

One Step Closer to Net Zero

SK innovation Net Zero Special Report 2022



CONTENTS

PROLOGUE

- 03 Summary
- 04 2021-2022 Footprints
- 05 SK innovation Key Aspirations
- 06 Net Zero Journey with Stakeholders

NET ZERO OPERATIONS

- 08 SK innovation Value Chain
- 10 Energy/Chemical Biz Scope 1, 2 Net Zero
- 15 Special Interview 1
- 16 Battery/Material Biz Scope 1, 2 Net Zero

NET ZERO PORTFOLIO & SALES

- 19 Scope 3 Emissions
- 20 Scope 3 Emissions Reduction Strategy and Targets
- 21 Net Zero Portfolio
- 22 Net Zero Sales

BEYOND NET ZERO

- 26 Scope 1,2,3 Net Zero and...
- 27 Greater Contribution to Reducing Global Carbon Emission
- 28 Impact of SK innovation's Key Reduction Contributions
- 31 SK innovation New Aspiration

NET ZERO GOVERNANCE

- 34 Key Focus
- 35 Expanding Net Zero Investment with Internal Carbon Price
- 36 Organization
- 37 Special Interview 2
- 38 ESG Sub Committee
- 39 Green Management Consultative Group
- 40 Special Interview 3
- 41 Data Management

RE_CAP

- 43 SK innovation Net Zero Aspirations
- 44 CEO Comments
- 45 FAQs

Interactive User Guide

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Go to the first page



Go to the 'Contents' page



Go to the previous page



Search the Report using keywords



Print page



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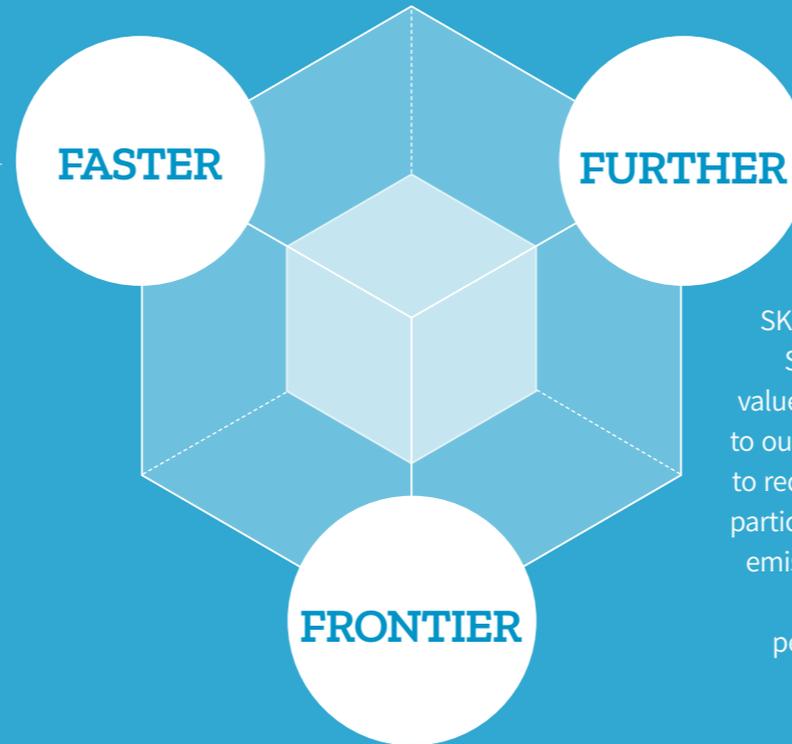


Go to related pages

Summary

Net Zero Operations (Scope 1,2)

SK innovation's Energy/Chemical businesses will reduce Scope 1 and 2 emissions from production sites by 50% by 2030 against the 2019 baseline, and reach Net Zero by 2050. The Battery/Material businesses will accelerate the speed towards Net Zero by using renewable energy at all global business sites by 2030, and achieve Net Zero by 2035. As a result of our active reduction efforts, we have already succeeded in reducing GHG emissions by more than 10%, and we are pursuing Net Zero faster than our goal.



Net Zero Portfolio & Sales (Scope 3)

SK innovation has established challenging and specific reduction targets for Scope 3 emission sources by extending the scope of GHG reduction to full value chain. Scope 3 reduction is carried out in connection with the transition to our low-carbon and eco-friendly business portfolio, and SK innovation aims to reduce carbon intensity by about 90% by 2050 against the 2019 baseline. In particular, the Energy/Chemical businesses, which account for 99% of Scope 3 emissions, aim to reduce emissions by about 70% in absolute terms by 2050.

Through this, we will contribute to dramatic reduction in the supply of petroleum products for land transportation, such as gasoline and diesel, in connection with changes in the future energy consumption structure.

Beyond Net Zero

(Reduction in Scope 1,2,3 emissions, combined with our contribution to Avoided Emissions)

At the same time as reducing greenhouse gases directly linked to us, SK innovation is making efforts to spread these eco-friendly effects with a great sense of duty to contribute to global carbon reduction. Through various low-carbon projects/products such as electric vehicle battery production, plastic recycling, and battery metal recycling, we expect 100 MtCO₂e of contribution to global carbon reduction in 2050. When combined with our efforts to reduce greenhouse gases, the total positive effect created by SK innovation is expected to exceed the remaining emissions from the early 2040s onwards.

2021-2022 Milestones

Creation of Net Zero Roadmap

Establishment and disclosure of SK innovation's Net Zero by 2050 Roadmap, focusing on reducing Scope 1, 2 emissions

Securing our leading ESG ratings based on our Net Zero performance

Securing excellent ratings from major global ESG rating agencies on Net Zero performance such as MSCI ESG Rating A, KCGS AA, and CDP A-

Establishing executive performance evaluations reflecting ESG Management

Incorporation of climate change response targets and performances in the major executives' evaluation and compensation scheme, in order to accelerate the enforcement of Net Zero Roadmap

Establishment of 'Beyond Net Zero' strategy

Establishment of a comprehensive Net Zero implementation plan that extends the existing Net Zero Roadmap to reduce Scope 1,2, and 3 emissions, also contributing to global Avoided Emissions

Launching of ESG Data Platform

Establishment of SK innovation's Online ESG Data Platform to transparently communicate our ESG management goals and performance data and a total of 127 ESG management indicators with external stakeholders

JUL 2021

4Q 2021

1Q 2022

2Q 2022

3Q 2022

Establishment of SK innovation's own ESG management strategy, 'GROWTH'

Our 'GROWTH' strategy is composed of 6 focus Areas, 16 core Ambitions, and 22 mid-term Aims of our ESG management, which are further linked to short-term management plans

Establishment of carbon reduction monitoring system

Initiation of monthly-basis consultations on greenhouse gas emission status of SK innovation subsidiaries and businesses, annual expected emissions, and plans to achieve reduction goals, at SK innovation's Green Management Initiative

Establishment of a Framework for Climate Change Risk Assessment

Establishment of a system to identify opportunities and risk factors related to climate change that may occur during the Net Zero implementation process and to evaluate strategic and financial impacts.

Establishment of a model to measure the quantitative impact level of major factors related to climate change (jointly conducted with Financial Supervisory Service and Ewha Womans University of Korea)

Driving and engaging in a Just Transition

Announcement of SK innovation's support of a just energy transition, which ensures our sincere effort to promote core activities related to just and fair transition that encompasses our key stakeholders including, but not limited to employees, customers, and local communities.

SK innovation's Key Aspirations



Net Zero Operations

Getting to Scope 1, 2 Net Zero by 2050 in absolute emissions



Net Zero Portfolio

Reducing Scope 3 carbon intensity by 90% of SK innovation and subsidiaries/business



Net Zero Sales

Driving 70% reduction in Scope 3 absolute emissions of our Energy/ Chemical businesses by 2050



Avoided Emissions

Contribution to global carbon reduction of at least 100 MtCO₂e by 2050 through promotion of eco-friendly business and products



Climate Change Risk Management

Identification and assessment of climate change-related opportunities and risk factors

 (* Refer to 2021 ESG Report)



Just Transition

Minimizing the negative impact of our Net Zero promotion by supporting a just energy transition

 (* Refer to 2021 ESG Report)



Net Zero Governance

Establishment of organizations and procedures that can promote Net Zero systematically



Beyond Net Zero

Reducing Scope 1,2,3 emissions and expanding our contribution to Avoided Emissions, to which the total positive effect exceeds the remaining carbon emissions (To be achieved in the early 2040s)

Net Zero Journey with Stakeholders



Mark Errington
Regional Chief Executive Officer,
Asia Pacific ERM

SK innovation's first step towards the very last step of Net Zero

ERM is the world's largest pure play sustainability consultancy, established more than fifty years ago.

Today, we help the world's leading organizations shape a sustainable future and navigate the transition to net zero, combining strategic insights with technical excellence. ERM has worked with SK innovation to help disclose and improve the scope 3 performance at both corporate and subsidiary levels as well as refine social GHG abatement opportunities. In this way, SK innovation can contribute the transition to a low-carbon economy.

Climate change is fundamentally changing the way business is done. From that perspective, 2022 Net Zero Special Report released by SK innovation is a meaningful step towards addressing the strategically important global issue of climate change.

We look forward to working with SK innovation as they continue on that journey to achieving net zero based on continuous efforts by 2050 or sooner.

*ERM(Environmental Resources Management)

: Global consultancy specialized in sustainability, environment, health and safety, established in the UK in 1971

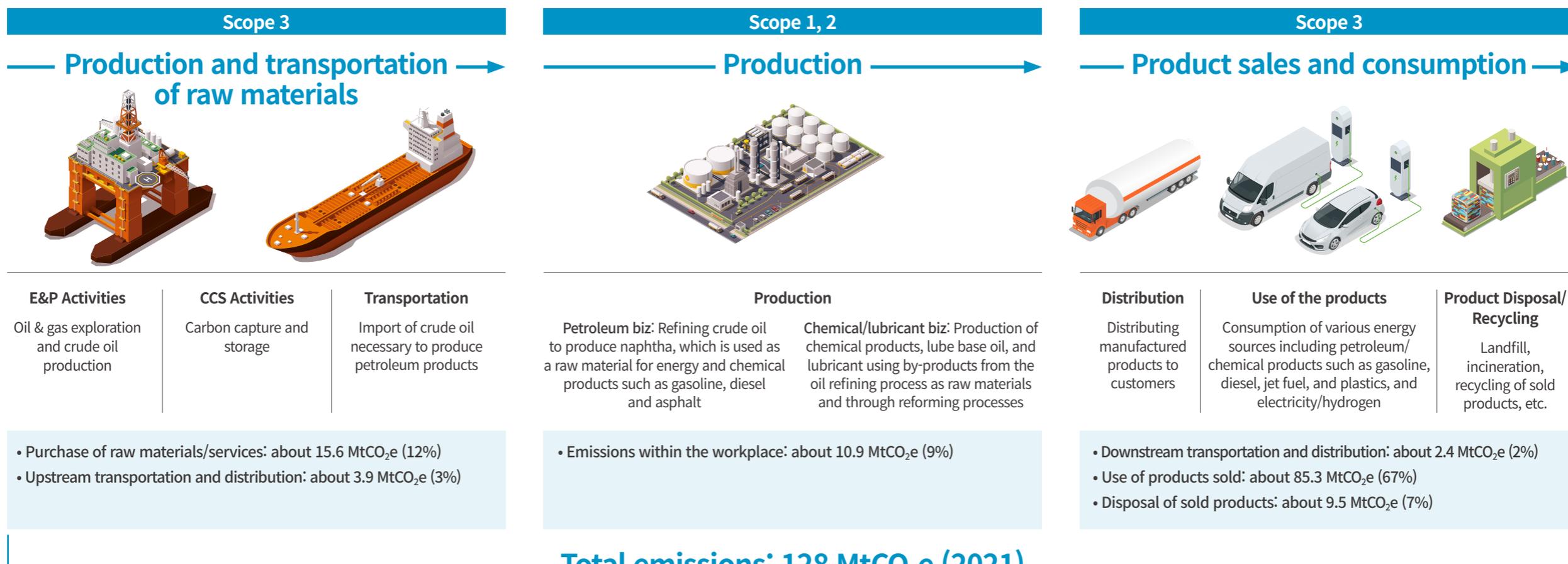
NET ZERO OPERATIONS

We are participating in the achievement of the global common goal of limiting the global temperature rise to 1.5 degrees below pre-industrial levels. From this perspective, we established the Scope 1, 2 Net Zero Roadmap in 2021. We aim to reach Net Zero by 2050 for our Energy/Chemical businesses and by 2035 for Battery/Material businesses.

To this end, various measures for carbon reduction such as improvement of process efficiency, introduction of low-carbon raw materials and operational optimizations, introduction of renewable energy-based power, and application of CCUS technology. Investment costs for each key milestone has been outlined as well. In addition, we are closely monitoring each of our subsidiaries' performance of carbon reduction by holding an in-house consultative body on a monthly-basis to create substantial carbon reduction results.

SKI Value Chain—Energy/Chemical Biz

SK innovation is keeping track of all carbon emissions from the entire value chain related to our Energy/Chemical businesses. From crude oil production to disposal of the products sold, we will continue to implement our net zero methods by measuring and managing emissions at source.



※ Scope 1,2 include biz sites in Korea, while Scope 3 encompasses both Korea and Global biz sites

SKI Value Chain—Battery/Material Biz

SK innovation is closely monitoring and managing main emission sources from the Battery/Material business, ranging from raw material extraction to product disposal. We will minimize the negative impact on the environment from the entire value chain of battery and material production and contribute to making electric vehicles a truly eco-friendly means of transportation.



※ Scope 1,2 include biz sites in Korea, while Scope 3 encompasses both Korea and Global biz sites

Energy/Chemical Biz

Net Zero Operations—Target

Energy/Chemical Business Scope 1, 2 Net Zero Reduction Target

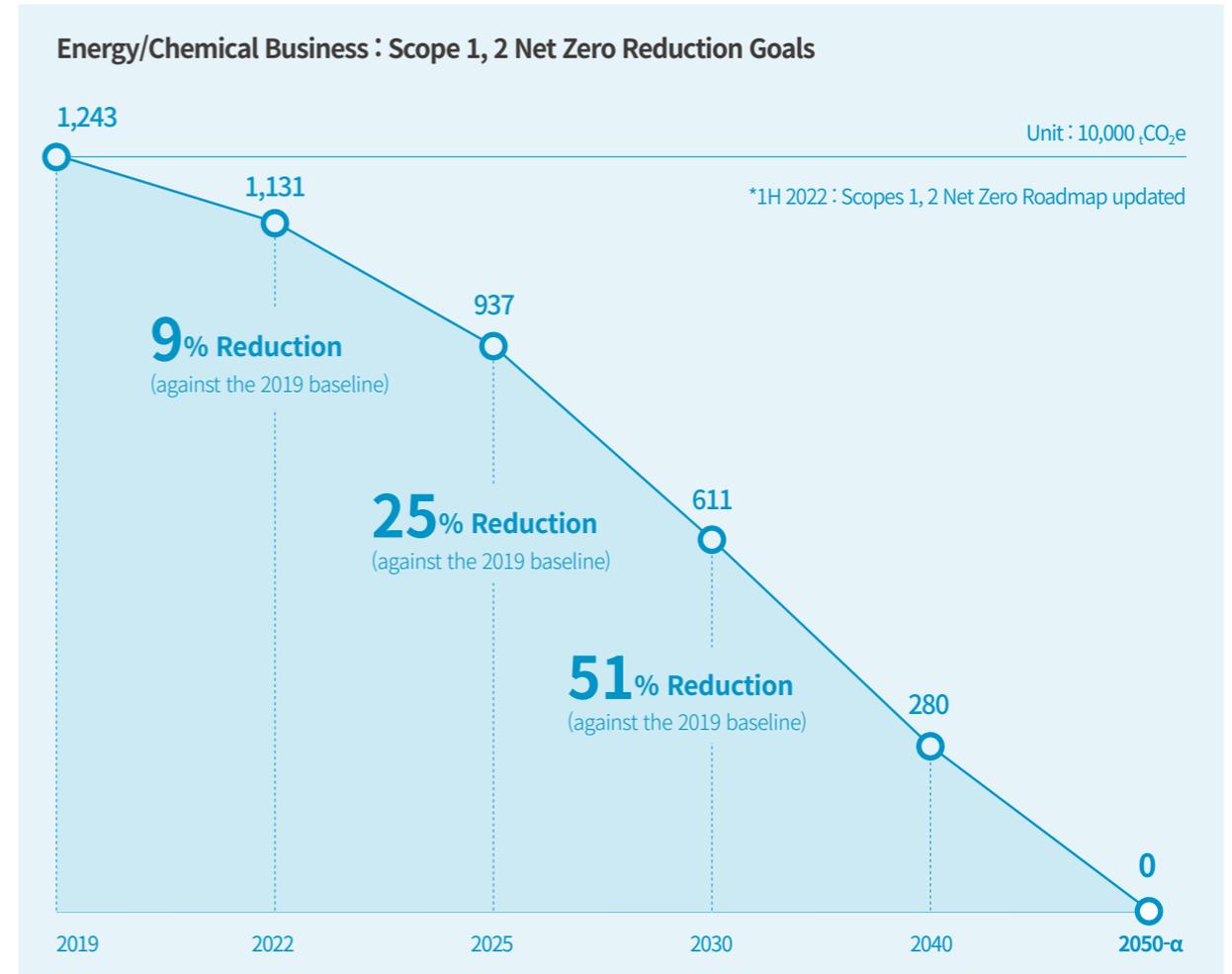
Net Zero Target : 2050-α

SK innovation strongly supports the Paris Agreement, which initiated the global transition to a low-carbon economy, and will cooperate to achieve the common goal of limiting the increase in the average global temperature to 1.5 °C above pre-industrial levels. We have explored the range of scenarios included in the Intergovernmental Panel on Climate Change (IPCC), which were judged to be consistent with meeting the goals of the Paris Agreement and set out an ambition that is aligned with IPCC pathway which requires global net anthropogenic CO₂ emissions decline by about 45% from 2010 levels by 2030, reaching net zero around 2050. SK innovation will reduce its net emissions of 12.43 MtCO₂e* of Scope 1 and Scope 2 greenhouse gases generated at domestic workplaces in 2019 to zero by 2050.

* Based on the sum of domestic Scope 1 (10.18 MtCO₂e) and Scope 2 (2.25 MtCO₂e) emissions from the Hydrocarbon Biz at SKE, SKGC, SKL, and SKIPC under SKI (SKE: 7.26 MtCO₂e / SKGC: 3.2 MtCO₂e / SKL: 0.18 MtCO₂e / SKIPC: 1.79 MtCO₂e)

Net Zero Pathway

SK innovation's Energy/Chemical business will actively implement measures to reduce greenhouse gases in the first 10 years, to meet targets including 25% reduction by 2025 and 50% reduction by 2030 against our 2019 baseline and then focus on efforts to achieve Net Zero before 2050 through implementing our Net Zero Roadmap. SK innovation has established our Scope 1,2 Net Zero Roadmap for the first time in 2021 and continuously updated the amount of emission reduction, cost, and reduction actions to move closer to our Net Zero ambition. Through continuous effort, SK innovation will achieve Net Zero Operations and will take the lead in responding to global climate change.

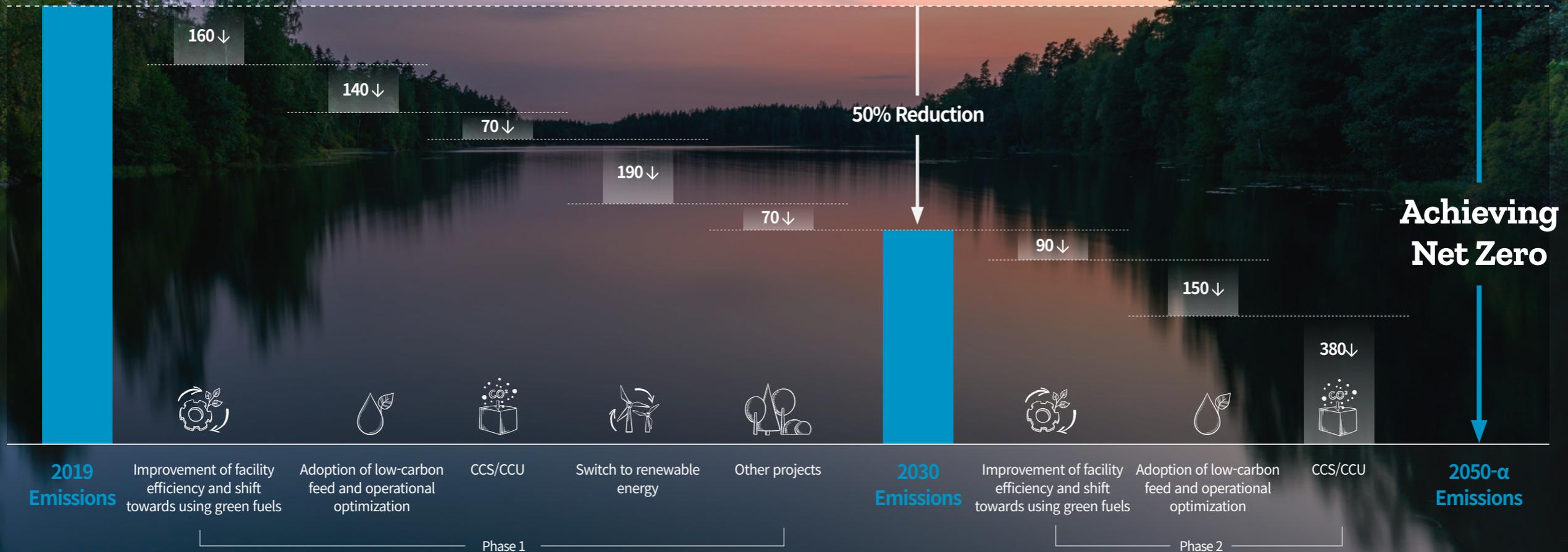


Energy/Chemical Biz Net Zero Operations—Pathway

Energy/Chemical Business Scope 1, 2 Net Zero Reduction Target

Energy/Chemical Biz Reduction Pathway (2019~2050-α)

Unit : 10,000 tCO₂e



Achieving Net Zero

*Annual Reductions from using renewable energy(190,000 tCO₂e) and reductions from external projects(700,000 tCO₂e) are reflected starting from 2030.

Energy/Chemical Biz Net Zero Operations—Actions

Energy/Chemical Business Scope 1, 2 Net Zero Reduction Method



Improve the efficiency of our facilities and shift towards using green fuels

Reduce the use of electricity/steam through Ulsan CLX optimization # Introduce LNG and low-carbon steam

SK innovation is improving the operational efficiency of our facilities through various measures such as heat exchange, change in driving force, and process separation. In the medium term, we will reduce fuel consumption by introducing advanced catalysts and expand the use of low-carbon steam in order to accelerate our transition towards low-carbon business.



Adopt low-carbon feed and operational optimization

Purchase of Low Carbon Feedstock # Adjustment of inefficient process utilization
Promotion of Petchem Balanced Refin

We predict the potential carbon emission by raw material and measure the change in carbon emission according to the change in refining capacity. These results are reflected in our decision-making process to pursue both economic feasibility and eco-friendliness. In the short term we will reduce emissions in the production stage through inputting raw material that generate less carbon. In the mid- to long-term, through using carbon-free fuels such as ammonia and converting to Petchem Balanced Refinery aligned to energy transition we will take the lead in producing a portfolio of low-carbon energy products.



CCS/CCU (Carbon Capture and Storage/ Carbon Capture and Utilization)

Participation in government projects such as the East Sea gas field and technology development
Develop/secure CCU technology jointly with government/partner

CCUS is a technology that can substantially reduce carbon. SK innovation has been working to secure the economic feasibility of CCS technology for the past 10 years by utilizing the capture technology that has been developed in the Ulsan Complex. We are participating in various government projects such as in the East Sea gas field. In the medium term, we plan to secure the technology that converts the captured carbon to fuel or chemical product after electrolysis and expand the scope of application in order to not only reduce operational emission but also secure new eco-friendly business model.



RE100

Direct purchase of REC # 3rd party PPA contract # Equity investment in power generation business
Renewable electricity purchase

SK innovation plans to use various methods such as REC purchase, third-party PPA, and in-house facility construction to expand the use of renewable energy. Although external stakeholders and the RE100 initiative generally expect 100% renewable electricity by 2050, SK innovation will switch to 100% renewable energy before 2030.



Other projects

Cook-stove projects # Securing carbon credits through participation in afforestation business

In order to achieve the level required by the international community, not only the emission reduction in our facilities, but also various external reduction efforts must go hand in hand. SK innovation will work towards achieving Net Zero through taking actions such as investing in reforestation and cook-stove projects.



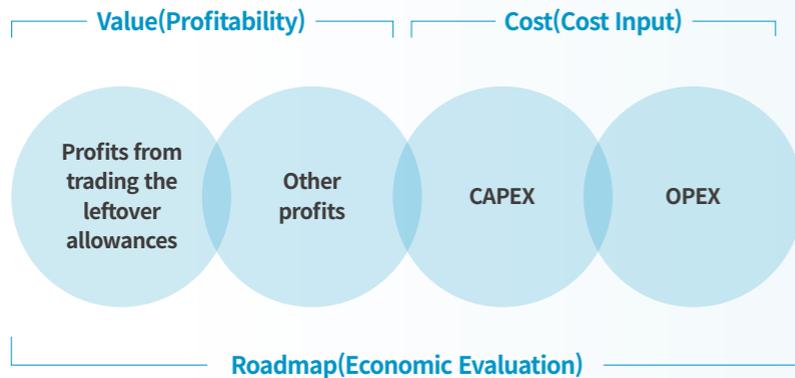
Emission reduction and CAPEX by key action (as of 2030)

Key Action	Reduced Amounts (10,000 tCO ₂ e)	Cumulative investment (KRW 100 million)
Improve the efficiency of our facilities and shift towards using green fuels	160	11,020
Adopt low-carbon feed and operational optimization	140	8,110
CCS/CCU	70	2,050
RE100	190	6,430
Other projects	70	190

Energy/Chemical Biz Net Zero Operations—Evaluation Framework

Energy/Chemical Business Net Zero Roadmap Evaluation Framework

① Evaluation of economic feasibility of net zero roadmap



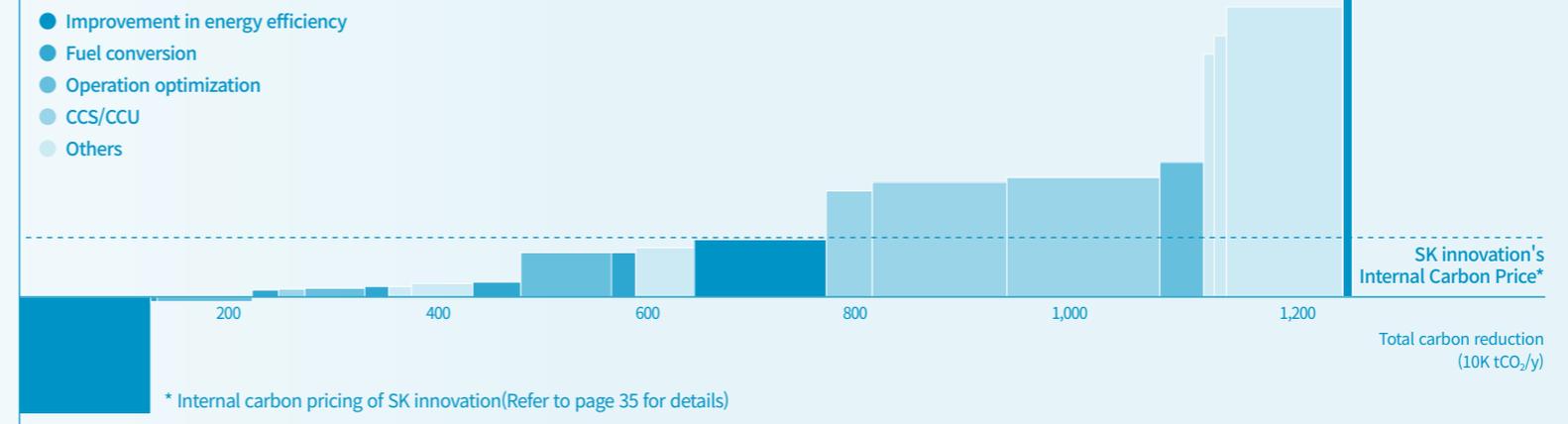
SK innovation has established a framework that comprehensively evaluates economic opportunities and costs in addition to the previously reviewed investment costs of the key reduction actions reflected in the Net Zero Roadmap of Energy/Chemical business.

Based on this framework, not only the cost of implementing our Net Zero Roadmap such as investment cost and variable cost, but also economic benefits from surplus of emission unit and utility reduction were comprehensively evaluated.

SK innovation will strive to implement optimal Net Zero by adjusting priorities among Net Zero options through continuous/cyclical re-assessment of potential profitability.

② Evaluation of economic feasibility of 157 actions for net zero

Carbon Reduction Cost



* Internal carbon pricing of SK innovation(Refer to page 35 for details)

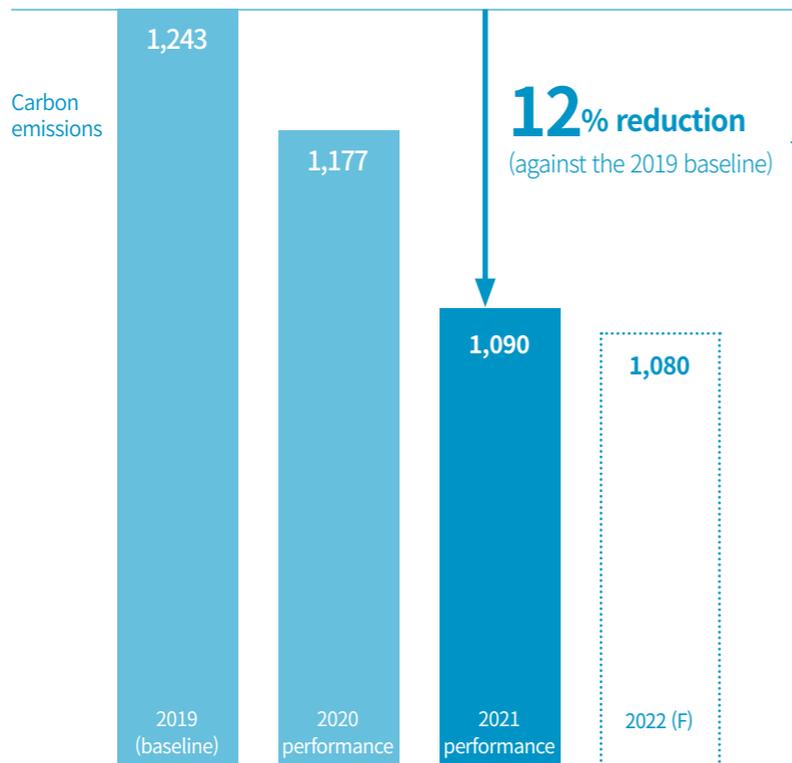
In addition to the economic evaluation of the Net Zero Roadmap, we reviewed the priority based on the Net Cost per carbon reduction unit for each of 157 Scope 1 and 2 reduction action. In addition to the economic evaluation of the Net Zero Roadmap, we reviewed the priority for each of 157 Scope 1 and 2 reduction action based on the Net Cost per carbon reduction unit. We listed up the reduction actions based on reduction cost per reduction unit and then re-evaluated the economic feasibility of each action after placing internal price on carbon. SK innovation has explored the range of scenarios for carbon price which are consistent with meeting the 1.5C goal of the Paris Agreement, and we plan to set an internal carbon price for investments on new projects in order to promote the allocation of capital for achieving net zero. Through evaluating profitability after applying internal carbon price on the emission reduction actions, we plan to execute the reduction actions that secures the minimum economic feasibility on the preferential basis and explore cost down method in the long term for those that do not secure the minimum economic feasibility. SK innovation will upgrade the Net Zero Roadmap evaluation framework in order to optimize our path to net zero.

Energy/Chemical Biz Net Zero Operations—Performance

Energy/Chemical Business Scope 1, 2 Reduction Performance (2019~2021)

Energy/Chemical business under SK innovation was able to achieve approximately 1.5 tCO₂e of greenhouse gas reduction since 2019 by executing the Net Zero Roadmap. This is approximately 12% against our 2019 baseline. SK innovation will transparently disclose our carbon reduction progress each year to disclose our journey to Net Zero.

Scope 1,2 Reduction Performance (Unit: 10,000 tCO₂e)



- Operation Optimization toward Max Double Bottom Line_ 720,000 tCO₂e, approx. 47%**
 Suspension of facility or optimization of operation by comprehensively considering economics of operation and volume of carbon emission
- Implementation of Green Operation _ 570,000 tCO₂e, approx. 37%**
 Implementation/operation of optimized raw materials from LCA perspective by reflecting carbon value and conversion to eco-friendly low-carbon energy, etc.
- Improvement of facility energy efficiency _ 230,000 tCO₂e, approx. 15%**
 Reduction of energy (electric/steam) by improving facility operation and hydrogen usage, direct implementation of LNG, external implementation of eco-friendly steam, etc.
- Others (CCU, etc.) _ 10,000 tCO₂e, approx. 1%**
 Implementation of external business such as cookstove with CCU technology

(unit: 10,000 tCO₂e)

Business company	2019 baseline	2020 performance	2021 performance
SK energy	726	692	670
SK geocentric	320	312	256
SK lubricants	18	15	14
SK incheon petrochem	179	158	149
Total	1,243	1,177	1,090

INTERVIEW



SK energy
Energy Net Zero Office / PM, Yongjae Nam

SK energy, as the core hydrocarbon business of SK innovation, recognizes its social responsibility for global climate change and is striving to become a sustainable energy company. As a result of such efforts, by 2021, we were able to reduce approximately 10% of our 2019 base emissions, 7.26 tCO₂e. This is a result of not only optimal operational decisions considering both profit maximization and carbon reduction, but also of improving process efficiency, implementing eco-friendly energy, and actively discovering and adopting various reduction options such as CCU. We are monitoring annual emission estimations regularly and continuously developing reduction performances in order to ensure emission reduction achievement does not end as a one-time event. Furthermore, we are participating in East Sea gas field CCS demonstration project to lead future technology development, and actively reviewing expanding implementation of new reusable energy in our efforts to attain Net Zero.

We hope you join SK energy in our steadfast determination to reduce carbon and our journey to Net Zero.

Evolution from Carbon Energy Company to Net Zero Energy Company!

What are some notable performances in 2021 among various efforts SK energy put into attain Net Zero?

Since SK energy is responsible for a large portion of carbon emission among SK innovation subsidiaries' we are more eager than other companies to discover various ways to achieve Net Zero. We were the first Korean energy company to define an operational decision-making system from DBL* Max perspective applying CO₂ Value in 2021.

The 'operational decision-making system from DBL Max perspective' refers to moving away from traditional decision making, based only on economic value, to finding the optimal point in between economic effect and carbon reduction in the entire process from crude oil import to production of petroleum/chemical goods.

We put in various efforts to build this DBL Max operational decision-making system. By implementing a carbon measuring system, we are quantifying changes in CO₂ emissions by different crude oil properties and processing methods, and making decisions on optimal operation volume based on the price of emission permits. By periodically verifying and complementing this model, we not only enhanced carbon value estimation accuracy and analytical ability, but also expanded our potential to adopt eco-friendly feedstock while considering carbon cost in our transition to 'Less Carbon CLX'. These efforts resulted in substantial carbon reduction in Scopes 1 and 2 by 2021.

* SK has shifted from Single Bottom Line management philosophy, which seeks economic profitability only, to Double Bottom Line (DBL), which pursues both economic value (EV) as well as social value (SV).

Which project are you continuously reviewing to drive Net Zero activities?

Management environment of 2022 is a continuation of stronger-than-expected petroleum market and slowing emission rights prices, but the Net Zero Roadmap of SK energy must be executed resolutely, unaffected by external changes of the management environment. We are continuously putting in various efforts to substantial carbon reduction in line with our unwavering determination to reduce carbon emission.

First of all, the decision-making system toward DBL Max established in 2021 must become the actual back-bone of Net Zero, and it is our most important task to optimize this. We are focusing on mitigating restrictions in adopting crude oil with relatively less carbon emission, and improving approximately 30 efficiency measures for our processes, facilities, and operations.

Promoting Net Zero does not merely mean passively adhering to regulations, but also creating new business opportunities and generating profits. In other words, shifting from reactive to proactive is what our management philosophy on Net Zero is about.

Seungjoo Kim

Head of Optimization Operation Office, SK energy



Battery/Material Biz Net Zero Operations—Target

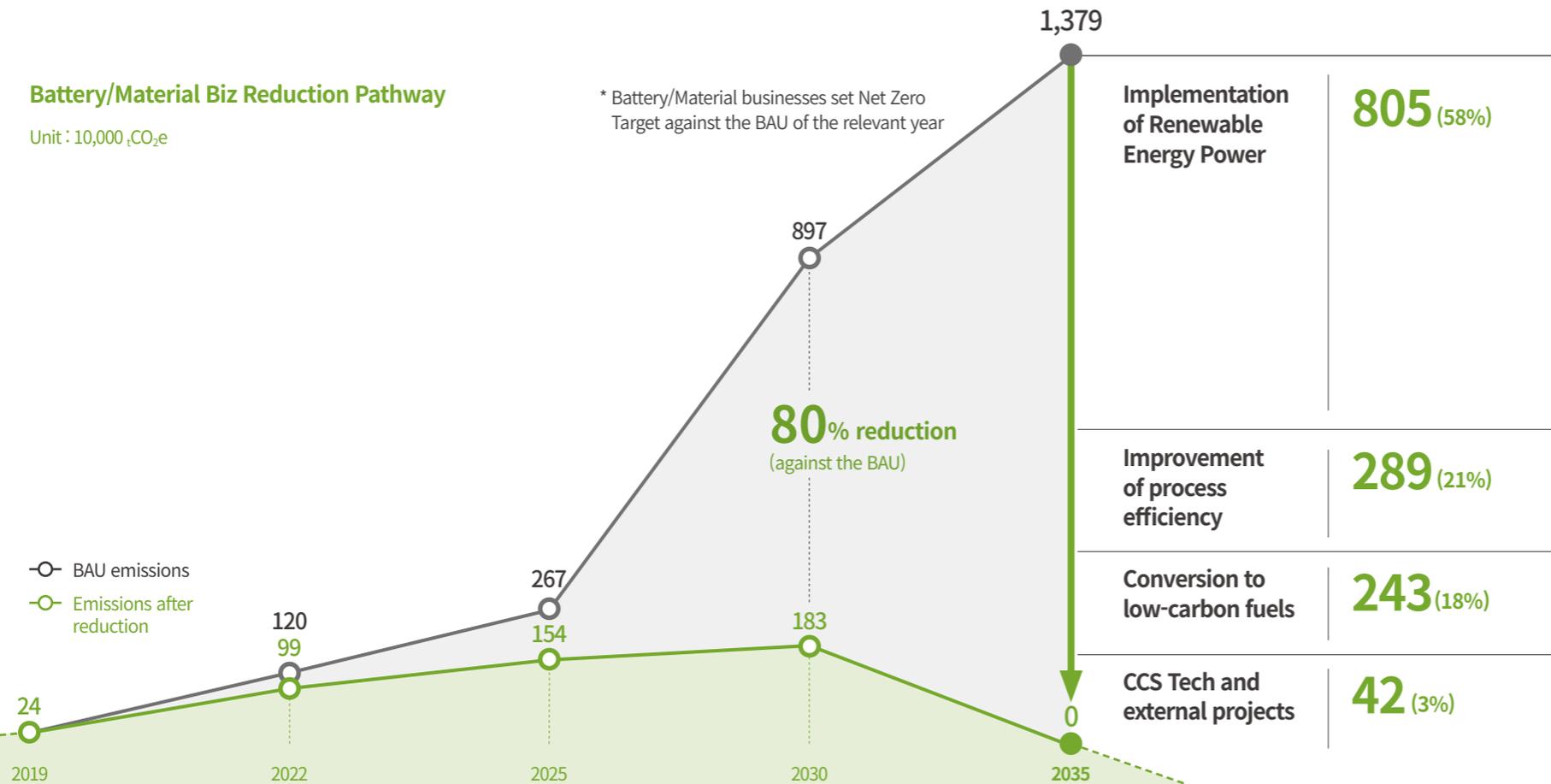
Battery/Material Business Scope 1, 2 Net Zero Reduction Target

SK innovation considers Electric Vehicles as a key to the transformation into a low-carbon social and economic structure, and is restructuring its business portfolio with EV battery and LiBS businesses as the pillars of its new growth. SK on and SK ie technology, which operate battery and material businesses respectively, have set a challenging goal to cut down carbon emissions to Net Zero by 2035. We aim to achieve Net Zero by 2035 through aggressive emission-reducing efforts such as using renewable energy, implementing eco-friendly technologies, and improving operational efficiency.

Battery/Material Biz Reduction Pathway

Unit : 10,000 tCO₂e

* Battery/Material businesses set Net Zero Target against the BAU of the relevant year



Implementation of Renewable Energy Power

805 (58%)

Improvement of process efficiency

289 (21%)

Conversion to low-carbon fuels

243 (18%)

CCS Tech and external projects

42 (3%)

80% reduction (against the BAU)

1 Implementation of renewable energy power

SK on and SK ie technology plan to introduce 100% of renewable energy to their workplaces by 2030. Especially, SK ie technology has been running its domestic sites on 100% renewable energy power since 2021 and will expand full renewable energy operation to overseas sites in the future to achieve RE100 early.

2 Improvement of process efficiency

SK on and SK ie technology plan to improve process and operation efficiency in order to reduce carbon emissions from their workplaces.

3 Conversion to eco-friendly energy

SK on and SK ie technology will reduce emission by 2.4 MtCO₂e to replace the existing fuels used for their process such as boilers with eco-friendly fuels.

		Reduced Amounts (10,000 tCO ₂ e)	Cumulative investment (KRW 100 million)
Implementation of renewable energy power	2030	550	1,300
	2035	810	4,260
Improvement of process efficiency	2030	140	1,320
	2035	290	3,260
Conversion to eco-friendly fuel	2030	20	400
	2035	240	1,440
CCS Tech and external business	2030	-	-
	2035	40	790

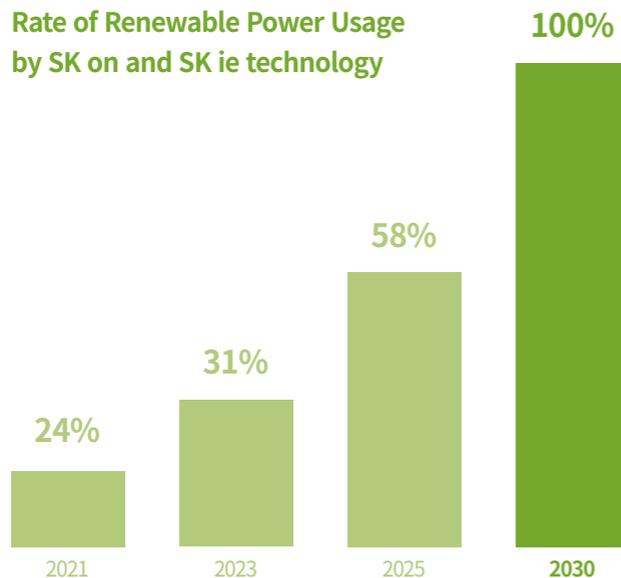
Battery/Material Biz Net Zero Operations—RE100

Battery/Material Business Scope 1, 2 Net Zero Reduction Target

SK on and SK ie technology will contribute to the early achievement of Net Zero by transforming power usage, which accounts for approximately 70% of total emissions, into renewable energy. SK on is leading in environmental management by expanding its determination and efforts for attaining RE100 to overseas production sites. Starting with Hungary site in Europe, it has started implementing renewable energy in a phased manner across its global sites while readily reviewing feasibility of implementing photovoltaic power generation within plant sites.

SK ie technology also joined the RE100 initiative in 2021 and is diligently making progress to attain the goal to using 100% renewable energy by 2030. For our battery and material business to truly become an eco-friendly business, not only our business sites, but the entire value chain should ultimately use renewable energy for power. With this goal in mind, we plan to seek ways to have our partner companies use renewable energy as well.

Rate of Renewable Power Usage by SK on and SK ie technology



Battery/Material Biz – Net Zero Operations RE100

	Renewable energy consumption (MWh)	Total power usage (MWh)	Rate of renewable energy usage (%)
2021	283,213	1,194,943	24%
2023	767,380	2,454,527	31%
2025	2,326,878	3,988,758	58%
2030	12,369,252	12,369,252	100%

INTERVIEW



SK ie technology
ESG Unit / PM, Eunhae Song

SK ie technology committed to RE100 in 2020, then officially joined the RE100 initiative in September 2021. It had already converted all power usage at Jeungpyung, Cheongju, and Poland sites to eco-friendly power in 2021. The Changzhou plant in China is producing and being supplied with 7,000MWh worth of eco-friendly electricity every year through its roof-top solar power generation. SK ie technology will not only secure its place as the market leader through business growth, but also lead the market as an unrivaled top company in converting to green energy.

NET ZERO PORTFOLIO & SALES

SK innovation has set a challenging goal of ‘Net Zero Portfolio and Sales’ for Scope 3 greenhouse gas reduction, and is taking systematic actions towards the goal. Achieving ‘Net Zero Portfolio and Sales’ means that we are transitioning towards green businesses through portfolio innovation and ultimately reducing Scope 3 emissions ambitiously across SK innovation subsidiaries and Energy/Chemical businesses.



Net Zero Portfolio & Sales **Scope 3 Info**

Our Scope 3 Emissions

In our pursuit of Net Zero, we are taking responsibilities to deliver on Net Zero targets for not only emissions directly under our operational control (Scope 1 and 2), but also emissions attributable to consumption of our products and services (Scope 3). We have set out aspirational, authentic goals by assigning specific tasks and Net Zero targets to each of our business entities and subsidiaries. Our methodologies have received independent third-party assurance from Lloyd's, and the validity of our Life Cycle Assessment Methodologies for measuring Scope 3 emissions has been thoroughly reviewed. In 2021, we have achieved our total Scope 3 emission of 118.35 MtCO₂e, which is equivalent to 22% reduction against our 2019 baseline. Going forward, SK innovation will set aspirational business-level targets and continuously monitor our progress, putting in multifaceted efforts and solidifying our Net Zero strategies.



SK innovation's Scope 3 emission in 2021: 118.35 MtCO₂e (22% reduction against the 2019 baseline)



LRQA Received assurance of Lloyd's Register in London (Jun. 2022) (Unit: 10,000 tCO₂e)

Category	Details	Energy/Chemical Biz.	Battery/Material Biz.	Total
● Category 01	Purchase of raw materials and services	1,561	97	1,658
● Category 03	Fuel- and energy-related emissions	37	24	61
● Category 04	Upstream transportation and distribution	385	1	386
● Category 05	Waste generated in operations	1	0.1	1
● Category 09	Downstream transportation and distribution	245	1	246
● Category 11	Use of the products sold	8,532	N/A	8,532
● Category 12	Disposal of the products sold	949	0.01	949

* For brevity, 17,000 tCO₂e of Scope 3 emissions which are attributable to Category 6 (employee travel) and Category 7 (employee commute) are omitted from the Table.

Net Zero Portfolio & Sales Scope 3 Reduction Target

Scope 3 Emissions Reduction Strategies and Targets

To accelerate our “Carbon to Green” business portfolio transformation, SK innovation is undertaking multifaceted strategies to reduce Scope 3 emissions at a business level and expanding green assets centering on battery and materials businesses. Subsequently, SK innovation has established an integrated metrics for its subsidiaries and have set our targets based on Financial Intensity. Reduction strategies based on absolute emission measures are set out specifically for Energy/Chemical businesses a significant contributor to SK innovation’s total Scope 3 emissions.

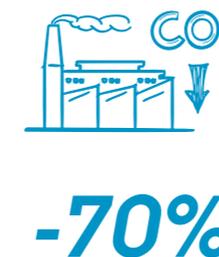
SKI’s Scope 3 Reduction Strategies

Net Zero Portfolio



SK innovation is transforming each of our subsidiaries’ business models towards strategic alignment for “Carbon to Green”, whilst pursuing overall business portfolio innovation. From the Financial Intensity perspective, SK innovation aims to reduce 90% of our Scope 3 emissions by 2050 compared to our 2019 baseline. In other words, we will dramatically reduce our Scope 3 emissions per unit of fixed assets.

Net Zero Sales



To genuinely accomplish our Scope 3 aspirations, our Energy/Chemical businesses have set the goal of directly reducing absolute carbon emissions up to 70% of our 2019 baseline by 2050. This is equivalent to the total amount of emissions from consumption and disposal of our products and services, as of 2019. Achieving this target would mean that SK innovation has reached Net Zero within its downstream value Chain.

Net Zero Portfolio & Sales **Net Zero Portfolio**

SK innovation's Corporate-wide Scope 3 Aspiration

SK innovation has set and manages reduction goals in financial intensity method in order to comprehensively manage Scope 3 reduction efforts of its Energy/Chemical and Battery/Material businesses. Financial intensity refers to Scope 3 emission per unit of fixed asset. SK innovation is committed to expanding assets in businesses with low carbon intensity, including battery and materials, and work jointly with all our subsidiaries and business companies to reduce Scope 3. We aim to reduce 75%, and further, 90% of emissions by years 2030 and 2050, respectively, against the 2019 baseline.

SK innovation's Corporate-wide Scope 3 Management Strategies

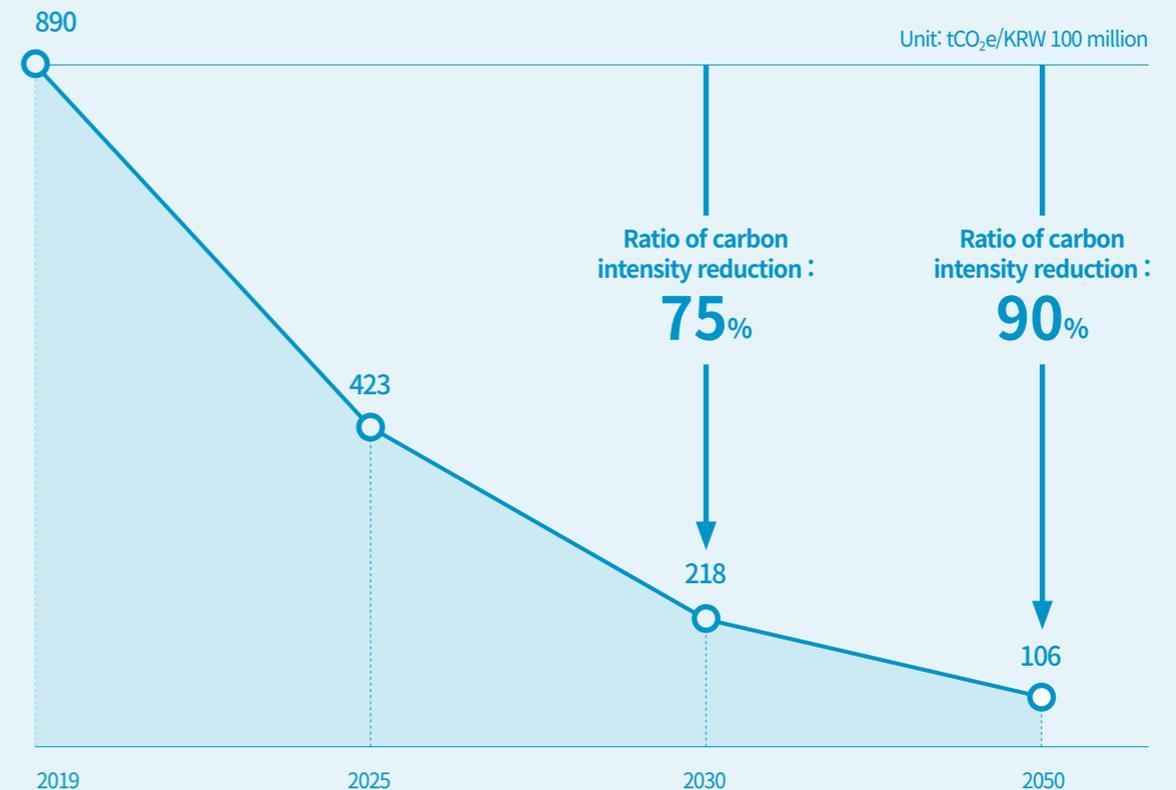
- ✓ With our business portfolio spanning multiple industries, from petrochemical to battery and materials, SK innovation will undertake the role of Portfolio Designer to manage our Financial Intensity of Scope 3 Emissions.
- ✓ Financial Intensity will cover ① respective Scope 3 reduction efforts of SK innovation subsidiaries, and ② overall performance of SK innovation's Portfolio Transformation.

$$\Sigma \left(\frac{\text{Scope 3 emissions}^{\text{①}}}{\text{Fixed assets by business}} \right) \times \left(\text{Ratio in SKI's total portfolio}^{\text{②}} \right) = \text{Financial Intensity Ratio Formula (established in 2021)}$$



SK innovation's Corporate-wide Scope 3 Aspiration: Net Zero Portfolio

Transforming our business structure into cutting 90% of our carbon emissions against our business-as-usual through Business Model and Portfolio innovation.

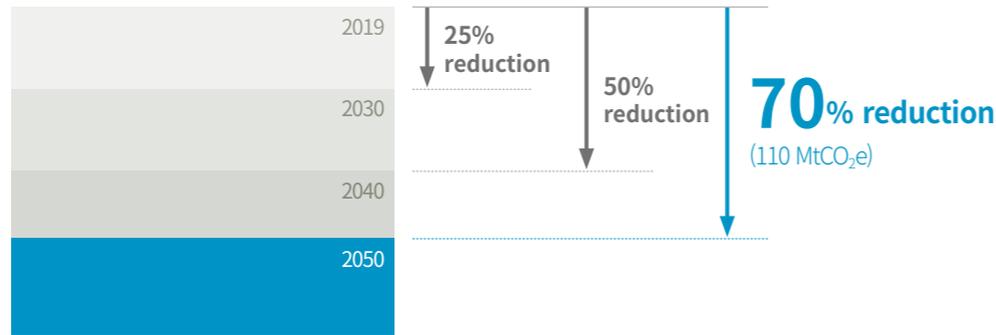


Net Zero Portfolio & Sales Net Zero Sales

Scope 3 Reduction Strategies for Energy/Chemical Businesses

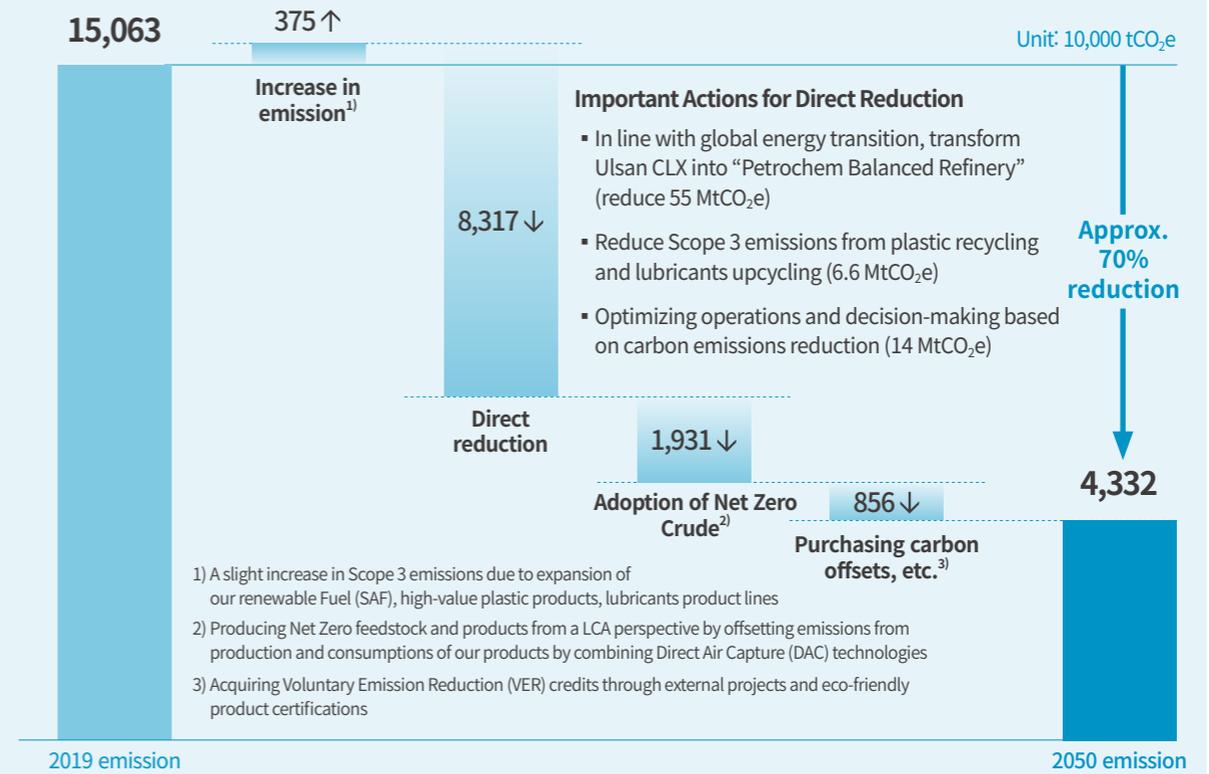
Petrochemical businesses under SK innovation’s business portfolio targets 25% reduction in absolute Scope 3 emissions against the 2019 baseline by 2030, 50% by 2045 and 70% by 2050 by transitioning the business models from petrochemical-centered to plastic recycling, clean energy from renewable sources, etc.

Net Zero Sales



Scope 3 Aspiration of Energy/Chemical Businesses: Net Zero Sales

Directly reduce 110 MtCO₂e of Scope 3 emissions, an amount equivalent to 2019’s total Scope 3 emissions from sales, consumption and disposal of our petrochemical products



1) A slight increase in Scope 3 emissions due to expansion of our renewable Fuel (SAF), high-value plastic products, lubricants product lines
 2) Producing Net Zero feedstock and products from a LCA perspective by offsetting emissions from production and consumptions of our products by combining Direct Air Capture (DAC) technologies
 3) Acquiring Voluntary Emission Reduction (VER) credits through external projects and eco-friendly product certifications

Net Zero Portfolio & Sales

Net Zero Sales - Actions

Scope 3 Reduction Methodologies for Energy/Chemical Businesses



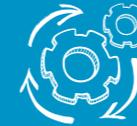
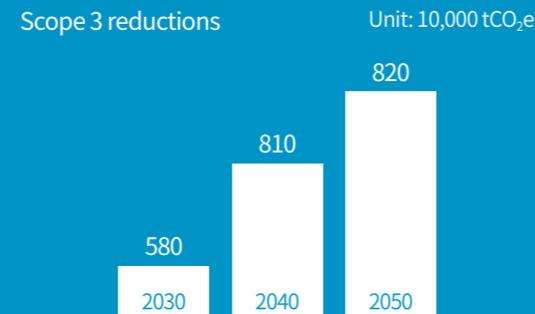
Petrochem Balanced Refinery

Over a longer horizon, we expect energy transition to take place, reshaping the global energy demand and supply from fossil-based to renewables. SK innovation is determined to transform our Energy/Chemical businesses by reforming the current asset structure, cutting the proportion of Energy/Chemical products such as diesel and gasoline fuels and meeting the growing demands in high-value renewables and eco-friendly energy.



Recycling Businesses

SK innovation's subsidiaries are ambitiously developing and enhancing our recycling business models to unlock value from collection and reprocessing used plastics, lubricants, tires etc. By recycling our products into reusable fuels, new business models will enable us to reduce Category 12 (disposal of products sold) emissions and Category 1 (purchase of raw materials) emissions.



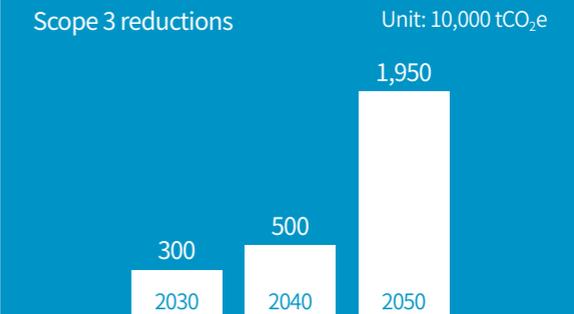
Business Process Optimization

We are transforming our business processes using our 60 years of experience in operational optimization, effectively cutting Scope 3 emissions whilst making our business profitable. By economizing on resources and making optimal operational decisions, we are aiming to reduce Scope 3 emissions throughout our value chain.



Net Zero Crude

With prospective growth in the Net Zero Crude market, SK innovation aim to capitalize on technologies such as Direct Air Capture (DAC) to offset total emissions of crude oil throughout its life cycle. Along with direct Scope 3 reduction endeavors, we will adopt Net Zero Crude in our operations.



Scope 1, 2, 3 Net Zero Aspirations

Summary of SK innovation's Scope 1, 2 and 3 Reduction Targets



Aspiration 1

Net Zero Operations (Scope 1, 2)

Achieve Net Zero in Scope 1 and 2 emissions by 2050-α for Energy/Chemical businesses, and by 2035 for battery and materials businesses



Aspiration 2

Net Zero Portfolio (Scope 3)

Reduce financial intensity by 90% against the 2019 baseline by 2050, through “Carbon to Green” business portfolio transformation and Scope 3 reduction efforts



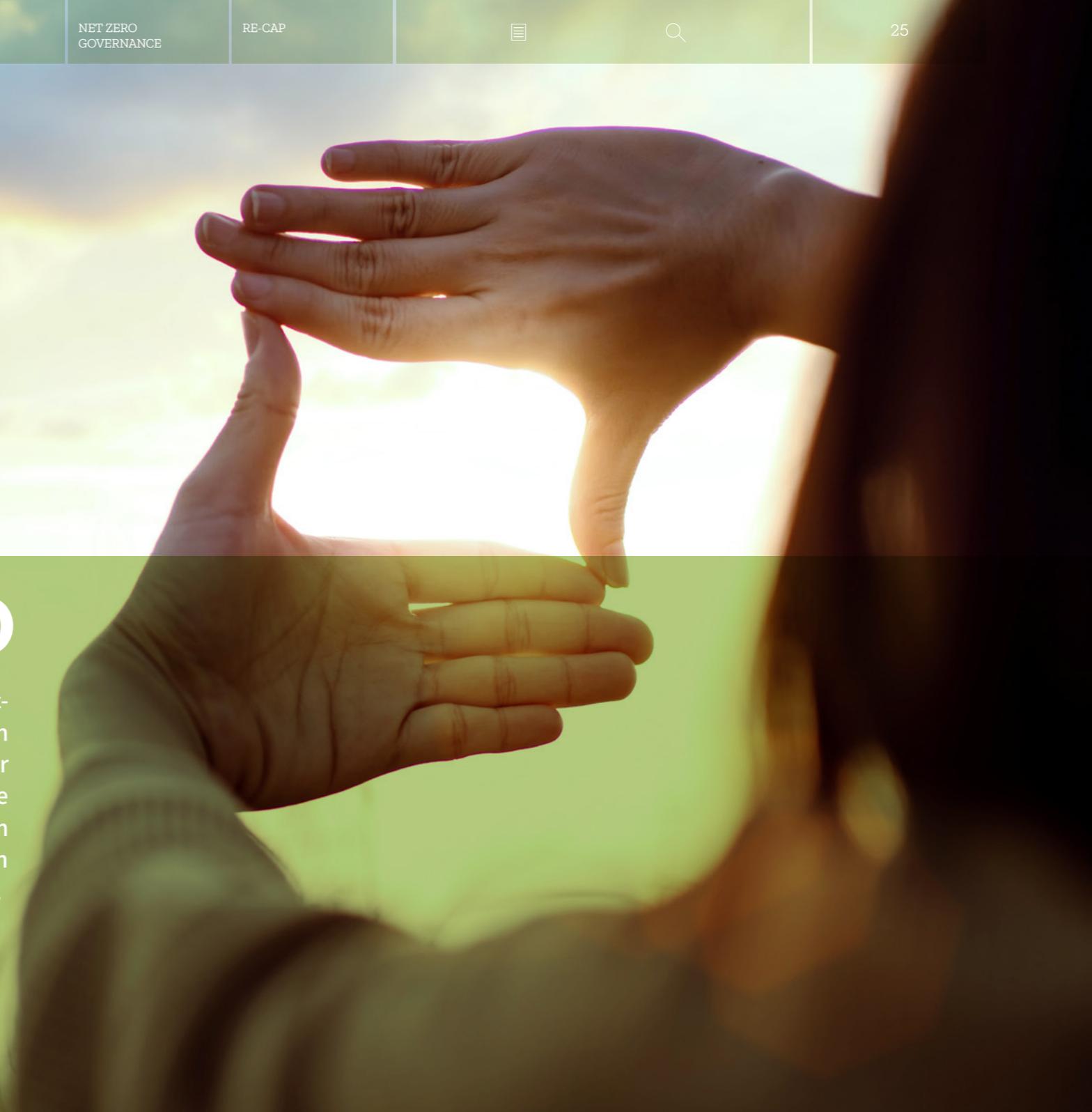
Aspiration 3

Net Zero Sales (Scope 3)

Reduce 70% of absolute Scope 3 emissions in Energy/Chemical businesses through flexible petroleum production, operations optimization, and effective decision-making for carbon reduction in line with energy transition

BEYOND NET ZERO

Not only does SK innovation pushes forward our ambition and aim for reducing Scope 1,2, and 3 GHG emissions, we also have a strong sense of mission to contribute to avoided emissions by making sincere efforts to spread our eco-friendly impacts. Combining all our efforts toward global Net Zero, we expect to make a positive contribution to entering Beyond Net Zero from the 2040s onwards, in which the overall positive effect of SK innovation on eco-friendliness exceeds the remaining amount of greenhouse gas emissions.



Beyond Net Zero—Scope 1,2,3 Net Zero and ...

In connection with the innovation in business portfolio in Carbon to Green direction, we will contribute to a faster pace towards reaching a Net Zero society by promoting various eco-friendly and low-carbon businesses and products. This ambition is also linked to the SK Group-wide target of contributing to global avoided emissions of about 200 MtCO₂e by 2030.

Scope 1,2,3 Net Zero

Get to Net Zero across
SK innovation's entire value
chain by 2050



Contribution to Avoided Emissions

Contribution to the reduction
of GHG emissions outside
SK innovation's value chain
through the expansion of
eco-friendly and low-carbon
businesses and products
(to be aligned with SK Group's
target of carbon reduction by 200
MtCO₂e by 2030)

Beyond Net Zero—Greater Contribution to Avoided Emissions

SK innovation’s approach towards Avoided Emissions

Apart from the efforts to reduce Scopes 1, 2, and 3 emissions that occur within the value chain, SK innovation is also actively making efforts to avoid emissions that contribute to global carbon reduction by promoting eco-friendly utility of low-carbon products or businesses.

We will continue our journey towards Avoided Emissions to accelerate the reduction of emissions across Scope 1~3 from a global perspective, in order to achieve Net Zero sooner than expected.



Definition of Avoided Emissions

Avoided Emissions is the difference in emissions between our eco-friendly product/business and targeted product/business that provides the same utility outside the value chain. This difference in emissions means the relative positive effect of supplying eco-friendly products to the market instead of conventional products with higher emissions. Avoided Emissions must be measured and managed separately from Scope 1, 2, and 3 Inventory reductions.

Category	Measured Target	Disclosure Method	Measuring Standard
Scope 1, 2, 3 Reductions	<ul style="list-style-type: none"> Emissions reduction within value chain 	<ul style="list-style-type: none"> Disclose Scope 1,2,3 emissions reduction plan 	<ul style="list-style-type: none"> Corporate Value Chain Standard among GHG protocols
Avoided Emissions	<ul style="list-style-type: none"> Measured difference against comparison target <ul style="list-style-type: none"> - existing vs. improved product - own vs. other company product - comparison with products providing the same effect 	<ul style="list-style-type: none"> Calculate/disclose separately from greenhouse gas reduction 	<ul style="list-style-type: none"> Product LCA Standard among GHG protocols

SK innovation’s perception about Avoided Emissions

SK innovation’s strategic direction:



- SK innovation’s strategic direction is consistent with the growing tendency to recognize Avoided Emissions as one of the important corporate-level eco-friendly efforts along with Net Zero
- SK innovation is contributing to global carbon reduction by continuously spreading eco-friendly products/businesses with high effects of Avoided Emissions

Measurement/Management methods:



- Aligned to the global Avoided Emissions measurement standards such as ISO 14040/44, GHG Protocol LCA, etc.
- Comprehensive measurement of effects from all stages of the product life cycle
- In terms of Scope 1,2,3 Net Zero, GHG Inventory and Avoided Emissions are separately managed, but in terms of overall effects of eco-friendliness, the impact of integrated eco-friendly contribution is calculated by combining the effects of GHG Inventory reduction at each key point and the effects of Avoided Emissions.

*** SK innovation’s history of measuring and managing Avoided Emissions**

From 2021, SK innovation began measuring the effects of Avoided Emissions on some businesses/products such as EV batteries and plastic recycles. In 2022, we have expanded the measurement/management targets under the accredited Global Avoided Emissions metric.

Beyond Net Zero—Impact of SKI’s Key Contributions to Avoided Emissions

SK innovation subsidiaries’ key businesses and products that avoid emissions

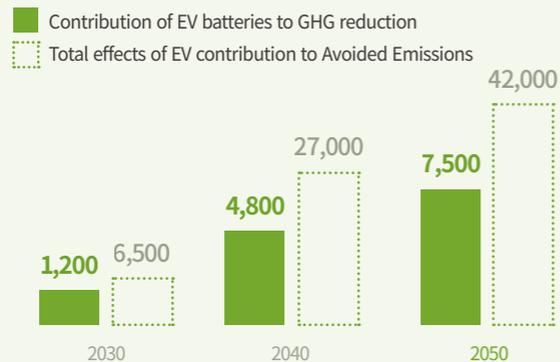


Battery

SK on is taking the lead in producing safe and eco-friendly batteries. SK on is calculating the effects of Avoided Emissions of our EV batteries, in comprehensive consideration of the contribution of EV battery and different rates of renewable energy distribution of each global region among total eco-friendly contribution of electric vehicles. About 2 tCO₂e of Avoided Emissions per EV equipped with SK on’s battery is expected, compared to using conventional internal combustion engine vehicles.

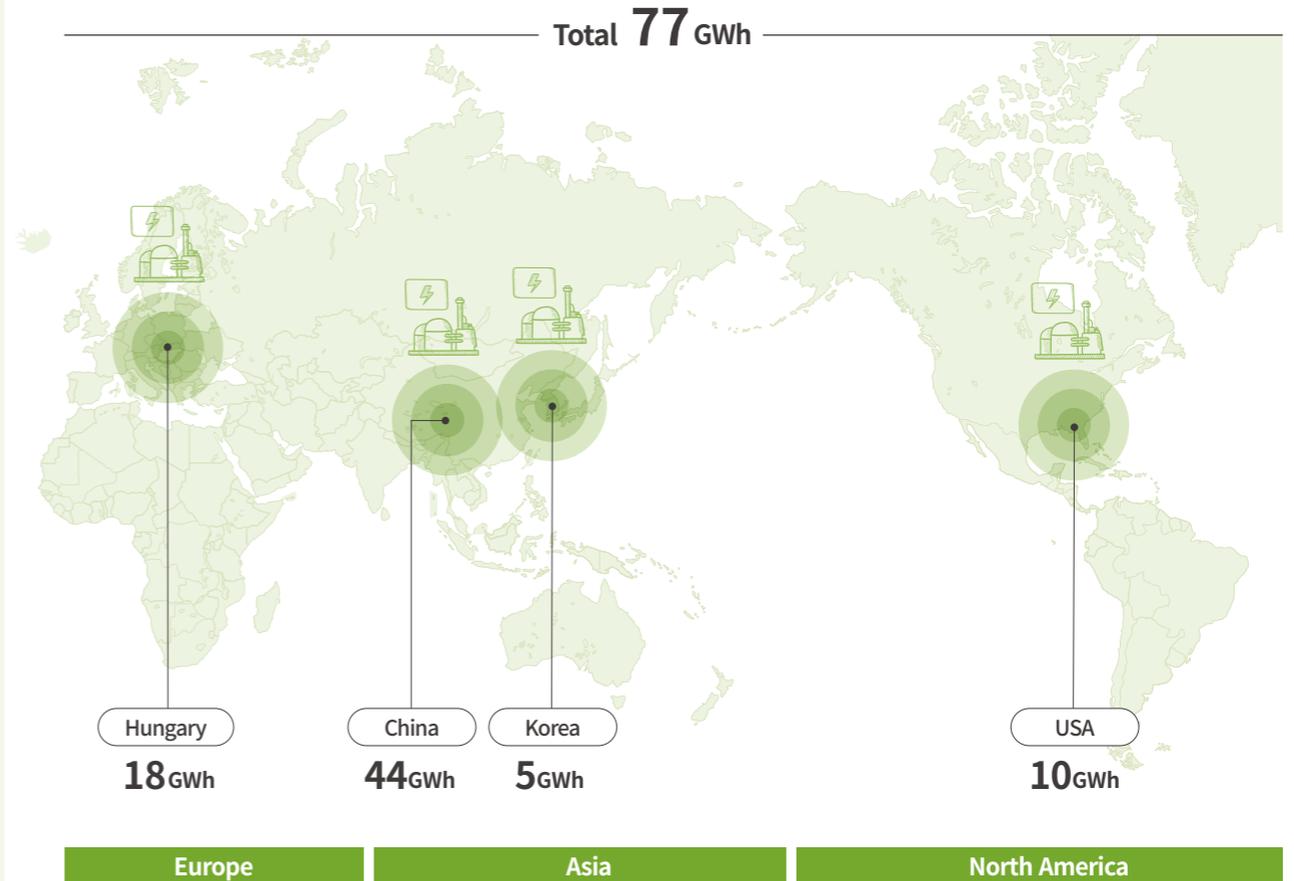
Calculated result of Avoided Emissions

Unit: 10,000 tCO₂e



SK on's EV Battery Production Capacity (as of 2022)

(Unit: GWh)



Beyond Net Zero—Impact of SKI’s Key Contributions to Avoided Emissions

SK innovation subsidiaries’ key businesses and products that avoid emissions



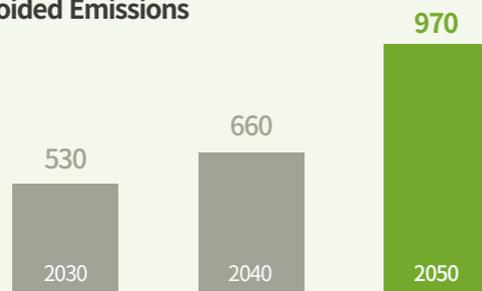
Plastic Recycle

SK geocentric is continuously developing technologies to recycle and reuse raw materials used for plastic manufacturing (PE, PP, and PET) in various ways such as mechanical recycle, chemical recycle, and thermal decomposition. In addition to the plastics produced by SK geocentric, we plan to gradually expand the capacity to recycle waste plastics distributed in the market.

These efforts will contribute to Avoided Emissions by reducing carbon emissions from conventional plastic incineration/landfill and the use of raw materials for manufacturing. Mechanical recycling for PE, PP, and PET reduces carbon emissions by an average of 2.34kg per 1kg of product, while chemical recycling for PP and PET reduces carbon emissions by an average of 3.13kg per 1kg of product.

Calculated result of
Avoided Emissions

Unit: 10,000 tCO₂e



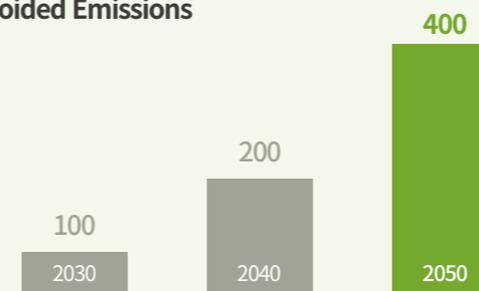
Battery Metal Recycling

Based on SK innovation's exclusive technology for lithium hydroxide recovery, we are promoting the BMR (Battery Metal Recycling) business, which recovers major minerals such as lithium, nickel, and cobalt contained in waste batteries with high purity that can be used for producing batteries.

By applying BMR technology, carbon emissions can be reduced by about 50~60% per 1kg of cathode material, compared to the method using virgin raw materials from mines. SK innovation is currently verifying methods for commercialization through a demo plant. We aim to operate a commercial plant for BMR business starting from 2025.

Calculated result of
Avoided Emissions

Unit: 10,000 tCO₂e



SK innovation’s BMR demo plant and lithium hydroxide recovery sample

Beyond Net Zero—Impact of SKI's Key Contributions to Avoided Emissions

SK innovation subsidiaries' key businesses and products that avoid emissions

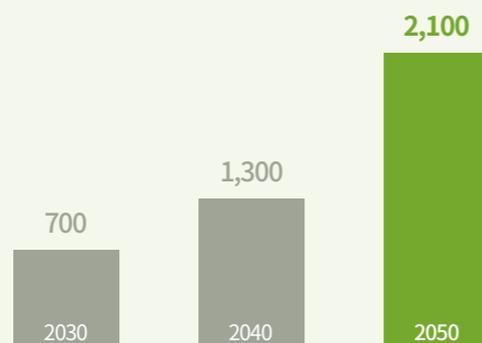


New Green Items

SK innovation's subsidiaries and businesses are actively promoting various eco-friendly and low-carbon businesses such as bio-based jet fuel, high-functional eco-friendly plastics, and waste lubricant upcycling. We expect the effect of our avoided emissions to reach approximately 20 MtCO₂e by 2050.

Calculated result of Avoided Emissions

Unit: 10,000 tCO₂e



SK innovation's New Green Items and Avoided Emissions

No.	New Green Items	Important Details
1	Sustainable Aviation Fuel (SAF)	Produce more eco-friendly aviation fuel using UCO (Used Cooking Oil), etc. as raw material
2	CCU Fuel	Use CO ₂ from carbon capture to produce fuel that can replace existing petroleum products
3	Blue Hydrogen	CCS from surplus hydrogen in the process to supply fuel for hydrogen-powered vehicles
4	Apply Light Weight Materials in Vehicles such as HCPP	Reduce use of polymer by applying specialty resin and reduce GHG emission through decreased vehicle weight
5	Improve Recycling Rate through Production of Single-Material Products	Replace composite material polymer with single materials (BOPE, etc.)
6	Produce Plastic Mixed with Recycled Resin	Reduce use of virgin resin by using recycled resin
7	Reduce Use of Polymer by Adopting Light-Weight Packaging Technology	Reduce polymer consumption in plastic raw materials by alleviating weight
8	Produce Biodegradable Resin, PBAT	Reduce GHG emission in processing waste plastic by using PBAT, a biodegradable resin
9	Reduce Food Waste by Using High Functional Packaging	Reduce Food Waste with packaging using EAA, Ionomer
10	Eco-friendly Paper Coating	Reduce polymer usage and increase recycling rate by replacing LDPE with EAA (water dispersion)
11	Replace of Material for Battery Separation Membrane	Use EAA as battery separating membrane material for greater GHG emission reduction effect
12	Use of Compatibilizer	Reduce virgin raw material usage by producing recycled resin using compatibilizer
13	Waste Lubricant Upcycling	Recycle collected lubricant waste to replace general incineration process and use of virgin raw material
14	Eco-friendly Base Oil	Improve fuel efficiency by using low viscosity engine oil rather than general engine oil
15	Data Center Oil Cooling	Increase GHG emission reduction effect compared to existing air-cooling method at data center
16	Low Viscosity Engine Oil	Reduce GHG emission by contributing to fuel efficiency compared to normal engine oil
17	Collect Heat Waste from Processing to Supply	Supply heat source wasted after internal plant processes to close-by apartments for heating

Beyond Net Zero—SKI's New Aspiration

SK innovation's strategic directions to Beyond Net Zero

SK innovation will continue to contribute to global carbon reduction by expanding eco-friendly businesses such as battery, plastic recycle, and battery metal recycling business, along with efforts to reduce Scope 1,2,3 to Net Zero by 2050. We further aim to make progress 'Beyond Net Zero', which is our strategy that encompasses both of our Net Zero performance and contributions to avoided emissions.

across SK innovation's value chain

Scope 1, 2, 3 Net Zero

- Scope 1,2 Net Zero by 2050 or sooner
- Reduction in Scope 3 carbon intensity of SK innovation subsidiaries by 90%, and in absolute emissions of SK innovation's Energy/ Chemical business by 70% by 2050



beyond SK innovation's value chain

Contribution to Avoided Emissions

- In alignment with our low carbon/eco-friendly business expansion, including Battery, Plastic/Battery Metal Recycling biz
- Contribution to Avoided Emissions in addition to SK innovation's efforts to get to net zero



Beyond Net Zero

- Help the world get to net zero by combining SK innovation's efforts to reach Scope 1,2,3 Net Zero and address Avoided Emissions

Beyond Net Zero Strategy

SK innovation's Beyond Net Zero Goal and To-be Image

Unit: 10,000 tCO₂e



NET ZERO GOVERNANCE

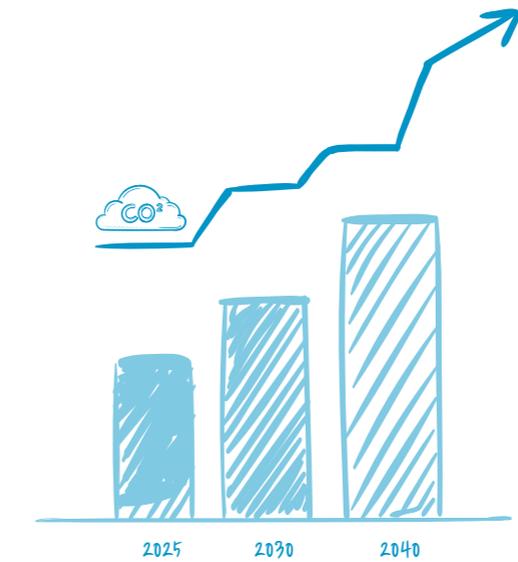
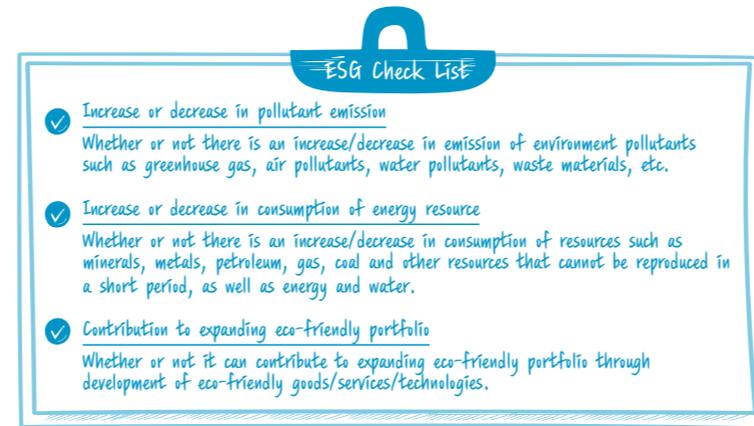
To strengthen and promote our commitment and response to climate change, SK innovation has established an organizational system in the direction of demonstrating collective intelligence regarding ESG management.

SK innovation is built on strong and well-established foundations and in-house management process that guide the way to Net Zero.

Net Zero Governance—Key Focus

Governance for Net Zero Acceleration

Establishment of Management Process for Addressing Climate Change and Achieving Net Zero



Net Zero Performance incorporated in Evaluation/Compensation

SK innovation has been incorporating Net Zero and climate change performance in CEO and company-wide KPI since 2021 to make direct links to evaluation/rewards. In 2022, evaluations will be based on not merely planning for measures but on actual performance based on the plan. SK innovation's CEO KPI consists of 10% of carbon reduction based on the Net Zero Target and $\pm 5\%$ of activities for achieving GROWTH strategy's core agendas which were established to promote ESG management at global top-tier level.

Mandatory Advanced Review of ESG Impact

In 2021, SK innovation implemented a procedure to mandatorily review ESG-related matters of all BOD agendas in order to identify and address potential risks related to climate change and ESG.

ESG Checklist consists of 11 items including whether the agenda entails change in carbon emissions, or any major negative impact on the environment. The company's important agendas are to be evaluated based on the ESG checklist that self-checks the ESG impact, and is being used as a core criterion for decision-making by the company and the board of directors.

Application of Internal Carbon Price in the Investment Review Process

SK innovation is improving company-wide investment review process by implementing internal carbon price for comprehensive review of potential profitability in order to accelerate Net Zero.

Starting from 2022 4Q, we plan to set carbon price internally for full implementation for Net Zero acceleration. SK innovation will measure increase or decrease of Scope 1, 2 emissions and review the potential profitability based on internal carbon price for all strategic investment agendas tabled to the Investment Committee for adjustment of investment priorities.

* Net Zero performance evaluation/compensation and ESG Checklist are disclosed in SK innovation 2021 ESG Report

Net Zero Governance—Expanding Net Zero Investment with Internal Carbon Price

Internal Carbon Pricing and Changing Investment Review Process

 What is internal carbon price (ICP)? : a value priced on each ton of carbon emissions in order to internally configure economic cost of corporate greenhouse gas emissions.

Starting from 4Q of 2022, SK innovation will improve the existing investment decision making process which mainly focuses on potential profitability, such as expected return against investment amount, by comprehensively considering economic effect of any increase or decrease in carbon emission as well by accurately measuring and applying internal carbon price for each investment agenda. As such, SK innovation will set and manage internal carbon price at a reasonable level to realize substantial progress in Net Zero Roadmap as well as to ensure discovery/execution of new eco-friendly/low-carbon businesses.

Direction of Internal Carbon Pricing and Investment Review Process Improvement



Direction of Setting Internal Carbon Pricing

- We plan to set price based on future carbon price scenarios, level of domestic/overseas internal carbon prices, attainment of 1.5°C goal, and acceleration of SK innovation's Net Zero target.
- After setting the level of internal carbon price by the second half of 2022, we plan to apply ICP and disclose it to the public

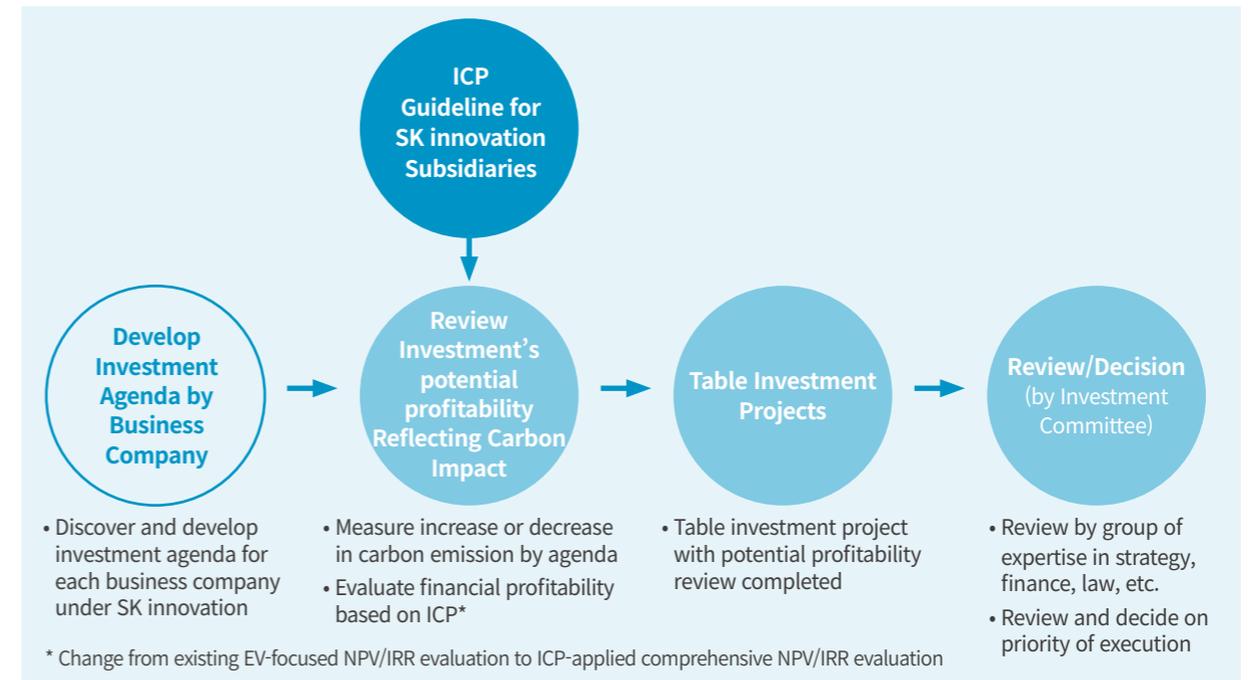
Subject for ICP application

- CAPEX investment items with expected change in Scope 1, 2 emissions among investment items tabled to the Investment Committee of SK innovation
- All strategic investments + some important current investments

Direction of Investment Decision-making Process Improvement

- Make measuring increase or decrease of Scope 1,2 emissions mandatory for all applicable investment items (supported by dedicated organization for carbon emission measuring/managing under SK innovation)
- Measure and evaluate financial analysis to estimate the profitability of potential investments based on internal carbon price of SK innovation
- Review/decide on execution of investment agenda considering comprehensive profitability inclusive of increase or decrease in carbon emission

Change in Investment Review Process (preliminary)



Net Zero Governance—Organization

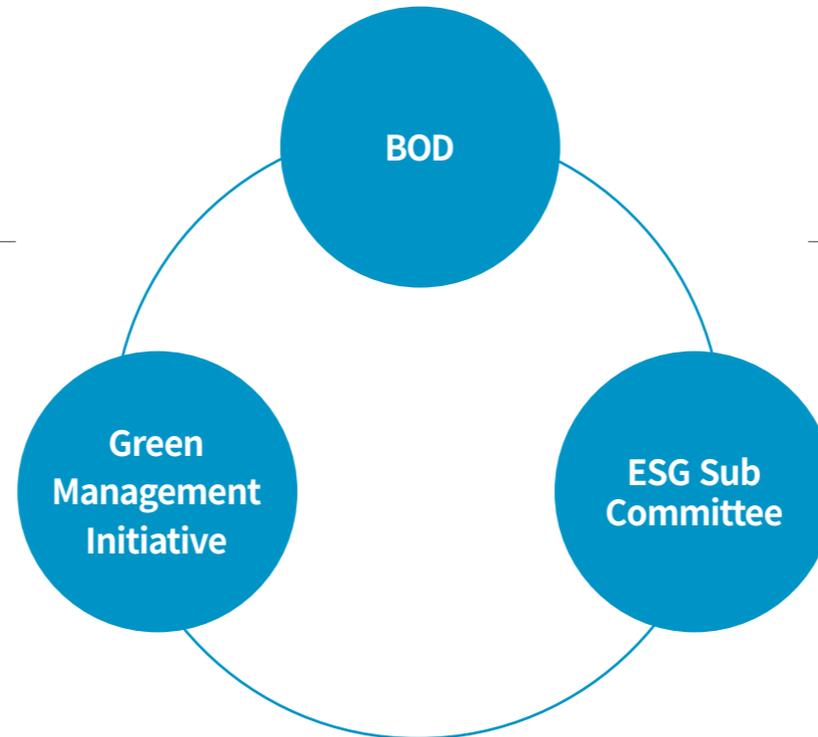
Key Governance Bodies Leading Net Zero

ESG Committee under BOD

SK innovation has established ESG Committee under the BOD, which is chaired by an outside director, in order to strengthen Net Zero execution and other ESG-related issues. ESG Committee checks the progress of Net Zero Roadmap of SK innovation and the company-wide measures against ESG risks. The Committee requires ESG pre-check process on important agendas tabled at BOD to screen negative impacts in advance.

Consultative Body of SK innovation Subsidiaries for Reviewing Net Zero Strategy/Performance

To discuss agenda on and strengthen execution for Net Zero and climate change, SK innovation is operating a consultative body participated by relevant organizations of all subsidiaries in SK innovation. Green Management Initiative meets once a month to monitor carbon reduction performance, and to discuss improvement methods as well as various agendas that strategically require collective intelligence in addressing Net Zero and climate change.



Integrated ESG Executive Governance Body of SK innovation and its Subsidiaries

Under the Management Committee participated by CEOs of SK innovation and its subsidiaries, we operate an ESG Sub Committee in charge of ESG management agendas. ESG Sub Committee is consisted of approximately 20 C-level senior executives, including the CEO of SK energy, and enhance corporate responsiveness and execution to the Net Zero, with monitoring performance and discussing diverse ESG agendas on monthly or ad-hoc basis.

We will continue our struggle to bring improved management system with sustainable governance and just transition

How would you diagnose current state of SK innovation as the ESG Committee Chair of BOD?

I have been aware of ESG management of SK Group and SK innovation through the press, but having an up-close look now as a key person of the corporate management since joining SK innovation as an outside director, I came to understand that it is considering ESG management at all forefronts of management activities. Not only in governance area, but the company leads in establishing and declaring strategies for Net Zero in the 'Environmental' area. In this point, I would like to make an emphasis on our sincerity, by planning the corporate-wide Net Zero strategy and setting specific-and-diverse reduction goals, which consequently presents significant progress. We will do our best to continue checking on the adequacy of Net Zero strategy set by the company, and evaluate the actual progress against the goal to enable SK innovation to attain Net Zero in each business area. Further, I will support the company with advice in areas of governance and social contribution, by leveraging on my professional background as a professor of commercial law. Each one of our BOD members with expertise in different areas will be ensured to contribute to the ESG management.

What is the key to sustain SK innovation's efforts toward Net Zero?

There may be various efforts but I believe they are system and fairness. I think SK innovation's Net Zero strategy already reaches high considering the substantiality and sincerity of the goal and execution methodology. What is more important is that executing such strategy should yield actual carbon-reducing effect each year.

Until today the company performed well with more than 10% of reduction against the base year, and what is critical in sustaining this performance is to establish a system through governance reformation. Performance doesn't come out of just a few people with strong determination, but requires building and supplementing various mechanisms that make Net Zero execution compulsory. For instance, SK innovation makes various efforts in governance such as including Net Zero targets in the CEO's KPI and compensation, and establishing an ESG Committee in BOD. However, there needs to be further ways to ensure Net Zero efforts are sustained by system consistently, even if time passes and persons in charge changes.

Let me move on to another key factor, fairness. Recently, there has been a rise in voices for 'just (fair) transition', insisting there should not be any stakeholder experiencing negative impact from the process of Net Zero. People have only just become aware of the process towards reaching the Net Zero is also as important as the goal. SK innovation promises to provide various support to ensure just transition for all employees, the customers and the community to be entirely engaged in the Net Zero ecology with us.

Outside director, Taejin Kim

Chair of ESG Committee, BOD of SK innovation
(current professor of Korea University School of Law)



Net Zero Governance—ESG Sub Committee

Integrated ESG Execution Consultative Body of SK innovation Subsidiaries

SK innovation operates a monthly ESG Sub Committee under Management Committee which is the highest decision-making body of the management. The Sub Committee monitors the progress of 'GROWTH strategy' execution, an ESG strategy unique to SK innovation. To drive ESG execution, the Sub Committee is composed of organizations with specialization and execution capacities in each area, headed by the CEO of SK energy, and participated by senior executives of subsidiaries and related organizations who lead in creating tangible ESG/Net Zero outcomes. Through this, we are continuously discovering and executing projects that not only raise ESG management competence of each subsidiary of SK innovation, but lead to creating company-wide synergy.



SK energy CEO / Kyongmok Cho

Management Committee

- Top-most decision-making body of the management of SK innovation subsidiaries
- Regular monthly meetings
- Participation by CEO of SK innovation, CEO/representatives of eight subsidiaries, Head of Ulsan Complex, Head of Institute of Environmental Science & Tech

ESG Sub Committee

- Organization dedicated to discussing/deciding on ESG-specific agendas (Sub Committee chairman: CEO of SK energy)
- Regular monthly meetings
- Participation by 16 key executives of SK innovation and subsidiaries including SKI ESG Development Officer, Head of Value Creation Center, Head of SHE Division Group, Procurement Officer, Optimization & Analytics Officer, Compliance Officer, Management Strategy Officer, Talent Development Officer, and Heads of Net Zero Department of each subsidiary
- Shared/discussed approximately 30 agendas throughout six meetings in 1H 2022

Agendas Discussed

(12 out of total 27 agendas were related to Net Zero in 1H 2022.)



- ✓ Establishment of ESG 'GROWTH Strategy' of SK innovation
- ✓ Operational Plan for Green Management Initiative
- ✓ Scope 1, 2 Reduction Roadmap Revision
- ✓ Operational Plan for Voluntary Carbon Credits
- ✓ Scope 3 Reduction Advancement Plan
- ✓ Beyond Net Zero Strategy for SK innovation
- ✓ Net Zero Roadmap Evaluation Framework
- ✓ Execution Plan for Just Transition
- ✓ Review of Scope 1, 2 Reduction Progress by Business Area
- ✓ Investment Evaluation Process Revision Plan for Net Zero Acceleration
- ✓ Progress of Jeju UTD Carbon-neutral Soccer Game



Net Zero Governance-Green Management Initiative

Net Zero Strategy/Performance Reviewing Consultative Body of SK innovation

Green Management Initiative is a group for discussing Net Zero and climate change agendas in depth participated by ESG, Net Zero, Optimization and Analytics and other related organizations among subsidiaries. Meetings are held once a month to review the performance of carbon reduction by business unit and discuss ways to optimize management process for Net Zero acceleration, monitoring of market trends.

- Approximately 50 participants including representative of SK innovation DT Division Group, O&A Office, ESG Development Office, SHE Division Group, and working-level managers of Net Zero and relevant organizations of each subsidiary
- Regular monthly meetings
- Shared/discussed approximately 30 agendas through six meetings in 1H 2022

Key Features and Roles

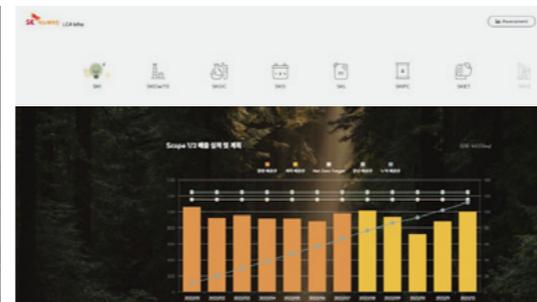
- 1 Monthly monitoring of carbon reduction progress**
 - Net Zero roadmap update
 - checking current progress of Scope 1, 2, 3 reductions
- 2 Discussion of Net Zero management infrastructures**
 - Establishing SK LCA infrastructure and carbon risk evaluation system
 - establishing DBL optimal operating system, etc.
- 3 Checking external market and industry trends and insights**
 - Systemizing carbon emission credit strategy
 - green product certification and exploring market



A view of Green Management Initiative meeting



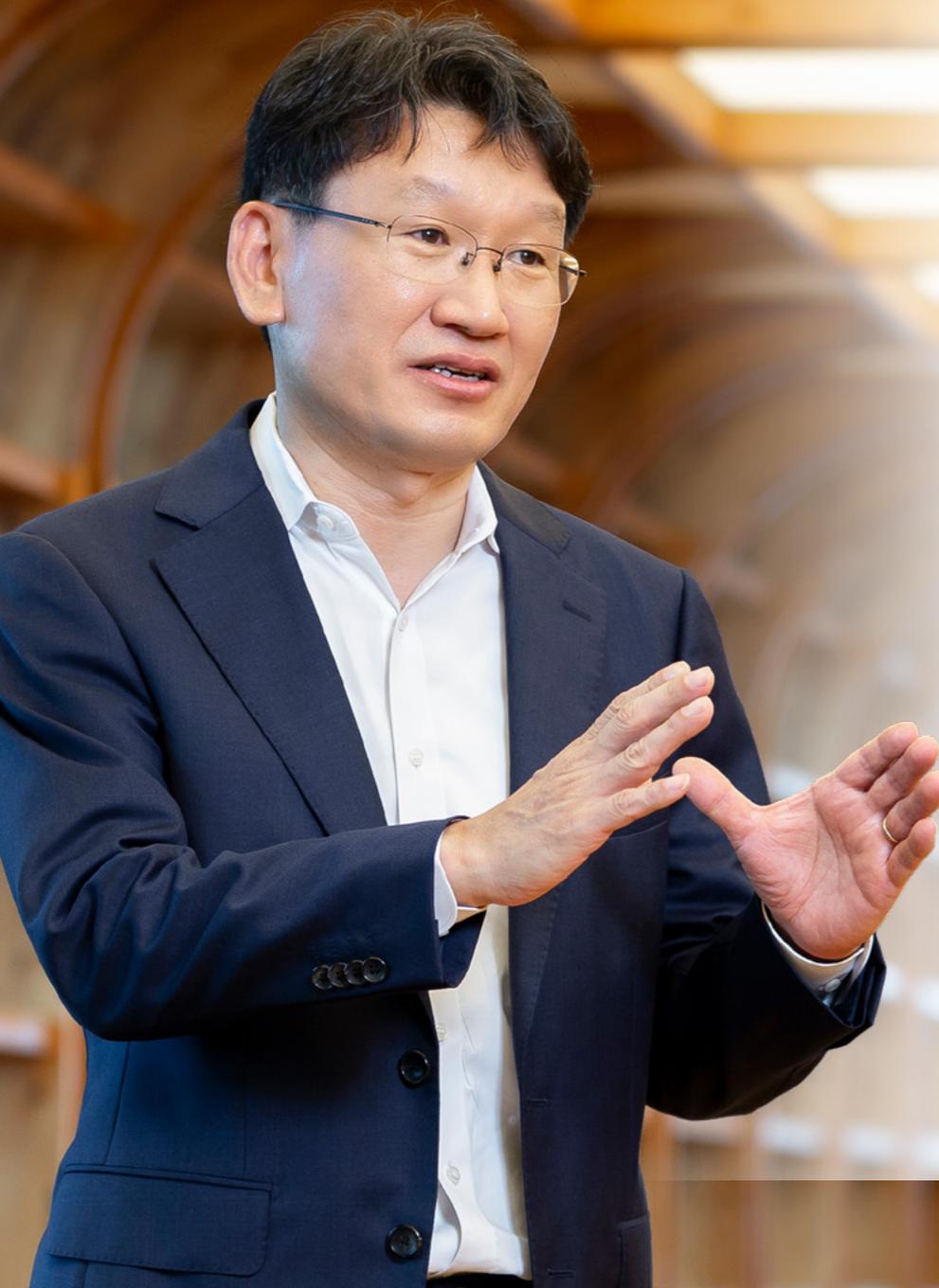
Discussion between HQ and domestic/overseas business sites



Monitoring of monthly carbon emission based on LCA Infra.

Agendas discussed

- ✓ Checking progress of each Net Zero key milestone
- ✓ Rolling and detailed analysis of Scope 1, 2 emissions
- ✓ Optimal operating system for greenhouse gas emission credit market
- ✓ 2022 update of Scope 1, 2 Net Zero Roadmap
- ✓ Scope 3 reduction advancement plan
- ✓ SK innovation's 'Beyond Net Zero' strategy
- ✓ Global trends monitoring on carbon neutrality and climate change measures
- ✓ Significance of CF100 (Carbon Free 100)
- ✓ Outcome of Net Zero roadmap evaluation framework
- ✓ Current status and next plan for DBL-based optimal operation system
- ✓ Outcome of LCA infrastructure established for Green Management
- ✓ CO₂ operation system optimizing method
- ✓ Improvement direction of investment project evaluation process for acceleration of Net Zero
- ✓ Review and forecast of voluntary carbon emissions trading market
- ✓ Investment evaluation process revision plan for Net Zero acceleration
- ✓ Establishment of operation process for attaining short-term target of Net Zero roadmap
- ✓ Outcome of DBL-based optimal operation system



Systematic and Scientific Net Zero Execution Through Green Management Initiative

Please introduce the Green Management Initiative.

SK innovation established Green Management Initiative in 2020 participated by Net Zero organizations and decision-making organizations of corporate subsidiaries to discuss specific execution plans for Net Zero. The initiative was organized and is in operation with the principle that unilateral determination of a certain organization charge is not sufficient and that Net Zero could be achieved only when the company utilizes collective intelligence. The Green Management Initiative of SK innovation actively discusses topics as adequacy of Net Zero goals, monitoring of monthly carbon reduction actual to the expectation, and agendas of discovering low-carbon business models. Green Management Initiative is a representative case of scientific Net Zero execution sought by SK innovation. It offers effective management methods through multi-dimensional analysis of carbon value while promoting decision-making based on simulation, which leads to the efficient achievement of Net Zero.

I believe collective intelligence through the initiative and science-based decision-making can take SK innovation a step closer to attaining Net Zero.

Cheol-Joong Kim

Head of Optimization & Analytics, DT Division Group

What kind of agendas does Green Management Initiative usually handle?

Green Management Initiative handles three types of agendas under the topic of 'Carbon to Value'. First is the regular monitoring progress on greenhouse gas reduction of each business subsidiary according to Net Zero Roadmap, and discussing solutions. Second is discussing systemization of carbon emission credit strategy, certification of green products and exploring the market value to enhance readiness for low-carbon industry paradigm. Finally, it develops and operates infrastructure to measure and evaluate LCA emissions of SK innovation businesses/products in order to secure the core driver of Net Zero.

Please explain LCA infrastructure in more details.

LCA infrastructure is a tool for measuring and assessing carbon emission of the entire life cycle of the businesses and products of SK innovation. To reduce carbon emission, there first has to be an accurate measuring of emission. LCA infrastructure is devised to enable accurate measuring and monitoring of carbon emissions throughout the life cycle of each subsidiary as per standardized procedure. Further, it can track the carbon emission coefficient of each source of emission and calculate carbon intensity of each product. Impact analysis result of carbon emission will be used for structuring our reduction efforts. While the infrastructure is disclosed to SK innovation employees as of now, we plan to provide external stakeholders with accurate and transparent emission data. We would like our stakeholders to keep attentive to the Net Zero progress and its disclosures through the LCA infrastructure.

Net Zero Governance—Data Management

Systematic Management and Transparent Disclosure of Net Zero and ESG Data

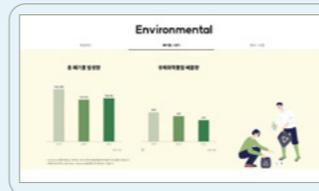
ESG Data Platform

SK innovation opened the ESG Data Platform in July 2022 to systematically manage ESG management goals, performances and detailed data of all SK innovation subsidiaries, as well as to communicate them transparently with external stakeholders. ESG Data Platform provides detailed data of 127 standard KPIs in environmental, social and governance areas, including greenhouse gas reduction targets of Scopes 1, 2, and 3, sorting by subsidiary and year.

SK innovation plans to stay in line with global trend of regulatory requirements on disclosure of non-financial data by starting with the ESG Data Platform for domestic sites and expanding management/disclosure coverage to EU production sites by 2023.

SK innovation's ESG Data Platform can be accessed through the company's website or via individual webpage.

 esg.skinnovation.com

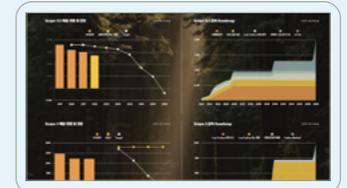
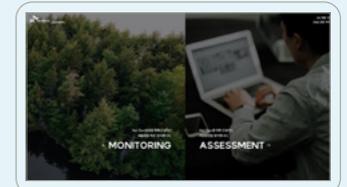


LCA Infra

SK innovation established and is operating company's LCA (Life Cycle Assessment) infrastructure to ensure systematic decision-making on carbon management takes place throughout all processes of corporate-wide management activities.

LCA infrastructure is a system that comprehensively/quantitatively assesses environmental impact in the entire process of product/service/technology, including raw material sourcing, processing and manufacturing, even further to product use and disposal. It supports measuring and monitoring carbon emissions of Scopes 1, 2, and 3 of each subsidiary. Carbon emission measurements helps evaluating/comparing quantitative impacts by each action plan for carbon reduction, ranging from process efficiency improvement to RE100, CCUS, and low carbon feedstocks. Through this, we are able to simulate changes in carbon emissions according to changing operation conditions, thus can deliver on Net Zero Roadmap more effectively.

SK innovation's LCA infrastructure has earned International Standard Certification for product LCA calculation process (ISO14040, 14044, 14067), which stands for assessing and managing carbon value based on standardized methodology and data.



RE-CAP

For the past 60 years ever since the founding in 1962, SK innovation has created a strong driving force that can shape the future at the forefront of the industry.

In commemoration of the 60th anniversary of our foundation in 2022, we will continue to create a “driving force that moves the world” through full-fledged innovation in the direction of Carbon to Green by creating new values to the challenges of Net Zero.

SK innovation Net Zero Aspirations

2050

Net Zero Operations Scope 1, 2

Accomplishment of Scope 1, 2 Net Zero before 2050, in alignment with the achieving 1.5°C scenario of Paris Climate Agreement

Net Zero Portfolio Scope 3

Reduction in financial intensity of SK innovation subsidiaries by 90% against that of 2019

Net Zero Sales Scope 3

Scope 3 carbon (absolute) emission reduction in Energy/Chemical Biz by 70% against that of 2019

2035

Net Zero (Green Biz) Scope 1, 2

Early Accomplishment of Net Zero in Battery/Material Biz

2022

Establishment of Scope 3 Reduction Plan and Integrated Beyond Net Zero Strategy

2040

Scope 1, 2, 3 Beyond Net Zero

Entering the 'golden cross' stage where positive impact surpasses negative impact of emissions, based on Scope 1,2,3 and avoided emissions

2030

Scope 1, 2 Scope 1, 2_50% Reduction

Scope 1,2 GHG emission reduction by 50% to that of 2019 in 10 years

Scope 1, 2 RE100_100%

Reaching RE100 early by converting all electricity power sources to renewable energy

2021

Establishment of Scope 1, 2 Net Zero Roadmap

CEO Comments

Sustainable growth, for sustainable world!

Year 2022 marks 60th anniversary of SK innovation.

For the past 60 years, we have produced the driving force to move and grow the world. SK innovation is now taking another step forward to 'Global Energy & Materials Company' based on the success in the past days, with leading the 'Carbon to Green' innovation against challenges of the times - climate risks.

For this, SK innovation will focus on four key commitments.

First, we will fulfill Carbon Net Zero with sincerity, and responsibility.

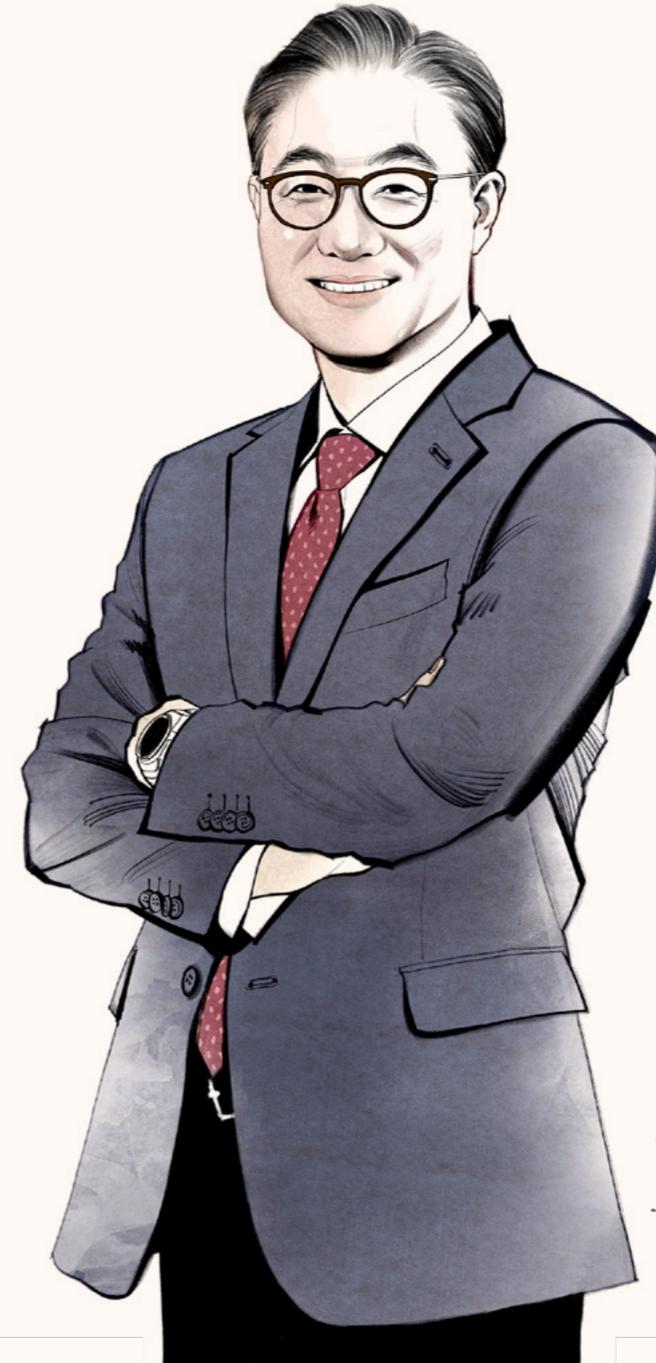
Second, we will create a green portfolio and accelerate innovation in business model oriented to 'Carbon to Green' transformation.

Third, we will clearly present and implement ESG management strategies and goals.

Fourth, we will continuously bring innovation to our governance.

SK innovation will continue to grow by expanding our business portfolio of zero or low-carbon energy and circular economy, 'Carbon to Green' innovation with unwavering focus on Net Zero Roadmap.

This will lead us to become a driving force to light up the sustainable world in the coming future.



CEO and Vice-chairman, SK innovation

Jun Kim

Frequently Asked Questions



Is there any impact of changes in external management environment such as global geopolitics on Net Zero plan of Energy/Chemical Biz?

Oil business is facing unprecedented performance in economic value, derived from Ukraine - Russia crisis prolonged. We are aware of high interest and concerns of stakeholders over the Net Zero Roadmap and its implementation under this current situation.

Attaining Net Zero target should be prioritized in any changes in external market environment, as SK innovation's corporate mission. And it is our ultimate goal to gain the trust of external stakeholders on our Net Zero commitment, by achieving the planned Net Zero reduction target.

As a part of the long journey towards the Net Zero, we are continuously monitoring greenhouse gas reduction of all businesses under SK innovation in monthly and yearly basis. Collective intelligence in the governance bodies will make us discover creative and effective reduction methodologies. Based on our operational decision-making toward DBL Max, we will ensure the efficient accomplishments in Net Zero Roadmap execution in short- and mid-terms through various carbon-reducing activities, and share the results transparently.

FAQ

What is SK innovation's perspective on global contribution to carbon reduction (avoided emissions)?

Corporates usually plan to reduce emission within the company's value chain, seen as Scopes 1, 2, and 3. SK innovation also set up our integrated Net Zero Roadmap spanning Scopes 1, 2, and 3, and is currently making more positive progress than expectations.

Aside from Scope 1, 2, 3 greenhouse gas reduction, we believe there needs accurately measuring and managing the overall effects of carbon reduction in various eco-friendly businesses and products, to ultimately contribute to converting to global low-carbon economic paradigm.

Therefore, SK innovation is measuring and managing the avoided emissions of green businesses and products like battery, plastic recycling, separate from Scopes 1, 2, and 3. By expanding such sustainable businesses, we are looking forward to contribution and promotion to the global carbon reduction.

Frequently Asked Questions



Does SK innovation intend to declare Net Zero for Scope 3 as well?

As a holding company, SK innovation maintains a wide range of business portfolio from Energy/Chemical to Battery/Material. Likewise, SK innovation has set a reduction goal centered to financial intensity in order to sufficiently reflect our efforts to reduce carbon emissions in an integrated manner, covering each individual business portfolio with different characteristics. Further to this, Energy/Chemical business set a separate additional goal of absolute amount reduction in carbon emission as a way to claim responsibility over Scope 3 reduction.

However, rather than overstraining to proclaim Scope 3 Net Zero, we aim to reduce Scope 3 from a more comprehensive perspective,

considering changes in national policies, development of carbon reduction technologies, and growth rate of green businesses, etc. This stance keeps the same context of external stakeholders who require Scope 3 reduction at an adequate pace and intensity aligned to a realistic stage of technology development, government policy support, and innovation in corporate business structure.

SK innovation will continue to deliver reductions in Scope 3, in line with the speed of global energy transition based on our commitment, to provide stable energy supply and reduce carbon emission.

FAQ

What is SK innovation's plan to supply stable energy and reduce carbon at the same time?

In the long run, by 2050, we predict there will be energy transition from hydrocarbon of petroleum/gas to green energy sources, such as electric/hydrogen, in both the supply and demand sides of the global energy market.

Amid such transition, SK innovation believes it very important to continue our role as stable supplier of energy needed for economic growth. Therefore, we are proactively investing in and driving R&D of

promising energy sources like hydrogen/ammonia, while aiming to maintain our position as an energy supplier, providing more stable and sustainable products and services to the mankind, with accelerating realization of Net Zero.

We believe striving for Net Zero, rather than minimizing or selling off existing business, is a responsible way to contribute to global Net Zero while stably supplying energy source.

One Step Closer to Net Zero



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