

# Recycling Waste from Business Sites

Minimizing waste generated from business operations is always on our agenda. SK Innovation does not stop at simply sorting recyclables for collection but also manages recycling rates in a bid to minimize incineration and landfill. SK Innovation will make further endeavors to raise waste recycling rates to keep pace with ever-tightening waste control and growing social awareness worldwide and lead the way in resource circulation.



## 2025 Targets

Major overseas business sites certified with ZWTL

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

SK Innovation aims to have all domestic business sites and major overseas sites obtain the zero waste to landfill (ZWTL) certification by 2025. Along with its global business expansion, the company plans to upgrade its waste management system to meet global standards and obtain objective verification of its progress. The ZWTL certification by UL Solutions, an international safety certification agency, awards four grades of certification based on waste recycling rates: Platinum (100%), Gold (99~95%), Silver (94~90%), and Certified (80~89%). We take the ZWTL certification as a means to reaffirm our commitment to increasing waste recycling and share our progress with outside stakeholders.

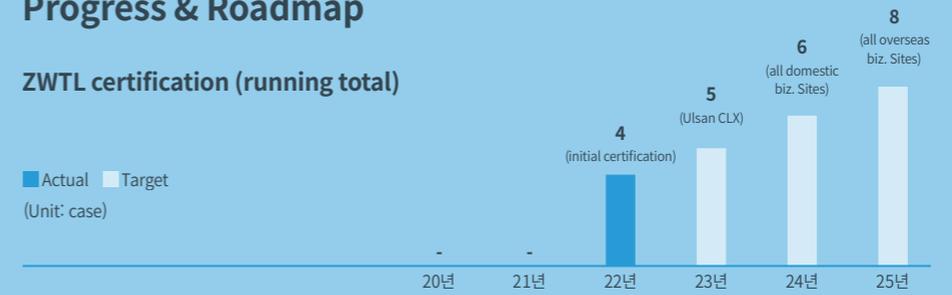
## Targets to Improve Resource Circulation at SK Innovation



## Progress & Roadmap

### ZWTL certification (running total)

Actual Target  
(Unit: case)



## Major Activities Planned for 2023

This year, we plan to have more business sites certified with ZWTL. In Korea, four business sites will have their certifications renewed and SK Enmove (Ulsan) will make its first bid for certification. As for overseas business sites, we are checking on corporations ready to get certified and the certification process in respective regions. Our target for this year is to get at least one overseas business site certified, which we expect would serve as a cornerstone for encouraging other business sites to get the ZWTL certification. In selecting recycling agents, the company will upgrade the evaluation criteria to include social value, such as recycling technology and recycling rate and put a priority on what's best for the earth, not simply going after economics, in every decision we make.



SK Innovation makes strenuous efforts, such as upcycling, to minimize waste from business activities and expedite their recycling.

### Activities and Achievements in 2022

#### Our Commitment



The global energy mix is rapidly shifting toward carbon-free or low-carbon energies amidst the international movement pursuing carbon neutrality to deal with the climate crisis. One of the key features of such a transition is a circular economy where we decrease waste to prevent pollution and efficiently use resources.

SK Innovation will pursue future growth by migrating to a portfolio centered on carbon-free and low-carbon energies and a circular economy based on its excellence in technology.

- Keynote speech at SK Innovation's Global Forum

Vice Chairman Kim Jun, SK Innovation



#### Achievement 1 Zero Waste To Landfill (ZWTL) Certification

Following the Carbon to Green strategy, SK Innovation sought the ZWTL certification for four domestic business sites, all of which were successfully certified in 2022. SK Energy and SK Geo Centric at the Ulsan CLX were rated as "Certified", and SK IE Technology (Jeungpyeong) and SK On (Seosan) were rated as "Gold" in recognition of their high recycling rates of 99% and 97% respectively. Meanwhile, SK Innovation will keep working to raise recycling rates with a commitment to promoting resource circulation, not simply for the sake of getting certified.

##### SK Energy



##### SK Geo Centric



#### Achievement 2 Upcycling Sewage Sludge to Cement

The Ulsan CLX generates approximately 7,000 tons of sewage sludge a year. Sewage sludge has mostly been incinerated or buried as its strong odor makes it inappropriate for recycling. To find ways to recycle sewage sludge, SK Innovation has worked with academia and research institutes and developed a solution that separates and removes organic substances, the main source of the odor, from sewage sludge. We completed pilot and demonstration tests and registered a patent last year. Currently, we are making facilities investments to apply the solution from 3Q, 2023, and plan to recycle the entire amount of sewage sludge, approximately 7,000 tons/year, for cement production.



The SBM Process Recycles Waste by 100%.

#### Achievement 3 Recycling Waste from Jet Fuel Production

The Ulsan CLX also recycles spent clay generated from jet fuel production. The solid bed merox (SBM) process filters raw kerosene to produce jet fuel and generates spent clay as waste. The company has improved treatment processes to recycle spent clay and hence is able to create both the social value of contributing to ESG management and the economic value of saving waste landfill expenses.



Learn more about recycling waste from business sites.