transportation Safety Planning

The short-to-medium-term planning is to phase out old tank trucks that are over 15 years old to improve transportation efficiency and reduce carbon emissions. We procured 10 new-model tractors of high-tech and way better fuel efficiency to replace 9 old-modeled ones in 2023. The long-term plan is to promote the installation of tire pressure detectors on large vehicles (in-tire type, installed on some tankers for long-term testing,) and the system can effectively control the condition of tires to significantly reduce transportation hazards and prolong the service life of tires.

SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION

#### **4** Enhance Safety Promotion

"Contractor Work Safety Rules" have been formulated to ensure the safety of personnel and equipment in the plant area. The rights and obligations of contractors working in the plant are specified in detail. One of the requirements is that all contractor employees entering the plant premises must be qualified and hold industrial safety certificates to ensure the safety of personnel as well as the work environment.

OUCC organizes the Contractor Safety Conference regularly to conduct two-way communication on safety matters through the meeting. The OUCC internal units will convey factory regulations, environmental safety operations main points, etc., and conduct co-experience sharing of the OUCC supervision and contractor management, which would be followed by the extemporary motions for problems discovered and improvements review to ensure the safety of the workplace.

# In the **2023** Safety Conference, the issues promulgated by the Environmental Safety unit were:

1. Weekly meeting for safety concepts advocacy and cases sharing.

- The advocacy event of hazard prevention and safety and health awareness for plant overhaul.
- Case studies for the accidents and incidents occurring in neighboring factories of the industrial park.
- Training for industrial park communication network and online notification system for confined space work by Labor Inspection department.
- 5. Bi-weekly safety meeting for contractors and on-site supervisors.



#### 5 Preference for Local Suppliers

In addition to its own production, OUCC prioritizes the procurement of its main raw materials such as ethylene, oxygen, ethylene oxide, liquefied ammonia and fatty alcohol from selected domestic suppliers and uses imports as the supplement. In 2023, local procurement of specialty chemicals amounted to NT\$0.66 billion, accounting for 59%; local procurement of ethylene amounted to NT\$3.94 billion, accounting for 80%; and local procurement excluding raw and auxiliary materials amounted to NT\$1.23 billion, accounting for 98%, which effectively promoted economic development in Taiwan.

Note:

- 1. Local procurement of specialty chemical raw materials is defined as manufactured locally
- 2. Domestic suppliers are defined as manufacturers registered in Taiwan, conducting transactions in the local currency (New Taiwan Dollar, TWD).
- 3. 2023 percentage of procurement amount from domestic suppliers = procurement amount from classified domestic suppliers in 2023 / total procurement amount in 2023 x 100%

#### S Practice Green Procurement

OUCC practices green procurement and consumption. Procurement specifications are established, and equipment standards are set with prioritized products of energy-saving and water-saving labels or other government approval. For example, the energy efficiency of electrical motors must comply with CNS14400 IE3. To achieve electricity, water, and energy conservation through the green procurement process in 2023, the purchase of green-certified items, including LED lamps and IE3 specification motor rotating equipment, reached NT\$13.47 million, with 100% green procurement rate of LED lighting and rotating equipment.

# Chapter 04 SOLID CONTRIBUTION

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**OUCC** has inherited the business philosophy of "sincerity, diligence, thrift, prudence, and innovation" from the Far Eastern Group. In a new era full of challenges, we continue to seek innovation and changes to face the global issues, such as global climate change, the water and energy shortages as well as social participation. With courageous, innovative spirit, and modest attitude, we are committed to the innovation of sustainable environment, applying strategies through "energy saving & carbon reduction for sustainability" attitudes and actions.



- Reduced carbon dioxide by 1,297 t-CO<sub>2</sub>e per year
- Procured REC green power of 446,000 kW

Performanc

- Obtained ISO 14067 product carbon footprint certifications for 8 products of 5 series
- The first company in Taiwan to introduce ABR technology
- NT\$68 million was invested to set up a wastewater recycling system. The current actual water consumption is around 542 MT/day, with a wastewater recycling rate of more than 55%
- Establish a waste removal and transportation platform
- Strengthen waste management and control, significantly increase the recovery of steel barrels. The average recovery rate over the past two years was 40.9 MT, with 73.96 MT recovered in 2023.
- Donations to local charities and disadvantaged minority groups amounted to a total of NT\$ 4.04 million



# **Energy Management Strategy**

We at OUCC fully understand that "energy saving" and "intelligent operation" are vital for enterprises that are striving to adapt their operations to a low carbon economy and achieve sustainable operation. To this end, we have introduced the ISO 50001 Energy Management System, improve the cycle through PDCA, keep track of energy usage status, work out appropriate energy management goals, improve energy efficiency in the plant site, and reduce our greenhouse gas emissions.



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## Energy Saving and Carbon Reduction Commission

In order to promote the energy saving measures in all factory sites, OUCC established a cross-departmental Energy Saving and Carbon Reduction Commission and sets out the "Procedures for the Organization of Energy Saving and Carbon Reduction Commission" and other mechanisms. Working meetings are held on a quarterly basis to ensure the goals are reached. A variety of energy saving practices are implemented to achieve the goals of greenhouse gas reduction and even the net zero emissions.

### Organizational Structure of the Energy Saving and Carbon Reduction Commission





#### **Carbon Management Targets**

Schedule	Target
2023 Results	<ul> <li>Take 2015 as the base year, 1% reduction as the average annual target</li> <li>Carbon reduction approx. 1,297 t-CO<sub>2</sub>e/year in 2023, with a target achievement rate of 0.4%</li> <li>2017-2023: cumulative reduction of 86,439 t-CO<sub>2</sub>e, of actual reduction rate 26.9%; the target achievement rate 100%</li> <li>Procured REC green power of 446,000 kW(1-31 December 2023)</li> </ul>
Short-term (2024)	<ul> <li>Take 2015 as the base year, 1% reduction as the average annual target</li> </ul>
Mid-term (until 2028)	<ul> <li>Annual reduction target: 2% per year.</li> <li>Evaluating and planning high-efficiency, low-carbon cogeneration system, and to purchase RECs</li> </ul>
Long-term (until 2032)	<ul> <li>Emissions of 2030 reduced by 35% compared to 2015</li> <li>Planning the achievable targets based on Climate Change Act and the schedule of carbon reduction and net zero emissions proposed by the government's Industrial Response Team</li> </ul>

#### Note:

1. We have implemented a greenhouse gas inventory since 2015, which is set as the benchmark year, with the greenhouse gas emission of 320,946 t-CO2e.

2. The carbon management target calculation covers Scope 1 and Scope 2.

3. CO<sub>2</sub> reduction calculation of scope 2: annual reduction volume / 2015 carbon emission volume=1,295 t-CO<sub>2</sub>e / 320,946 t-CO<sub>2</sub>e=0.4%

#### Greenhouse Gas Emission

	Taipei	Linyuan	Total
Scope 1	2.61 t-CO <sub>2</sub> e	28,258.1804 t-CO <sub>2</sub> e	28,260.7904 t-CO <sub>2</sub> e
Scope 2	53.221 t-CO <sub>2</sub> e	317,216.8315 t-CO <sub>2</sub> e	317,270.0525 t-CO <sub>2</sub> e
Total emission	-	-	345,530.8429 t-CO <sub>2</sub> e
Number of employees	-	-	392 persons
Operating income	-	-	10,347,248 NT\$ thousand
Emission intensity	-	-	881.4562 t-CO <sub>2</sub> e / person
	-	-	0.0334 t-CO <sub>2</sub> e / NT\$ thousand
Emission collection method	Operational control		

Note:

1. The 2023 Linyuan Plant data is verified by SGS Taiwan and obtained ISO 14064-1:2018 and ISO 14064-1:2006 verifications.

2. The emissions of the Taipei head office are calculated by self-examination, which cover scope 1 and 2, excluding scope 3.

3. We have implemented a greenhouse gas inventory since 2015, which is set as the benchmark year, with the greenhouse gas emission of 320,946 t-CO<sub>2</sub>e.

4. GWP is refer to IPCC (2021) global warming potential value.

5. The discharge coefficient was set at 0.494kg-CO2e/kWh in 2023.

### Emission of Value Chain

Category	Item	Emission (t-CO <sub>2</sub> e)	Description
Category 3	Transportation	39,436.1944	<ul> <li>Emissions caused by the transportation of raw materials</li> <li>Emissions caused by the transportation and distribution of the organization's products</li> <li>Emissions caused by employees' commute</li> <li>Emissions caused by business travel</li> </ul>
Category 4	Products used by an organization	508,394.3631	<ul> <li>The emissions caused by product purchase are the emissions associated with product manufacturing process.</li> <li>The emissions from the disposal of solid and liquid wastes depend on the type of wastes and processing methods.</li> </ul>

Note: The 2023 Linyuan Plant data is verified by SGS Taiwan and obtained ISO 14064-1:2018 verification.

#### Greenhouse Gas Emission (Taipei Head Office)

Category	Item	2021	2022	2023
Scope 1	Company car fuel consumption (L)	997	1058	1035
	Company car CO <sub>2</sub> emissions (t-CO <sub>2</sub> e)	2.26	2.76	2.61
Scope 2	Power consumption (kWh)	107842	107419	107.820
	CO <sub>2</sub> emission from power consumption(t-CO <sub>2</sub> e)	54.14	54.68	53.221
Total (t-CO <sub>2</sub> e)	-	56.4	57.44	55.831

Note: The above data is converted in accordance with the annual average unit price of the "Oil price data management and analysis system" of the Department of Energy MOEA Office (https://www2.moeaboe.gov.tw/oil102/oil2017/newmain.asp).

## Greenhouse Gas Emission (Linyuan Plant)

Item (Unit: t-CO <sub>2</sub> e)	2021	2022	2023
CO2	37,901.6244	30,010.7531	24,834.2226
$CH_4$	39.5556	51.1896	33.8492
N <sub>2</sub> O	1.3515	1.4840	1.3650
HFCs	2,801.1002	607.8084	3,388.7436
Direct greenhouse gas emissions (Scope 1)	40,743.6317	30,671.2351	28,258.1804

Note:

1. SF6, PFCs, NF3 emissions are 0 t-CO $_2$ e

2. We have implemented a greenhouse gas inventory since 2015, which is set as the benchmark year, with the greenhouse gas emission of 320,946 t-CO<sub>2</sub>e.



## Energy Consumption

Item	2021	2022	2023
	6.4927 Kilo-Liter	5.795 Kilo-Liter	7.057 Kilo-Liter
Gasoline	1,715.49 Gallon	1,530.92 Gallon	1,864.21 Gallon
	211.89 GJ	189.13 GJ	230.30 GJ
	61.65 Kilo-Liter	65.62 Kilo-Liter	54.74 Kilo-Liter
Diesel fuel	16,286 Gallon	17,336 Gallon	14,461 Gallon
	2,167 GJ	2,306 GJ	1,923 GJ
Daviaa	476,784,000 kWh	467,971,200 kWh	452,120,370 kWh
Power	1,716,422.4 GJ	1,684,696.32 GJ	1,627,633.332 GJ
Steam	335,072 ton	387,157 ton	518,837 ton
	973,504.16 GJ	1,125,109.67 GJ	1,507,782.44 GJ
	557,997 M3	593,762 M3	419,538.77 M3
Natural Gas	21,011.95 GJ	22,358.70 GJ	15,798.15 GJ
Total energy consumption	2,713,317.4 GJ	2,834,659.82 GJ	3,153,367.222 GJ
Number of employees	329 persons	365 persons	392 persons
Operating income	14,673,731 NT\$ thousand	12,770,275 NT\$ thousand	10,347,248 NT\$ thousand
Energy intensity	8,247.1653 GJ/ per-son	7,766.1913 GJ/ per-son	8,044.3041 GJ/ per-son
	0.1849 GJ/NT\$ thou-sand	0.222 GJ/NT\$ thou-sand	0.3048 GJ/NT\$ thou-sand

#### Note:

1. All energy source used by OUCC is non-renewable energy.

2. The energy thermal value conversion coefficient is quoted from the Energy Bureau.



INNOVATION OUCC

#### **Energy-saving Action Plans**

According to the inventory data, 36% of the OUCC greenhouse gas emissions came from electricity. As a response, we set a "power-saving" goal by promoting a series of power-saving measures, looking for suitable fuel- and steam-saving solutions. With effective management, the actual annual power saved was about 2.621million kWh in 2023, with a 0.59% power-saving rate.

Schedule	Target	Action Plan
Short-term / Annual Plan (2024)	The annual power saving rate of 1%	<ol> <li>Projects of semiconductor grade CO<sub>2</sub>, rooftop solar energy and program-controlled electricity distribution (2023-2024 inter year)</li> <li>EOG plant recycle water pump (PP-201N) renewal project (2023-2024 inter-year)</li> <li>EOG plant recycle gas compressor energy conservation project (2023-2024 inter- year)</li> <li>ASU#2 main air compressor (MAC) efficiency improvement (2023-2024 inter-year)</li> <li>EOG plant methane compressor (PR-110) renewal project (2023-2024 inter-year)</li> <li>GAS plant II ice water system revamp project (2023-2024 inter-year)</li> <li>EOG plant RTO energy conservation project</li> <li>GAS plant II circulation compressor motor renewal project</li> <li>LED lamps project to replace the high-pressure sodium lamps at R&amp;M building.</li> </ol>
Mid-term (until 2028)	The annual power saving rate of 1%	<ol> <li>Continue the introduction of power-saving equipment, such as frequency converters, inverter motor, and fans, etc.</li> <li>Optimization of cooling water circulation to save electricity used by water pumps</li> <li>OUCC has combined the energy management system with a cloud-based "Plant Power Monitoring System Platform," to continuously monitor energy usage and seek for energy saving opportunities</li> <li>Plans have been made to introduce a smart monitoring system to enable continuous process improvement and optimization to reduce product unit power consumption rate</li> <li>Plans have been made for the construction of a co-gen system to reduce the use of outsourced electricity</li> <li>Procurement of green energy and RECs, evaluation and construction of energy storage equipment.</li> <li>All employees participate in energy conservation and carbon reduction management activities, continuous planning and implementation of energy-saving and carbon-reduction programs to reduce energy consumption and greenhouse gas emissions</li> </ol>
Long-term (until 2032)	The annual power saving rate of 1%	<ol> <li>Ongoing improvement in energy efficiency and carbon reduction management</li> <li>Evaluation for the installation of waste heat recovery &amp; power generation facility</li> </ol>

Note: The annual electricity saving target benchmark settings and the annual electricity conservation calculation method shall be handled according to the "Energy Conservation Goals and Implement Plan Regulation Settings for Energy Users" promulgated by the Bureau of Energy:

1. Annual electricity saving target: over 1%

2. Annual power saving rate = annual power saving / (annual power saving + annual power consumption) x 100%

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#### Actively Promote Energy Saving at Linyuan

The feasibility of a high-efficiency low-carbon heat and electricity cogeneration system at the Linyuan Plant is being evaluated, in the hope that the electricity and steam will fulfill all the requirements for production. Furthermore, we complied with the terms of large electricity users and completed the 10% contractual capacity of green power procurement in 2023, achieving optimal emission, power saving and carbon reduction objectives.

In terms of technology application, OUCC makes full use of technological advantages to promote clean processes, coupled with a cloud based "plant power monitoring system platform" to monitor energy use by the plant with the structured approach in search of energy-saving opportunities.

In addition, carbon reduction measures in the office area have been promoted, including electronic administrative operations, monitor and control of photocopying over the entire factory, and the promotion of a paperless system for online management, contributing to the reduction of greenhouse gas emission.

#### 2023 Energy Efficiency Improvement Results

ltem	Conservation plans	Estimated annual energy saving benefits	Estimated annu- al carbon reduc- tion
	Recycle water pump (PP-201N) renewal project (statistics period April – December 2023)	Annual electricity saving of 0.796 million kWh	394 t-CO <sub>2</sub> e
EOG plant	Methane compressor (PR-110) renew- al project (statistics period October – December 2023)	Annual electricity saving of 49,800 kWh	25 t-CO <sub>2</sub> e
	Recycle gas compressor project for energy saving (statistics period October – December 2023)	Annual electricity saving of 0.877 million kWh	434 t-CO <sub>2</sub> e
	Efficiency improvement project of GAS plant II main air compressor (MAC) (statistics period April – December 2023)	Annual electricity saving of 0.628 million kWh	310 t-CO <sub>2</sub> e
GAS plant	Gas plant II ice water system revamp project (statistics period October - December 2023)	Annual electricity saving of 0.182 million kWh	90 t-CO <sub>2</sub> e
	Demand-response-load management measures and power trading platform solutions - planned measures to re- duce electricity consumption (statistics period January - December 2023)	Annual electricity saving of 27,500 kWh	14 t-CO <sub>2</sub> e
Linyuan plant	Streetlamps renewal for the Linyuan plant area (switching to LED) (statistics period January - June 2023)	Annual electricity saving of 61,300 kWh	30 t-CO <sub>2</sub> e

G

saved is about

million kWh

The annual carbon reduction is **1,297** t-CO<sub>2</sub>e

#### **Energy Saving Improvement Results**

Туре	Item	2021	2022	2023
Process Improvement	Investing Amount	NT\$ 100,000	NT\$0	NT\$0
	Energy Saving	10,212 GJ	35 GJ	3,253 GJ
Equipment Upgrade	Investing Amount	NT\$68,370,000	NT\$608	NT\$46,500,000
	Energy Saving	33,302 GJ	13,468 GJ	6,178 GJ
Total	Investing Amount	NT\$68,470,000	NT\$608	NT\$46,500,000
	Energy Saving	43,514 GJ	13,503 GJ	9,431 GJ

Note: Estimated energy savings are based on the data reporting to the Energy Bureau, effective the month following the completion of the energy saving measures and can be calculated across years.

#### Green & Sustainable New Process

OUCC's Linyuan Plant has changed the fuel of the coal fired furnace and the regenerative thermal oxidizer (RTO) systems to clean low-carbon fuel (natural gas). We also installed high-efficiency waste heat recovery technology to reduce fuel consumption and environmental pollution.

#### **Expected Benefits**

- Converting the medium-heat heating furnaces and the regenerative thermal oxidizer (RTO-I/RTO-II) incinerators to natural gas burners and deactivating the diesel pumps are estimated to save **8,169** kWh of electricity and reduce diesel consumption by 600 kL annually. The projects were completed by the end of January 2021.
- 2021-2023: The cumulative carbon reduction was about 1,578 t-CO2e.

# The Paving and Rain and Polluted Water Diversion and the Flood Retention Construction in the Plant Area

To beautify the factory surroundings as well as to reduce the long-term problem of flooding, the paving at production processing sites of Linyuan were completed, and underground discharge pipelines were laid and modified at the EOG plant, which included the following:

- 1. Rain and polluted water diversion was established at the leaked wastewater collecting pit of EO loading station / EG / EA filling stations and the recovery system. Modifications were made to the draining chutes to ensure the separation of rain and polluted water.
- 2. The drainage system surrounding the plant was reconstructed and a flood retention pond was built.

#### **Expected Benefits**

- The paving at each processing area optimizes the surrounding of the Plant area.
- Both the rain and polluted water were diverted to reduce environmental and industrial safety issues, reducing the occurrence of penalty incidents.
- The drainage system surrounding the plant was reconstructed, which improved the long-term flooding problem, and a flood retention pond was also built to cope with the impact of climate change.



#### The EOG Plant Cooling Water Pipeline Modification Project

Due to the outdated design of the gas circulating cooler and cooling water tower of EOG plant, there was no way for maintenance personnel to get into the tower to fix an abnormal fan on account of the high temperature resulted from the lack of interior isolation. It would cause the cooling water temperature to rise and require the reaction zone to reduce production.

After reconfirming the overall water distribution and thermal loading of EOG, the circulating water cooler (TT-201N/ TT-201) was changed to the #2 cooling tower water supply (where the inside can be isolated for repair).

- The annual electricity saved is about 6 million kWh, which is about NT\$13.27 million
- The system can reduce greenhouse gas emissions by approx. 3,218 t-CO<sub>2</sub>e per year.
- 2019-2023: The cumulative electricity saved is about 30 million kWh, the amount saved is about NT\$66.35 million, and the greenhouse gas emission is reduced by about 16,090 t-CO<sub>2</sub>e.

#### OUCC's Renewable Energy Development Plan

- Photovoltaic system: Installment of a photovoltaic system on the rooftop of the semiconductor CO<sub>2</sub> plant at Linyuan was completed by Q1/2023, with capacity of 108.78 kWp and annual average power generation of 153,000 kWh. As renewable energy is self-generated and used, the renewable energy certificate can be obtained.
- 2. Co-generation system: Become partial self-sufficiency in terms of electricity, re-adjust the heat and electricity ratio, and plan a high-efficiency and low-carbon co-generation system in response to future energy structure changes.
- 3. Medium and long-term plan: Actively evaluate options such as "setup of renewable energy facility (rooftop photovoltaic system)," "purchase green power and RECs," and "setup of energy storage equipment." We obtained adequate green power and RECs per year starting December 2023 in accordance with the regulated 10% contracted capacity of green power procurement for the large electricity users.

#### Waste Heat Recovery

2021-2023 Cumulative

In order to save energy, the excess steam emitted at Linyuan Plant will be recovered and used to replace the old screw type chiller unit for air conditioning at EOG control room, the laboratory and R&D buildings, with estimated annual electricity savings of 2.07 million kWh, and reduction of 1,040 t-CO<sub>2</sub>e per year.

The cumulative energy savings from 2021 to 2023 amounted to approximately 6.21 million kWh, resulting in a reduction of 3,120 t-CO<sub>2</sub>e.

Estimated annual energy savings **6.21** million kWh

Reduction in greenhouse gas emissions **3,120** t-CO<sub>2</sub>e INNOVATION

ETHICAL GOVERNANCE

SINCERE AND **DILIGENT PARTNER** 

#### The Mitigation of Transportation Emission

To save energy and reduce carbon emission, we encourage employees at the Linyuan plant, the main manufacturing base of the OUCC, to take use of the company shuttle buses, or to join the carpool system for commuting, so as to cut down on the use of vehicles and reduce the indirect emission of greenhouse gases.



**Enhance the** fuel efficiency of outsourced

Action

transport vehicles

- No outsourced transport vehicles may remain in use for more than 15 years.
- We drove suppliers to renew the energy-saving tractors to reduce greenhouse gas emission from transportation.

# 2023 Results

In 2023, 9 phase-3 vehicles were replaced with 10 phase-6 vehicles.



# **Resources Recycling**

#### Water Resource Management

Schedule	Target
Short-term / annual Plan (2024)	<ul> <li>Daily water consumption reduced by 2%</li> <li>Daily saving 100 MT of water</li> <li>Introducing ISO 46001:2019 Water Resource Efficiency Management System. (Obtained SGS verification at April 26, 2024)</li> </ul>
Mid-term (until 2028)	<ul> <li>Daily water consumption reduced by 20%</li> <li>Daily saving 1,000 MT of water</li> <li>Calculate water footprint</li> </ul>
Long-term (until 2032)	<ul><li>Daily water consumption reduced by 50%</li><li>Daily saving 2,500 MT of water</li></ul>



#### Water Resource Usage

Water Utilization	Ratio (%)
Production plant (EOG/GAS/EA/EB/EC/EOD) public system cooling tower	93.09
Pure water manufacturing for the EOG process	6.46
Livelihood	0.45



OUCC Linyuan Plant uses the water from the Fengshan Reservoir rather than the areas suffering from water shortage. The water is treated before use. The plant is located at the industrial park, so the wastewater is discharged into the industrial sewers with no risk of pollution to the water source.

To cope with the risk of a water shortage or floods caused by climate change, we have formulated a comprehensive water resource management plan in cooperation with the local government and have also set water resource management objectives to handle emergencies (when implementing water restriction measures, an external water purchase mechanism will be activated if necessary, otherwise the factory's operation loading will be reduced), water conservation measures, and introduce the ISO 46001:2019 Water Resource Efficiency Management System in 2023 to improve water use efficiency.

#### Relevant measures also include:

- The plant regularly records the cumulative value of the tap water meter (industrial raw water) and declares the following: weekly tap water consumption declaration to the Industrial Development Bureau's Drought Emergency Response, monthly and annually declaration of water consumption and water resources management information, and annual flowmeter calibration for each water-consuming facility at the plant site.
- Continue to promote improvement projects in manufacturing process and technology: invested NT\$68 million to build a wastewater recycling system in the Linyuan plant. The production capacity for reclaimed water is 1,000 MT per day, and the wastewater recovery rate is up to 70%, which can be used for cooling water tower replenishment.
- In 2023, the total reclaimed water production was about 197,723 MT/year (about 542 MT/day), and the wastewater recovery rate was about 55.1%. In addition, OUCC also responded to the willingness survey for the usage of recycled water, aiming at the utilization of 1,500 MT/day of recycled water and 50% of reclaimed water.

#### Water Usage (Unit: million L)

	2021	2022	2023
Linyuan Plant	2,104.758	1,990.891	1,581.036
Taipei Head Office	0.862	0.768	0.772
Total	2,105.62	1,991.659	1,581.808

Note

1. The 2021-2023 figure is based on the water bill data.

2. In 2023, the total amount of water used by Linyuan Plant includes 12,210 MT of water outsourced.

# The Amounts of Total Water Intake, Waste (Polluted) Water Discharge Disclosed Voluntarily or Upon Legal Request

Туре	Description	Statistics (Million L)
	Freshwater (≤1,000 mg / L total dissolved solids)	1,581.036
Water withdrawal	Other water (>1,000 mg / L total dissolved solids)	0
	Total water withdrawal	1,581.036
	Freshwater (≤1,000 mg / L total dissolved solids)	394.472
Water disabarga	Other water (>1,000 mg / L total dissolved solids)	0
water discharge	Total water discharge (freshwater + other water)	394.472
	Discharge rate (%)	24.9502%
Water consumption	Total water consumption	1,186.564
	Change in water storage	0
	Recycled water volume from production processes	0
Water recycled volume	Recycled percentage from production process (%)	0%
	Total recycled water volume	716.56
	Total recycled percentage (%)	45.3222%
Number of uses of a single drop of water		1.6039

Note:

1. The total amount of water withdraw includes the water outsourced during the drought.

2. The data of the total amount of water discharge is reported by the Wastewater Treatment Plant of the Linyuan Industrial Park.

3. Discharge rate (%) = (total water discharge / total water withdrawal) x100%

4. Total water consumption = total water withdrawal - total water discharge

5. Change in water storage volume = water storage volume in December 2023 - water storage volume in January 2023 (if special volume changes occur in the current year, such as changes in the volume of water used due to damage to the water storage facilities.)

6. The total amount of recycled water includes recycled wastewater and recycled steam condensate.

7. Total recycled percentage (%) = (total recycled water volume / total water withdrawal) x100%

8. The number of uses of a single drop of water = (total water consumed + total recycled water) / total water consumed.



#### Water Recycling Measures

We strive to implement the water resources management mechanism in the plant premises through innovative technologies to improve the efficiency of water resource usage and reduce the environmental risks of water shortage and water resource recycling. In 2023, the volume of purchased steam totaled 518,800 MT, and the recycled condensate of 518,800 MT (calculated from 100% of outsourced steam.) The recycled condensate was mainly used as boiler water feeding and supply, with minor used as water supply for the cooling towers.

• Passed the inspection by the National Cheng Kung University Research and Development Foundation in 2023. The water recovery rate (excluding circulation volume in the cooling water tower) in 2022 reached 79.5%, and the water consumption fee was reduced by NTD 169,144.

Wastewater recovery rate up to 70%	• The measures used are different from those of other traditional industries where partial or single recovery is used (such as the restricted recycling of cooling tower wastewater.) OUCC expects to improve the wastewater recovery rate to more than 70%, which includes wastewater from processing as well as from cooling tower.
New technology	• In the recycling process of processing wastewater and cooling tower effluent, a mature membrane filtering technology of UF/RO is applied as treatment, prior to recycling to the production processes in response to government policy on water conservation.
Enhanced recovery efficiency	<ul> <li>To effectively enhance the recovery rate, our plant uses a two-stage RO process which increases recovery efficiency from 50% to 70%, and 1,000 MT per day is estimated to be recovered for use in cooling towers and pure water processes.</li> <li>Since the quality of the recycled water is better than that of ordinary industrial water, the reuse of the recycled water for the cooling towers reduces the amount of acid and anti-scaling agents that used to need.</li> </ul>

## The First Company in Taiwan to Introduce ABR Technology

The RO process produces very pure water of high economic value, along with the wastewater of high ionic concentration as well as high COD. RO concentrated water is usually mixed with other low-concentration wastewater in the general water recycling systems, which provides the difficult-to-dissolve organic substance the access to the water environment.

In view of the effect of water quality on the environment, OUCC has been the first in the industry to introduce ABR technology for the treatment of concentrated wastewater from the RO process, reducing COD and other environmentally harmful substances, to fulfill our environmental responsibility.

#### Wastewater Treatment & Discharge

The chemical plant wastewater contains incompletely reacted raw materials, and the media of solvents. Any wastewater or liquid waste produced in the manufacturing process that has not been properly treated would be a serious hazard should it be discharged into the environment.

In this regard, the OUCC abides by the "Procedures for OUCC production process wastewater discharge," stipulating emission limits of COD<90ppm and SS<25ppm. The total treated wastewater is piped into the Industrial Park Joint Wastewater Treatment Plant. The initial rainfall (about 30 minutes) is collected in a storage tank, and then passed into the wastewater treatment plant for further processing. The wastewater discharge meets the limits in 2023.

#### **Effluent Quality Test**

Item	Standards	H1 Detected value	H2 Detected value	
pH	limit value: 6-9	8.1 mg/L	6.4 mg/L	
CHCI3	limit value: 0.6	0.0061 mg/L	0.0048mg/L	
COD	limit value: 90	49.9 mg/L	4.3 mg/L	
NH <sub>3</sub>	limit value: 60	0.48 mg/L	1.05 mg/L	
phenols	limit value: 1.0	0 mg/L	0 mg/L	
NO <sub>3</sub> -N	limit value: 50	17.1 mg/L	20.7 mg/L	
Particulate Matter	limit value: 25	7.2 mg/L	2.3 mg/L	

#### Wastewater Discharge

Ser and

	2021	2022	2023
The total amount of wastewater discharged (m <sub>3</sub> / year)	469,561	483,418	394,492

**Discharge destination:** Piped into the joint wastewater treatment plant and to the offshore area

**Water quality and discharge:** In line with the Effluents Standard / activated sludge treatment for low and high COD concentration

Standards, methods, and assumptions: Joint wastewater treatment plant limit

#### Note:

- 1. The total amount of wastewater discharge in 2023 was 394,492 MT, a decrease of 18% compared with 2022.
- The amount and quality of water discharged from 2021 to 2023 meet the discharge limits, and there are no incidents that exceed the standard.



# Environmental Prevention Mechanism

OUCC actively takes various measures to reduce pollution emissions from its factories and facilities, and through rigorous management mechanisms, minimize the actual or potential negative impacts on the local community. We adopt innovative technology to establish a production PI system to monitor the status of the plant operation sites. This real-time monitoring system for environmental data of the plant allows employees to monitor the operation of both production and environmentally protective equipment simultaneously, ensuring equipment availability and compliance with the relevant environmental regulations.



PI allows faster detection of cumene vapors being leaked from a nearby factory. Personnel can now control the air quality without delay and activate counter responses. Incoming air is cut off by the control room and inside air is recirculated through an activated carbon filter. Workers wear gas masks when working outdoors to prevent the inhalation of cumene vapor. Contact will be made with the nearby factory as soon as possible to request that corrective action be taken.

#### Air Pollution Control and Prevention

The Linyuan plant has acquired 7 Fixed Pollutant Operator Permits from the Environmental Protection Bureau of Kaohsiung City Government in accordance with Article 24 of the Air Pollution Prevention Act. According to the content of the permits, pollutants are tested and reported regularly. The main air pollutant emissions are: Volatile Organic Compounds (VOCs), Ethylene Oxide (EO), and ammonia.

#### **Air Pollution Prevention Equipment**

Туре	Number	Pollutants	Pollutant Removal Efficiency
Regenerative Thermal Oxidizer, RTO	2	VOCs	
Direct Fired Thermal Oxidizer, DFTO	1		>95%
Catalytic oxidizer	1		
Scrubber	7		>85%

#### **Air Pollution Control and Prevention**

Pollutant Emission	2021	2022	2023
NOx	6,692.00 kg	4,442 kg	4,133 kg
SOx	0 kg	1 kg	0 kg
POP	0 kg	0 kg	0 kg
VOC	41,880 kg	29,777 kg	25,382 kg
HAP	0 kg	0 kg	0 kg
РМ	595.00 kg	358 kg	341 kg

Note:

1. According to the regulations of the Kaohsiung City Government Environmental Protection Bureau "Pollutant Emission Quantity Authorization Documentation for Existing Stationary Pollution Sources," emission limits are as follows: NOx: 27,975 kg / year; SOx: 34,837 kg / year; VOC: 56,105 kg/year; PM: 5,051 kg / year.

2. The calculation of air pollutant emission is based on the declaration and review of the "Integrated Management System for the Declaration of Air Pollution Charges and Emission Quantity from Stationary Pollution Sources."

3. The calculation coefficient is done by inspection tests, where the actual pipeline emission data is collected by OUCC and sent to an inspection company authorized by the Environment Protection Administration. The average of the last 3 test reports multiplied by product quantity of current season equal to 2023 annual total.

4. Zero POP emissions.

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#### Waste Management

All the waste generated by the OUCC plant is entrusted to qualified waste disposal contractors for removal. No breach of contract by waste disposal contractors in 2023. In addition, recyclable items are entrusted to community charity organizations for recycling after preliminary classification in the plant.

Our Waste Disposal Platform helps accelerate in-plant waste disposal and increase reuse. The goal is to reduce the waste by 5%. We will continue to strengthen the waste control and implement effective management. The system will reduce the waste for the landfill, prevent the employees from wrongfully disposing unfamiliar waste that may jeopardize the safety of the plant.

#### OUCC Waste Management Policies

Identifying waste related impacts	<ol> <li>OUCC production process: raw material input→ reaction/production →waste generated</li> <li>Failure to remove the sludge generated may cause the shutdown of wastewater plant and further affect the production processes of the plants</li> <li>The process of drying sludge reduces volume of the waste to be transported, allowing more flexibility for waste disposal. Sludge can be recycled through the process of composting</li> </ol>
Impact prevention mechanisms	<ol> <li>Following the SOP for in-plant waste management</li> <li>Establishing Waste Disposal Platform to speed up in-plant waste disposal and increase reuse; achieving effective management by tracking the type and amount of waste to be disposed</li> <li>Outsourcing the qualified operators for disposal of waste generated in the manufacturing processes</li> <li>Recycling measures to increase the reuse of metal barrels/plastic barrels/waste timber, sludge, etc.</li> </ol>
Managing the waste disposal suppliers	<ol> <li>Outsourcing the qualified operators for disposal of waste generated in the manufacturing processes</li> <li>Establishing and initiating the review of new qualified waste disposal operators</li> <li>Annual review of waste management operators</li> <li>Reviewing the violation records of the waste disposal operators</li> <li>Irregular inspection</li> </ol>
Measurement and monitoring data	<ol> <li>Output record of waste reporting</li> <li>Autonomous waste inspection log</li> </ol>

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#### 2 The Results of Waste Management

Types of waste	Amount generated	Transfer disposal/reuse	Direct disposal
Hazardous waste (MT)	0.03	0	0
Non-hazardous waste (MT)	705.15	409.71	0

#### Note:

1. Disposal refers to any non-recycling operation, even though the operation contains the secondary outcomes of energy recycling.

2. Disposal is the action of dumping products, materials and resources in sinks or handling the above substances with the chemical reaction or thermal conversion at the end-of-life cycle, so that those products, materials and resources cannot be further used.

#### Amount of the Waste Transferred from the Disposal by Recycling Operations

Types of waste	Disposal method (unit: tons)	On-site	Off-site	Total amount
Hazardous waste	Reuse	0	0	0
Non-hazardous waste	Preparation for reuse	0	0	0
	Reuse	0	0	0
	Other recycling operations	409.71	0	409.71
Total		409.71	0	409.71

Note:

Recycling and reuse: The products, components or materials to be treated as waste are processed and turned into new products, components or materials of the same use.

1. Recycling: The products or components to be treated as waste are processed to create new materials.

2. Reuse preparation: The process that consists of checking, cleaning and repair, the products or components to be treated as waste can be used again to serve the same purpose.

#### Amount of the Waste Directly Disposed Using Disposal Methods

Disposal method (unit: MT)	On-site	Off-site	Total amount
Incineration (including energy recycling)	0	125.47	125.47
Incineration (excluding energy recycling)	0	0	0
Landfill	0	30.48	30.48
Other disposal operations	0	549.2	549.2
Total	0	705.15	705.15

Note: According to disposal operations, disposed waste contained no hazardous waste.

# 5 Total Amount of Hazardous Wastes Generated during the Manufacturing Processes Required to be Disclosed under The Law or to be Disclosed Voluntarily

Туре	Item (unit: MT)	Method	2021	2022	2023
Hazardous	pH≤2.0 Waste acid	Chemical treatment	0.03	0.03	0.03
waste	Total weight	-	0.03	0.03	0.03
- Non-	Waste iron barrels, waste iron (plastic) barrels, waste lubricating oil, waste oil mixture, waste wood, waste insulation materials, waste refractory materials, waste glass, and waste soil and rock.	Reuse	190.36	317.15	409.71
	Organic sludge	Thermal treatment	367.55	71.8	32.59
hazardous waste	The waste plastic mixture, wood mixture, household garbage, and organic sludge.	Incineration	117.33	129.83	125.47
_	Non-hazardous slag, waste-activated carbon.	Landfill	0	4.54	30.48
	Others (Note 4)		33.12	117.28	106.9
	Total weight		708.36	640.6	705.15

Note:

1. Reuse includes energy recycling.

2. Incineration (massive combustion): waste plastic mixture, waste wood mixture, household garbage, organic sludge, etc.

3. Other categories include waste ion exchange resin, sandblasting waste, non-hazardous oil sludge, waste paint, paint residue, other single non-hazardous waste metal or metal waste mixture, waste wire and cable, non-hazardous organic waste liquid, or waste solvent.

4. In 2023, D-1504 non-hazardous organic waste liquid totaled 106.9 MT.

5. In 2023, 6.96 MT of soil and rock waste were reused.

6. In 2023, 435.34 MT of thermal treatment/reuse/recycling products and 155.95 MT of waste disposed via incineration/landfill/physical treatment.

7. In 2023, waste plastic mixtures were made into plastic barrels for recycling and reuse.

8. In 2023, there were no output of general waste chemical substances, or non-hazardous waste catalysts.

	E3-					
Year	Metal	Paper	Pallet	Tire	Air Conditioner	PET Bottle
2023	150,900 kg	16,439 kg	360 pc	117 рс	0 pc	1,477 kg
2022	124,270 kg	21,404 kg	440 pc	117 рс	0 pc	1,399 kg
2021	55,950 kg	18,040 kg	2,040 pc	144 рс	3 рс	-

Note:

1. Changed resource recycling calculation method and categories in 2022.

2. Wastepaper recycling includes documents and paper.

3. PET bottle waste includes plastics in 2022 and 2023.

4. There was an addition of 541 waste batteries in 2023.





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#### Environmental Issues Appeal Mechanism

OUCC has stipulated internal and external communication procedures for environment, labor safety and health, and quality management. Any of the environmental opinions or complaints the external stakeholders wish to convey can be sent to the Safety and Health Department, and according to the contents, a specialist from the Central Safety Committee will be appointed to communicate with the external stakeholders, and to investigate or review the issue within the shortest possible time according to its magnitude.

We have a "Stakeholder Contact" and an "Environmental Business Contact (07-6413101#1301)." If an environmental issue arises, OUCC can handle and respond to it immediately. With effective management, there have been no environmental complaints for 10 consecutive years.

# The Environmental Protection Expenditures

Year	Environmental protection expenditure
2021	NT\$17,827,900
2022	NT\$26,025,438
2023	NT\$12,362,968

#### 2023 Environmental Regulation Management Improvement Mechanism

Description of Violation Incidents	Improvement Mechanism	Prevention Mechanism
The Environmental Protection Bureau conducted on-site inspection of EOG production process and found 4 points of VOC components emitted exceeding its standard.	<ol> <li>Improve the detection implementation.</li> <li>Decrease the use of unnecessary instrumental connectors (UNION).</li> </ol>	<ol> <li>Change the current pipelines to weldable hard pipes to rid of the unnecessary connectors.</li> <li>Strengthen the implementation of personnel.</li> <li>Enhance the inspection mechanism.</li> </ol>
Total Fine NT\$225 000		

Note:

1. There were no significant environmental incidents involving chemical leaks or environmental pollution in 2023.

2. A significant incident is defined as an event that results in penalties fined consecutively per day, shut-down, business suspension, mandatory close down, license invalidation, or referral for criminal punishment by environmental protection authorities at various levels.

#### **Operational Environmental Tests**

We have actively promoted pollution prevention and control systems and improvement plans, such as establishing groundwater monitoring wells and combustible gas monitoring stations, actively recycling carbon dioxide for reuse, establishing waste gas incinerators, and covering various wastewater plants to reduce the environmental impacts from production.

- Improve workplace ventilation and chemical substance volatilization, add ventilation equipment, use protective safety gear, implement safety and health education and training for operators, and execute other related safety operation management.
- An internal/external circulation function switches have been installed in the air-conditioning system of each control room in response to the odor emitted from other plant nearby, intruding through the air-conditioning system and causing discomfort to the staff. With the CO<sub>2</sub> concentration detectors added, the air quality is monitored. Also, an activated carbon air cleaner has also been added to the gas control room.

#### **Environment Operational Test Results**

Item	Content	Frequency	Inspection results
Personal hearing tests	Measurement of accumulated personal noise exposure	Biannually	
Reproductive toxic chemical detection	Detection of the concentration of ethylene oxide	Biannually	
Chemical detection	Detection and measurement of the concentration of chemicals such as methanol, ethylene glycol butyl ether, n-butanol and sulfuric acid in the working environment	Biannually	
Central AC indoor CO <sub>2</sub> concentration detection	Indoor CO <sub>2</sub> concentration detection	Biannually	
Inspection of equipment components	Volatile organic compounds	Quarterly	
Pipeline inspection	Carry out detection of volatile organic compounds, sulfur and nitrogen oxides, granular particles, vapor and fumes in exhaust pipelines	Biannually / Annually	
Waste detection	pH value, lead, zinc, cadmium, nickel, copper, chromium, arsenic, mercury and hexavalent chromium from the Toxicity Characteristic Leaching Procedure (TCLP) of industrial waste.	Annually	
Wastewater detection	Water quality detection of original water and effluent.	Biannually	





# **Social Inclusion**

OUCC applies its corporate spirit of "taking from society, giving back to society." Through communication and cooperation, we sponsor in various manners the charitable organizations or charitable foundations, to which our affiliated companies belong, and participate in social activities.

In addition, we also maintain partnership with suppliers and actively invite suppliers and employees to participate in social welfare activities. The total amount donated to disadvantaged minority and charity groups in 2023 exceeded NT\$ 4.04 million.

- OUCC has conducted unscheduled blood donation drives and cooperated with the FE Group to make relevant donations
- Employees have voluntarily donated to disadvantaged groups, volunteered, and donated materials to children's homes
- Actively participate in Good Neighborhood Fund donations, offer health care to those living in the Linyuan district, emergency assistance, facility repairs, public welfare, and government decree promotion. Provide wholesome lunches for elementary schools, magazine subscriptions, and implement community building, greening, and beautification to improve city highlights. Organize New Year's traditional festival, agricultural, fishery & special products marketing, arts & culture, environmental protection, economic construction, and sports activities.

## Participation in the Far Eastern Group Anniversary Charity Events

OUCC is in line with Far Eastern Group's anniversary public welfare activities every year. The Group business spans many industries, including food, clothing, housing, transportation, education, entertainment and charity. OUCC actively participates in the Group's "Happy 70" series of public welfare activities to convey the concept of "Together for a Promising Future" and "Hand in Hand, to Create a Better Future Together," expressing our deep social commitment to the land, gratitude to the people of Taiwan, and our social commitment to the local community.

### Community Environment Greening and Landscaping

OUCC has applied to the Industrial Development Bureau of the Ministry of Economic Affairs to adopt the environmental maintenance of a road landscape to achieve the effect of air purification through greening in the industrial area's road landscape. In 2023, OUCC adopted 116 street trees, 2,028 square meters of green space, 350 square meters of hedgerows. The work sponsored includes cleaning, watering, environmental sanitation maintenance, pest control, post-disaster cleanup, and replanting depending on the planting density.



#### Donation

Type (NT\$ ten thousand)	2021	2022	2023
Charity	4	5	5
Local Participation	376	383	394
Goods Donation	0	4	5
Total	380	392	404

#### **Cash Donation Activity**

Unit(NT\$)	Events	Amount
Linyuan District Office Coordination	Sponsoring neighborly community funds (uses including festivals, environment, healthcare, policy advocacy events, folk activities, sales promotion for agricultural and fishery products, care for the underprivileged, stipend and scholarships, emergency relief, tours, maintenance of public facilities, etc.)	3,941,882
Police Union Association, firefighters, etc.	Fellowship, commemorative activities, etc.	53,000

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# Chapter 05 PRUDENT THINKING

- **111** SAFE AND HEALTHY WORKPLACE
- **116** MANUFACTURING PROCESS OF ZERO DAMAGE
- **120** ZERO ACCIDENTS IN TRANSPORTATION
- **124** EMERGENCY RESPONSE MECHANISM



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**OUCC** is committed to providing a safe and healthy working environment while ensuring its workers' physical and mental health. We follow and introduce pertinent international environmental safety and health standards, continuously improve workplace safety, and implement training and education to ensure employees understand and master necessary security knowledge and skills. The goal is to strive for "zero accidents, zero injuries, and zero pollution."

To ensure the employees equip with required safety knowledge and skills, we've developed diversified training and education planning, for employees to fully comprehend and conduct all stipulated safety operations to prevent effectively the occurrence of all safety incidents.

With the adherence to the industrial development and continuous improvement, OUCC joined the Taiwan Chemical Industry Responsible Care Association (TRCA) and is committed to pursuing a balance between industrial safety, health and environmental protection in accordance with the association's mission of "comprehensive recognition of the chemical industry's responsibility to Taiwan society and continuously improving environmental, health and safety performance."

2023 Sustainable Performance



- Accumulated record of 637,016 disaster-free man-hours
- The workplace environment monitoring items such as CO<sub>2</sub> concentration in the central air-conditioned space indoors, specific chemicals, organic solvents, etc. are all in compliance with the standards.
- Labor representatives accounted for 50% of the Occupational Health and Safety Committee composition.



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### **Business Continuity Management**

OUCC has been working on the chemical safety management system for a long time, applying the concept of potential risk assessment as "no safest, only safer" in production and manufacturing processes, and evaluating possible disasters through pre-conception and simulation. This attitude contributes to the establishment of a comprehensive company approach to "Prevention Measures," "Chemical Transportation Safety," "Manufacturing Process (Plant) Safety" and the "Emergent Contingency Plan." We conduct simulation to predict the occurrence of possible disaster situations, and apply appropriate corrections to address deficiencies or shortcomings, continuing to improve safety management at our plant premises.



ETHICAL GOVERNANCE SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING

### Safe and Healthy Workplace

The OUCC has joined the Taiwan Responsible Care Association (TRCA) to promote responsible care and taken up six standard management guidelines to ensure plant safety, including process safety, emergency response safety, distribution safety, contractor safety, waste and reduction management, and product safety management.





- The senior supervisors of the factory have formulated a 5S safety team to carry out regular weekly patrol inspections according to the areas, keep track of any equipment gaps or environmental hazards, and offer suggestions for improving the inspected unit so that anomalies can be identified instantly.
- Promote and implement "TPM total production management/maintenance inspection" to strengthen the safety cultivation.
- The GRI 403 described in this chapter only applies to the Linyuan plant, with the Taipei headquarters excluded.

### **Record of Awards**

2020

- Received the "Self-Response to Global Energy Conservation Activities" certificate of appreciation from the Environmental Protection Bureau.
- Assisted in the "Dafa Industrial Park factory pollution prevention exchange workshop", and received a certificate of appreciation from Dafa Industrial Park Service Center, Industrial Development Bureau of the Ministry of Economic Affairs.
- Assisted the Ministry of Education and Fooyin University in the implementation of University Social Responsibility (USR) project "Dafa Industrial Park factory pollution prevention exchange workshop," and received a certificate of appreciation.
- Received an outstanding performance award from the Taiwan Responsible Care Association (TRCA) in the participation of emergency response practice drills.
- Recognized by Industrial Development Bureau of the Ministry of Economic Affairs as the outstanding performance company for 2020 self-reduction in greenhouse gas emissions.
- Received a certificate of appreciation from the Health Department of Kaohsiung City Government for proactively advocating workplace cancer prevention.
- Received an award plaque from Taiwan Responsible Care Association (TRCA) for holding a conjoined on-site drill for toxic substance (ethylene oxide) incident.
- Received an award plaque from Taiwan Responsible Care Association (TRCA) for participating in the Responsible Care Seminar.
- Received award plaques for participating in National Toxic Substance Accident Mock-up exercise from Environmental Protection Administration of Executive Yuan and Kaohsiung City Mayor.
- Received an award plaque from CPC Corporation, Taiwan for participating in Critical Infrastructure Protection Evaluation and Exercise.
- Received award plaque from IDB, MOEA for outstanding performance in reducing greenhouse gas emissions.
- Received a certificate of appreciation for participating in the project of Strengthening Industrial Public Safety Management organized by the Industrial Safety and Health Association of the R.O.C.
- 2022

2023

2021

- Due to the severe COVID-19 status in 2022, the activity participation rate was reduced in compliance with the company's epidemic prevention policy.
- Received a certificate of appreciation from Ministry of Environment for participating in the case sharing of the 2023 National
  Environmental Incidents Case Study Seminar & Award Ceremony for Excellent Operation and Management Joint Defense Organization.
- Received a certificate of appreciation from Health Dept. of Kaohsiung City Government for participating in the "2023 Kaohsiung City Workplace Employee Health Service Promotion Plan" and rewarded as Outstanding Group for the promotion of workplace cancer prevention and treatment.
  - Received a certificate of appreciation from Fire Dept. of Kaohsiung City Government for donating fire alarms.
  - Awarded the Health Promotion Label by the Health Promotion Administration of the Ministry of Health and Welfare for promoting workplace tobacco hazard prevention and health improvement.



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### Strengthen Industrial and Public Safety Management

- 1. On 10 July 2023, Simon Chen, Senior Manager and W. L. Yeh, Senior Specialist of SHE Dept., participated in the Industrial Safety Week observation activities of CPC Petrochemical Division for ideal experiences learning.
- 2. On 12 December 2023, Y. S. Chang, Vice President, led relevant supervisors to participate in the general inspection & high-level promotion symposium of factories to strengthen factory risk management under the jurisdiction of the Industrial Park of the Ministry of Economic Affairs.

### Comprehensive Occupational Safety and Health Management

According to national laws and regulations, OUCC has established and obtained ISO 45001:2018 Occupational Safety and Health Management System certification. In addition to completing the hazard operation (HazOp) assessment before the plant construction, we have also formulated the "Procedure for the Management of Change (MOC)" for any changes involving process equipment, process chemicals, process technology, safety facilities, operating procedures, etc., to ensure the safety management of each operation after the change.

Scope of application of the OUCC Occupational Health and Safety Management System:

- Include approx. 493 employees (345 employees + 148 contractors) in the Kaohsiung Linyuan plant, locating at No. 3, Gongye 3rd Rd, Linyuan District, Kaohsiung City, with 100% coverage rate.
- Operation activities, products or services of controllable, influential employees of all units at the OUCC Linyuan plant and all contractors who enter the facility's perimeter.
- The number of people covered by the internal & external management system audit: 493 people, covering 100% of the employees.

Note: Non-employee worker calculation method: The details of gate access records for personnel entering the factory according to OUCC's "Contractor Access Control System": cumulative working hours per month / number of working days per month / 8 hours per person per day = the number of people per month. The total number of people in 12 months / 12 = the average number of people per year

### Solid Occupational Safety and Health System

OUCC has established an Occupational Safety and Health Committee with the chief plant Director as the convener. A total of 14 representatives participated, including 7 labor representatives, accounting for 50% of the committee.

The committee holds the meeting quarterly. Its main responsibility is to review and coordinate the occupational safety and health issues submitted by employees. After the records are completed, the results shall be announced to all employees. The Occupational Safety and Health Committee reviews the issues related to occupational safety and health inside and outside the factory pursuant to the items required by laws and regulations.



### **Diversified Health Management Project**

OUCC cares for employees' personal health and provides them with comprehensive health resources, a comprehensive assessment mechanism and a health management program, which can also be extended to their families, include health checkups, health consultations, health education, diversified health seminars, employee assistance programs, as well as programs for the prevention of human-induced hazards. These services help employees to manage their own health, to create a friendly and healthy work environment.

Plans	2023 Employee Health Promotion Results			
Health Care Measures	<ol> <li>The factory area is equipped with medical kits, which are regularly and irregularly cleaned and updated.</li> <li>Set up the Automated External Defibrillator (AED)</li> <li>Linyuan plant has a specialized physician and a full-time nurse stationed to provide medical care and consultation for employees.</li> </ol>			
Health Checkup	<ol> <li>Annual physical examination and re-examination are provided and are of a higher standard than those stipulated by laws and regulations.</li> <li>In addition to the annual physical examination, for manager level and up, a senior executive health checkup is conducted once every 2 years.</li> <li>With the relief of the pandemic and the health examination of the medical institutes back to service, the annual health checkup coverage rate reached 100%.</li> <li>Explain the results of the examination items and provide health education information in the health examination report.</li> <li>Establish a health check tracking management mechanism and provide medical and treatment assistance for employees with abnormal results.</li> <li>If an employee cannot adopt the original work due to health conditions, the unit supervisor is suggested changing the employee's working place or job contents according to the doctor's evaluation results.</li> <li>For employees over age of 50, we provide special health check-up items that are superior to regulations.</li> <li>No special request for health examination in 2023.</li> </ol>			
Health Counseling & Assistance	<ol> <li>Assist employees and their family members in medical consultation and registration services.</li> <li>Provide individual health consultation services and advise employees to avoid high-risk jobs.</li> <li>No employee was diagnosed with occupational disease, the Occupational Disease Rate (ODR) was 0%, and no employee identified with the high-risk category.</li> <li>Follow up on abnormal and high-risk employees, provide individual counseling and education, and assist in medical treatment.</li> </ol>			
Health Education and Advocacy	<ol> <li>Information on vaccinations collected from health agencies was provided to the employees for easy vaccination.</li> <li>Unscheduled health and education publicity is held, and the content of the publicity depends on the actual epidemic status.</li> <li>Safety is advocated daily by E-mail to all employees and suppliers.</li> <li>The 2023 safety promotion themes include industrial safety, environmental protection, sanitation, fire protection, and epidemic prevention.</li> <li>An alert announcement would be made when the air quality measured by the Environmental Protection Agency indicates dangers to health, to remind employees to wear mask outdoors and lessen outdoor activities.</li> </ol>			
Physical and Mental Health Promotion Activities	<ol> <li>The company website and bulletin boards are used to promote health and epidemic prevention information.</li> <li>Invite the fire department to the plant for "AED" and CPR education and training.</li> <li>Awarded the Workplace Promotion Mark.</li> <li>We invited Dr. Y. Z. Chang from Xiaogang Hospital to the factory to conduct health promotion courses, which included dementia friendly of elders, metabolic syndrome, four cancers, smoking hazards, and monthly consultations with occupational disease doctors.</li> </ol>			
Employee Assistance Program (EAP)	<ol> <li>Compile information of "Daily Safety Promotion" &amp; "Epidemic Prevention Promotion" information and send it to all employees for reference.</li> <li>The plant nurse in the medical office is available for telephone consultation and provides diversified assistance to employees.</li> <li>The evaluation is forwarded to the plant physician for consultation or medical treatment support, and the family is called if necessary to discuss and coordinate jointly.</li> <li>Every year, staff recreation events like outings are organized for employees' participation to maintain their physical and mental health.</li> <li>Organize clubs and related activities to promote communication among employees and their families and improve physical and mental health.</li> </ol>			
Human-induced Hazards Prevention Plan	<ol> <li>Formulate the "Program for the Prevention of Human-induced Hazards" to track and execute improvement and prevention to employees.</li> <li>Develop rules for the management of personal posture operations to prevent employee injuries caused by incorrect working postures.</li> <li>Propose an improvement mechanism based on the hazard level, and review and track the improved performance during quarterly occupational safety meetings.</li> </ol>			
Occupational Disease Risk Control	We conducted the relevant occupational disease prevention measures pursuant to the SOP stipulated according to G0300- WI-074 for Employee Health Check, G0300-WI-082 for Workplace Health Management Approaches, G0300-WI-088 for Female Labor & Maternity Health Protection Plan, G0300-WI-089 for Abnormal Workload Intrigued Disease Prevention, and G0300- WI-091 for Human-Induced Hazards Prevention Plan, classified the annual health check results, arranged occupational physician and nurse visit and consultation for employees with highly indicated health risk, and assisted in the follow-up management and care forwarding.			



### Prevention of Abnormal Occupational Disease

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OUCC has been attentive to the issue of employee overwork. OUCC Linyuan plant has established, implemented and promoted "Prevention of Disease Caused by Abnormal Workload Procedures," and take safety and health preventive measures related to overwork to ensure the physical and mental health of employees, to further reduce the employee's long-term work pressure and job fatigue cumulation due to shift rotation, night shift work and long working hours, which affect the physical capability and cause the risk of cardiovascular disease. In 2023, there was no occurrence of employee overwork, saved for some with high health risks and under health control after consulted with the plant physician.

### Female Health Care at the Workplace

A "Healthy Maternity Protection Committee" has been established by Human Resources Department, the SHE Department, plant nurse, and supervisor of the workplace maternity unit to study maternal health hazard control and work adaptability adjustment practices. Risk levels are classified and adjusted in accordance with health risk assessment to ensure the work nature is in line with a proper level of health care for female employees.



Organization	"Healthy Maternity Protection Committee"		
Goal	Provide physical and mental health care during pregnancy, childbirth, or nursing period		
Plan	"Female Labor & Maternal Employee Health Plan"		
Measure	<ul> <li>Conduct risk assessment and classification management of the health of maternal employees.</li> <li>Assessment of the health and the work adaptability of employee within a year after pregnancy and childbirth. No maternal employee was under risk within 1 year after pregnancy and childbirth in 2023.</li> <li>A nursing room has been set up.</li> <li>Risk control strategies and plans have been prepared.</li> <li>Full-time physician and nurse are stationed on the premises to provide employees with interviews, health counseling and assessment.</li> <li>Adaptive work allocation has been established.</li> <li>Emergency response measures have been implemented.</li> <li>Improvements have been made to the working environment.</li> <li>Tracking and management is carried out regularly.</li> </ul>		
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SINCERE AND DILIGENT PARTNER SOLID CONTRIBUTION PRUDENT THINKING

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### Occupational Safety and Health Management System

OUCC follows the safety and health implementation project, establishes a people-oriented safety culture, and anticipates to implement comprehensive safety management and control.

Regulatory identification	"Management Guidelines for Obtaining and Identifying Occupational Safety and Health Regulations"	
Standardized management procedures	"Document and Data Control Management"	
Safety and health education and training	"Education and Training" "Environmental Safety Certification Requirements for All Levels"	
Hazard identification	"Occupational Safety and Health Hazard Identification and Risks and Opportunities Assessment Guidelines"	
Change management	"Management Guidelines for Changes to Production Processes" "Management Guidelines for Organization and Personnel Change"	
Chemical management	"Implementation of Labeling and Education Mechanism for Hazardous Chemicals" "Development and Management of Safety Data Sheets (SDS)"	
Contractor management	"Communication and Evaluation of Environmental Safety and Health Management of Third-Party Suppliers" "External Suppliers Management Guidelines" "Policies for Work Safety and Health of Contractors"	
Implementation check	"Safety Audit Branch Operational Guidelines" "Guidelines for 5S Patrol Inspections by Senior Managers" "TPM Total Production Management/Maintenance Inspection" "Safety Observations" "Internal Audit"	
Emergency response	"Emergency Response Personnel and Duties" "Diversion and Response Plans for Typhoons and Heavy Rain" "Emergency Response Guidelines for Earthquakes" "Personnel Emergency Evacuation" "Guidelines for Crisis Management"	
Occupational disaster prevention	"Guidelines for Incident Investigations" "Command Authority for Emergency Shut Down" "Female Labor & Maternal Employee Health Plan" "Prevention of Abnormal Workload Leading to the Onset of Illness" "Program for the Prevention of Human-induced Hazards" "Guidelines for Body Posture Management"	



## Manufacturing Process of Zero Damage

OUCC has carried out manufacturing process hazard and operability (HazOp) analysis on hazardous processes associated with higher risks. A hazard prevention model and the risk management process have been constructed to reduce the probability of industrial accidents.



We have introduced the Layers of Protection Analysis (LOPA) technology into the newly established EOD plant since 2010 to effectively strengthen the safety protection layer and achieve the expected risk management effects.

- LOPA analyses of the existing processes were 100% completed.
- In 2023, two HazOp & LOPA risk identifications in the workplace of GAS plant, as a 5-year regular review, and the ethylene oxide process area modification were implemented to improve safety.
- Each unit carried out general hazard identification using the risk ratings chart; a total of 10 improvement cases were tracked in 2023.

### Risk Hazard Analysis

Process risk holds the key to plant safety. In 2023, we conducted HazOp & LOPA risk identifications in the workplace of GAS plant, as a 5-year regular review, and the ethylene oxide process area modification, with 6 improvement recommendations, which were all completed.

### **Production Process Disaster Prevention Measures**

Item	Safety Configuration
GAS plant	<ul><li>Set up high flow alarm devices.</li><li>Set up low flow alarm devices.</li><li>Set up low pressure alarm devices.</li></ul>
Ethylene dioxide process area	<ul> <li>Add interlocking high-voltage shut-off device</li> <li>Establish a mechanism to confirm the oxygen concentration in the reactor after feeding materials</li> </ul>

### Safety Prevention Mechanism

### Occupational Safety and Health Management Standard Operation Procedures (SOP)

- The environmental health and safety policy as set down in the "Environmental and Occupational Health and Safety Management Handbook" has been revised in response to the resolve of top management, request of the FE Group, and anticipation of stakeholders in view of the environmental safety and health.
- "Occupational Health and Safety Risks and Opportunities Management Guidelines" effectively identify the risks and opportunities of the occupational health and safety management system. We continue to enhance performance through active improvements to the occupational safety and health management system.
- The "Safety Manual for Work in Confined Spaces" lists safety management for all work operations in confined spaces to ensure personnel safety.
- "Environmental Safety Certification Requirements for All Levels" have to be followed by the supervisors of all units and apply to all levels of staff in need of certification.
- "Safety Management of High-Pressure Water Column (Water Blade) Operations" requires that all the necessary tasks be taken in strict compliance with regulations to ensure and maintain the safety of personnel.

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### 2 Safety Data Sheet and Hazard Labeling of Chemical Substances

All raw materials and products used in the plant have associated material Safety Data Sheets (SDS) which are kept on-site and in the offices of each unit. They are also accessible on the Internet platform for employees' checking at all times. This ensures that all the proper actions to be adopted to secure the safe handling of the material and the safety of personnel and the plant.

### Sobriety Testing Before Entry

The "Work Rules" stipulate a sobriety test for employees entering the plant: For employees and contractors, alcohol testing is conducted at the factory as appropriate to deter and ensure the effect of alcohol-free entry into the factory. Employees or contractors who fail the sobriety test are denied entry. An employee who violates the rules will be dealt with according to the Work Rules. Contractors in violation will be penalized under the Contractor Operation Safety Commitment.

#### Safety and Health Education Training



- Continue to promote "safety, health, and environmental protection education and training." In 2023, a total of 4 courses were held with 309 participants and a total of 32 training hours. To ensure that employees can apply what they have learned, they can instantly submit or raise their questions, if any, during the course, to conduct effective two-way communication.
- A test of "Procedures for Work Safety Management" was held at Q4/2023 to enhance employees' safety awareness. The participants totaled 170, with qualification ratio of 69%. Rest of the unqualified employees were coached and retested with 100% qualification rate.

### **Noise Prevention Measures**

- 1. Notices of ear protection gear application are displayed at all the entrances to the plant with noise pollutant.
- 2. Personal hearing tests are carried out every six months.
- 3. Plant personnel must wear earplugs or earmuffs before entering noise polluted spaces.
- 4. Every employee is arranged for an annual precision hearing test. No employees experienced hearing disorders in 2023.
- 5. A full-time physician and a nurse are stationed in the plant and provide employees with health checkups and healthcare.

#### Non-disaster Man-Hours

OUCC promotes the following mechanisms to enhance the safety awareness of all our workers and contractors, to achieve the goal of accident-free man-hours:

- 5S patrol inspections are implemented by supervisory personnel every week. The safety branch will conduct a safety audit every
  month with improvement tracking carried out.
- Combine occupational health and safety with personnel key performance indicator (KPI), which links with employees' performance bonuses. And we encourage all personnel to report false alarm incidents.
- The Plant supervisors participate regular safety meetings to discuss, communicate, share experiences and coordinate with each other on safety and health issues.
- An OUCC Safety and Health Line Group has been created and the plant's supervisors and contractors are requested to join the group in order to reflect, share and communicate ideas and opinions.
- OUCC's cumulative safety man-hours in 2023: 637,016 million hours (mid and long-term goal: 2 million safety man-hours)
- OUCC contractors' cumulative safety man-hours in 2023: 1,698,442 million hours (mid and long-term goal: 2.5 million safety man-hours)

### Improving Workplace Safety by Listening to Employees

- Through regular meetings of the Occupational Safety & Health Committee and the Contractors, we discuss and develop safety improvement mechanisms to effectively reduce occupational safety risks. To ensure the safety of employees in the plant, we review and improve the safety and health items proposed by employees through the "Plant Safety and Health Meeting" held routinely.
- To discover unsafe environment, equipment, facilities and behaviors inconsistent with safety and health in the workplace, we have established the G0300-WI-096 incentive mechanism for False Alarm Incidents and Safety Suggestions Proposals, which encourages colleagues and contractors to proactively propose false alarm incidents and safety suggestions with potential hazards for prevention and correction, and rewards are given to the proposers.

### The safety recommendations proposed in 2023 include the following:

Purpose	Improvement Items and Methods	Status
Prevent the falling of personnel	Set up railing at the opening of the floor edge.	~~~
Prevent personnel from tripping over protruding platforms on the ground	A colored warning was coated at the protruded platform.	$\{ \bigcirc \}$
Improve operation safety of sludge feeding machine	Remove the activation switch from the proximity of the ladder to the operation platform to facilitate emergent control.	Achieved

Scope		OUCC Employees			Contractors		
Item	Gender			Total			Total
	Type of work-related injury	-	-	-	-	-	-
	Total working hour	-	-	658,970	-	-	346,209
	Number of recordable work-related injuries (case)	1	0	1	0	0	0
	Recordable work-related injuries rate (%)	1.5175 %	0%	1.5175 %	0%	0%	0%
IR	Number of fatalities resulted from work-related injuries (person)	0	0	0	0	0	0
	Rate of fatalities resulted from work-related injuries (%)	0%	0%	0%	0%	0%	0%
	Number of high-consequence work-related injuries (excluding fatalities) (person)	1	0	1	0	0	0
	High-consequence work-related injuries rate (excluding fatalities) (%)	1.5175%	0	1.5175%	0%	0%	0%
	Type of work-related illness	-	-	-	-	-	-
ODR -	Number of cases of recordable work-related illness	0	0	0	0	0	0
	Number of fatalities as a result of work-related illness (person)	0	0	0	0	0	0
	Rate of fatalities resulted from work-related illness (ODR)(%)	0%	0%	0%	0%	0%	0%

Note:

2. Rate of high-consequence work-related injuries = (Number of high-consequence work-related injuries / total work hours) x 1,000,000.

3. Rate of recordable work-related injuries = (Number of recordable work-related injuries / total work hours) x 1,000,000.

5. Statistical data does not include commuting accidents.

<sup>1.</sup> Rate of fatalities resulted from work-related injury = (Number of fatalities resulted from work-related injury / total work hours) x 1,000,000.

<sup>4.</sup> Total work hours of contractor / employees: total work hours of contractor, individual or organization at the work site at OUCC, from registered access recordings and statistical calculation.

<sup>6.</sup> Definition of high-consequence injury: According to Article 37 of the Occupational Safety Law, an occupational accident must be reported to the labor inspection agency within 8 hours.

<sup>7.</sup> No case of occupational disease sustained by "Implementation Measures for Occupational Disease Identification Operations of Labor Occupational Accident Insurance" in 2023.

<sup>8.</sup> In 2023, an occupational disaster occurred in which one person was injured and hospitalized. The report was completed within 8 hours of the incident, and investigation, analysis and records were carried out in accordance with regulations. The control measures taken to reduce the risk were also evaluated, and the risk after control was confirmed to be Level 5 (acceptable risk, maintaining existing safety and health controls, continuous monitoring).

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### Better Communication with Workers to Improve Occupational Safety and Health

OUCC followed the "G0300-WI-007 Guideline for Consultation and Participation of Workers and Occupational Safety and Health Committee Management" to reach internal consensus, and to establish safety and health management obligations and regular bilateral communication channels for internal employees, external contractors and the relevant stakeholders.

### Improvement Cases

Risk Hazard Identification	Risk Level Before Improvement	Safety Improvement Mechanism	Risk Level After Improvement
Prevent personnel from the scald injury and discomfort caused by inhaling chemical smell when operating solvent sampling from EA/ EB column bottom.	2	<ol> <li>Wear latex gloves and cotton gauze gloves to reduce the chance of scald on site personnel.</li> <li>Wear an activated carbon mask to reduce the chance of feeling uncomfortable when inhaling chemical scent.</li> <li>Request personnel to confirm that there is water in the cooler.</li> </ol>	6
Prevent acid and alkali liquid from leaking due to violent vehicle collision when unloading	4	<ol> <li>Add a linkage switch to control the vehicle gear device.</li> <li>Change the unloading standard procedures.</li> </ol>	5
Prevent the emitted ammonia from top of scrubber (T-801) to affect the health of personnel	2	<ol> <li>Add ice water scrubber tower, pumps and other equipment.</li> <li>Add distillation tower, re-boiler, condenser, pump and other equipment.</li> </ol>	5
Prevent drop leaking of acrylic acid from D401 due to hose removal after tanker transport	2	1. Replace the hose connector type with a dry connector.	6
Prevent muscle injury of personnel and manpower shortage	1	<ol> <li>Introduce automated packaging and stacking of Industry 4.0 technology to replace manual bagging and stacking operations.</li> <li>Added industrial robots related safety operation procedures in Work Instruction (WI).</li> <li>Provide on-the-spot training on hazardous maintenance and safety drills for operators.</li> </ol>	4
Prevent the hose fracture due to the inlet filter cleaning of EO pump	5	<ol> <li>During the monthly safety meeting, it was promoted that the appearance of the hose and the nozzle fixing buckle should be checked before use.</li> <li>Observe and confirm when the supervisor conducts on-site inspections from time to time.</li> </ol>	6
Reduce the risk of on-site cold box check valve freezing, falling, and injuring personnel during patrol and inspections.	3	<ol> <li>De-ice the frozen parts of the cold box regularly every month.</li> <li>During the annual maintenance period, the ice blocking valve should be repaired to prevent the risk of ice falling and impact thereof.</li> </ol>	5
Prevent injury of personnel from improperly operated electric trailer which has no designated parking lot and driving route.	2	<ol> <li>Plan the fixed location and driving route of the electric trailer on 1F of the pilot plant.</li> <li>Establish standard operation procedures and conduct irregular spot checks to implement operations.</li> </ol>	4
Reduce the risk of personnel falling by forbidding the use of A-frame wooden stepladder for operation	4	<ol> <li>Contractors must use aluminum A-frame stepladders when entering the factory for construction of equipment.</li> <li>Tools will be inspected by guards when entering the factory.</li> </ol>	6
Prevent the injury of personnel from steel bar assembly operation	4	<ol> <li>Add warning lights.</li> <li>Cover a large area with something sturdy, such as a wooden board.</li> <li>Add fixed fences.</li> <li>Try to complete the construction work on the same day without stall.</li> </ol>	5



## Zero Accidents in Transportation —

Most of the chemicals in Taiwan rely on road transportation, but the lack of road planning for chemical transportation within the small geographical environment narrowly populated, any accident may immediately endanger the lives and property of the people nearby and cause significant losses to enterprises. Therefore, OUCC attaches importance to the establishment of a transportation safety mechanism and fulfills its responsibility as a gatekeeper for transportation safety. There were no serious chemical leakages in 2023.



### **Transportation Risk Assessment**

OUCC outsources all of its product transportation to external tanker truck operators. The main risk of chemical transport is traffic accident. Crashed or overturned truck may lead to chemical spills, endangering the lives and properties of truck drivers, road users, rescuers, nearby residents, and the wreck of environment, which shall incur tremendous social costs. The direct cause triggering the hazardous substance leakage can be divided into four factors: human error, vehicle failure, storage facility, road and environment.

### **Transportation Risk Factors**

Risk factor	Possible incidents
Human error	<ol> <li>The inlet valve is not closed properly after a tank has been filled.</li> <li>The tanker driver fails to fully comply with traffic rules, for example: speeding, drunk driving, running red lights, keeping no safe driving distance, etc.</li> <li>Other road users fail to follow traffic rules and collide with the chemical tanker or cause the tanker driver to veer and lose control.</li> </ol>
Vehicle failure	<ol> <li>Vehicle mechanical failure: brakes, steering tire blowouts or punctures.</li> <li>Transport tank not correctly coupled with the vehicle or the coupling device has been damaged.</li> </ol>
Storage facilities	<ol> <li>The tank has been used for too long and may be corroded or defective in other ways.</li> <li>The chemical load is incompatible with the tank material.</li> <li>The internal pressure is way beyond the tank tolerance.</li> <li>Leaking valves or leaks from pipeline accessories or other parts.</li> </ol>
Road and environment	<ol> <li>Poor geometric road design: too sharp curves, steep hills, obstructed view of the road, etc.</li> <li>Unclear and insufficient traffic direction and warning signs.</li> <li>Poor road conditions and obstructions due to weather.</li> </ol>

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### Zero Transportation Accident - Adopting Tighter Transport Control Practices

We develop strict management standards to ensure that freight suppliers jointly fulfill their security commitments since all the tanker transportation in OUCC is outsourced. Apart from compliance with the requirements of the laws and regulations, we also ask our freight suppliers to include the "Risk Factors" in the emergency response mechanism, and continue to improve the safety management system based on the past disaster reviews or potential risk analysis.

OUCC also makes use of case-collected information to improve the depth of crisis response in the supplier transportation personnel and to create a win-win situation for contractor and the company through the promotion of regular education and training for the drivers and freight suppliers.

Process	Control Mechanism
Operational Regulations	<ol> <li>Contract specifications: Supplier conduct is regulated by comprehensive clauses in the transport contracts. Freight suppliers are requested to comply with the signed admission management document that is included in the contract annexure.</li> <li>Tanker loading: The "hazardous products road transport prospectus" and "material safety data sheets" must be submitted to the local motor vehicle supervision office for the issue of a temporary permit that must be on board with the driver before loading and shipping. The driver must drive on the scheduled transportation routes at the stipulated times.</li> <li>Vehicle hardware requirements: Use of retreaded tires is strictly prohibited for the entire tanker (including front, back or onboard trolley), each tanker should have at least two functional dashcams (speed and image), and remote video storage for at least 2 weeks. The vehicle is equipped with GPS so the tanker can be located from any remote computer using a browser.</li> <li>Driver requirements: OUCC requests that all tanker drivers must have dangerous goods transport permit and driver's license, and the gas tanker driver is required to have two additional permits for "high-pressure gas operation" and "high-pressure container operation." The driver must also have a qualified annual physical checkup report, and any driver with heart disease or hypertension history is prohibited from driving chemical tankers.</li> </ol>
Transportation Regulations	<ol> <li>Control and management mechanism: Implementation of personnel control, vehicle and cargo permits, coupling with tanker weighing and entrance/exit access records, strictly controls the admission of drivers, vehicles and their cargo to lower the possibility of incorrect product filling.</li> <li>Safety control: The transportation route of dangerous goods tankers complies with Article 84 of the Road Traffic Safety Regulations. In addition to the announcement to notify all transporters, the contract also includes the "Rules Governing Safety and Health for Hazardous Goods Delivery" and "Transportation Violation Penalty Standards" to which the transporters must comply.</li> <li>Safety inspection: Each transport vehicle entering and leaving the factory must complete the declaration and inspection. The driver must be notified to perform the self-inspection procedures, and then the OUCC staff will perform the re-check. Same process will be repeated after completion of filling.</li> <li>Transportation monitoring: Each transportation route has been identified by the supervisory office. Dangerous goods must apply for a temporary road pass. According to the GPS and driving records, the driver must follow the intended route and allow inspection for compliance.</li> </ol>
Transportation Meeting	<ol> <li>Regular meetings: OUCC holds regular transportation meetings to effectively manage safety and communicate the relevant safety issues with the transportation suppliers.</li> <li>Meeting results: In 2023, we reviewed the dispatching vehicle problem, tracked and reviewed abnormal accidents, coordinated transportation operation modes, discussed controversial projects, publicized policies and safety, and responded to the manufacturers' problematic issues.</li> <li>Goal: In 2023, the gas tanker was equipped with camera lens over the entire vehicle to strengthen the driver's control over the surrounding situation of the vehicle, which has been achieved.</li> </ol>



Process	Control Mechanism			
Emergency Response	<ol> <li>Emergency response mechanism: Each transport company is required to provide an Emergency Response Prospectus.</li> <li>Emergency drill: Every year, one type of transportation provider is selected to conduct emergency response drills, and the fire department or the fire prevention organization is invited to participate in the drills. At least two or more freight suppliers are involved in each exercise.</li> <li>An emergency response drill for "liquefied oxygen" transportation was held in 2023, and the relevant safety recommendations were proposed after the drill.</li> </ol>			
Education and Training	Suppliers' transportation and dispatch personnel should receive 2 times of training every year to improve their agility and depth of crisis response.			
Diversified Audit	<ol> <li>Onsite audit: The transport company is subject to an annual onsite audit that is part of the supplier's audit. To ensure that the transport companies attach enough importance to the quality of transportation, the results of the onsite audit shall be referred as the basis for the distribution of freight charges or volume ratio for the following year.</li> <li>Road audit: It is classified as occasional inspections or as GPS satellite positioning.</li> <li>Occasional inspections: Randomly track transport vehicle, record the driver's driving behavior, driving speed, and whether the unloading operation complies with the regulations.</li> <li>GPS satellite positioning inspection: Such is used to determine the vehicle position and check reasonableness of the driving speed, idle time, as well as the appropriateness of selected route or zone.</li> </ol>			

### Education and Training Results for the Gas Supplier Transportation Personnel

	H1 / 2023	H2 / 2023
Training Topic	Defensive driving, emergency response procedures (notification and evacuation training) and hazard communication.	Plant site operation safety, tank truck filling process, tank truck common pressure specifications and stable operation training to avoid safety valve emissions and equipment safe operation related training.
Number of Participants	28	28
Number of Gas Transportation Suppliers Participated	3	3
Participation Rate (%)	100	100

Note: Participation Rate=total forwarders participated in the training / total forwarders in 2023

### Pandemic Prevention Policies for Transportation

- 1. Before entering the plant, all drivers must have their temperature taken at the guard's office. Anyone with a temperature above 37.5°C will be denied entrance.
- 2. Contractors, subcontractors, drivers, etc., must wear masks at all times when they are at the plant premises.
- 3. Contractors, subcontractors, and drivers are prohibited from entering indoor space such as control room, office, warehouse, etc.
- 4. At the weigh station, drivers are required to sanitize their hands. Anyone who refuses to comply will be barred from continuing the operation.
- 5. Anti-pandemic measures such as Health Declaration Statement, Temperature Taken, and Social Distancing APP must be implemented before entering the plant premises.
- 6. The five rules of implementation include zero contact, visual confirmation of document, minimal conversation, keeping a safe distance and frequent sanitization.
- 7. During a severe epidemic, guests or contractors are prohibited from entering the plant premises for non-emergency events.

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### Field Pipeline Maintenance Operation and Management

OUCC formed the "Pipeline Maintenance Operation Team" to actively manage the pipeline-related business, including the establishment and management of pipeline diagrams, monitoring the current status of pipeline operations, conducting pipeline surveys, contingency drills, joint defense organization maintenance, and reviewing the management of pipelines out of OUCC to comprehensively control the inspection, testing, and maintenance status, so as to reduce the risks of the external pipelines.



### **Underground Pipeline Maintenance Operation**

- 1. Pipeline diagram information system maintenance: pipeline piping diagram, basic data collection and maintenance, the establishment of coordinate data and system applications.
- 2. Pipeline patrol inspection management and pipeline management audit
- Pipeline and facility maintenance: Underground pipeline thickness measurement, abnormal nodes maintenance, supervising and planning for the cathode anti-corrosion measurement, pipe positioning detection, close electricity potential detection and GPS positioning measurement, etc.
- Pipeline maintenance and risk assessment: Pipeline condition detection and risk assessment, Intelligent Passers (IP) inspection planning, pipeline leak detection and replacement planning, etc.
- 5. Pipeline system operation and monitor: Pipeline inflow & outflow metering, pressure checking system planning and operation supervision.
- 6. Pipeline contingency plan and the drill: Implement pipeline contingency management and the drill according to the "Contingency Countermeasure Guidelines" and "Contingency Drill Plan" formulated by the Pipeline Bundle 5 Area Joint Protection Organization.

### Emergency Response Mechanism

To strengthen emergency response for risks, the company sets up various scenario simulations through announcement, education & training, and practical exercises, to enhance employees' comprehension and familiarity with the contingency mechanism, which may ensure of a swift response at the accident scene of the plant premises, to minimize the damage of the accident and its effects on the environment and the personnel.



### Emergency Response Plan

The OUCC has set up various scenarios in its "Emergency Response Plan," covering the probable fire, leaks, typhoons, earthquakes, war, transportation accidents, notifications, evacuations, rehabilitation and so on. Regular drills and contingency measures are organized to cope with disasters that might occur, to minimize damage and loss, and to protect employees' safety.

### **Emergency Response Training**

According to the risk assessment results regarding the processes of production and transportation, the major factors of incurring accidents at OUCC are likely to involve chemical spills, fire, tanker accidents, and explosion.

In this regard, we organized four "Emergency Response Teams" to conduct the implementation of class A protective outfit, self-contained air breathing apparatus training, and fire protection equipment operation training in 2023, with a total of 32 trainings and 592 participants. In addition, all employees of the Linyuan plant participated in the 4-sectioned contingency drill.

The production unit conducted 66 tabletop drills, with a total of 652 participants. The production unit also conducted 19 drills for the worst-case scenario in the jurisdiction, with a total of 180 participants. In addition, a first-level emergency response drill for leakage of toxic chemical substances (specific chemical substances) was conducted for the R&D unit, with a total of 21participants.

In response to the Pingtung Launch Technologies' fire incident, we deeply reviewed and learned from it. A random inspection of the emergency response team drill was held during the holiday on 14 October 2023, by the President at Linyuan plant, with 18 participants. It is expected that when an emergency occurs, employees will have sufficient knowledge and experience to effectively reduce the impact and control the accident.

### **Emergency Response Training**

Training Type	Number of drill (times)	Participants in total
Emergency response drill of high- pressure Gas transportation	1	35

### Climate Change: A Compound Disaster Response Plan

Disaster Risk Type	Participants in total
Leaks, fire	Emergency Response Personnel and Duties
Transport accidents	Transportation Incident Emergency Response Operations
Typhoon, heavy rain	Diversion and Response Plans for Typhoons and Heavy Rain
Earthquakes	Emergency Response Guidelines for Earthquakes

### 2023 Emergency Response Drill Example

Emergency Response Drill Type	Liquefied Oxygen Transportation Emergency Response Drill
Simulation Scenarios	The liquefied oxygen tank truck delaminated during transportation: The driver drove the tank truck (empty) on his way back from to the customer's factory after unloading. Suddenly the plate fell off the tank truck while driving on Sanchuang Road. The driver immediately stopped to check. After the accident, the driver immediately turned on the yellow warning light, cut off the vehicle's power supply, and got out of the vehicle to inspect the damage to the tanker. He found that the legs were suspected to be damaged and could not be operated. The driver quickly took the safety cone and placed it behind the tanker, and called the police immediately, notified the transportation company and the company's control room to request support (emergency call), and alerted the scene.
Key aspects of exercises	<ol> <li>When an unexpected situation occurs, how does the tank truck driver judge and report it?</li> <li>How does the transportation company initiate the mobilization of emergency response procedures and how to notify OUCC the cargo owner.</li> <li>How to activate emergency response procedures.</li> </ol>



### Appendix

### Governance Member Information

Name	Gender	Committee	Job Position	Management / Non- Management
Douglas Hsu		Board of Directors	Chairman of Far Eastern New Century Corporation, Asia Cement Corporation, U-Ming Marine Transport Corporation, Far Eastern Department Stores Ltd., Far EasTone Telecom. Co., Ltd., and Vice Chairman of Far Eastern International Bank.	٠
Johnny Shih		Board of Directors	Vice Chairman of Far Eastern New Century Corporation, Chairman of Everest Textiles Co., Ltd., Director of Asia Cement Corporation, and CTCI.	•
Humphrey Cheng		Board of Directors	President of Far Eastern New Century's administrative headquarters, Director of Far Eastern International Bank, and Chairman of Tong Fu Investment Corporation.	٠
Kao-Shan Wu		Board of Directors	President of Far Eastern New Century's petrochemical headquarters, Director of Everest Textiles Co., Ltd., and Oriental Petrochemical Corporation.	٠
Justin Tsai		Board of Directors	Director and President of Tong Fu Investment Corporation, Director of Far Eastern United Petrochemical (Yangzhou) Ltd., Oriental Petrochemical Corporation, and Feng Tay Enterprises Co., Ltd.	•
Eric Chueh		Board of Directors	President of Oriental Petrochemical Corporation, COO of Far Eastern New Century's petrochemical headquarters	٠
James Chou		Board of Directors	Chairman of Far Eastern Industries (Shanghai) Ltd., Director of Far Eastern Union Petrochemical (Yangzhou)Ltd., Far Eastern Yihwa Petrochemical (Yangzhou) Ltd., and Oriental Petrochemical Corporation.	٠
Bing Shen		Board of Directors	Independent Director of Elite Material Co., Ltd.	•
Walt Cheng		Board of Directors / Audit Committee / Remuneration Committee	President of Axolar Technology Corp., Supervisor of Sunny Pharmtech Inc.	٠
Cheng-Tien Chan		Board of Directors / Audit Committee / Remuneration Committee	Chairman of Yi Jinn Industrial, Yi Tong Fiber, Kwang Ming Silk Mill, and Hung Chou Fiber Industrial	٠
Ping Lih		Board of Directors / Audit Committee	Director of T. N. Soong Foundation	•
Jing-Wu Huang		Remuneration Committee	-	٠

SINCERE AND DILIGENT PARTNER

SOLID CONTRIBUTION

Yes No No

Independence	Tenure	Representative Community	Enterprise Impact / Influence Ability	Stakeholder Representative
Non-independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making.	٠
Non-independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making.	•
Non-independent Directors	3 years	٠	Possesses industrial experience, professional qualifications and operational judgment in law section, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making.	•
Non-independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making, chemical engineering and chemistry.	•
Non-independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making, chemical engineering and chemistry.	•
Non-independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making, chemical engineering and chemistry.	•
Non-independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making, chemical engineering and chemistry.	•
Non-independent Directors	3 years	٠	Possess experience and operational judgment in the professional finance sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making.	•
Independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making, chemical engineering and chemistry.	٠
Independent Directors	3 years	٠	Possesses industrial experience and operational judgment in the petrochemical sector, business management, financial accounting, business economics, crisis management, industrial know-how, worldwide market view, leadership decision-making.	٠
Independent Directors	3 years	•	Possess professional accountant qualifications and operational judgment, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making.	٠
Non-independent Directors	3 years	٠	Possess professional accountant qualifications and operational judgment, business management, financial accounting, business economics, crisis management, worldwide market view, leadership decision-making.	•



### Appendix - GRI 403: Occupational Health and Safety

Item	Reporting requirements	Reporting Content
<b>403-1</b> Occupational health and safety management system	<ul> <li>a. A statement of whether an occupational health and safety management system has been implemented, including whether:</li> <li>l. the system has been implemented due to legal requirements, if so, a list of the requirements;</li> <li>ll. the system has been implemented based on recognized risk management and/or management system standards/guidelines.</li> </ul>	OUCC's Kaohsiung Linyuan plant obtained the "ISO 45001 Occupational Safety and Health Management" certification in 2020, which has been re-verified by the certification company every year, and the certificate continues to be valid.
	b. A description of the scope of workers, activities, and workplaces covered by the occupational health and safety management system, and an explanation of whether and, if so, why any workers, activities, or workplaces are not covered.	<ol> <li>Scope of application for the occupational safety and health management system:</li> <li>Include about 400 employees in the Kaohsiung Linyuan plant, which is located at No. 3 Gongye 3rd Rd, Linyuan District, Kaohsiung City.</li> <li>Each unit of the plant can control and dictate the staff's operational activities, products, or services.</li> </ol>
<b>403-2</b> Hazard identification, risk assessment, and incident investigation	<ul> <li>a. A description of the processes used to identify work-related hazards and assess risks on a routine and non-routine basis, and to apply the hierarchy of controls in order to eliminate hazards and minimize risks, including:</li> <li>l. how the organization ensures the quality of these processes, including the competency of persons who carry them out;</li> <li>ll. how the results of these processes are used to evaluate and continually improve the occupational health and safety management system.</li> </ul>	<ul> <li>Established:</li> <li>G0300-PC-013 Occupation Safety and Health Hazard Identification &amp; Risk and Opportunity Assessment</li> <li>G0300-PC-037 Occupational Safety &amp; Health Risk and Opportunity Management Procedures</li> <li>For accident investigation, OUCC has established the following:</li> <li>G0300-PC-020 Accident Investigation Procedures</li> <li>G0300-WI-096 Proposal Incentives for False Alarm Incidents</li> </ul> Occupational safety and health hazard identification and risk opportunity assessment operation process: <ol> <li>Selection of hazard identification tools/techniques</li> <li>Hazard identification and risk/opportunity assessment of "Qualitative Analysis"</li> <li>Hazard identification and risk/opportunity assessment of "Qualitative Analysis"</li> <li>Hazard identification and risk/opportunity assessment of "Qualitative Analysis"</li> <li>Hazard identification of risk level scoring criteria</li> <li>Close the case</li>  Accident investigation process: <ul> <li>The occurrence warrants investigation</li> <li>Establish an accident investigation team and hold an investigation meeting</li> <li>Submit an accident investigation report</li> <li>Accident Investigation Safety Branch Review</li> <li>Approval by the chief director (if the review fails)</li> <li>Log in and distribute education propaganda to each unit</li> <li>Track and distribute educational propaganda to each unit</li> <li>Track the completion of improvement items</li> <li>The closed files are permanently saved</li> </ul></ol>
	<ul> <li>A description of the processes for workers to report work-related hazards and hazardous situations, and an explanation of how workers are protected against reprisals.</li> </ul>	<ul> <li>Establish incident investigation and handling procedures to confirm the cause of the incident, propose property damage, disaster analysis and incident recurrence prevention countermeasures, and track and confirm the implementation of improvement suggestions.</li> <li>Ensure that "those who report hazards" and "workers who evade hazards on their own" are exempt from punishment.</li> <li>Established G0300-PC-020 Accident Investigation Procedures and G0300-WI-096 Proposal Incentives for False Alarm Incidents</li> </ul>
	c. A description of the policies and processes for workers to remove themselves from work situations that they believe could cause injury or ill health, and an explanation of how workers are protected against reprisals.	We have formulated G0300-PC-033 emergency shutdown command authority and G0300-PC-035 personnel emergency evacuation plan, which shall be implemented in accordance with relevant regulations. In G0300-EA-001 Environmental and Occupational Safety and Health Management Manual: 6.2.1.3 Determine and remove barriers or barriers to participation (including failure to respond to workers' views or suggestions, language or language barriers, retaliatory acts or threats of retaliatory acts, policies or practices that discourage or penalize worker participation)

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Item	Reporting requirements	Reporting Content
<b>403-2</b> Hazard identification, risk assessment, and incident investigation	d. A description of the processes used to investigate work- related incidents, including the processes to identify hazards and assess risks relating to the incidents, to determine corrective actions using the hierarchy of controls, and to determine improvements needed in the occupational health and safety management system.	We have established G0300-PC-020 Accident Investigation Procedures, G0300-PC-013 Occupation Safety and Health Hazard Identification & Risk and Opportunity Assessment, and G0300-PC-037 Occupational Safety & Health Risk and Opportunity Management Procedures for relevant implementation, tracking and control.
<b>403-3</b> Occupational health services	a. A description of the occupational health services' functions that contribute to the identification and elimination of hazards and minimization of risks, and an explanation of how the organization ensures the quality of these services and facilitates workers' access to them.	<ul> <li>Formulated G0300-PC-013 Occupation Safety and Health Hazard Identification &amp; Risk and Opportunity Assessment, G0300-PC-037 Occupational Safety and Health Risk and Opportunity Management Procedure, G0300-WI-074 Employee Health Examination, G0300-WI-082 Workplace Health Management Measures, G0300-WI-088 Maternal Employee Health Plan</li> <li>G0300-WI-089 Prevention of Abnormal Workload Leading to the Onset of Illness, G0300-WI-091 Program for the Prevention of Human-induced Hazards, and G0300-WI-094 Guidelines for Body Posture Management.</li> </ul>
<b>403-4</b> Worker participation, consultation, and communication on occupational	a. A description of the processes for worker participation and consultation in the development, implementation, and evaluation of the occupational health and safety management system, and for providing access to and communicating relevant information on occupational health and safety to workers.	<ul> <li>The "Occupational Safety and Health Management Unit" is responsible for planning, supervising, and promoting labor safety and health-related operations. OUCC's "Occupational Safety and Health Committee" meets quarterly and is responsible for deliberation.</li> <li>Established "G0300-WI-007 Worker Consultation, Participation, and Occupational Safety and Health Committee Management Procedures."</li> </ul>
health and safety	b. Where formal joint management-worker health and safety committees exist, a description of their responsibilities, meeting frequency, decision-making authority, and whether and, if so, why any workers are not represented by these committees.	Please refer to 2023 ESG report P.112
<b>403-5</b> Worker training on occupational health and safety	<ul> <li>A description of any occupational health and safety training provided to workers, including generic training as well as training on specific work-related hazards, hazardous activities, or hazardous situations.</li> </ul>	Implement the necessary safety and health education and training for general, specialized, new hire, and changed operations according to A0200-PC-001 Education and Training, A0200-PC-009-01 Application Form for Safety and Health Changes Regarding Organizational and Personnel Changes, and G0300-WI-073 Environmental Safety Certification Requirements for All Levels.
<b>403-6</b> Promotion of worker health	a. An explanation of how the organization facilitates workers' access to non-occupational medical and healthcare services, and the scope of access provided.	<ul> <li>G0300-WI-074 Employee Health Examination, G0300-WI-082 Workplace Health Management Measures, G0300-WI-088 Maternal Employee Health Plan, G0300-WI-089 Abnormal Workload-Induced Illness Prevention, G0300-WI-091 Human- Induced Hazards Prevention Program, and G0300-WI-094 Guidelines for Body Posture Management.</li> <li>There are occupational physician and nurse for consultations, and we also participate in the health workplace certification of external organizations.</li> </ul>
	b. A description of any voluntary health promotion services and programs offered to workers to address major non- work-related health risks, including the specific health risks addressed, and how the organization facilitates workers' access to these services and programs.	Our plant is committed to promoting tobacco harm prevention and health promotion, actively implementing smoke-free health promotion measures in the workplace, and establishing an excellent working environment. And was awarded the Healthy Workplace Certification Health Promotion Seal by the National Health Service of the Ministry of Health and Welfare. The factory also promotes cancer prevention and control in the workplace, conducts screenings in conjunction with employee health examinations, and receives certificates of appreciation from the Kaohsiung City Health Bureau.

### Appendix - GRI 403: Occupational Health and Safety

Item	Reporting requirements	Reporting Content
<b>403-7</b> Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	a. A description of the organization's approach to preventing or mitigating significant negative occupational health and safety impacts that are directly linked to its operations, products or services by its business relationships, and the related hazards and risks.	<ul> <li>Identify and analyze all types of physical, chemical, biological, and human engineering risks that may be created by raw materials, machinery and equipment, the operating environment, and personnel operating activities engaged in the company's various operations or services continuously.</li> <li>Formulated "G0300-PC-013 Occupation Safety and Health Hazard Identification &amp; Risk and Opportunity Assessment, G0300-PC-037 Occupational Safety and Health Risk and Opportunity Management Procedure."</li> </ul>
<b>403-8</b> Workers covered by an occupational health and safety management system	<ul> <li>a. If the organization has implemented an occupational health and safety management system based on legal requirements and/or recognized standards/guidelines: <ol> <li>the number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system that has been internally audited;</li> <li>the number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system that has been audited or certified by an external party.</li> </ol> </li> </ul>	Coverage of audit: the whole plant Number of auditors: 22 people (internal auditors) Number of employees (incl. contractors) : 493 Ratio of participation = 100%
	<ul> <li>Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.</li> </ul>	No exclusion
	c. Any contextual information necessary to understand how the data have been complied, such as any standards, methodologies, and assumptions used.	Nil
	<ul> <li>a. For all employees:</li> <li>i. The number and rate of fatalities as a result of work-related injury;</li> <li>ii. The number and rate of high-consequence work-related injuries (excluding fatalities);</li> <li>iii. The number and rate of recordable work-related injuries;</li> <li>iv. The main types of work-related injury;</li> <li>v. The number of hours worked.</li> </ul>	Please refer to 2023 ESG Report P.118.
403-9 Work-related injuries	<ul> <li>b. For all workers who are not employees but whose work and/or workplace is controlled by the organization:</li> <li>i. The number and rate of fatalities as a result of work-related injury;</li> <li>ii. The number and rate of high-consequence work-related injuries (excluding fatalities);</li> <li>iii. The number and rate of recordable work-related injuries;</li> <li>iv. The main types of work-related injury;</li> <li>v. The number of hours worked.</li> </ul>	Please refer to 2023 ESG Report P.118.
	<ul> <li>c. The work-related hazards that pose a risk of high-consequence injury, including:</li> <li>i. how these hazards have been determined;</li> <li>ii. which of these hazards have caused or contributed to high-consequence injuries during the reporting period;</li> <li>iii. actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls.</li> </ul>	Formulated "G0300-PC-013 Occupation Safety and Health Hazard Identification & Risk and Opportunity Assessment, G0300-PC-037 Occupational Safety and Health Risk and Opportunity Management Guideline."

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Item	Reporting requirements	Reporting Content
	<ul> <li>Any actions taken or underway to eliminate other work-related hazards and minimize risks using the hierarchy of controls.</li> </ul>	Formulated "G0300-PC-013 Occupation Safety & Health Hazard Identification and Risk & Opportunity Assessment, G0300-PC-037 Occupational Safety & Health Risk and Opportunity Management Guideline."
<b>403-9</b> Work-related	e. Whether the rates have been calculated based on 200,000 or 1,000,000 hours worked.	1,000,000
injuries	f. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.	No exclusion
	g. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.	Implemented in accordance with the regulations on occupational accident monthly reports
<b>403-10</b> Work-related ill health	<ul> <li>a. For all employees:</li> <li>i. The number of fatalities as a result of work-related ill health;</li> <li>ii. The number of cases of recordable work-related ill health;</li> <li>iii. The main types of work-related ill health.</li> </ul>	Please refer to 2023 ESG Report P.118.
	<ul> <li>b. For all workers who are not employees but whose work and/or workplace is controlled by the organization:</li> <li>i. The number of fatalities as a result of work-related ill health;</li> <li>ii. The number of cases of recordable work-related ill health;</li> <li>iii. The main types of work-related ill health.</li> </ul>	Please refer to 2023 ESG Report P.118.
	<ul> <li>c. The work-related hazards that pose a risk of ill health, including:</li> <li>i. how these hazards have been determined;</li> <li>ii. which of these hazards have caused or contributed to cases of ill health during the reporting period;</li> <li>iii. actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls.</li> </ul>	Formulated "G0300-PC-013 Occupation Safety & Health Hazard Identification and Risk & Opportunity Assessment, G0300-PC-037 Occupational Safety & Health Risk & Opportunity Management Guideline"
	d. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.	No exclusion
	<ul> <li>Any contextual information necessary to understand how the data have been complied, such as any standards, methodologies, and assumptions used.</li> </ul>	Nil

### Appendix - SASB Index - Chemicals

Through our incessant endeavors in the enhancement of sustainability disclosures, OUCC's compliance and disclosure of the Sustainability Accounting Standards Board (SASB) this year has set a major milestone in our sustainability management. Unless otherwise stated, the statistical date for the data disclosed in this index is till December 31, 2023.

Table 1	1.	Sustainability	Disclosure	Topics &	& Accounting	Metrics
Table	••	Oustainability	Disclosure	100103	Accounting	Mictile3

SASB Topic	SASB CODE	ACCOUNTING METRIC	PAGE
Greenhouse	RT-CH-110a.1	Gross global Scope 1 emissions, percentage covered under emissions- limiting regulations	133
Gas Emissions	RT-CH-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	133
Air Quality	RT-CH-120a.1	Air emissions of the following pollutants: (1) NOx, (2) SOx, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	134
Energy Management	RT-CH-130a.1	<ol> <li>Total energy consumed</li> <li>Percentage grid electricity</li> <li>Percentage renewable</li> <li>Total self-generated energy</li> </ol>	135
	RT-CH-140a.1	<ol> <li>Total water withdrawn</li> <li>Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress</li> </ol>	135
Water Management	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	135
	RT-CH-140a.3	Description of water management risks and strategies and practices to mitigate those risks	135
Hazardous Waste Management	RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	136
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	136
Workforce	RT-CH-320a.1	<ol> <li>Total recordable incident rate (TRIR)</li> <li>fatality rate for (a) direct employees and (b) contract employees</li> </ol>	136
Safety	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	136-137
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	137
Safety & Environment Stewardship of Chemicals	RT-CH-410b.1	<ol> <li>Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances</li> <li>Percentage of such products that have undergone a hazard assessment</li> </ol>	137
	RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	137

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SASB Topic	SASB CODE	ACCOUNTING METRIC	PAGE
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	No occurrence
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	138
Operational Safety,	RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	138
Emergency Preparedness & Response	RT-CH-540a.2	Number of transport incidents	No occurrence

### Table 2. Activity Metrics

SASB CODE	ACCOUNTING METRIC	PAGE
RT-CH-000.A	Production by reportable segment	138

### Sustainability Disclosure Topics & Accounting Metrics



### RT-CH-110a.1

Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations.

- 1. Scope 1 GHG emissions: 28,258.1804 t-CO2e
- 2. Percentage covered under emissions-limiting regulations:100%

RT-CH-110a.2 Discussion of long-terr

Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets.

### Long- and short-term strategies/plans for scope 1 greenhouse gas emissions

### Short-term goals:

- Reduce 1% of carbon annually using 2015 as the base year.
- In 2023, the carbon reduction amount reached 1,297 t-CO<sub>2</sub>e, which reached 0.4%
- Cumulated carbon reduction of 2017-2023 totaled approx.
   86,439 t-CO<sub>2</sub>e, actual carbon reduction rate 26.9%, of goal achieving rate 100%.

### Medium-term goals (till 2028):

• Annual reduction target: 2% per year, carbon reduction 6,420 t-CO<sub>2</sub>e/year

### Long-term goals (till 2032):

- 2030 carbon reduction target: 35%
- Readjust the proportion of heat and electricity, evaluate and plan a high-efficiency & low-carbon co-gen system to cope with the goal of energy structure change in 2025, in response to the government's "Climate Change Response Act" and the implementation of new energy and electricity policies, as well as the energy demand of future expansion plans.
- Keep in line with the "Climate Change Response Act" and the carbon reduction and net-zero emission schedule of the government's industrial response group to achieve the goals.



### 1. Scope 1 greenhouse gas emissions reduction target setting

Item	Absolute Target
Absolute goal of GHG emission	27.79 %
Base year	2015
Absolute carbon emissions at base year	66,732.4267t-CO <sub>2</sub> e
Target setting year	2008
Percentage of emissions reduction compared to base year	35 %
Target achievement year	2030
Target achievement ratio (compared to base year)	35 %
Target achievement mechanism	All personnel participate in energy conservation and carbon reduction management activities, continue to design and carry out energy conservation and reduction projects, analyze and implement low-carbon technology, reduce energy consumption to reduce GHG emissions.

- 2. Activities or investments for the reduction plan and any risks or constraints that may affect the plan/objectives, including:
  - Changes in energy structure: Evaluating and designing high-efficiency and low-carbon co-generation systems and setting goals in response to energy structure changes in 2025.
  - Rising energy prices: Affect the benefit evaluation of the co-generation system, as energy depends on imports. There is a risk of supply shortages due to international situations.
  - Lack of labor and materials: It may lead to completion schedule delays.
- 3. Scope of reduction strategy, plan, and/or reduction target : covers OUCC's Linyuan plant area.
- 4. Impact strategies, programs and/or reduction targets, related "Emissions Limitation Programs" and/or "Emissions Programs/Regulations," including:
  - The 2050 net-zero emissions target is incorporated in accordance with the amendments of the Climate Change Response Act.
  - The carbon fee will be collected in stages and implemented as soon as 2024.

Air Quality

### RT-CH-120a.1

Air emissions of the following pollutants:

- 1. NOx (excluding N2O)
- 2. SOx
- 3. volatile organic compounds (VOCs)
- 4. hazardous air pollutants (HAPs)

	2023
NO <sub>x</sub>	4.133 MT
SO <sub>x</sub>	0 MT
VOCs	25.382 MT
HAPs	NA
РМ	0.341 MT



### RT-CH-140a.1

(1) Total water withdrawn, (2) total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress

- 1. Total water withdrawn: 1,581.808 thousand m<sup>3</sup>
- 2. total water consumed: 1,186.564 thousand m<sup>3</sup>
- 3. No water withdrawn/use from water-stressed areas.

### RT-CH-140a.2

Number of incidents of non-compliance associated with water quality permits, standards, and regulations.

1. In 2023, OUCC had no incident of non-compliance associated with water quality permit.

### RT-CH-140a.3

Description of water management risks and discussion of strategies and practices to mitigate those risks

Explanation of water resources management-related risks and coping strategies.

1. Water management risks associated with water intake, consumption, and discharge and/or wastewater:

OUCC Linyuan Plant uses the water from the Fengshan Reservoir rather than the areas suffering from water shortage. The water is treated before use. As located in the industrial park, the plant's waste water is discharged into the industrial sewers, polluting no water source. To cope with the risk of a water shortage or floods caused by climate change, we have formulated a comprehensive water resource management plan, set water resource management objectives and cooperated with the local government to handle emergencies and water conservation measures.

- a. Short-term plan: OUCC continues to promote improvement projects in manufacturing processes and technology to conserve environmental water resources. The production capacity for reclaimed water is 1,000 MT per day, and the wastewater recovery rate is up to 70%, which can be used for cooling water tower replenishment.
- b. Medium/long-term strategy:
  - Continue to plan and implement water-saving plans and management programs.
  - Evaluate/plan cooling tower exhaust condensate recovery.



### Hazardous Waste Managemen

### RT-CH-150a.1

Amount of hazardous waste generated, percentage recycled

- 1. Hazardous waste generation: 0.03 MT
- 2. Hazardous waste recycling percentage: 0%

**Community Relations** 

### RT-CH-210a.1

Discussion of engagement processes to manage risks and opportunities associated with community interests

OUCC adheres to the corporate spirit of taking from the society and giving back to society. It recognizes the requirements of the community and society through conversation and engagement, sponsors charity foundations of public welfare organizations or affiliated companies in various forms, and participates in social activities. Furthermore, we collaborate with suppliers to maintain partnerships and actively invite suppliers and employees to participate in social welfare activities.

Every year, OUCC transfers the allotted amount of the good-neighbor fund to the Linyuan Industrial Zone Management Center's good-neighborliness account, which the Linyuan District Office will apply for and use in various local public welfare events. We also make various donations to firefighting and journalism units. In 2023, the entire local public welfare spending amount was around NT\$4.04 million, of which the Good Neighbor Fund portion is approximately NT\$3.93 million, and the remainder of NT\$100,000.

In 2023, a total of 116 street trees, roughly 350 square meters of greenery fences, and 2,028 square meters of green field were adopted for air purification through greening and improvement of the road landscape.

Workforce Health & Safety

### RT-CH-320a.1

(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees

Item	Direct employees	Contracted employees
Total work hours	658,970 hours	346,209 hours
Number of People with Recordable Occupational Injuries	1 person	0 person
Ratio of Recordable Occupational Injuries	0.3035 %	0 %
Number of fatalities as a result of occupational injuries	0 person	0 person
Percentage of fatalities as a result of occupational injuries	0 %	0 %

### RT-CH-320a.2

Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks

1. Ethylene oxide in our factory is a carcinogen, and the relevant evaluation and monitoring mechanisms are explained as follows:

Our goal is to completely avoid work-related illness through proper prevention. Regular on-site and workplace inspections are the basis for a comprehensive occupational health assessment. A qualified risk assessment is the rudiment for evaluation and improvement. Occupational medical expertise is integrated into the Company's technical and organizational innovation programs. Analyze the occupational medical examinations concerning possible health hazards in the workplace.

- 2. Chemical, biological, and physical hazards (including noise, vibration, radiation, and exposure to heat and cold in the workplace) and ergonomic and psychosocial hazards are assessed and controlled in routine operations. The following measures are adopted as part of our health risk management depending on the level of control:
  - Eliminate or replace health hazards.
  - Implementation or improvement of technical and engineering controls.
  - Optimizing work organization (including minimizing the frequency and duration of activities).
  - Implement environmental monitoring biannually.
  - Availability and correct use of personal protective gear.
  - Apply annual health check.
- 3. The anti-pandemic plan launched during the COVID-19 period includes measures to protect the health of employees, contractors, and third parties. The actions adopted include advocating hygiene concepts, tracing and breaking infection chains, providing information, and raising employee awareness.

Product Design for Use-phase Efficiency

### RT-CH-410a.1

Revenue from products designed for use-phase resource efficiency

• NT \$113,088,226 in 2023

Safety & Environment Stewardship of Chemicals

### RT-CH-410b.1

(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment.

- 1. Percentage of GHS health and environmental hazard substances contained in the product: 100%
- 2. Percentage of products containing GHS health and environmental hazard substances that have undergone a hazard assessment: 100%

### RT-CH-410b.2

Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact.

- Waste prevention: The R&D has also planned a series of CO<sub>2</sub> (CO<sub>2</sub>-contained) products and carbon capture agent products since the end of 2021 to capture and reuse the CO<sub>2</sub> generated from the process to reduce carbon emissions; complete the basic technology development for carbon dioxide capture agent N-methyldiethanolamine (MDEA) and be followed by evaluating the market benefits based on this technology as the feasibility foundation for factory establishment and mass production.
- 2. Recycling: Using recycled PET as raw material and using one-step alcoholysis-repolymerization technology to develop a series of recycled polyester polyols (recycled PET/rPET) with more than 50% recycling content, and in line with Far Eastern New Century Corp. to further produce products containing 20% recycled PU materials for fabric, which has been verified by downstream customers.
- 3. Biodegradability: Successfully developed a non-ionic surfactant containing 20wt% recycled PET using recycled PET as raw material through chemical alcoholysis and EO ring-opening polymerization technology with high biodegradability (>95%), low foaming and cleaning functions. An active agent product, which have passed the application test of the laundry ball product of downstream customer ANJIETEK, with a preliminary estimation of approx. 35% carbon footprint reduction compared to AEO (L78) with the same cleaning function.



Genetically Modified Organisms

### RT-CH-410c.1

Percentage of products by revenue that contain genetically modified organisms (GMOs)

OUCC has no genetically modification-related products.

Management of the Legal & Regulatory Environment

### RT-CH-530a.1

Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry.

In terms of process safety, OUCC focuses on mechanical integrity (MI) to build a complete and more intelligent PSM structure. Although process safety management (PSM) has been practiced for many years, most promotion efforts still focused on the "personnel" unit of PSM. Nowadays, efforts have been made to strengthen the "technology" unit (process safety information, PSI and process hazard analysis, PHA) & "equipment" unit (MI) and continue to enhance comprehensive process safety management and building a safe workplace.

- 1. OUCC participates in public environmental regulation hearings related to the chemical industry.
- 2. Invited to participate in unscheduled industry forums to share management technology and practical experience. On 14 November 2023, we participated in National Environmental Accident Case Seminar hosted by the Ministry of Environment to conduct exchanges of international process safety management technology and experiences, improve the process safety of domestic industries, and integrate with international standards.
- 3. Regularly discuss the impact of environmental laws and regulations at the Monthly Linyuan Safety Meeting.

Operational Safety, Emergency Preparedness & Response



Specialty Chemicals

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## Appendix - Climate-related Information of TWSE and TPEx Listed Companies

### Risks and opportunities brought by climate change and related countermeasures taken by the Company

	Disclosure Item	Implementation Status
1	Description of the oversight and governance by the Board of Directors and the management on climate-related risks and opportunities	See P.44 of OUCC's 2023 TCFD report for details
2	Description of how the identified climate risks and opportunities affect the businesses, strategies, and finances of the Company (in the short, medium, and long term)	See P.45 of OUCC's 2023 TCFD report for details
3	Description of the financial impact arising from extreme weather events and transitional actions	See P.45 of OUCC's 2023 TCFD report for details
4	Description of how the climate risk identification, assessment, and management processes are integrated into the overall risk management system	See P.45 of OUCC's 2023 TCFD report for details
5	Description of the used scenarios, parameters, assumptions, analysis factors, and main financial impacts if scenario analysis is used to analyze or assess the resilience against climate change risks	See P.45 of OUCC's 2023 TCFD report for details
6	Description of the content as well as the metrics and targets used for any transition plan to identify and manage physical risks and transition risks for any transition plan to respond or manage climate-related risks	<ol> <li>Develop green and low-carbon chemical technologies in response to the carbon neutrality trend (details on innovative R&amp;D P.18)</li> <li>Develop Renewable Energy</li> </ol>
7	Description of the basis for pricing if an internal carbon price is used	No internal carbon pricing mechanism has been promoted.
8	Description of the activities covered, scope of greenhouse gas emissions, timeframes planned, annual progress and so on if climate-related targets are set; description of the sources and quantity of carbon credits or the quantity of renewable energy certificates (RECs) for offset if carbon offset or RECs are employed to achieve relevant targets	See P.85-95 of this report for details.
9	GHG inventory and assurance (fill in details in the table below)	See the table below for details

### 1-1 Greenhouse Gas Inventory and Assurance Status for the past two years

### 1-1-1 Greenhouse Gas Inventory and Assurance Status

Item	2022	2023	Info covered boundary
Scope 1	30,437.1649 t-CO <sub>2</sub> e	28,260.7904 t-CO <sub>2</sub> e	Individual company
Scope 2	316,225.0684 t-CO <sub>2</sub> e	317,270.0525 t-CO <sub>2</sub> e	Individual company
Scope 3	456,940.3116 t-CO <sub>2</sub> e	547,830.5575 t-CO <sub>2</sub> e	Individual company
Total emission (scope 1+2)	346,662.2333 t-CO <sub>2</sub> e	345,530.8429 t-CO <sub>2</sub> e	Individual company
Total emission (scope 1+2+3)	803,602.5449 t-CO <sub>2</sub> e	893,361.4004 t-CO <sub>2</sub> e	Individual company
Operating Revenue	12,770.275 NTD M	10,347.248 NTD M	Individual company
Intensity (scope 1+2)	27.146 t-CO <sub>2</sub> e / NTD M	33.3934 t-CO <sub>2</sub> e / NTD M	Individual company
Intensity (scope 1+2+3)	62.9276 t-CO <sub>2</sub> e / NTD M	86.3378 t-CO <sub>2</sub> e / NTD M	Individual company

### 1-1-2 Greenhouse Gas Assurance Status

The relevant data of Linyuan plant was verified by the third-party SGS-Taiwan and obtained ISO 14064-1:2006 and ISO 14064-1:2018 verification statements.



### 1-2 GHG Reduction Goal, Strategy and Action Plan

Base Year	Base Year Carbon Emission	Carbon Emission Reduction Goal	Carbon Emission Reduction Strategy	Action Plan	Achievement
2015	320,946 t-CO <sub>2</sub> e	35% Carbon emission reduction by 2030	Please refer to Chapter 4 Solid Contribution for d		bution for detail.

### Appendix - Sustainability Disclosure Indicators - Chemical Industry

No.	Indicator	Disclosure status Remarks
_	Total energy consumption, percentage of purchased electricity, the utilization rate of renewable energy, and total self-generated and self-consumed energy	<ol> <li>Total Energy Consumption: 3,153,367.222 GJ</li> <li>Percentage of purchased electricity: 100 %</li> <li>Renewable energy usage rate: 0 %</li> <li>The total amount of self-generated and self-consumed energy: 0 GJ</li> </ol>
_	Total water intake, total water consumption, and waste (sewage) discharge according to legal requirements or voluntary disclosure	<ol> <li>Total water intake volume: 1,581.808 m<sup>3</sup></li> <li>Total water consumption volume: 1,186.564 m<sup>3</sup></li> <li>Total water discharge volume: 394.472 m<sup>3</sup></li> </ol>
Ξ	The "total amount of hazardous waste" produced by the "product production process" required by law or voluntarily disclosed, and the "recycling percentage."	<ol> <li>The weight of hazardous waste produced by the product production process: 0.03 MT</li> <li>Recycling percentage of hazardous waste produced by the product production process: 0%</li> </ol>
四	Explain the number of occupational accidents and the rate.	<ol> <li>Number of occupational accidents: 1 person</li> <li>Occupational accident rate: 0.3035 %</li> </ol>
五	Operating activities that have significant actual or potential negative impacts on local communities.	The chemical processes employed by OUCC and others in the same industry will pollute the air during the production process. If this is not managed properly, it can have an actual or potential negative impact on local communities.
六	The specific and effective mechanisms and actions taken by the enterprise itself and its suppliers to reduce the negative impact on the environment or society.	Environmental Prevention Mechanism (p.101) Transportation Zero Accident Details (p.121-p.122) Social Inclusion (p.107)
t	Product output by product category	<ul> <li>Ethylene oxide and ethylene glycol products: 278,850 MT</li> <li>GAS products: 602,415 MT</li> <li>Ethanolamine products: 30,664 MT</li> <li>Ethylene glycol butyl ether products: 40,593 MT</li> <li>EC products : 47,463 MT</li> <li>EOD products: 37,445 MT</li> </ul>

### GRI Standards Index

Statement of use	OUCC has reported in accordance with the GRI Standards for the period 2023/1/1 to 2023/12/31
GRI 1 used	GRI 1 : Foundation 2021
GRI Standards Index	Ν/Α

GRI		Page /	Omission		
Standards		Comment	Requirement	Reason	Explanation
GRI 2: Gene	GRI 2: General Disclosure 2021				
The organiza	tion and its reporting practices				
2-1	Organizational details	2			
2-2	Entities included in the organization's sustainability reporting	2			
2-3	Reporting period, frequency and contact point	3			
2-4	Restatements of information	-	N	o restated	info
2-5	External assurance	2-3			
Activities and	workers				
2-6	Activities, value chain and other business relationships	15,80			
2-7	Employees	62			
2-8	Workers who are not employees	64			
Governance					
2-9	Governance structure and composition	126-127			
2-10	Nomination and selection of the highest governance body	38			
2-11	Chair of the highest governance body	38			
2-12	Role of the highest governance body in overseeing the management of impacts	38			
2-13	Delegation of responsibility for managing impacts	38			
2-14	Role of the highest governance body in sustainability reporting	38,40			
2-15	Conflicts of interest	39			
2-16	Communication of critical concerns	38			
2-17	Collective knowledge of the highest governance body	38			
2-18	Evaluation of the performance of the highest governance body	38			
2-19	Remuneration policies	40			
2-20	Process to determine remuneration	40			
2-21	Annual total compensation ratio	40			

GRI	Disclosure Items	Page /	Omission		
Standards		Comment	Requirement	Reason	Explanation
Strategy, poli	cies and practices				
2-22	Statement on sustainable development strategy	6			
2-23	Policy commitments	47			
2-24	Embedding policy commitments	47			
2-25	Processes to remediate negative impacts	47			
2-26	Mechanisms for seeking advice and raising concerns	47			
2-27	Compliance with laws and regulations	47,105			
2-28	Membership associations	59			
Stakeholder e	engagement				
2-29	Approach to stakeholder engagement	53-54			
2-30	Collective bargaining agreements	65			
GRI 3 : Mat	rerial Topics 2021				
3-1	Process to determine material topics	54			
3-2	List of material topics	55-56			
3-3	Management of material topics	57-58			
GRI 201 : Eco	onomic Performance 2016				
202-1	Direct economic value generated and distributed	36			
202-2	Financial implications and other risks and opportunities due to climate change	44-45			
201-3	Defined benefit plan obligations and other retirement plans	73			
201-4	Financial assistance received from government	22			
GRI 202 : Ma	rket Presence 2016				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	74			
202-2	Proportion of senior management hired from the local community	62			
GRI 204 : Pro	ocurement Practices 2016				
204-1	Proportion of spending on local suppliers	83			
GRI 303 : Wa	ter and Effluents 2018				
303-1	Interactions with water as a shared resource	96			
303-2	Management of water discharge-related impacts	99			
303-3	Water withdrawal	97			
303-4	Water discharge	97			
303-5	Water consumption	97			

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GRI	Discharge Hange	Page /	Omission		
Standards	Disclosure Items	Comment	Requirement	Reason	Explanation
GRI 305 : EI	missions 2016				
305-1	Direct (Scope 1) GHG emissions	88			
305-2	Energy indirect (Scope 2) GHG emissions	88			
305-3	Other indirect (Scope 3) GHG emissions	89			
305-4	GHG emissions intensity	88			
305-5	Reduction of GHG emissions	88			
305-6	Emissions of ozone-depleting substances (ODS)	NA			
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	100			
GRI 401 : EI	mployment 2018				
401-1	New employee hires and employee turnover	64			
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	74-76			
401-3	Parental leave	75			
GRI 403 : O	ccupational Health and Safety 2018				
403-1	Occupational health and safety management system	112,128			
403-2	Hazard identification, risk assessment, and incident investigation	120,128			
403-3	Occupational health services	113,129			
403-4	Worker participation, consultation, and communication on occupational health and safety	112,129			
403-5	Worker training on occupational health and safety	117,129			
403-6	Promotion of worker health	113,129			
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	130			
403-8	Workers covered by an occupational health and safety management system	112,130			
403-9	Work-related injuries	118,130			
403-10	Work-related ill health	118,131			
GRI 407:Fre	eedom of Association and Collective Bargaining 2016 ( Non-material top	ics, disclose	d as required l	by governm	ent policies)
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk			No r	estated info
## Assurance Statement

SGS

# ASSURANCE STATEMENT

## SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE ORIENTAL UNION CHEMICAL CORPORATION'S SUSTAINABILITY REPORT FOR 2023

## NATURE AND SCOPE OF THE ASSURANCE

SGS Taiwan Ltd. (hereinafter referred to as SGS) was commissioned by ORIENTAL UNION CHEMICAL CORPORATION (hereinafter referred to as OUCC) to conduct an independent assurance of the Sustainability Report for 2023 (hereinafter referred to as the Sustainability Report). The scope of assurance is based on the SGS Sustainability Report Assurance methodology and AA1000 Assurance Standard v3 Type 1 Moderate level to assess whether the text and data in accompanying tables contained in the report presented and complies with the GRI Standards and AA1000 Accountability Principles (2018) during assurance (2024/05/02~2024/06/04) in OUCC headquarter .The assurance process did not include the evaluation of specific performance information outside the scope, such as climate-related financial disclosures (TCFD) and sustainability accounting standards (SASB).

SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

## INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all OUCC's Stakeholders.

## RESPONSIBILITIES

The information in the OUCC's Sustainability Report of 2023 and its presentation are the responsibility of the directors or governing body (as applicable) and management of OUCC. SGS has not been involved in the preparation of any of the material included in the ESG Report.

Our responsibility is to express an opinion on the report content within the scope of assurance with the intention to inform all OUCC's stakeholders.

## ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognized assurance guidance and standards including the principles of reporting process contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) GRI 1: Foundation 2021 for report quality, GRI 2: General Disclosure 2021 for organization's reporting practices and other organizational detail, GRI 3: 2021 for organization's process of determining material topics, its list of material topics and how to manages each topic, and the guidance on levels of assurance contained within the AA1000 series of standards.

The assurance of this report has been conducted according to the following Assurance Standards:



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#### AA1000ASv3 Type 1 Moderate (AA1000AP Evaluation only)

В

### SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of adherence to the following reporting criteria:

### **Reporting Criteria Options**

- 1 GRI Standards (2021)(in Accordance with)
- 2 AA1000 Accountability Principles (2018)
- AA1000 Assurance Standard v3 Type 1 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018) is conducted at a moderate level of scrutiny, and therefore the reliability and quality of specified sustainability performance information is excluded.
- The evaluation of the report against the requirements of GRI Standards, includes GRI 1, GRI 2, GRI 3, 200, 300 and 400 series claimed in the GRI content index as material and is conducted in accordance with the standards.

#### ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, interviews with relevant employees, superintendents, ESG committee members and the senior management in Taiwan; documentation and record review and validation with external bodies and/or stakeholders where relevant.

#### LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts, Task Force on Climate-related Financial Disclosures (TCFD) and SASB related disclosures has not been checked back to source as part of this assurance process.

## STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and assurance, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and ESG Report assurance. SGS affirm our independence from OUCC, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with ISO 26000, ISO 20121, SA8000, RBA, QMS, EMS, SMS, CFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

#### **ASSURANCE / VERIFICATION OPINION**

On the basis of the methodology described and the assurance work performed, we are satisfied that the disclosure with inclusivity, materiality, responsiveness, and impact information in the scope of assurance is reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria. We believe that the organization has chosen an appropriate level of assurance for this stage in their reporting.



## ADHERENCE TO AA1000 ACCOUNTABILITY PRINCIPLES (2018)

## INCLUSIVITY

OUCC has demonstrated management of stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, suppliers, sustainability experts, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns. **MATERIALITY** 

OUCC has established effective processes for determining issues that are material to the business. Formal review has identified stakeholders and those issues that are material to each group and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders.

## RESPONSIVENESS

The report includes coverage given to stakeholder engagement and channels for stakeholder feedback. **IMPACT** 

OUCC has demonstrated a process on identify and fairly represented impacts that encompass a range of environmental, social and governance topics from wide range of sources, such as activities, policies, programs, decisions and products and services, as well as any related performance. Measurement and evaluation of its material topics were in place at target setting metrics monitoring. For further reporting, OUCC could consider conducting impact identification of topics based on the difference between operational location.

## GLOBAL REPORTING INITIATIVE REPORTING STANDARDS CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

The report, OUCC's Sustainability Report of 2023, is adequately in accordance with the GRI Universal Standards 2021 and complies with the requirements set out in section 3 of GRI 1: Foundation 2021, where the significant impacts on the economy, environment, and people, including impacts on their human rights are assessed and disclosed following the guidance defined in GRI 3: Material Topic 2021, and the relevant 200/300/400 series Topic Standard related to Material Topic have been disclosed. The report has properly disclosed information related to OUCC's contributions to sustainability development, such as Occupational safety and health management. For future reporting, OUCC is encouraged to present the impacts and management of material issues along the value chain to highlight the overall effectiveness of the management approaches.

Signed: For and on behalf of SGS Taiwan Ltd.

Stephen Pao Business Assurance Director Taipei, Taiwan 3 July, 2024 WWW.SGS.COM



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## Accountant's Limited Assurance



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### 會計師有限確信報告

東聯化學股份有限公司 公鑒

本會計師接受東聯化學股份有限公司(以下簡稱「東聯化學」)之委任,對 2023 年度永續報 告書中所選定之永續績效資訊(以下稱「標的資訊」),執行財團法人中華民國會計研究發展基金 會所發布之確信準則所定義之「有限確信案件」並出具報告。

### 標的資訊及其適用基準

有關東聯化學之標的資訊及其適用基準詳列於附件。

#### 管理階層之責任

東聯化學管理階層之責任係依據臺灣證券交易所「上市公司編製與申報永續報告書作業辦法」之規定,以及參考適當之基準編製標的資訊,包括參考全球永續性報告協會(Global Reporting Initiatives, GRI)所發布之2021年GRI 準則(GRI Standards),東聯化學管理階層應選擇所適用之基準,並對標的資訊在所有重大方面是否依據該適用基準報導負責,此責任包括建立及維持與標的資訊編製有關之內部控制、維持適當之記錄並作成相關之估計,以確保標的資訊未存有導因於舞弊或錯誤之重大不實表達。

#### 本會計師之責任

本會計師之責任係依據所取得之證據對標的資訊作成結論。

本會計師係依照財團法人中華民國會計研究發展基金會所發布之確信準則 3000 號「非屬歷 史性財務資訊查核或核閱之確信案件」之要求規劃並執行有限確信工作,以對標的資訊是否存 有重大不實表達出具有限確信報告。本會計師依據專業判斷,包括對導因於舞弊或錯誤之重大 不實表達風險之評估,以決定確信程序之性質、時間及範圍。

本會計師相信已取得足夠及適切之證據,以作為表示有限確信結論之基礎。

#### 會計師之獨立性與品質管理

本會計師及所隸屬組織遵循會計師職業道德規範中有關獨立性及其他道德規範之規定,該 規範之基本原則為正直、公正客觀、專業能力及專業上應有之注意、保密及專業行為。

本事務所遵循品質管理準則1號「會計師事務所之品質管理」,該品質管理準則規定組織設計、付諸實行及執行品質管理制度,包含與遵循職業道德規範、專業準則及適用之法令規範相 開之政策及程序。

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所執行程序之說明

有限確信案件中執行程序之性質及時間與適用於合理確信案件不同,其範圍亦較小,因此, 有限確信案件中取得之確信程度明顯低於合理確信案件中取得者。本會計師所設計之程序係為 取得有限確信並據此作成結論,並不提供合理確信必要之所有證據。

儘管本會計師於決定確信程序之性質及範圍時曾考量東聯化學內部控制之有效性,惟本確 信案件並非對東聯化學內部控制之有效性表示意見。本會計師所執行之程序不包括測試控制或 執行與檢查資訊科技(IT)系統內資料之彙總或計算相關之程序。

有限確信案件包括進行查詢,主要係對負責編製標的資訊及相關資訊之人員進行查詢,並 應用分析及其他適當程序。

本會計師所執行之程序包括:

- 取得東聯化學 2023 年度報告書,並閱讀其內容;
- 與參與編制確信標的資訊之相關人員進行訪談,以瞭解編制前述確信標的資訊之流程, 以及攸關之內部控制;
- 基於對上述事項之瞭解,就確信標的資訊執行分析性程序,或於必要時檢視核對相關 文件,已取得有限確信之證據。

## 先天限制

因永續報告中所包含之非財務資訊受到衛量不確定性之影響,選擇不同的衡量方式,可能 導致績效衡量上之重大差異,且由於確信工作係採抽樣方式進行,任何內部控制均受有先天限 制,故未必能查出所有業已存在之重大不實表達,無論是導因於舞弊或錯誤。

## 結論

依據所執行之程序及所取得之證據,本會計師未發現標的資訊有未依照適用基準編製而須 作重大修正之情事。

安永聯合會計師事務所

會計師:劉瑩進

民國 一一三 年 六 月 二十八 日

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附件:

编號	對應章節	標的資訊	適用基準
1	四之(一):能源管理策 略	<ul> <li>(1)能源總消耗: 3,153,367.222 GJ</li> <li>(2)外購電力百分比: 100%</li> <li>(3)再生能源使用率: 0%</li> <li>(4)自發自用能源總量: 0 GJ</li> </ul>	「上市公司編製與申報 永續報告書作業辨法」第 四條第二款第一目之消 耗能源總量、外購電力百 分比、再生能源使用率及 自然自由性源總量。
2	四之(二):資源循環再 利用	<ul> <li>(1)總取水量:1,581.808 立方公尺</li> <li>(2)總耗水量:1,186.564 立方公尺</li> <li>(3)總排水量:394.472 立方公尺</li> </ul>	日次日川肥小恐里 「上市公司編製與申報 永續報告書作業辦法」第四條第二款第二目之總 取水量、總耗水量或依法 規要求或自願揭露之廢 (污)水排放量。
3	四之(三):環境預防機 制	<ul> <li>(1) 製程產生有害廢棄物之重量:</li> <li>0.03 公噸</li> <li>(2) 製程產生有害廢棄物之回收</li> <li>百分比:0%</li> </ul>	「上市公司編製與申報 永續報告書作業辦法」 第四條第二款第三日之 依法規要求或自願揭露 之產品生產過程所製造 之有害廢棄物總量,及 回收百分比。
4	五之(二): 製程零傷害 五之(三): 運輸零事故	<ul><li>(1)職業災害人数:1人</li><li>(2)職業災害比率:0.3035%</li></ul>	「上市公司編製與申報 永續報告書作業辦法」第 四條第二款第四目之職 業災害人數及比率。
5	五之(四):緊急應變機 制	東聯所處的化學產業,於製程中 會產生空污,若管理不嚴謹,則可 能會對當地社區帶來實際或潛在 負面衝擊之影響。	「上市公司編製與申報 永續報告書作業辦法」第 四條第二款第五目之對 當地社區具有顯著實際, 或潛在負面衝擊之營運 活動。
6	四之(三):環境預防機制 四之(四):促進社會共融 五之(三):運輸零事故	詳四之(三):環境預防機制 詳四之(四):促進社會共融 詳五之(三):運輸零事故	「上市公司編製與申報 永續報告書作業辦法」第 四條第二款第六目之企 業本身及其供應商,為降 低對環境或社會之負面 衝擊,所採取之具體、有 效機制及作為。
7	附錄︰永續揭露指標	<ul> <li>環氧乙烷及乙二醇產品: 278,850公頓</li> <li>GAS產品:602,415公頓</li> <li>乙醇胺產品:30,664公頓</li> <li>乙二醇丁醚產品:40,593公頓</li> <li>碳酸乙烯酯產品:47,463公頓</li> <li>EOD產品:37,445公噸</li> </ul>	「上市公司編製與申報 永續報告書作業辦法」第 四條第二款第七目之依 產品類別之產品產量。

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