Environmental

Environmental

Key Performance



GHG emissions 7,184.3_{tC02-eq}



EPD Environmental Product Declaration 16% saving (power consumption)



Obtainment of certification



environmental laws and regulations ZERO



Environmental Management and Development of Eco-friendly Products **Response to Climate Change**

0

Environmental Impact Management

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2 RESPONSIBLE CONSUMPTION AND PRODUCTION

Environmental Management and Development of Eco-friendly Products

Environmental Management System

Environmental Management Policy

Recognizing that environmental factors arising from business activities not only significantly impact our production and supply system but are also directly linked to the continued survival of humanity, Seoyon E-Hwa places great importance on environmental management. As a leader in the automotive interior parts industry, we have established a comprehensive company-wide environmental policy to guide us in minimizing environmental risks across all stages of design, production, and sales. Additionally, we recognized the need to proactively revise our environmental management policy to stay abreast of the latest trends and enhance our environmental practices. Consequently, in the first half of 2024, Seoyon E-Hwa revised and disseminated its environmental management policy across four sections.



Seoyon E-Hwa's Environmental Management Policy



Establish core strategies to achieve carbon neutrality and continuously manage performance to achieve the goal

Carry out resource recycling and energy reduction activities, such as developing eco-friendly materials, introducing eco-friendly processes, and improving process efficiency through automation

Fulfil our corporate legal and social responsibilities towards the environment by strictly complying with domestic and international environmental laws and conventions



All executives and employees recognize the seriousness of environmental problems and faithfully comply with their responsibilities and obligations for environmental improvement activities



Environmental Management and Development of Eco-friendly Products

Environmental Management Governance

To internalize sustainability management and strengthen environmental management, Seoyon E-Hwa has established the ESG Committee, the premier decision-making body comprised of outside directors. In addition, the Company has a general department that manages safety, health and environmental management at all business sites. The CEO is in charge of the environmental management system and monitors and supervises the strategy and status of the company-wide environmental management. The company sets detailed goals for environmental management every year and conducts monitoring of environment-related indicators to actively respond to various environmental risks.

Environmental Management Implementation Organization



Environmental Risk Management

Compliance with Environmental Regulations

Seoyon E-Hwa has distributed the Environmental Law and Regulations Update to all domestic worksites, which is used to continuously monitor environmental laws and regulations. The Safety and Health Support Department checks and reports on amendments to the Air Environment Protection Act, Groundwater Act, Waste Management Act, and Chemicals Management Act at all times. If there are any amendments to these laws, we immediately reflect the changes in the Environmental Law and Regulations Update and notify the relevant departments to ensure that the revised information is applied to their work. We also conduct our own compliance assessment once a year to ensure that no violations of laws and regulations occur. To date, there have been no cases of violations of environmental laws and regulations.

Environmental incident and Emergency Response

Seoyon E-Hwa follows an emergency management process to ensure the prevention of damage spread and immediate response in the event of environmental accidents caused by industrial accidents and natural disasters. The document stipulates the roles of each department in taking action in emergency situations, starting with the receipt and understanding of the situation of accidents at each workplace. The document stipulates that even after recovery measures are taken, the potential environmental impact of the pollutants generated by the incident be analyzed, and continuous follow-up management carried out until the incident is fully restored to below the standards set by the Company. Furthermore, after all measures are completed, an incident report is created to analyze the cause and take countermeasures. Based on the report, we conduct emergency response drills to prevent similar incidents from recurrence.

Environmental Accident Management Process



Environmental Management and Development of Eco-friendly Products

Environmental Management System Certification

Seoyon E-Hwa has obtained ISO 14001 certification, the international standard for environmental management systems, and based on this, we systematically manage and inspect environmental impacts at our domestic and overseas business sites. As of December 2023, three domestic and 11 overseas plants are certified, with management activities carried out to review the certification every year. With the goal of achieving 100% certification of domestic and international operations, our U.S. Urban plant is on track to be certified in 2024 and our Mexico operations in 2025. Through this, we will proactively manage and improve environmental risks that may arise at all sites.



Environmental Training for Employees

To raise employees' awareness of ESG management, Seoyon E-Hwa distributes card news containing basic concepts and key issues related to ESG twice a month. In addition, environmental technicians appointed to manage environmental pollution emission facilities must complete statutory training within one year of appointment, and relevant refresher training every three years. At Seoyon E-Hwa, employees appointed as air pollution environmental technicians and waste disposal personnel complete mandatory training for systematic and professional operational management. In addition, the R&D Center and each manufacturing site conduct two-hour training on Material Safety Data Sheets (MSDS) to prevent accidents that may occur in the handling and management of chemicals.

Obtainment of the ISO Certification

Classification		V	Workplace		Valid Period
Domestic	Monufacturing	Ulsan		0	2024-08-24
100	Manufacturing	Asan		0	2024-08-24
100 %	Non-manufacturing	Pyeongchon (H	Pyeongchon (Head Office R&D Center)		2024-08-24
		Jiangsu, China	0	2025-08-31	
Overseas			Beijing, China	0	2027-03-22
		Asia	India, India	0	2025-04-29
	Manufacturing		Chennai, India	0	2027-04-02
			Anantapur, India	0	2025-03-31
		Europe	Turkye	0	2024-07-23
			Slovakia	0	2025-05-18
85%			Poland	0	2027-03-15
			Alabama, USA	0	2024-10-18
			Georgia, USA	0	2027-03-25
		Americas	Americas Auburn, USA		- (Scheduled to June 2024)
			Brazil	0	2027-05-18
			Mexico	×	- (Scheduled to 2025)

Distribution of ESG Card News

	About climate			
Carban nautrality	change and climate	Do electric vehicles	Hyundai Motor	Learn about
Carbon neutrality	crisis, climate	also produce	Company's	greenhouse gas
by the numbers	change and carbon	carbon emissions?	Sustainability Report	inventory
	neutrality methods			

Environmental Trainings in 2023

Classification	Subject / Completed (persons)	Training Institution
Environmental engineer – air pollution	1/1	Environmental Conservation Association
Waste disposal manager	1/1	Environmental Conservation Association
ESG, sustainability report writing practice	2/2	Korea Productivity Center
Practical training to respond to ESG regulations	2/2	Korea Environmental Industry and Technology Insti-tute
ESG ON Seminar	1/1	Korea Environmental Industry and Technology Insti-tute
MSDS training	243/231	In-house training
Understanding of ESG management	19/19	In-house training

Environmental Management and Development of Eco-friendly Products

Eco-friendly Materials and Product Development

Development of Eco-friendly Materials

Direction of Materials Development Research

Seoyon E-Hwa collaborates with many companies in the peer industries to develop eco-friendly materials and parts, including recycled/biofabrics, natural fiber composites, and lightweight composites. We research new materials for interior and exterior automotive parts, and evaluate various material specifications to ensure lightweight, eco-friendly, and functional performance. Seoyon E-Hwa has been actively involved in the development of eco-friendly materials for many years and has successfully commercialized eco-friendly materials as a result.

Advanced Material Research

Review of the new material application of automotive interior/exterior parts and evaluation of various material specifications



New Method Research

Engineering Method Research

Seoyon E-Hwa's R&D Centre conducts research on the development of eco-friendly materials, as well as new methods for the structure and manufacturing of automotive interior and exterior parts.

Research on Methods (New Technology & Production Method Research)

Development of new technologies/methods for the structures and manufacturing methods of automotive interior/exterior parts



Interdisciplinary integration technology



Local proximity air-conditioning system
Surface emitting lighting with soft-trim
Multi – focused infinite mirror lighting pattern



New production method

Ultra-precise mold control for Foaming injection
Core rotation technology in co-injection mold
High-sensitivity fabric insert injection technology

Appendix

Environmental Management and Development of Eco-friendly Products

Key Eco-friendly Materials

Key eco-friendly materials at Seoyon E-Hwa are recycled PC/ABS and bamboo fiber composite resin and recycled PA6, which have been developed and commercialized.



Bamboo Fiber Composite Resins

Bio resin for wrapping cores with 20% Bamboo Fiber developed from bamboo fibers. Replaces existing composite resins containing 20% talc and reduces weight by approximately 7%. Developed in collaboration with Hanyang Advanced Materials, Daeha and GS Caltex, it has been applied to the upper trim and center trim of the MQ4 model and has been mass-produced since 2020.



MQ4: Sorento (Kia)



Developed by recycling selected PA6 after separating and shredding waste fishing nets, a typical marine waste product. The recycled PA6 content ratio is approximately 20% and has the same physical properties as 100% virgin PA6. To be applied to the frame inner cover and inner handle bracket of the ME1 model scheduled for mass production in 2024.



ME1: EV (Hyundai Motor Company)

SEOYON E-HWA Story

Eco-friendly Materials under Development

Seoyon E-Hwa collaborates with partners in joint research and development projects of various eco-friendly materials for the purpose of applying to in our commercial products.

Recycled paint- free olefin		Paint-free PP materials applied with HDPE of high-purity waste vinyl			
Recycled ABS	-	High heat-resistant ABS material applied with recycled ABS for household appliances			
Recycled PC/PET		PC/PET materials applied with recycled PC and PET			
Recycled PP for scrap car		Recycled PP from waste cars for ELV regulations			
Water filter PP material		PP materials applied with recycled water filters			
Cellulose composite resin		Cellulose composite resin for injection (embossed injection type)			
Natural fiber foam composites		Light and eco-friendly by developing natural fiber reinforced board foaming type			
Eco-Friendly Fabric		Eco-friendly fabric made from a blend of natural fibers (HEMP) and recycled PET			
Recycled fabric made of natural leather scraps		Woven yarn from recycled natural leather scraps (for D/T and P/T)			

Environmental Management and Development of Eco-friendly Products

Eco-friendly Products and Engineering Methods

Injection door trim with natural fiber inserts

Automotive door trim is one of Seoyon E-Hwa's core products. We have been conducting continuous research to use eco-friendly materials and apply eco-friendly engineering methods, and our efforts have led to our success in developing natural fiber insert injection door trim technology. We have been mass-producing this product since 2018, applying it to four vehicle models. The technology uses natural fibers such as Kenaf. By eliminating various environmental impacts from the manufacturing process of inorganic materials, we have reduced the weight of the parts by approximately 40%. We have also continuously improved possible quality issues such as fabric folds, rib blockage, and edge jamming in deep drawings during the process. Now that the technology has been proven to be capable of mass production, we plan to gradually expand its application to other interior parts.



Technology Process





SEOYON E-HWA Story

Winner of the Minister of Industry Award in 2023

Seoyon E-Hwa won the Minister of Industry Award at the 2023 Korea Tech Show, hosted by the Ministry of Trade, Industry and Energy, for its self-developed natural fiber insert injection door trim. This award proves that we have succeeded in lightweighting innovative parts using natural materials and shortening processes, and that our technology has been officially recognized. In order to respond to global greenhouse gas reduction policies and the resulting issues of corporate responsibility, we will continue to develop new materials and eco-friendly engineering methods in the future.



Environmental Management and Development of Eco-friendly Products

Applying Sandwich Engineering Method

As interest in eco-friendly materials and engineering methods among domestic and foreign automotive companies is rising, so is the demand for the use of recycled materials by domestic automotive interior manufacturers significantly in recent years. In response to this, Seoyon E-Hwa applied the sandwich molding engineering method to maximize the use of recycled materials in manufacturing plastic parts and to address shortcomings caused by single injection of ELV (*). This engineering method is a sandwich-like molding of the first (skin layer) and second (core layer) injection resin by sequentially injecting two types of materials from two nozzles into one gate. The product surface that directly faces the car interior and is in contact with passengers, and the rear mounting part of the product, which requires the assembly strength of the part, is molded with new material. The side recycled material injection part is also blocked to prevent the exposure of ELV recycled material, which completely prevents the odor caused by the recycled material. By applying this engineering method, Seoyon E-Hwa was able to maximize the amount of ELV recycled material used and also achieve skin coloring of the finished product. In addition, the number of VOCs (**) emitted from the use of ELV recycled material was reduced by approximately 31%, and the odor rating was reduced from 3.5 to 3.0 compared to single injection.

(*) ELV: End of Life Vehicle (**) VOCs: Volatile Organic Compounds

Sandwich Engineering Process



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* Toluene: Emission within the standard (1.5%)



Cross section of sandwich molded product



1st = Skin resin (Orange) 2nd = Core resin (Yellow)

TCFD Disclosure System

Environmental Social Ge

Response to Climate Change

Carbon Emissions Management and Strategic Climate Change Response

Direction of Climate Change Response

Seoyon E-Hwa promotes step-by-step goals and action plans for 'Carbon Neutral 2050' established under the goal of realizing an eco-friendly green company. In accordance with the TCFD (Task Force on Climate-Related Financial Disclosures), we have established climate change management goals, analyzed the risks brought about by climate change, and systematically implemented strategic eco-friendly activities in response.

Carbon Neutrality Vision & Plan

Governance Establishing response strategies Vision **Realization of an Eco-Friendly Green Company** Strengthening the Climate Change Analyzing climate change risks **Response Promotion System** and opportunities - ESG Committee - Identifying risks and opportunities Purpose **Global Auto Parts Supplier Contributing to Sustainable Ecosystem** - ESG implementation council and - Scenario analysis dedicated TFT Working group by each plant Mission Seoyon E-Hwa Carbon-Neutral by 2050 **Risk Management Goal and Indicator Management** Risk management at the company Goal and indicator management level **Energy Saving Strategic Activity** Partnership - Emissions management Plan - Risk management process and verification according to the environmental Setup of 2050 carbon neutrality goal Introduction of Intelligent Facility **Emission Quantity Inspection** Vision Dissemination management system - Environmental indicator data Improving Efficiency of Manufacturing Support for Partners **KPI** Management management Processes Development of Green Products Cooperation of Reduction Activity **Eco-Friendly Production Processes**

Carbon Neutrality Roadmap

	2024 ~ 2030 (Phase I)	2031 ~ 2040 (Phase II)	2041 ~ 2050 (Phase III)
	Expansion of green products and establishment of emission reduction foundation	Mission reduction performance management across all facilities	Achieving carbon neutrality including supply chain
Execution Goals	 Expansion of green products Development of carbon neutrality strategies and roadmap 	 Enhancement of carbon neutrality response across all facilities Effective emission reduction management for carbon neutrality 	Establishment and operation of carbon neutrality response including supply chain
Execution Strategies	Operation of climate response and carbon neutrality department Establishment of greenhouse gas inventories across all facilities	Expansion of carbon neutrality department oversight (all facilities) Enhancement of greenhouse gas inventory system (GHG protocol compliant)	Enhancement of carbon neutrality department oversight (all facilities and partners) Management of greenhouse gas inventories including supply chain

Response to Climate Change

Climate Change Governance

To ensure prompt and systematic response and decision-making on climate change risks, Seoyon E-Hwa established the ESG Committee under the BOD in March 2024 to establish a governance system that accommodates the organizational functions as required by the TCFD. The ESG department plans environmentrelated agendas, including climate change, in consultation with the ESG Implementation Council and the ESG TFT, and reports to the ESG Committee, which is composed entirely of outside directors, on a regular basis or as needed. The ESG Committee reviews the agenda as necessary before making the final decision.

Report on Climate Change Response

Date	Issue
Sep. 6, 2023	Report on the 2023 Sustainability Management Report publication plan Report on materiality assessment results and selection of materiality issues
May 14, 2024 •	 Report on the results of ESG management consulting in 2023 Related tasks: Participation in global climate change response tasks Direction of promotion: Reduction of GHG and advancement of renewable energy strategies Mid- to long-term roadmap: Review of reduction and transition strategies, review of mid- to long-term goals (draft) Report on 2024 ESG management promotion plan and approval of budget use
Jul. 3, 2024 (plan)	Report on the results of strategic consulting including carbon neutrality and edu- cation on ESG trends

The ESG department oversees ESG operations at domestic and overseas business sites. The ESG TFT and the safety, health, and environment departments at each business site establish strategies for responding to climate change and environmental management, and monitor the environmental management status of each business site.

Organization for Climate Change Response



Appendix

Response to Climate Change

Climate Change Response Strategy

Analysis of Climate Change Risks and Opportunities

Seoyon E-Hwa analyses the risks posed by climate change by dividing them into transition risk and physical risk, and then develops countermeasures alongside opportunities to minimize the potential financial impact on companies. Seoyon E-Hwa simulates both risks according to prevailing climate change scenarios. A relatively high transition risk is assumed if the temperature increase remains below 1.5°C compared to pre-industrial times. On the other hand, a relatively high physical risk is when the temperature increase is 2.0°C or higher due to the failure of each country's policy efforts to comply with the Paris Agreement. We draft our response strategies accordingly.

Classification		Factor	Perspective	Financial Impact	Potential Financial Impact	Countermeasures	
	Delicico and	 Disclosure of GHG emissions Mandatory disclosure of climate- related financial impacts 		Medium	Increase in data management costs Sanctions for unfaithful disclosure	Establishment of greenhouse gas inventory External verification of emissions and expansion of Scope 3 aggregation	
Transition risks	laws	 Expansion of the emissions trading system and rise in prices Tightening EU carbon border tax regulations 	Mid-term	Medium	 Increase in carbon emission purchase costs Penalties for excess emissions 	 Analysis of relevant systems and establishment of emission reduction plans for each EU country Gradual expansion of renewable energy use 	
	Market / reputation	 Increasing stakeholder (customer) demands and strengthening supply chain evaluation 	Short-term	High	Decrease in corporate reputation and increase in procurement costs	 Participation in global initiatives Establishing a climate change response system including overseas business sites 	
Physical risks	Natural disaster	 Business suspension due to typhoon/ flood/heavy snow/forest fire, etc. Production disruption due to interruption in raw material supply 	Mid-term	Medium	Recovery costs due to disasters and decrease in sales due to disruption Increase in raw materials procurement costs	 Enhancement of the emergency response management system at all workplaces Evaluation of the stability of supply to partner companies 	
	Abnormal weather	 Disruption of business operation and deterioration of quality Occurrence of safety accidents 	Long-term	Medium	Decrease in sales and increase in quality costs due to decreased operating rates	Expansion of application of safety and health policies Improvement of inventory management processes and regular monitoring	
Opportuni	Market	• Expansion of the eco-friendly/new technology parts market and increase in demand	Long-term	Medium	 Increase in sales of eco-friendly components New customer and new product opportunities 	Expansion of research and development of eco-friendly (low-carbon) materials and new products	
Opportuni- ties	Productivity	Energy supply disruption and price fluctuation risks Improvement of energy efficiency in business site	Short-term	High	 Increase in short-term costs due to the use of renewable energy Decrease in mid- to long-term costs due to energy savings in business sites 	 Review of the sequential introduction of renewable energy Improvement of cost structure 	

Climate Change Risk Management

Seoyon E-Hwa has established a four-step risk management process consisting of identifying and analyzing company-wide climate change risks, establishing strategies, and conducting response activities and monitoring. The ESG TFT department regularly monitors all business sites to proactively identify risks we may face based on analyses of peer companies and global climate disclosure regulations and issues. In addition, the person in charge of the environmental organization within each business site frequently manages energy efficiency and monitors greenhouse gas reduction targets and performance, thus ensuring timely identification of environmental impacts.

Risk Management Process



Response to Climate Change

Managing Climate Change Targets and Indicators

Seoyon E-Hwa has established GHG inventory in accordance with the ISO 14064-1:2018 guidelines in detail to accurately measure GHG emissions and manage target achievement. Direct sources of GHG emissions, such as companyowned production facilities and business vehicles used directly within the organizational boundaries of the headquarters and each business site, are classified as Scope 1. On the other hand, electricity consumed within the same organizational boundary is Scope 2. The emissions aggregated according to this standard have been verified by a third party. Seoyon E-Hwa will continue to improve its GHG inventory, including Scope 3, and strive to achieve carbon neutrality in 2050 by setting feasible targets and thoroughly monitoring them.

Managing Greenhouse Gas Emissions

Seoyon E-Hwa reduces greenhouse gas emissions from its business sites through various activities. Since 2023, we have been purchasing and leasing electric vehicles for delivery and corporate vehicles to reduce GHG emissions. In addition, we are considering installing an on-site PPA power generation facility on a 10,670 m² parking lot at our Ulsan Plant to be part of the K-RE100 declaration. Seoyon E-Hwa aggregates and monitors the GHG emissions of our own and our affiliates' plants, and together with our affiliates, we are working to set targets and implement measures to reduce GHG emissions.

GHG Reduction Goal and Roadmap



GHG Emissions (Scope 1, 2)

(Unit: tCO_2eq (emissions), tCO_2eq/KRW 100 million (intensity)

Seoyon E-Hwa 2024 Sustainability Report 31



Scope 3 Emissions Breakdown

Seoyon E-Hwa has selected four categories to calculate emission equivalents in order to manage Scope 3 GHG emissions generated throughout the supply chain. Going forward, we plan to expand the participation of suppliers and expand the scope of calculation to produce more accurate data.

Emission Items	C3. Fuel and electricity activities not included in Scope 1 and 2	C5. Waste generated during operation	C6. Employee business trip	C7. Employee commuting	
Emissions (Unit: tCO2eq)	61.7	631.3	1,362.6	363.9	
Details	Emissions generated during energy production and transportation	Emissions generated during the treatment process by waste management service providers	Emissions generated during employee business trips us- ing transportation owned or operated by third parties	Emissions generated during employee commuting using transportation owned or op- erated by third parties	

* Based on domestic business sites in 2023, Scope 3 is scheduled for third-party verification

** Applied emission factor: Environmental Product Declaration (EPD) assessment factor

*** Applied conversion factor: Korea Energy Agency petroleum product unit

Response to Climate Change

Implementation of Life Cycle Assessment (LCA)

To proactively respond to international regulations and transparently disclose our carbon emission reduction activities, we conduct a Life Cycle Assessment (LCA) of our core product, door trim. For the LCA assessment of door trim, which is an intermediate production material part of a vehicle, we considered the manufacturing stage and the pre-production stage. In the pre-manufacturing stage, raw materials with a cumulative mass contribution of 95% were reviewed, and the environmental impact of the transport stage was calculated by applying a one-way distance between suppliers. In addition, the product manufacturing stage included electrical energy, packaging materials, and direct waste used in the product manufacturing process. In addition to the door trim, Seoyon E-Hwa will upgrade its methodology to conduct LCA assessments for other products it produces.





Obtainment of Environmental Product Declaration (EPD) Certification





Seoyon E-Hwa is committed to environmental protection and achieving carbon neutrality by measuring the environmental impact of its entire process, from raw material procurement to product production, packaging, transportation, and disposal, and transparently disclosing these results. As part of this strategy, Seoyon E-Hwa maintains an Environmental Product Declaration (EPD) certification for door trim, its key production product.

Seoyon E-Hwa has meticulously devised and executed a systematic response strategy for precise carbon emissions measurement and reduction across the entire life cycle assessment (LCA) process.





Environmental Social

Appendix

Response to Climate Change

Energy Management at Workplace

Eco-friendly Workplace

Seoyon E-Hwa improves the efficiency of energy-consuming equipment installed at its Asan and Ulsan plants with a multi-control system that measures and controls energy usage in real time. Through this integrated energy management system, we are transforming our workplaces into energy-efficient and eco-friendly workplaces, and all employees are engaged in campaigns to save energy.

Air Compressor Multi Control System

In January 2024, Seoyon E-Hwa introduced a multi-control system at its Ulsan Plant. As a result, the plant saw an improvement in the operating efficiency of air compressors that consume a lot of electric energy, and was able to reduce power costs by optimizing equipment operation. Previously, each compressor was operated individually and had to be managed manually according to changes in air consumption, resulting in energy waste due to management losses. The multi-control system integrates all compressors to enable multi-control, so operation can be automatically managed according to air consumption. A monitoring system is also implemented to check real-time power usage, minimizing energy waste due to management losses. After applying the multi-control system, we confirmed through power usage analysis that there was a reduction in actual power usage, and we will continue to upgrade the system to improve energy efficiency.

Air Compressor Multi Control System



Electricity Saving Effect

Classification	Electricity Consumption (kWh)	Saving (kWh)	Saving Effect	
Jan. to Mar. 2023	312,780	-	-	
Jan. to Mar. 2024	260,748	52,032	16% saving	

Factory Energy Management System (FEMS)

Seoyon E-Hwa introduced an integrated Factory Energy Management System (FEMS) at the Asan plant that controls energy usage in real time to optimize energy usage. When the forecast power exceeds the target power, automatic control of the heating and cooling equipment is launched to cut the load in stages, thus reducing the instantaneous power peak value.

Energy-saving Campaign

Energy Saving

Campaign Poster

Seoyon E-Hwa's production sites are conducting energy campaigns to promote energy conservation and efficient use. In order to spread the culture of energy conservation and green living in all areas of life, employees, including plant managers, personally distributed campaign flyers and broadcast promotional videos. In addition, monitors for on-site posting were used to promote energy-saving materials, distribute campaign flyers, and display energy-saving materials on pop-up bulletin boards. We also distributed promotional materials by sending out emails requesting cooperation for power peak energy management during the winter and summer seasons.



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ESG Fact Book Appendix

Environmental Impact Management

Efforts to Mitigate Environmental Impact

Water Sources Management

Seoyon E-Hwa does not use much water compared to other industries producing products through the component assembly process. It mainly uses water and groundwater for domestic use in office spaces and cooling towers for its facilities. As a result, there is very little wastewater generated at its sites, and sewage is legally discharged to the local sewage treatment plant. Seoyon E-Hwa recommends that each business site reduce water use by increasing the amount of groundwater used compared to water supply. We also caution them to prevent the risk of water leakage due to winter freezes. In addition, we clean the water reservoirs at our sites twice a year in accordance with the Water Act, and we monitor the water quality by commissioning a professional inspection agency once a year.

Management of Air Pollution

Seoyon E-Hwa has established air pollutant management procedures to monitor air pollutants that may be generated in the manufacturing process and minimize their environmental impact. Environmental engineers at each plant maintain an operation log to ensure that air pollutant prevention facilities are properly operated to minimize the amount of pollutants emitted. As a result, the regulated pollutants emitted are strictly kept within 50% of the legal emission threshold. In addition, the safety and health support department at each plant conducts annual self-measurement of air pollutants in accordance with the Air Environment Protection Act and maintains emission levels that are significantly lower than the legal levels.

Waste Management

Waste generated at Seoyon E-Hwa's business sites is mostly waste synthetic resin, which is general waste. Waste from business sites is transported to the outside through a waste disposal contractor, and the quantity disposed of on the day is recorded in the waste management log. In addition, the waste to be transported is registered in the Korea Environment Corporation's waste legal disposal system, Allbaro System, to monitor the status of disposal and recycling. Seoyon E-Hwa reuses reusable PP resin generated from the injection process as raw materials after sales. We continue to comply with the 3R - Reuse, Reduce, Recycle - policy for waste management by reducing waste through improving the defect rate.

Water Saving Status



Air Pollutants Measurement Result

Business Site	Pollutant	Standard	Unit	2021	2022	2023
Lilcon	Dust	Legal: 30 In-house: 15	mg/sm ³	0.6	0.8	0.8
UISAIT	THC	-	ppm	8.0	-	-
Asan	Dust	Legal: 30 In-house: 15	mg/sm ³	-	-	-

* Based on domestic business sites (Asan plant does not have a crushing facility, so it is excluded from measurement.)

Waste Recycling Rate



Environmental Impact Management

Management of Hazardous Chemicals

Chemicals Management Policy at Business Sites

Seoyon E-Hwa does not directly use hazardous chemicals that fall under the Occupational Safety and Health Act or the Chemical Substances Control Act. Nevertheless, we have guidelines on how to handle and inspect all hazardous chemicals that may be used throughout our production and sales activities. By complying with the Dangerous Goods Safety Management Act and the Chemical Substances Control Act and conducting periodic inspections, we strive to prevent accidents that may occur due to hazardous chemicals. In order to purchase and use new chemicals, information on the substances is written and documented based on the guidelines, and their hazardousness is examined by relevant agencies. In addition, in accordance with the Occupational Safety and Health Act, we conduct work environment measurement by an external agency twice a year, and we conduct inspections of dangerous goods storage at least once every half-year to ensure worker safety.

Managing Material Safety Data Sheets (MSDS)

Seoyon E-Hwa provides Material Safety Data Sheets (MSDS) in all workplaces where hazardous chemicals are used so that workers who handle hazardous chemicals can see them and use and manage them safely. In addition, managers of these workplaces receive training every quarter on MSDS items, handling precautions and what to do in case of accidents, and understand the importance of MSDS management.

Managing International Material Data System (IMDS)

Seoyon E-Hwa enters information on the ingredients of parts used in the domestic and overseas vehicles it supplies into the International Material Data System (IMDS) to manage legal regulations, substance composition information, and safety-checked ingredients. We review outsourced parts directly through email requests to suppliers and request final approval from customers. The MSDS input process ends when the approved MSDS approval report is downloaded from the customer and delivered to quality department. Seoyon E-Hwa is taking the lead in managing hazardous chemicals by strictly complying with process on the IMDS management tasks that are common in the global automotive industry.

Hazardous Chemicals Management Process



MSDS Training Track Record

The number of MSDS-related training subjects in the workplace is increasing significantly every year. We aim to increase the participation rate to create a safer work environment, and in 2023, the participation rate was 95%, an increase of 3.1 percentage points year-on-year.



Environmental Impact Management

Commitment to Biodiversity Conservation

Biodiversity is the collective term for the diversity of all the species that live on Earth, the diversity of the ecosystems in which they live, or the diversity of the genes in living things. Biodiversity provides a safety net for the survival of all life on Earth, including humans. Therefore, it is imperative that our diverse conservation efforts maintain the delicate balance of these natural ecosystems.

Biodiversity Protection Policy

Seoyon E-Hwa recognizes that it receives various resources from nature for its business activities. Therefore, in order to prevent biodiversity risks that may occur in the entire process from production to sales and to practice biodiversity protection, Seoyon E-Hwa has a separate provision for biodiversity protection in its environmental management policy. Based on this policy, we will protect and restore biodiversity in the communities where our business sites are located.

Seoyon E-Hwa's Environmental Management Policy

Biodiversity Protection Management Process



Eco-friendly Activities for Communities

Muryongsan Keepers

The Muryongsan Keepers at Seoyon E-Hwa Ulsan Plant is an in-house volunteer club that conducts local environmental clean-up activities. This environmental volunteer group, comprised of Ulsan Plant employees and their families, conducts environmental clean-up activities with local residents in Ulsan's North District every month, contributing to improving local environment. Every month, the group visits designated areas to pick up cigarette butts and garbage, and their main activity is to clean up the local environment. In addition to these regular activities, when natural disasters such as forest fires have caused major damage to local communities, we also actively conduct special fundraising activities to restore the damage. In March 2022, we also delivered donations to the victims of the forest fires that occurred in the Uljin and Samcheok regions for a speedy recovery.



Environmental Cleanup Activities of the Muryongsan Keepers

Lantern Volunteer Association

Seoyon E-Hwa's Lantern Volunteer Association is a volunteer group organized by employees at the Ulsan Plant to contribute to the local community. Its main role is to improve the living environment and clean up the environment. Lantern Volunteer Association conducts environmental clean-up activities around rivers once a month to protect local river ecosystems and prevent water pollution. They also carry out home repair and cleaning activities for local residents who need to improve their living environment.



Environmental Cleanup Activities of the Lantern Volunteer Associatior

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ESG Performance Data

Environmental

Greenhouse Gas Emissions

	Classification	Unit	2021	2022	2023
Emissions (domestic)	Scope 1		575.2	687.1	710.5
	Scope 2	tCO₂eq	5,840.6	6,002.7	6,473.9
	Scope 1+2		6,415.8	6,689.7	7,184.3
	GHG emissions intensity	tCO2eq/KRW 100 million	0.60	0.54	0.45
	Scope 3	tCO2eq	-	-	2,419.5
GHG emissions	intensity target	tCO2eq/KRW 100 million	-	0.58	0.52
	Total amount of reduction		-	(273.99)	(494.57)
Deduction	Scope 1	tCO2eq	-	(111.88)	(23.39)
Reduction	Scope 2		-	(162.10)	(471.18)
	Year-on-year GHG reduction	%	-	-	(81)

* Collected based on ISO14054 and IPCC2006

** Applied emission factor: Environmental Product Declaration (EPD) assessment factor

*** Applied conversion factor: Korea Energy Agency petroleum product unit

*** Recalculated performance in 2021 and 2022 due to change in measurement method

Water Resource Consumption

	Classification	Unit	2021	2022	2023
	Total		56,091	58,592	54,718
	Water supply (Ulsan)		17,499	7,069	8,992
Water intake	Groundwater (Ulsan)		6,876	19,506	18,778
	Water supply (Asan)		11,960	15,261	6,074
	Groundwater (Asan)		12,970	9,900	13,620
	Water supply (Pyeongchon)		6,786	6,856	7,254
	Groundwater (Pyeongchon)		-	-	-
	Total		56,091	58,592	54,718
	Water supply (Ulsan)		17,499	7,069	8,992
	Groundwater (Ulsan)		6,876	19,506	18,778
	Water supply (Asan)		11,960	15,261	6,074
water consumption	Groundwater (Asan)		12,970	9,900	13,620
	Water supply (Pyeongchon)		6,786	6,856	7,254
	Groundwater (Pyeongchon)		-	-	-
	Water intensity	ton/KRW 100 million	5.20	4.73	3.44
Water discharge	Total		-	-	-
Water saving	Water supply	ton	7,059	6,866	7,059
	Groundwater		(9,560)	(2,992)	(9,560)
	Water use reduction rate compared to the previous year	%	-	(4)	7

* Recalculated performance in 2021 and 2022 due to change in measurement method

Energy Consumption

	Classification	Unit	2021	2022	2023
	Electricity		122.1	125.1	135.3
Non-renewable Energy _	Fuel	TJ	7.1	8.1	7.8
	Others		3.0	3.6	4.3
	Total energy consumption		132.1	136.7	147.3
	Energy consumption intensity	TJ/KRW 100 million	0.0123	0.0110	0.0093

* Recalculated performance in 2021 and 2022 due to change in measurement method

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ESG Performance Data

Waste Generation

	Classification Unit		2021	2022	2023
	Incineration		233.40	143.70	243.60
General waste Landfill Recycling Sale		-	-	-	
		209.11	98.95	121.18	
		165.24	46.70	80.27	
	Total	top	442.51	242.65	364.78
	Incineration	ton	-	-	-
Landfill Designated waste Sale Total	Landfill		-	-	0.08
	Recycling		6.60	2.30	11.55
	Sale		-	-	-
	Total		6.60	2.30	11.63
	Waste generation intensity	ton/KRW 100 million	0.04	0.02	0.02

Hazardous Chemicals

Classification	Unit	2021	2022	2023
Hazardous chemicals consumption	ton	-	-	-
Hazardous chemicals consumption intensity	ton/KRW 100 million	-	-	-

Eco-friendly Sales

Classification	Unit	2021	2022	2023
Sales of eco-friendly automotive parts	KRW 100 million	337.62	415.69	412.08

* Recalculated performance in 2021 and 2022 due to change in measurement method

Violation of Environmental Laws

Classification	Unit	2021	2022	2023
Number of violations of environmental laws	Cases	-	-	-

Waste Recycling

Classification	Unit	2021	2022	2023
Waste recycled	ton	215.71	101.25	132.73
Waste recycling rate	%	48.0	41.3	35.3

Environmental Risk Assessment

Classification	Unit	2021	2022	2023
Percentage of business sites that received assessment	%	-	-	-

Discharge of Chemicals

	Classification	Unit	2021	2022	2023
	TCE		-	-	-
	Chromium		-	-	-
Chemicals Manganese Tin Copper	Manganese	kg	-	-	-
	Tin		-	-	-
	Copper		-	-	-

Environmental Management and Environmental Training

Classification		Unit	2021	2022	2023
Environmental	Business sites subject to obtainment	Sites	15	15	16
management system	Business sites that obtained the certification	Sites	14	13	14
certification (ISO14001)	Obtainment rate	%	93	87	88
	Employees subject to environmental training	Persons	207	235	243
Environmental training	Participants in environmental training	Persons	205	216	231
	Ratio of participants in environmental training	%	99	92	95

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DNV BUSINESS ASSURANCE

GREENHOUSE GAS EMISSIONS VERIFICATION OPINION

No.: AO-PRJN-568280-2023-AST-ENG

SEOYON E-HWA CO., LTD.

Introduction

DNV Business Assurance Korea Ltd. ("DNV") was commissioned by SEOYON E-HWA CO., LTD. ("SEOYON E-HWA") to verify the Greenhouse Gas Inventories of SEOYON E-HWA for the calendar year 2022, based upon a limited level of assurance. SEOYON E-HWA are responsible for the preparation of the GHG emissions data on the basis set out within the 'ISO 14064-1:2018 (Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals). Our responsibility in performing this work is to the management of SEOYON E-HWA only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decisions, whether investment or otherwise, based upon this verification opinion.

Scope of Assurance

The emissions data covered by our examination comprise Direct emissions (Scope 1) and Indirect emissions (Scope 2) within the organization's business sites of the company established in accordance with the operational control;

- · Organizational boundary: SEOYON E-HWA headquarters (Pyeongchon) and 2 production plants (Ulsan and Asan)
- Operational boundary: Direct emissions (Scope 1 Emissions from Stationary and Mobile Combustion,) and Indirect emissions (Scope 2 Emissions from purchased electricity)

Verification Approach

The verification has been conducted by DNV in July 2023 and performed in accordance with the verification principles and tasks outlined in ISO 14064-32019 (Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions)². We planned and performed our work so as to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a verification opinion with 5% materiality level, concerning the completeness of the emission inventory as well as the reported emission figures in the unit of ton CO₂ equivalent. As part of the verification process:

- · We have reviewed and verified the Greenhouse Gas Inventory System (Excel based)
- · We have reviewed and verified the process to generate, aggregate and report the emissions data

Conclusions

Based on the above verification of core elements, it is the DNV's opinion that nothing comes to our attention to suggest that GHG Emissions are not properly calculated, and a significant uncertainty and error are not included in the GHG Emission of SEOYON E-HWA in the year 2022 below.

Greenhouse Gas Emissions of SEOYON E-HWA for Yr 2022

SEOYON E-HWA 687.063 6,002.682 6,690	Corporation	Direct emissions (Scope 1)	Indirect emissions (Scope 2)	Total emissions
	SEOYON E-HWA	687.063	6,002.682	6,690

* in other to report the error emissions as an integr, are rounded manned of the statement might be unrefer from the number of the system when + 1 (edge Total emissions = Direct emissions(Scope 1) + Energy indirect emissions(Scope 2)



Country Manager DNV Business Assurance Korea Ltd

Lee . Jang Sun

This Verification Opinion is valid as of the date of the issuance. Please note that this would be revised if any material discrepancy which may impact on the Greenhouse Gas Emissions of Company is subsequently brought to our attention. In the event of ambiguity or contradiction in this opinion between English version and Korean version, Korean shall be given precedent.



GREENHOUSE GAS EMISSIONS VERIFICATION OPINION

SEOYON E-HWA CO., LTD.

Introduction

DNV Business Assurance Korea Ltd. ("DNV") was commissioned by Seoyon E-Hwa Co.,Ltd. ("Company") to perform third party verification for the Company's Greenhouse Gas Inventory Report ("the report"). The Company is responsible for the preparation of the GHG emissions data on the basis set out within the "WR/WBCSD GHG Protocol:2004' and '2006 IPCC Guidelines for National Greenhouse Gas Inventories'. Our responsibility in performing this work is to the management of the Company only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decisions, whether investment or otherwise, based upon this assurance opinion.

Objectives and scope of verification

The purpose of this verification is to present an independent verification opinion on the company's greenhouse gas emissions, and the scope of verification is as follows;

- · Organizational Boundary: Seoyon E-Hwa Co., Ltd's Sites in Korea
- Operational Boundary: Scope 1 (Direct emissions), Scope 2 (Indirect emissions)
- Reporting period: 2023.01.01 ~2023.12.31

Verification Approach

The verification has been conducted in accordance with the verification principles and tasks outlined in the 'ISO 14064-3:2019', based upon a limited level of assurance. We planned and performed our work so as to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a verification opinion with 5% materiality level, concerning the completeness of the emission inventory as well as the reported emission figures in ton CO_2 equivalent. As part of the verification process, we have reviewed as follows;

- · Process to generate, aggregate and report the emissions data
- The data and information supporting the report were based on historical in nature. May include partially hypothetical
 and projected data and information (refer to the report for details)

Conclusions

Based on the process and procedures conducted, there is no evidence that the GHG statement is not materially correct and is not a fair representation of GHG data and information;

· DNV presents an 'Unmodified' opinion on Greenhouse Gas Emissions

(Unit:	ton	CO ₂ -eq)
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	Direct Emissions (Scope 1)	Indirect Emissions (Scope 2)	Total emissions
Seoyon E-Hwa Co., Ltd.	710	6,474	7,184

* Greenhouse gas emissions may differ by less than ± 1 tCO2-co due to rounding to report as an integer.

30 May 2024

Seoul, Korea



This Assurance Opinion is valid as of the date of the issuance. Please note that this Assurance Opinion would be revised if any material discrepancy which may impact the Greenhouse Gas Emissions of the company is subsequently brought to our attention.