

Expansion of Environmental Products and Services Creating Social Value (SV)*

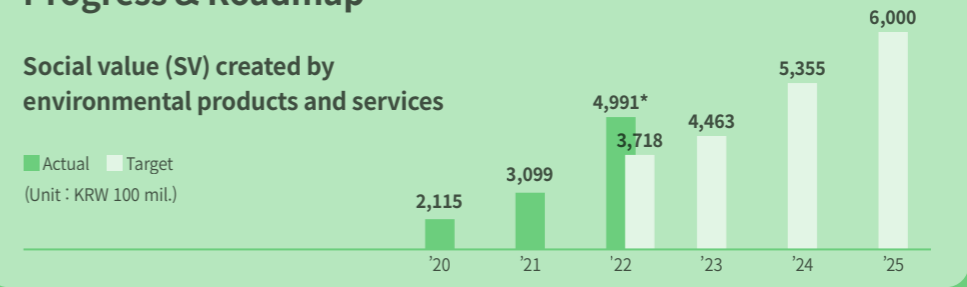
SK Innovation pursues both the qualitative and quantitative growth of products and services creating Social and environmental value and develops innovative solutions tailored to its financial story and stakeholders' demands.

* Based on the calculation system of the Center for Social value Enhancement Studies

Progress & Roadmap

Social value (SV) created by environmental products and services

Actual Target
(Unit : KRW 100 mil.)



* Exceeded the target (KRW 371.8 billion) for 2022



Strategies to Achieve Key Tasks (Mid-to Long Term)

In the mid- to long term, SK Innovation aims to create social value through its products and services at an annual growth rate of at least 20%, so that the total social value generated through its products and services will surpass KRW 600 billion by 2025, double the level seen in 2021. To this end, the company will introduce KPIs linked with green business models and social value creation and throw greater support for its subsidiaries to expand products and services with better environmental impacts. We will keep upgrading the existing solutions to increase the ratio of sales of those products and services. We will also push to build new green business models by developing and verifying formulas to calculate social value created by new solutions and aligning them with our financial story.

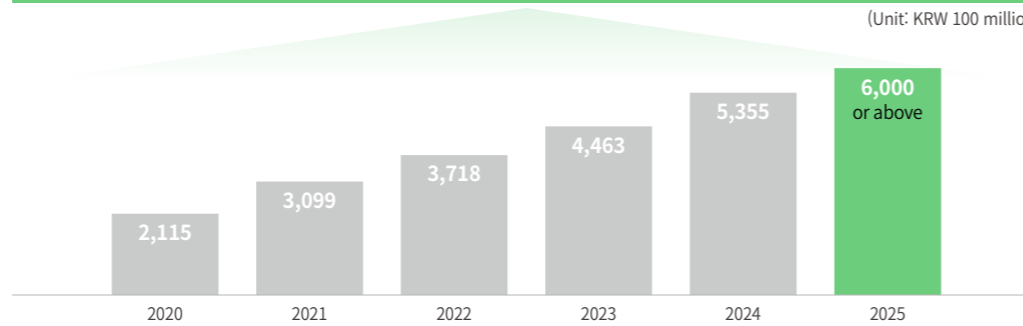
2025 Targets

Social value (SV) created by environmental products and services

KRW 600 billion or above

Yearly Execution Plan

(Unit: KRW 100 million)



Major Activities Planned for 2023

In 2023, SK Innovation is making a spurt to develop a new environmental business model aligned with its financial story, so that it can continue to expand its business portfolio focusing on products and services creating social and environmental value. Under the Carbon to Green strategy, the company will put priority on developing sustainable solutions aligned with carbon reduction and recycled products such as lubricant upcycling and plastic recycling, and will also increase sales.

Development of SV Calculation Formulas for New Products and Services

Develop formulas to calculate the environmental improvement effect of new products and services planned for commercialization ("i.e." upcycling lubricants and plastic recycling)



Upgrade of SV Calculation Formula

- Research and upgrade calculation methodologies (contribution rate, impact calculation methodology, etc.)
- Review calculation methods in collaboration with global partners such as Value Balancing Alliance (VBA) and Harvard Business School (HBS)

SK Innovation created a total of KRW 499 billion in social value through the quantitative growth of environmental products and services and the launch of innovative solutions meeting market demands.

Major Environmental Products and Services in 2022

Our Commitment



SK Innovation will continuously expand its business and product portfolios, including EV batteries, plastic recycling, and battery metal recycling, as part of our aggressive actions under the Carbon to Green strategy to achieve net zero.

- New Year Interview with SKInno News

Vice Chairman Kim Jun, SK Innovation



Social value calculation formulas for major products and services (p.155) →

Achievement 1 Recyclable Asphalt

SK Energy develops and supplies recyclable asphalt that enables the simplified recycling process of asphalt concrete and better reliability control. Our supply of recyclable asphalt facilitates the recycling of aged asphalt in waste asphalt concrete (recycled aggregate) and contributes to raising the recycling rate of waste ascon, which currently remains low, in Korea. Asphalt recycling is a good way of saving resources (as it helps to reduce the demand for aggregate quarrying and asphalt production) and cutting waste generation.

KRW 6.1 billion in 2022

Achievement 2 High-Performance Packaging Materials

SK Geo Centric is making a spurt in developing 3R solutions (reduce, replace, and recycle) under its strategy to cut waste plastic and carbon to zero and is exploring ways to increase plastic recycling. We developed a high-performance single material as packing film, which is easier to recycle and hence helps to raise plastic recycling rates. We are also partnering with distributors to use lightweight packaging so that we can reduce waste and promote people's green lifestyle conducive to resource circulation.

KRW 2 billion in 2022

Achievement 3 Group III Lube Base Oil

SK Enmove redefines itself as a partner for energy efficiency and makes devoted efforts to expand its portfolio of products, services, and technologies for carbon reduction. Group III lube base oil that SK Enmove produces through advanced hydrocracking reaction is graded as premium lube base oil according to the American Petroleum Institute (API)'s classification standards. The high viscosity, low sulfur content, and outstanding fuel efficiency of its Group III lube base oil mean less energy consumption and carbon emission.

KRW 160.3 billion in 2022

<p>Major Environmental Products and Services by SK Innovation and Its Subsidiaries</p>	<p>SK energy</p> <p>Middle-temperature asphalt, Recycle asphalt</p>	<p>SK geo centric</p> <p>Blowing agent to replace HCFC, Lightweight materials for automobile, High-functionality packaging materials, Recycled plastic</p>	<p>SK enmove</p> <p>Group III lube base oil, Lube base oil for EVs</p>
	<p>SK incheon petrochem</p> <p>Upcycling of waste heat from processes</p>	<p>SK trading international</p> <p>Chartering high-efficiency vessels</p>	<p>SK on</p> <p>EV batteries</p>

Achievement 4 Upcycling of Waste Heat from Processes

SK Incheon Petrochem has built infrastructure to share with local communities, whereby waste heat from petrochemical production is turned into resources for heating and cooling services. Waste heat, once abandoned from production processes, is now recovered and used for supplying heating and cooling services sufficient to cover up to 40,000 households for one year through local supply networks. The company also partners with district energy suppliers on energy upcycling to reduce greenhouse gases and air pollutants.

KRW 3.1 billion in 2022

Best Practices in 2022

Recyclable Asphalt

The Korean government encourages asphalt concrete recycling to deal with an enormous amount of waste asphalt concrete generated from road repair and maintenance every year. Yet, asphalt concrete manufacturers, most of whom are small businesses, struggle to add the facilities, such as tanks, driers, and burners, required to control the quality of the asphalt recycling process. While the Ministry of Land, Infrastructure and Transport notified that the mandatory use of recycled asphalt concrete would be raised to 40% by 2016, the actual use of recycled asphalt concrete under government contracts for asphalt concrete remained only 21% as of 2021. SK Energy developed asphalt that made asphalt concrete recycling easier, so as to help ease these challenges facing asphalt concrete manufacturers and enable more convenient quality control and production. We also support them to acquire a government certificate on the quality of recycled asphalt concrete and contributed a fund to help them construct asphalt tanks exclusive to recycled asphalt concrete. As such, SK Energy strives to promote win-win cooperation with asphalt concrete manufacturers and create social value of waste asphalt concrete recycling and less environmental cost by decreasing the landfill of waste asphalt concrete.



SK Energy and Inseung A&T complete the construction of an asphalt tank exclusive to recycled asphalt concrete

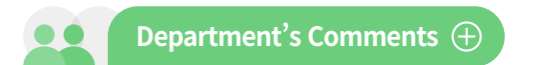


Advanced Recycling Cluster under Construction by SK Geo Centric

Key Tasks to Implement

Promote Plastic Recycling

SK Geo Centric adopted a strategy to cut waste plastic to zero and ultimately aims to ultimately recycle more waste plastic than actual production by increasing product manufacturing using recycled waste plastic. The company improved its plastic recycling business by introducing advanced pyrolysis technology and developing a post-treatment technology for pyrolysis. The company also works with many partners at home and abroad to construct a number of recycling plants, which includes the construction of the advanced recycling cluster (ARC) in Ulsan slated for start-up in 2025. The Ulsan ARC will be the world's first recycling cluster representing diverse chemicals-based technologies for plastic recycling, such as the largest pyrolysis plant in Asia. We are planning to expand waste plastic recycling to at least 2.5 million tons, equivalent to 100% of our plastic production in Korea and abroad, and increase the ratio of recyclable products to 100% by 2027. SK Geo Centric will make relentless moves for 3R solutions (reduce, replace, and recycle), thus creating an ecosystem for resource circulation and make continuous contributions to environmental protection, such as saving raw materials and cutting waste.



ESG SPECIAL PAGE

Deliver SKI’s Commitment to Climate Change Response at CES

CES 2022, SK, Your Companion

At CES 2022, SK Innovation proposed “Companion: SK, Your companion on the journey toward a Net Zero future)” as a key message delivering its commitment toward net zero that the company will decrease 200 million tons of carbon or 1% of the global reduction target for 2030 (21 billion tons). SK’s exhibition pavilion designed with a “green forest” concept, presented our activities and progress on carbon reduction as a journey through which visitors could experience what SK has done to clear up carbon.

SK Innovation declared 2022 as a starting year of internalizing Carbon to Green DNAs and showcased key performances on aggressive carbon reduction, such as EV batteries, separation membranes, plastic recycling, CCS, and green lubricants.

SK Innovation will continue constructive partnerships with its stakeholders to make the world carbon-free and have a positive influence.



Companion

SK, Your Companion on the Journey toward Net Zero Future

CES 2023, Together in Action

“Your companion on the journey toward Net Zero future” was our message delivered at CES 2022, and this year, SK Innovation proposed a new theme for CES 2023, “Moving toward a carbon-free future together” and reiterated its commitment to “actions” to cut carbon emissions through various innovative technologies.

Composed of four zones—Futuremarks, Together in Action, SK Around Every Corner, and Zero Arcade—the SK booth effectively demonstrated the continuous initiatives and efforts for SK and its partners to reach net zero and our commitment to triggering changes, with impactful directing and real products displayed. The Futuremark zone showed the dismal future that climate change may bring on with landmarks around the world submerged under water, thus making visitors take climate change seriously. The Together in Action zone expressed the intent of SK & Friends to lead the global movements to cut carbon by 1% worldwide. The SK Around Every Corner zone showcased SKI’s innovative technologies leading carbon reduction in daily life with real product displays and eye-catching videos. And finally, the Zero Arcade zone encouraged visitors’ participation. Our booth received rave reviews for conveying SKI’s strong commitment and well-organized storytelling.

Action

Moving Toward a Carbon-Free Future Together

Interviews with ‘Friends of Innovation’ Biz Partners

SK’s pavilion was a wonderful experience. There was a lot more to see than last year and it is a must-visit place for SK Innovation’s customers and other visitors to the fair.

Will McKenna
Marketing Communications Director at Solid Power

Our partnership with SK Geo Centric and its experience and excellence will be a springboard for us to complete our Plastic Asia Project with success.

Bruno Guillon
Chief Commercial Office at Plastic Energy

SK Innovation presented its confidence in EV batteries and battery materials by displaying real products in the booth: SK On’s SuperFast (SF) battery, which received the Best Innovation Award for the first time among Korean-made batteries, along with its NCM9+ battery, and SK IE Technology’s LiBS (Lithium-ion Battery Separator), both of which won the Innovation Award. Also on display were SK IE Technology’s flexible cover window (FCW) and SK Geo Centric’s lightweight material, UD Tape, each of which won the Best Innovation Award and the Innovation Award, and also SK Enmove’s EV fluid and immersion cooling technology. As such, our excellent technologies were introduced to potential customers and also highlighted our technology and vision for SMR and CCUS, which are hailed as green solutions.

SK Innovation will lead the way in creating a sustainable world by building upon its strong commitment and diverse achievements responding to climate change as demonstrated in CES 2023.

