

Partnership for Green Ecosystem

It takes collective efforts and cooperation across society to resolve environmental pollution and make a transition to a clean society. Knowing that, SK Innovation is seeking to create a green ecosystem where it works with the government and various stakeholders to select and develop promising startups with green solutions as partners to address environmental issues together.



2025 Targets

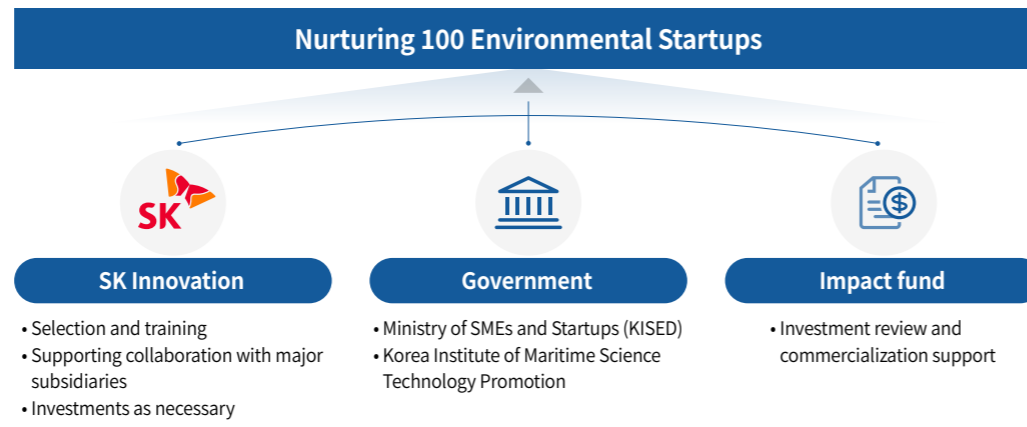
Nurturing environmental startups

100
startups in total

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

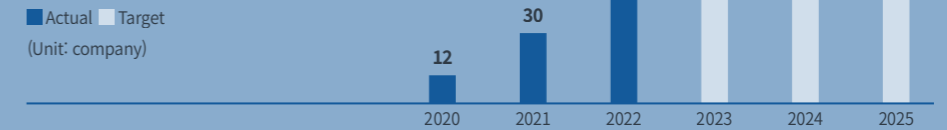
SK Innovation launched “EGG”, a project to support environmental startups, and discovered 20 promising startups in 2021. Ever since, we have supported around 20 startups every year and aim to bring the total number of startups we support to 100 by 2025. This will be done by securing a reliable pool of promising startups through long-term collaboration with the government and various partnerships with investment firms or our subsidiaries. The company will form at least three alliances for collaboration, like “EGG”, and expand existing low-carbon partnerships to other sectors of the environment. We will also establish policies to provide post-care to those startups we have nurtured and conduct continuous monitoring to build an efficient system to manage their performance.

Framework of the EGG Program



Progress & Roadmap

No. of green startups (running total)



Major Activities Planned for 2023

In 2023, we selected 16 environmental startups in the areas of biofuel, waste plastic recycling, safety inspection robots, etc. The company will provide them with a startup nurturing program that includes the Open Innovation session and training courses tailored to environmental startup lasting ten months. Furthermore, the company will add the preservation of marine ecosystems and biodiversity to the scope of the environmental agenda it intends to address and select startups to nurture in these new areas. We also plan to implement collaboration projects between our subsidiaries and startups, thus rendering opportunities for more startups to engage in our businesses.

Foray into New Areas of ESG

- Enter new areas related to ESG reflecting external stakeholders' demands (e.g., preservation of the marine ecosystem, biodiversity protection, green and smart agriculture).



Expansion of Partnership for Green Ecosystem

- Expand the pool of startups by partnering with the government and the private sector, in addition to existing partnerships, and lead the creation of an ecosystem for environmental startup.

SK Innovation has strived to create a robust ecosystem of environmental startups, operating the environmental venture scale-up program and supporting their participation in the Open Innovation session, which boiled down to tangible results: five MOUs and one product launch between SKI’s subsidiaries and startups.

Our Commitment



SK Innovation and its subsidiaries are strongly carrying forward “Carbon to Green” strategy to create its financial story. Nurturing environmental startups and a robust startup ecosystem would be key to addressing environmental issues.

- Business agreement signing ceremony with the Korea Institute of Startup & Entrepreneurship Development in 2022

CEO Cho Kyong-mok, SK Energy



Activities and Achievements in 2022

Achievement 1 Green Venture Scale-Up Program

EGG II Support for Green Startups

Following last year, SK Innovation proceeded with the second round of “EGG”, a project to foster a green ecosystem by nurturing startups in 2022. We provided competent and promising startups with systematic support, together developing low-carbon and resource-circulation collaboration models to create various environmental value, as well as advice on technologies and drawing investments, and measuring their social impact. In the second EGG, the company selected 15 environmental startups that scored high on business value, innovativeness, potential social impact, and potential synergy with our subsidiaries in environmental areas, including low carbon. We signed MOUs with five EGG startups to create tangible results through continuous collaboration and launched products made with their technologies in 2022. Moving forward, SK Innovation will remain a staunch supporter of environmental startups, helping them secure sustainable competitiveness and expediting the creation of a green ecosystem.

Achievement 2 Creating Value through Collaboration

Hue-Cycle Campaign by SK Geo Centric and Inobus

SK Geo Centric has put forward the “Hue(Rest)-Cycle Campaign” since 2022 in collaboration with a green startup, “Inobus”. This campaign aims to recycle waste plastic collected at expressway rest stops and

is supported by the Ministry of Environment, Korea Expressway Corporation, Jeju Samdasoo, and Korea Resource Circulation Service Agency. In this campaign, recycling robots manufactured by Inobus efficiently sort transparent PET bottles, which are good-quality resources for recycling, among recyclables.

SK Earthon and Enerzai to Adopt AI for CCS Business

Enerzai is an environmental startup with edge AI technology performing real-time data analysis right on various devices, such as drilling rigs, with no need for massive data transmission and processing through a separate server. SKEO signed an MOU with Enerzai for technology exchanges, joint R&D, and commercialization, to enhance both accuracy and efficiency in E&P activities.

Partnership with environmental startups in 2022

SKI subsidiary	Startup	Partnership
SKGC	Inobus	• Conduct the Hue(Rest)-Cycle Campaign using AI-based recycling robots that efficiently sort transparent PET bottles. (MOU signed)
SKE	60 Hertz	• Develop an energy management system to monitor EV charging status and progress by solar PV and fuel cells at energy superstations. (MOU signed)
SKEO	Enerzai	• Collaborate for diffusion and leakage monitoring after CO ₂ injection, the CCS business using image detection technology. (MOU signed)
SKIPC	LD Carbon	• Collaborate for supplying pyrolysis oil generated from waste tires dissolution (investment agreement underway)

Achievement 3 ESG Best Practice Contest

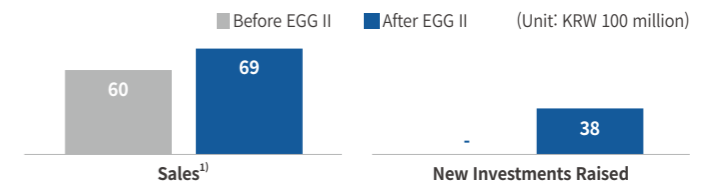
Contest for Maritime and Fisheries Startups Held in Partnership with KIMST

SK Innovation cultivates startups in the fields of maritime and fisheries to protect the marine ecosystem, considering that its

business sites located in coastal areas, such as Incheon and Ulsan, could have impacts on the local environment. In 2022, the company co-hosted a contest with Korea Institute for Maritime Science and Technology Promotion (KIMST) as a collaboration model between a large company and a public institution to discover the best practices of maritime and fisheries startups dealing with ESG issues and to address environmental and social problems together by supporting ESG management. SK Innovation held the Open Innovation seminar and provided education on the commercialization of carbon emission rights for the four winning startups in the contest. We also paired them up with our subsidiaries expected to have the highest synergy with them, throwing full support for their ESG management. We are planning to create diverse opportunities for collaboration with the winners going forward.

Sales of and Investments in 14 Startups in EGG II (Ten Months)

SK Innovation seeks to find fundamental and efficient solutions to various social issues by tapping into its capabilities, infrastructure, and partnership with startups. We will put our heads together with these startups to address social agenda, including creating quality jobs, economic growth, sustainable production and consumption, and low-carbon energy production and consumption, and will turn their social and environmental impacts into ESG indicators to manage and upgrade going forward.



1) Sales after participation in EGG were calculated for 10 months, equivalent to the duration of the EGG program.

Department’s Comments +

[Learn more about reinforced green ecosystem partnership.](#)

ESG SPECIAL PAGE

Partnership with Green Startup: SK Incheon Petrochem & LD Carbon

Background and Purpose

SK Innovation collaborates with the Ministry of SMEs and Startups and Korea Institute of Startup & Entrepreneurship Development to create an ecosystem for environmental venture businesses and operates EGG (SK Innovation’s green ventures scale-up program) where the company provides startup funds, shares its business infrastructure and operating know-how, and arranges investments. Following the Carbon to Green strategy that sets the key direction of our financial story, we focus on selecting startups with high potential for collaboration on carbon reduction and resource circulation and developing businesses between them and our subsidiaries. The company has maintained a partnership with LD Carbon since 2021 and it started a recycling business using pyrolysis for waste tires together with SK Incheon Petrochem. As such, SK Innovation will continue its support for promising environmental startup to foster an ecosystem for environmental venture firms and create more success stories, like LD Carbon, following our Carbon to Green strategy.

Investment Agreement Signed among SK Incheon Petrochem, LD Carbon, and KDB Bank

Major Achievements and Expectations

SK Incheon Petrochem entered into a partnership with LD Carbon, a promising environmental startup that nicely fits its corporate strategies. Consultations went successfully backed up by various support available under the EGG program.

Partnership with LD Carbon let SK Incheon Petrochem set a cornerstone for implementing the Carbon to Green strategy pursuing shared growth and mutual prosperity. The company will expand such partnerships going forward to reach net zero and sincerely fulfill its corporate social responsibility.



Interview with CEO Hwang Yong-gyeong, LD Carbon

Q
Would you briefly introduce LD Carbon?

Approximately 1 billion waste tires are generated every year and are causing social concerns as incineration, the most common way of scrapping waste tires, results in serious environmental pollution and economic losses totaling KRW 1.6 trillion a year. Mindful of their negative impacts, LD Carbon developed a pyrolysis technology for waste tires, produce pyrolysis oil and process pyrolysis residues into carbon black. It produces “green carbon oil (GCO)”, “green carbon black (GCB)”, and rubber power, iron core, PET/nylon, and hydrogen out of waste tires with its “waste-free” technologies for resource circulation. GCO, in particular, is manufactured by tire pyrolysis and has properties similar to those of petroleum. LD Carbon will work with SK Incheon Petrochem through open Innovation and GCO will be used as feedstock for petrochemicals with mitigated environmental impact in the near future.

Q
How did the consultation go with SK Innovation?

We are a startup with a lot of aspirations and have desperately needed chances to partner with large companies. However, seizing a commercialization opportunity with them was hard to come by. The EGG program enabled us to receive a government fund and work with a large company for open innovation. Furthermore, they actively supported connecting us with a subsidiary of SK Innovation, which is expected to have synergy with us. Thanks to all that, we found a strategic investor, SK Incheon Petrochem, and opportunities to grow together in partnership.

Q
What progress was made thus far and what is your next target?

After we joined the EGG program, we saw sales increase by 210%, hired 30 new employees, and attracted about KRW 58 billion of investment and funding. We received awards from the Ministry of SMEs and Startups and the Ministry of Environment and a presidential award. We also registered our technology as an external business methodology with the Carbon Emissions Certification Center of the Korea Chamber of Commerce and Industry and entered into a ten-year pyrolysis oil supply contract with SK Incheon petrochemical, which secured us a foundation for shared growth. Drawing on these achievements, we are currently constructing a waste tire resource circulation plant (EL:T 50,000 tons/year) at the Dangjin & Hapdeok General Industrial Complex. Once completed, it will be the first of its kind in Korea and the largest in Asia.

LD Carbon set recycling at least 25% of waste tires generated in the country as its short-term goal for resource circulation. LD Carbon will strive to contribute to Korea meeting net zero by cutting CO₂ emissions, at least 100,000 tons a year and will also realize a new model of resource circulation, thus sincerely fulfilling its social responsibility for humanity and the future.