2023 Korea Zinc

INVESTOR DAY

KOREA ZINC

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INVESTOR DAY

The Past and Future

HISTORY

Establishment/ Growth Period (1974~1999)

1974 Established Korea Zinc Co., Ltd.

1978 Construction of Zinc Refinery (Zinc 50ktpa)

1986 Construction of Lead Refinery (Lead 35ktpa)

1992 Construction of DRS Lead Refinery (Lead 135ktpa)

1994 Construction of Direct Leaching Factory for Zinc Concentrate

1995 Construction of Fumer Plant

1997 Established SMC, Australian Zinc Smelting Subsidiary

Global Expansion Period (2000~2017)

2000 Construction of TSL Plant

2004 Construction of Copper Refinery (Copper 20kpa)

2015 Construction of the Second Non-ferrous Metal Complex (Lead 420ktpa)

2016 Acquired Zinc Oxide Corporation

2017 Established Zinc Oxide Corporation Vietnam

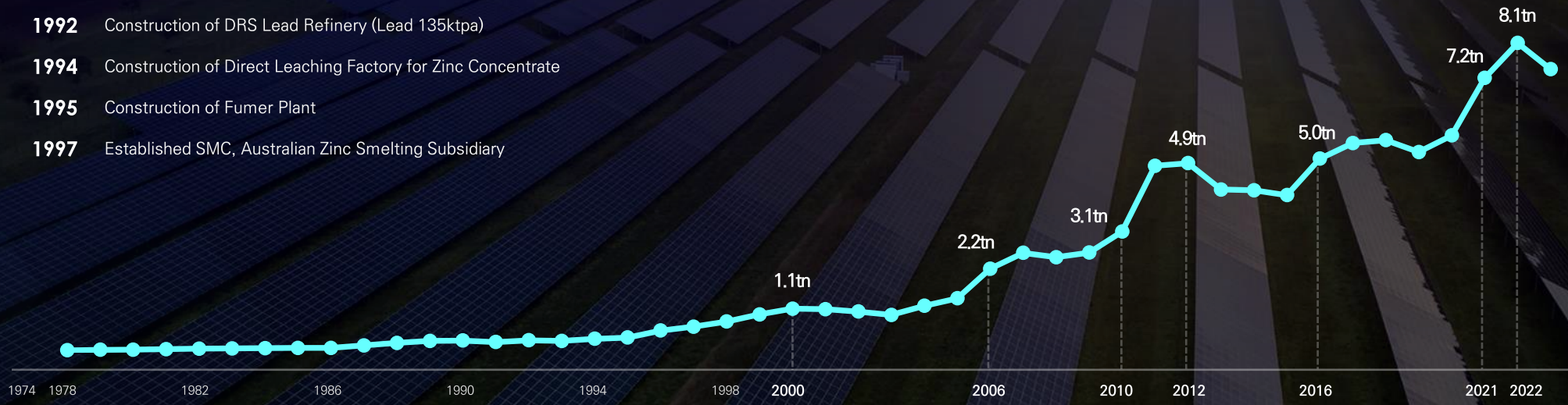
TD Growth Period (2018~)

2018 Construction of #10 Zinc Electrolysis Plant (Zinc 650ktpa)
Commissioning of Onsan ESS (150,000 kWh)
Construction of SMC Solar Farm (124 MW)

2020 Construction of LNG Combined Cycle Power Plant,
Established KZAM Co., Ltd

2021 Established Ark Energy in Australia,
Acquired Epuron, a renewable energy developer

2022 Acquired Igneo Holdings (US), an electronic waste recycling corporation



View of SMC Solar Farm

Revenue: Parent Basis (Unit: KRW)

The Past and Future

Creating A Sustainable Growth Based On Unrivalled Competitiveness in the Smelting Industry

Past

- Pursuit of global excellence through technological prowess
- Establishment of a solid leadership in the global non-ferrous metals market
- Focus on high profitability in core smelting business
- Achieved 2x revenue growth over the past 10 years (CAGR 7.1%)
- Reported 95 consecutive quarterly profits since 2000*

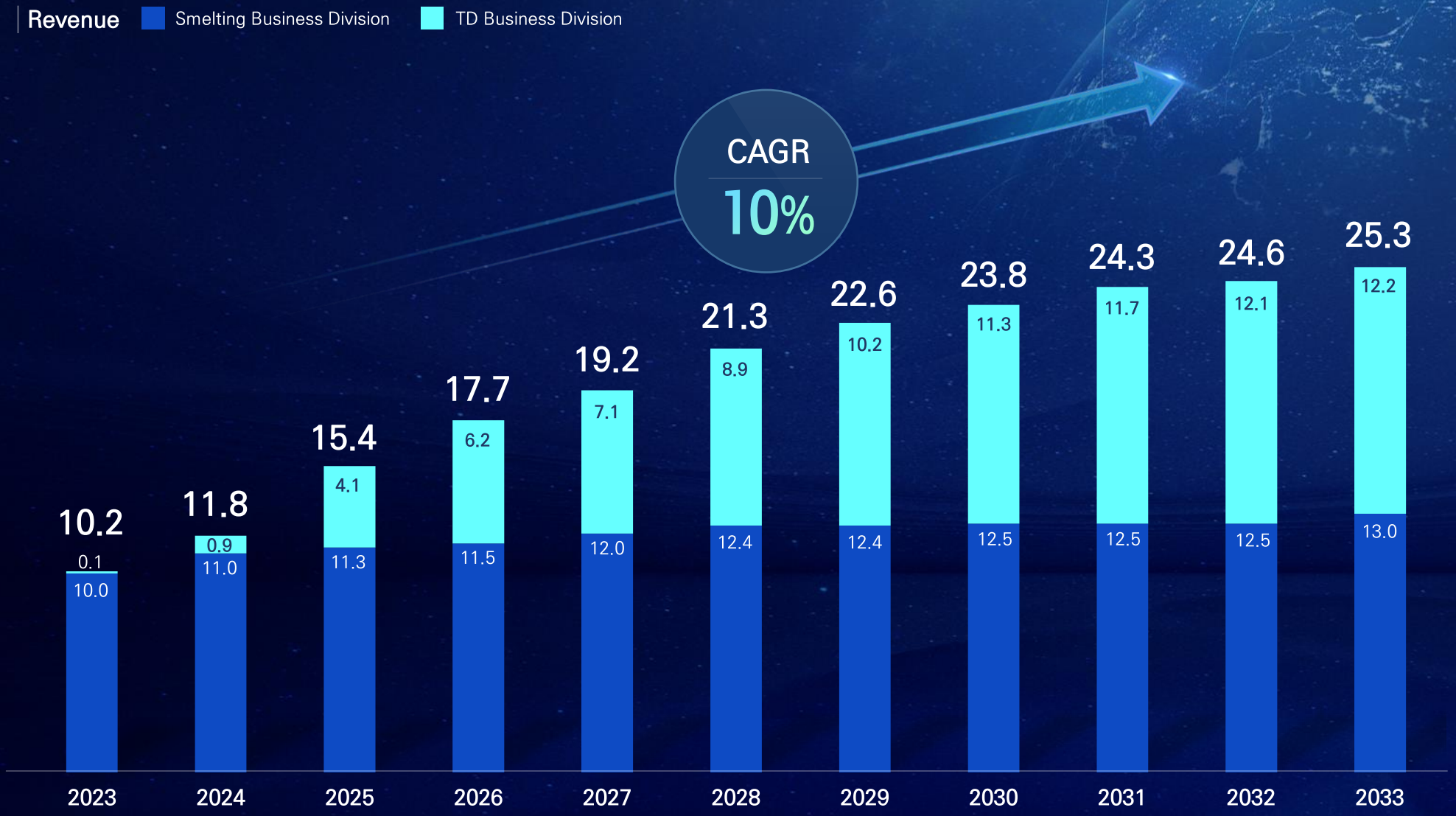
Future

- Venturing into new businesses using inherent technologies and capabilities
- Maximizing financial profits by expanding our footprint in new markets
- Securing future growth drivers based on core competitiveness in the smelting industry
- Playing a key role as a responsible member of society through ESG management

* Mandatory filing of quarterly reports since 2000

Projected Consolidated Revenue

10% Revenue CAGR for the Next 10 Years



Unit: KRW tn
All figures are based on real values (2023 figures are internal estimates)
Revenue: Simple sum of revenue before the elimination of intercompany sales

02

Smelting Business Division

With the Unrivalled Technological Leadership, We

“Reported 95 Consecutive Quarterly Profits”

1 Unification

DRS*
Process Unification
Autoclave

2 Enlargement

The World's Largest Jumbo Plate
The World's Largest Cell House
The World's Largest Roaster

3 Productization of Impurities

Ferric Oxide
Co, Ni Oxide
Sb, Bi, Te, etc.

* DRS: Direct Redox Smelter

Onsan Refinery View

A Panoramic View of Korea Zinc's Onsan Refinery and Secondary Battery Materials Facility in April 2023

Location: Onsan-eup, Ulju-gun, Ulsan Metropolitan City
Total Site Area: 1,421,487 square meters

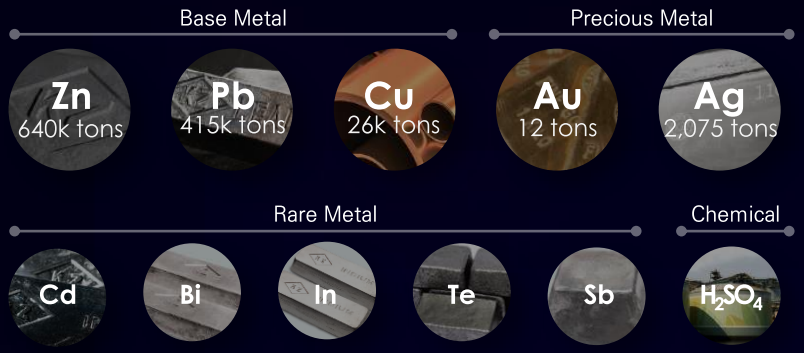
Production Capabilities

Global Market Share of Zinc and Lead Production

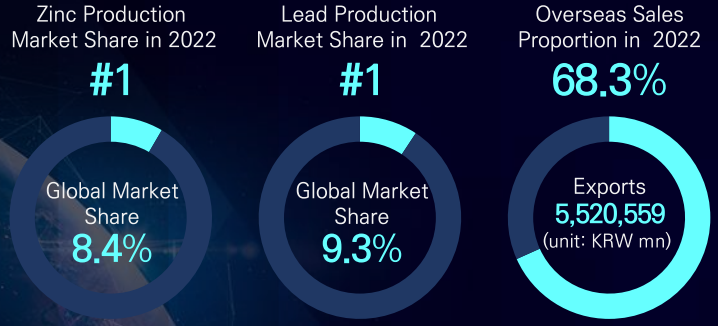
World No.1

Securing the top position in global zinc and lead production with market shares of 8.4% and 9.3% for zinc and lead, respectively, as the world's largest single smelting facility.

Producing over 1 million tons of more than 10 types of non-ferrous metals annually



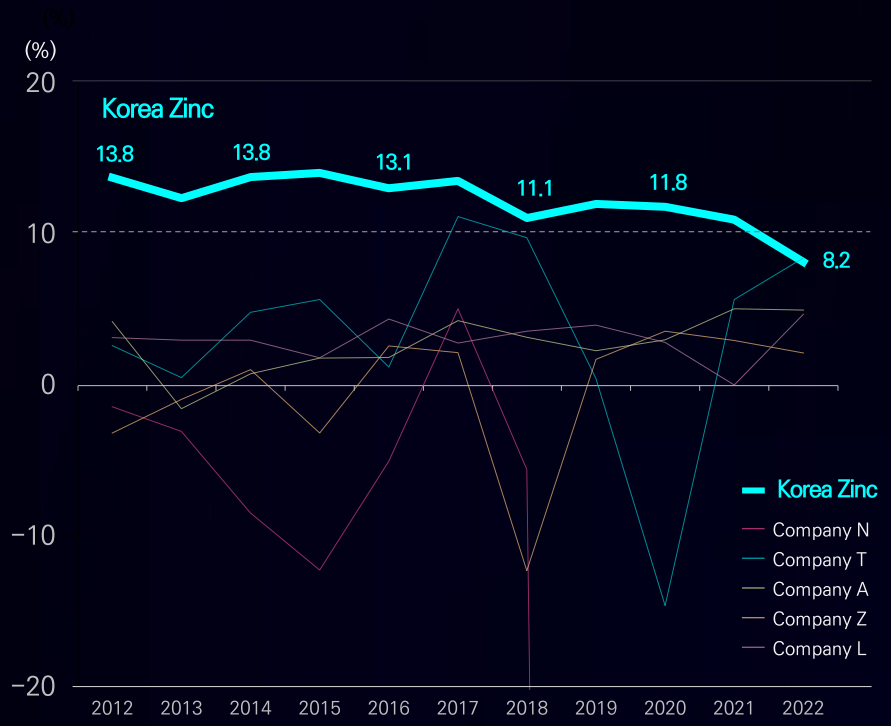
The World's No. 1 Smelter



* Source: Wood Mackenzie (4Q 2022)

A High and Stable Profitability

Maximizing the recovery of high-value metals from low-value residues



* Source: Bloomberg

Risk & Opportunity

Smelting

Risk

1 Lower TC* (Raw Materials Costs▲)

Deterioration in Miner's Profitability → Curtailment in miner's output → Tight Concentrate Supply → Decline in TC

* Treatment Charge

2 Rising Manufacturing Costs

Deterioration in KEPCO's profitability → Rise in Electricity Prices
Increase in Labor and Material Costs amid inflationary environment

Opportunity

1 Higher processing volume from secondary materials

% of Secondary Raw Materials: Zn 24%, Pb 26%, Ag 33%, Au 40%, Cu 70%

2 Strengthening Competitiveness in Production and Costs

Cost Reduction through Streamlining processes and Internal Power Generation

3 Improving External Conditions

Stabilizing Coal/LNG Prices and Logistics Cost

Strengthening Competitiveness

Streamlining Processes

- **Shutdown and conversion of 5 plants: estimated manufacturing costs saving of KRW 113 bn**
- **Steady production volume: 1.12mn tons of total production volume in 2024 vs 1.10mn tons in 2023**

Fumer : Conversion of 2 plants

#1 TSL: Shutdown

#1 Lead refining : Shutdown

CMF*: Shut down

Cu Smelter conversion
(Copper production capacity : 40ktpa → 66ktpa, +165%)

#2 TSL Transition
(Increase in Pb production capacity)

Streamlining #2 lead refining
(Pb production capacity : 300ktpa→420ktpa)

Streamlining Puri* process
(60,000 tons of by-products reduced annually, Maximizing Zn/Cu recovery rate)

* CMF: Copper Melting Furnace

* Puri process : Purification (FO impurity removal process)

Internal Power Generation

Electricity from in-house power plant satisfy nearly two third of electricity consumption (38% cheaper than the price from KEPCO)

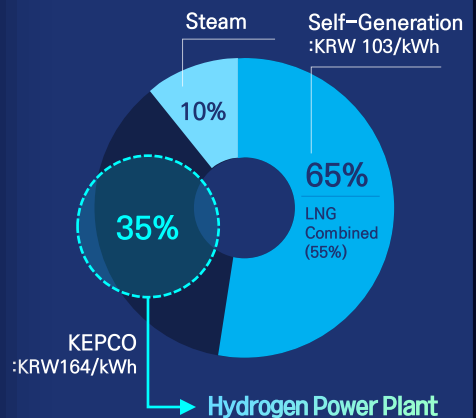
Electricity cost : 28% of manufacturing cost*
(Zinc production through electrolysis process)

Annual usage of 3.9bn kWh*
(Risk of KEPCO electricity price increase)

Self-Generation ratio, including the LNG Combined Power Plant, is 65%*

As of 2023

Future plan to implement hydrogen power plant (100% internal power generation)



* In a feasibility study to implement in 2029

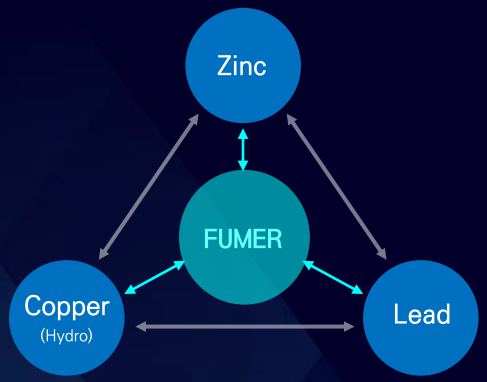
Integrated Process

A process that integrates all refining processes to maximize the recovery rate of high-value metals from various raw materials and low-value residues

Phase I (~2017)

Establishment of Integrated Smelting Process

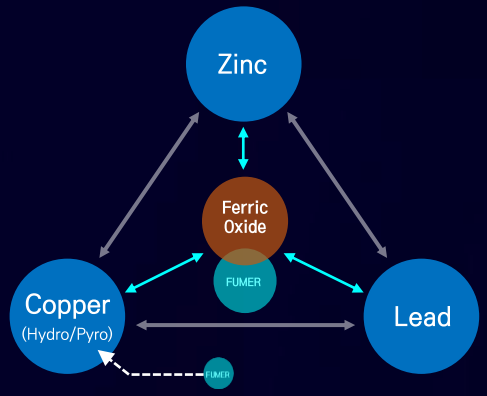
Eco-friendly Smelter with Zero Waste



Phase II (Today)

Introduction of the Ferric Oxide Production Method

Maximizing Zinc/Copper Recovery Rates → Increased Profitability

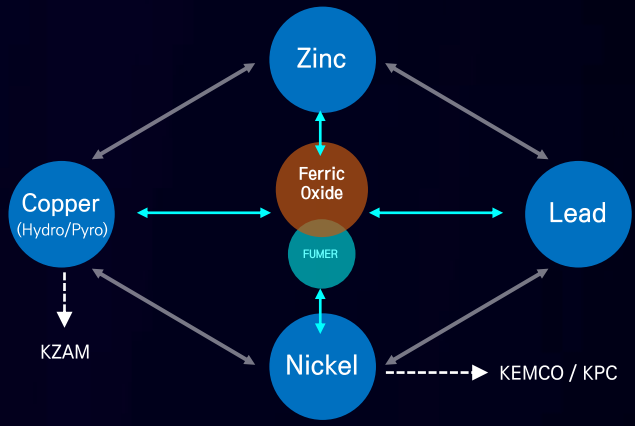


Conversion from existing Fumer to Cu Smelter
(Processing secondary Cu sources)

Phase III (2026~)

All-in-One Nickel Smelter Construction (Scheduled for 2026)

Establishing Integrated Processes for the Four Major Non-Ferrous Metals: Zinc, Lead, Copper, and Nickel

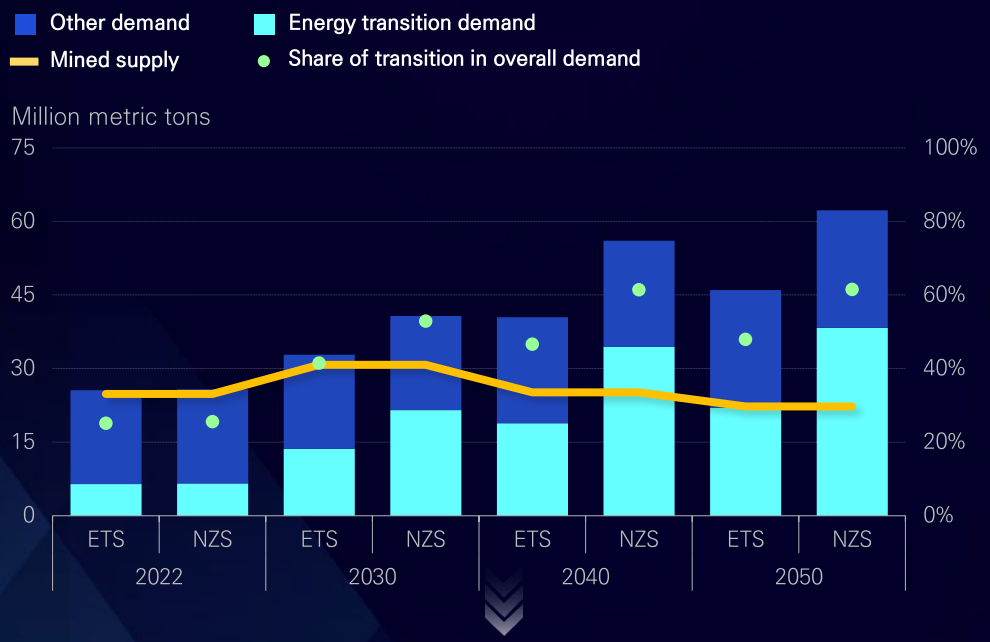


Growth Engine (1) - Electrolytic Copper

Structural Growth in Copper Demand Amid the Transition to Green Energy

Global Cu Supply and Demand

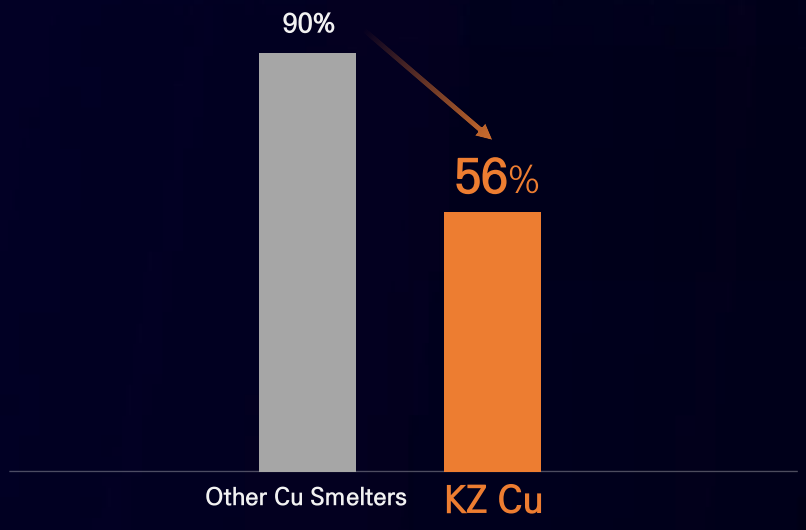
* Source: Bloomberg
* ETS (Economic Transition Scenario), NZS(Net Zero Scenario)



Rising EV Production and Investment in Power Grid → Increase in Copper Demand
An opportunity for Korea Zinc, a high-purity electrolytic copper producer.

Raw Materials Costs Comparison (as a Percentage of Revenue)

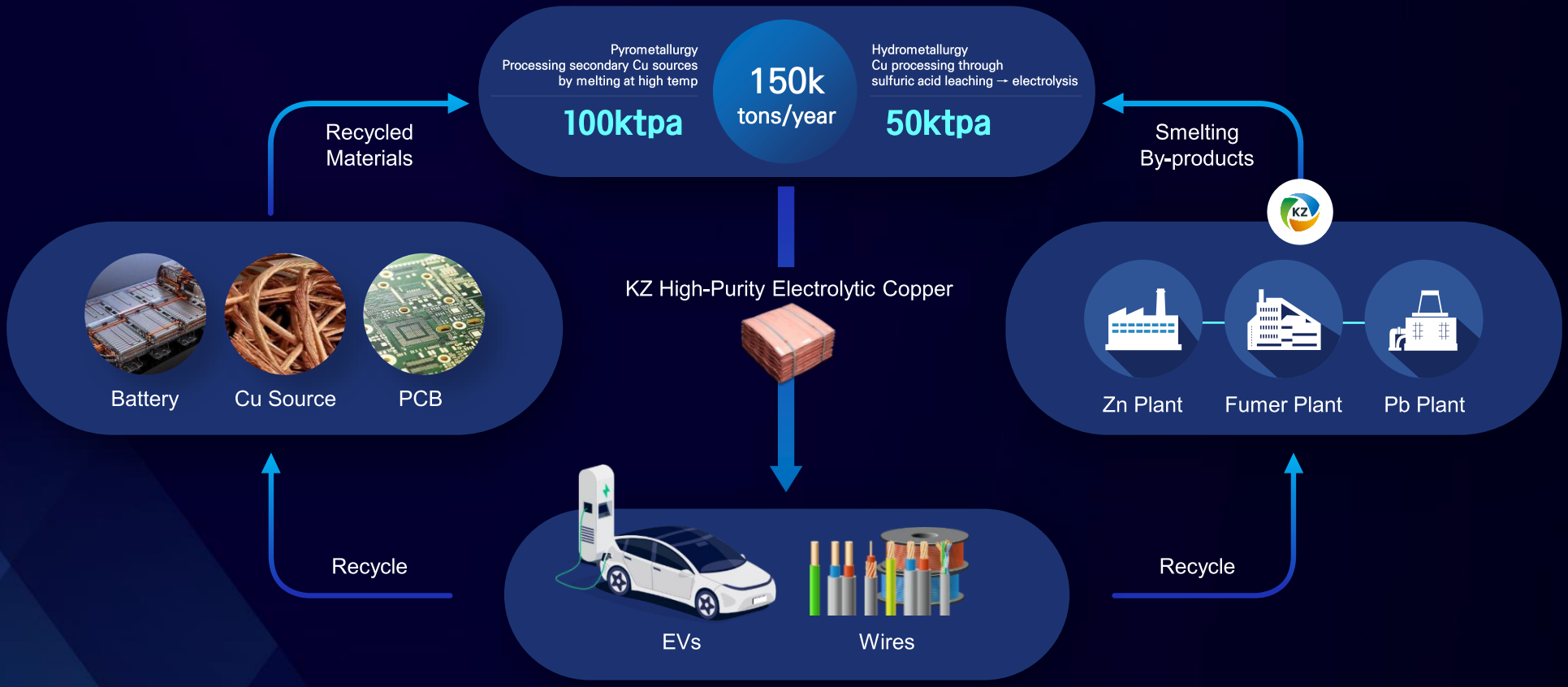
* Source: Dart filing



Producing high-purity electrolytic Copper with relatively lower raw materials costs, by using residue and recyclable feedstocks

Growth Engine (1) - Electrolytic Copper

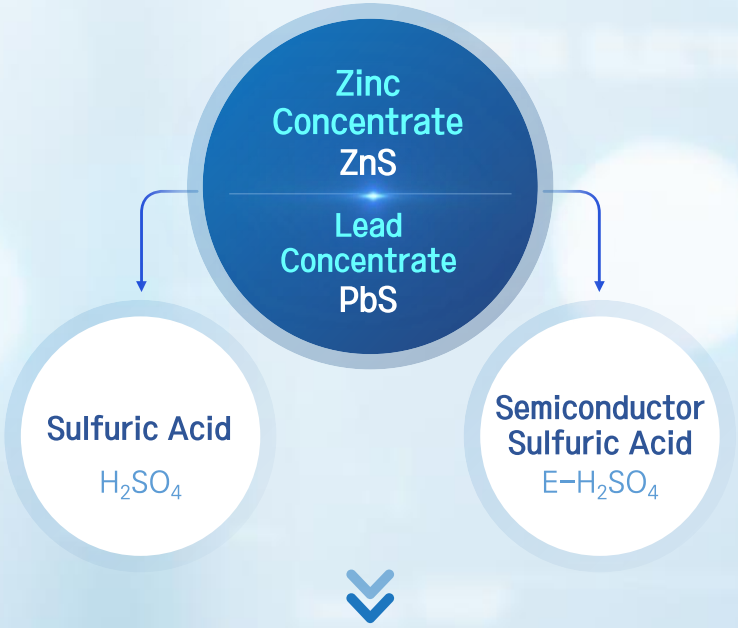
Solidifying Competitiveness in Copper Smelting through Capacity Expansion and Circular Ecosystem



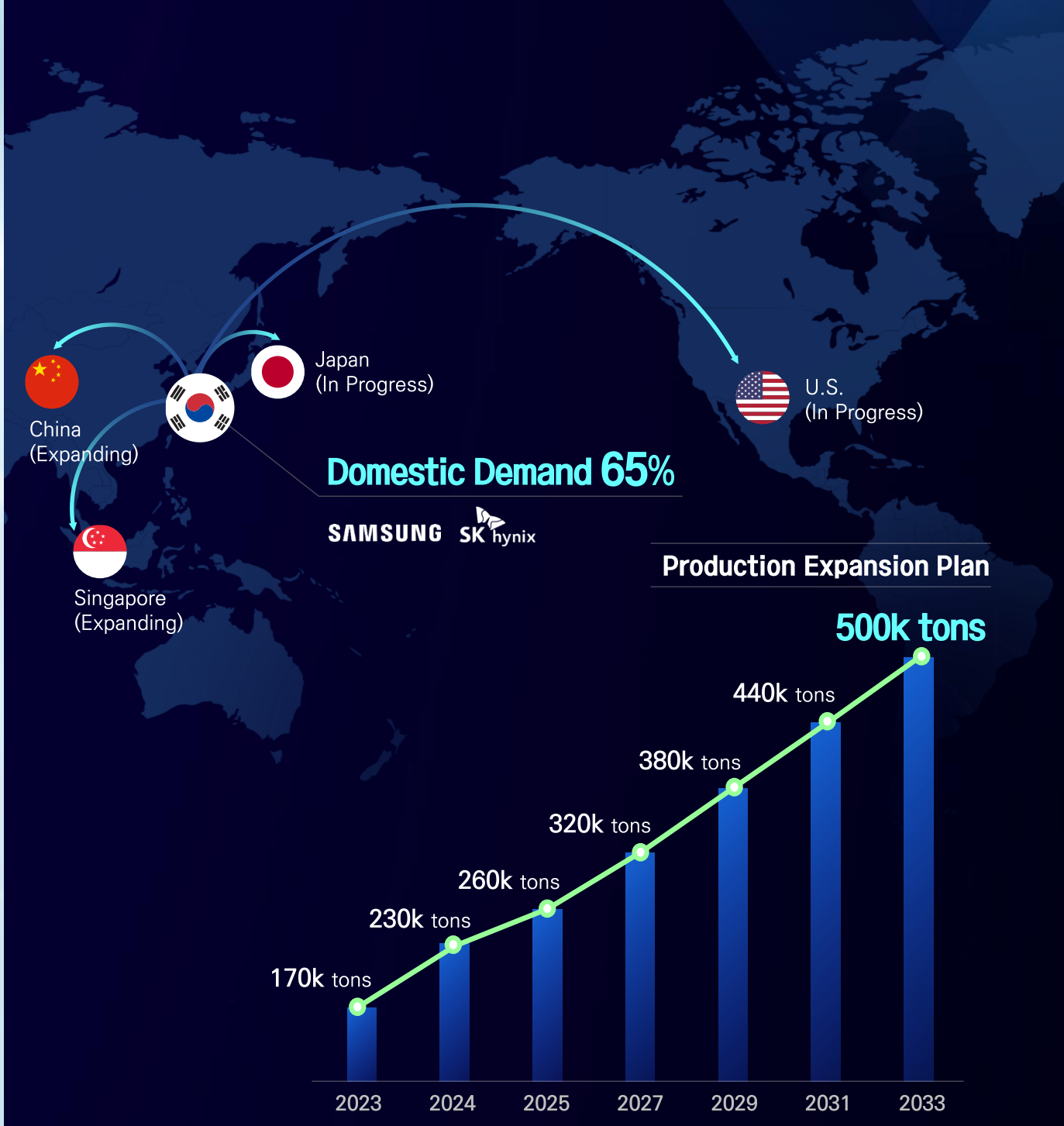
Establishing a Circular Copper Resource Value Chain

Growth Engine (2)
- Semiconductor Sulfuric Acid

Semiconductor Sulfuric Acid Sulfur Source



Ability to produce 500ktpa of semiconductor sulfuric acid by utilizing Free Sulfur



Growth Engine (3) - SMC

Green Metal Production Through RE100

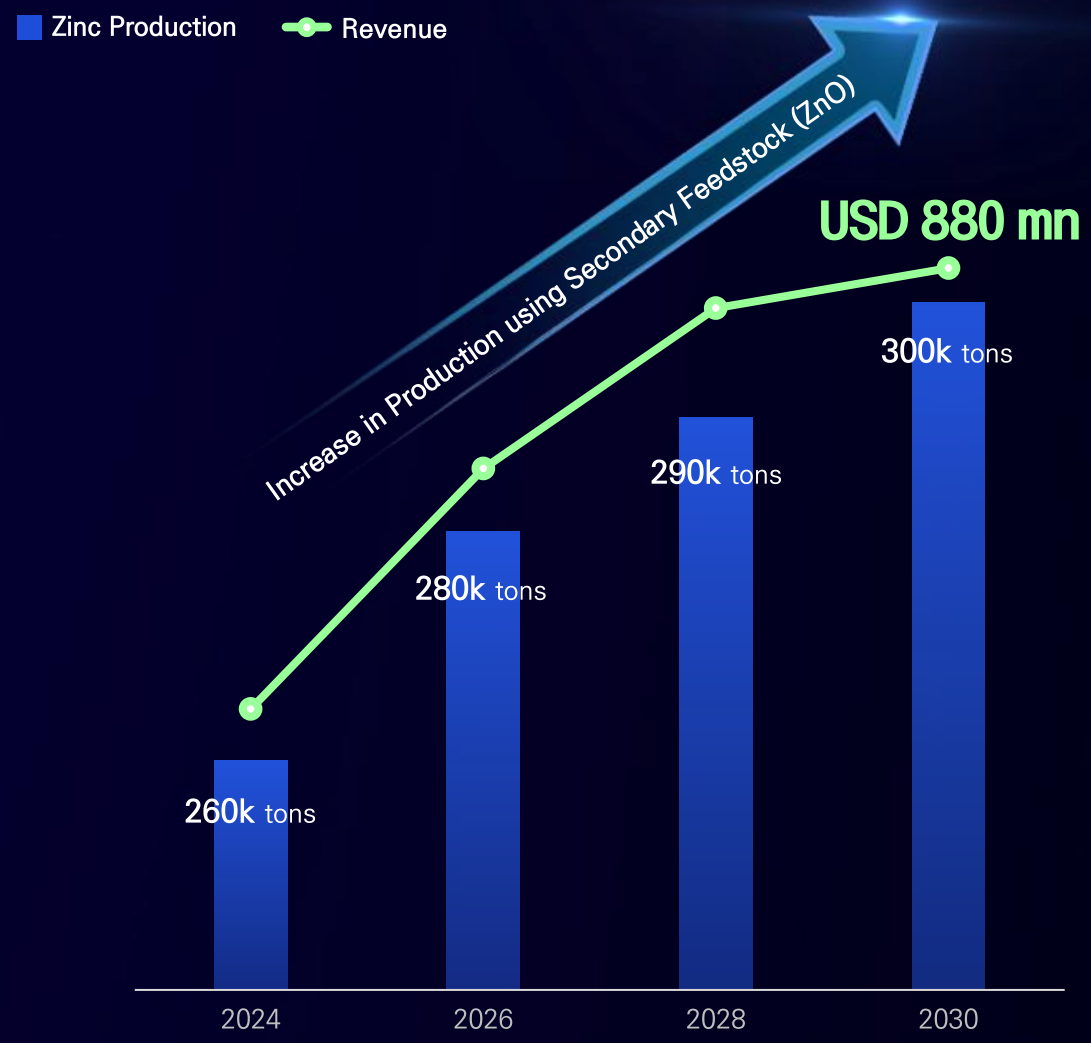
Sun Metals Solar Farm

Capacity: 124MW
Satisfying 25% of the power Consumption in SMC

Wind Power Generation

Scheduled to use wind power from 2025 onward

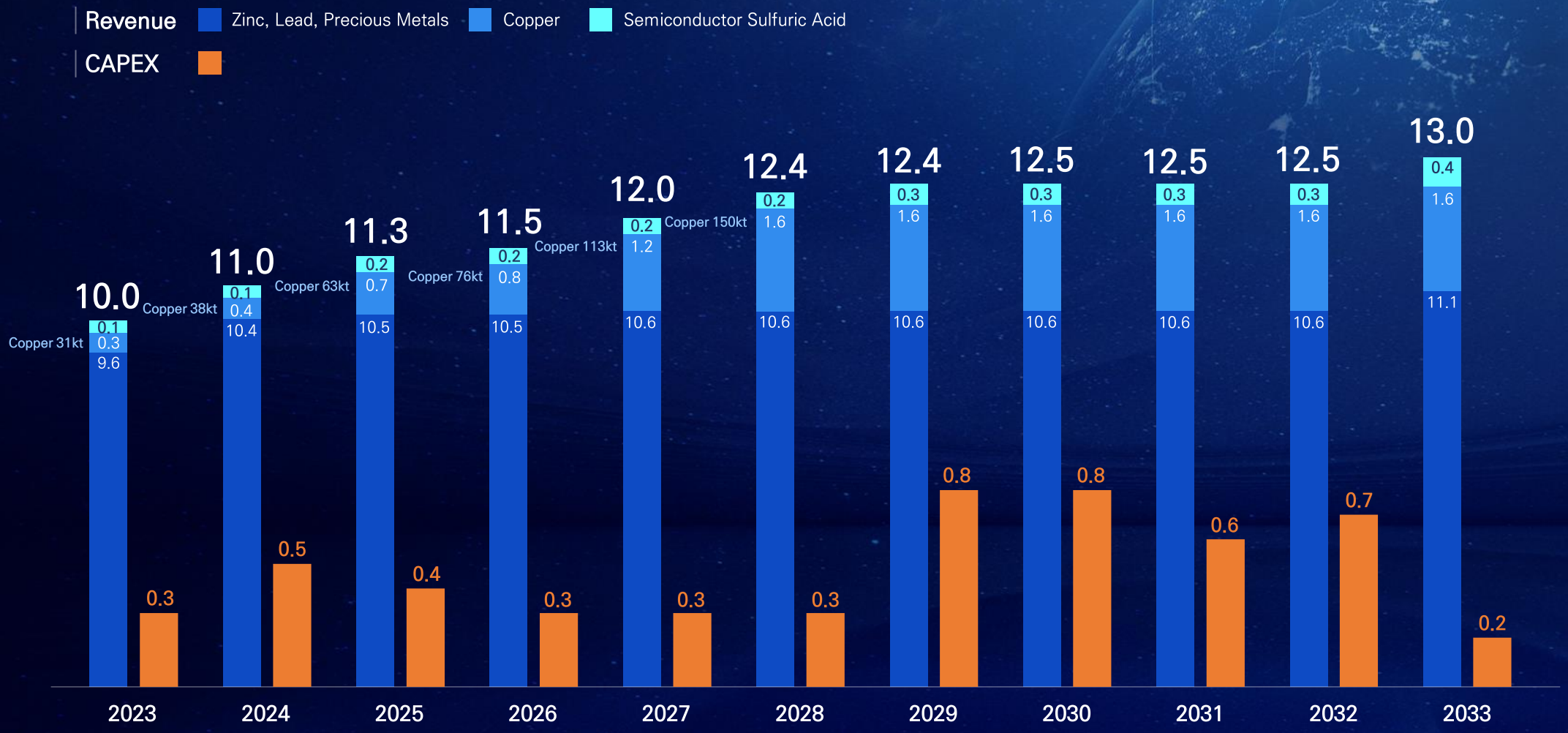
Zinc Production Plan



Commissioned Ferric Oxide Plant in 2023

Projected Smelting Business Revenue and CAPEX

KRW 13tn Revenue Forecast for 2023



Unit: KRW tn
All figures are based on real values (2023 figures are internal estimates).
Revenue: Simple sum of revenue before the elimination of intercompany sales

03

TD Business Division

Troika Drive

New Opportunities in the Changing Market Environment

Background

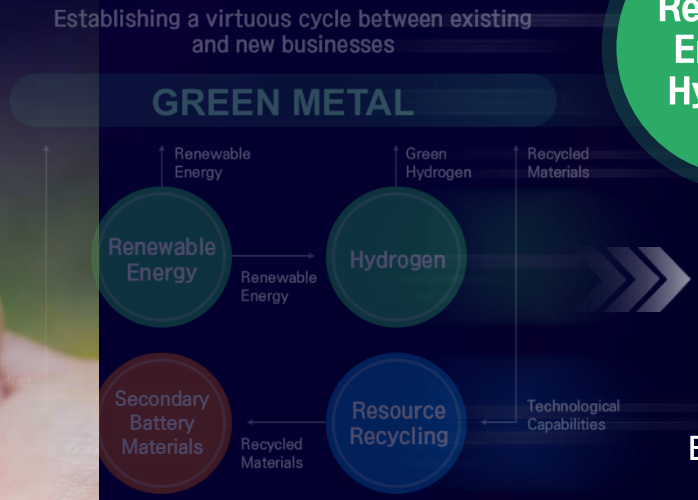
Troika Drive

New Opportunities in the Changing Market Environment

Market Changes	Challenges	Our Strengths	New Opportunities
			TROIKA DRIVE
•Accelerating environmental regulations and mounting pressure to reduce carbon emissions	•Fundamental Changes in energy source	•Proactive Investment in Environmentally-friendly Business Based on Existing Resources	•Transition to eco-friendly green metals producer
•Slowing demand growth in the zinc/lead market	•Poor economic viability of renewable energy in Korea	•Preemptive Investment in smelting and renewables network Australia	•Expanding towards new business areas – Renewables and green hydrogen production – Secondary battery materials – Resource recycling
•Emergence of alternative materials	•Challenges in expanding the customer base	•Technological expertise (Smelting, Refining, Electrolysis)	

The Call of the Market

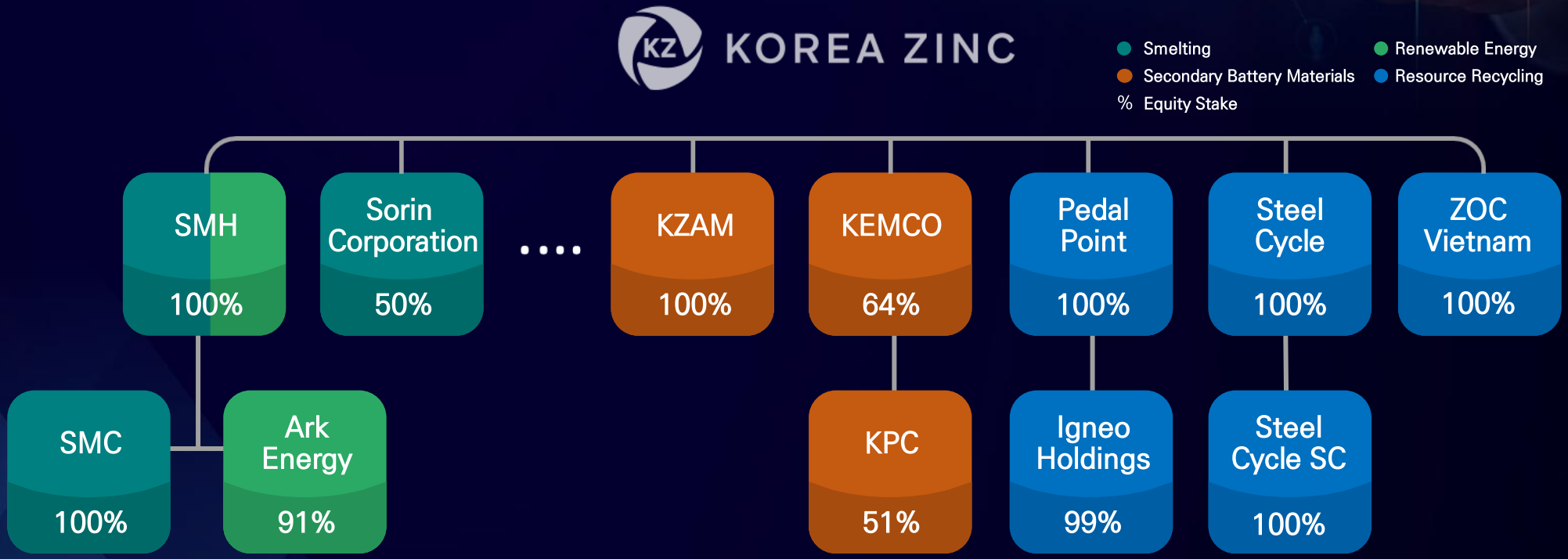
Transition from Non-Ferrous Metals Business to Eco-friendly Materials/Energy Business



Materializing Concrete Business Strategy through Troika Drive

KZ Holdings Structure

Optimal Structure for Driving Successful New Business Initiatives



Renewables and Hydrogen

History & Roadmap

● Completed ● In Progress ● Target

Renewable Energy

2018

2018.04
Construction of Sun Metals Solar Farm 124MW

2019

2019
SMC Reaching RE25

2021

2021.01
Established Ark Energy Corporation
KZ's Renewable Energy Subsidiary

2021.05
Acquired 30% Stake in Macintyre Wind Farm 923.4MW Wind Power Project

2021.12
Acquired Epuron Holdings, A Renewable Energy Developer

EPURON

2021.12
Secured land for 4.2GW wind farm
Potential Development Capacity of 4.8GW in the pipeline

2023

2030

2030
SMC Reaching RE85

2040

2040
SMC Reaching RE100

2050

2050
KZ Reaching RE100

Hydrogen

2022

2022.07
Han-Ho Consortium Agreement

2023

2023.10
Construction Commenced: Hydrogen Fuel Cell Refueling Station for Forklifts

2023.11
'Sun HQ'
*Commencement of a Pilot Project

2024

2024.10
Commencement of Green Hydrogen Production
(Annual Production Capacity: 155 tons)

2030

2030
Annual Production of Green Hydrogen: 280kt
(Annual Production of Ammonia: 1.6 mn tons)

2050

2050
Annual Production of Green Hydrogen: 500kt

ESS

2018.12
Installation of Onsan BESS (32.5MW, 150MWh)

* Sun HQ: Integrated Green Hydrogen Production and Charging Facility
(Annual Green Hydrogen Production Capacity: 155 tons in 2024)

Renewables and Hydrogen

Renewables and Hydrogen

Risk

1. Increased CAPEX burden amid inflationary environment
2. Higher borrowing costs along with interest rates
3. Deteriorating profitability in solar farm due to increased generation output and thereby, lower electricity prices in Australia
4. Changes in government policies

Opportunity

1. Stricter emission standards and transition away from fossil fuels across the board
2. Extensive experience and expertise in Australian power grid from successful development and operation of solar farm
3. Competitive LCOE* in Australia thanks to high capacity factor
4. Easy access for green financing as a safe asset with low operating costs
5. Combined with wind power and integration with ESS, renewables provide base-load power in Australia.
6. Strong policy supports in Australia

* LCOE: Levelized Cost of Electricity

Renewable Energy Company

Emerging as a Renewable Energy Producer for a Sustainable Future

Renewable Energy Company

Emerging as a Renewable Energy Company by developing assets in Australia

Generating Stable Profits by Providing Renewable Energy to the Australian Power Grid

Implementation of Green Hydrogen Projects

Governments' Effort to Achieve Energy Security and Reach Carbon Neutrality

Developing Green Hydrogen Projects to Use Renewable Energy in Australia to decarbonize Onsan complex

Barriers to implementation of Green hydrogen projects

Impediments to Hinder Commercialization of Green Hydrogen Projects

- Limitation of Transportation/Storage technology commercialization
- Lack of Stable and Large-Scale Demand for Green Hydrogen

Independent Renewable Energy Project

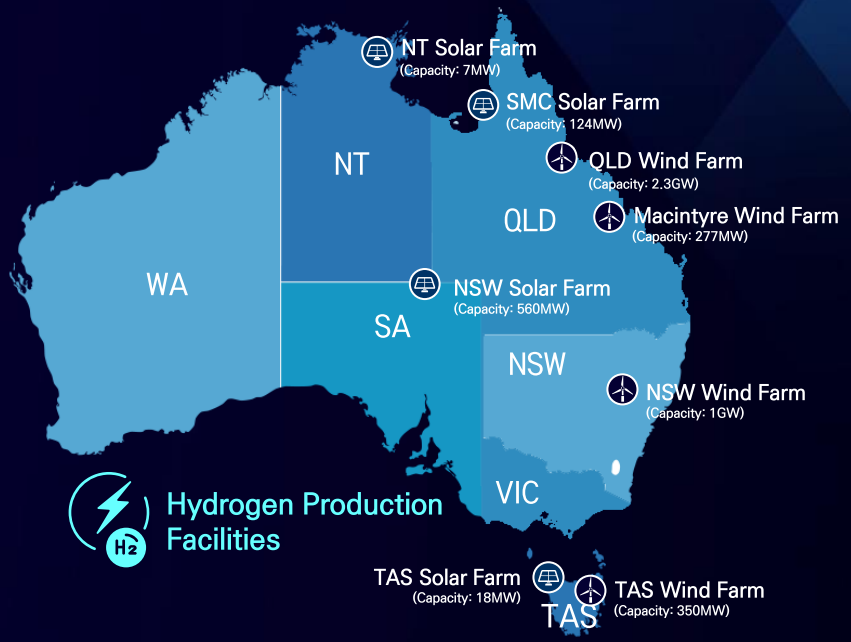
Delay in Hydrogen Project Unless Impediments Are Resolved → Generating Stable Profits through Developing and Operating Renewable Energy Projects

Commencement of Green Hydrogen Project

Implementation of Green Hydrogen Projects if Impediments Are Resolved via Governments' Support and/or Technological Innovation, etc.) → Swift Transition to Green Hydrogen Producer from Renewable Energy

Renewables and Hydrogen

KZ's Renewable Energy & Hydrogen Value Chain



Up-stream			Mid-stream		Down-stream		
Production			Transportation & Storage		Usage		
Solar & Wind Farm/ ESS	Electrolyzer	Ammonia Synthesis	Storage	Transportation	Ammonia Reforming & Hydrogen Supply	Hydrogen Mobility	Green Metals
Ark Energy			SK Gas		Hanwha Impact	Korea Zinc	

Renewables and Hydrogen

Total Capacity in 2033	Revenue in 2033	Cumulative CAPEX (2024~2033)
4.6GW	**KRW 0.9 tn**	**KRW 8.3 tn**
Renewable Energy	EBITDA Margin : 79.4%	KRW 5.8 tn with Potential 30% Equity Partnership

All figures are based on real values.
Figures related to the conversion of renewable energy into hydrogen are not included.
Revenue: Simple sum of revenue before the elimination of intercompany sales (unit: KRW tn)
EBITDA Margin: With heavy upfront investment, renewable projects typically generate high and stable cash flow with relatively low operating expenses
CAPEX: Cumulative figures from 2024 to 2033. 60% of investment can be funded by debt financing.

Secondary Battery Materials

History & Roadmap

● Completed ● In Progress ● Target

2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029

KEMCO (Nickel Sulfate)

- 2017.01 KEMCO Establishment
- 2018.02 Completion of Nickel Sulfate Plant (4.5kt Ni)
- 2019.11 1st Expansion (+6.5kt Ni)
- 2020.12 2nd Expansion (+11kt Ni)

KEMCO Nickel Sulfate Plant View

- 2023.11 All-in-One Nickel Refinery Groundbreaking Ceremony
- Trafigura – Signed Raw Material/Investment Agreement
- 2026 All-in-one Nickel Refinery Online (+43kt Ni)
- 2028 All-in-one Nickel Refinery 1st Expansion (+20kt Ni)
- Ni Production Capacity 85kt

KPC (Precursor)

KPC Plant View ('23.10)

- 2022.08 KPC Establishment
- 2022.10 Start of Plant Construction
- 2024 KPC Plant Unit 1 in Operation (+20kt)
- 2026 KPC Plant Unit 2 in Operation (+30kt)
- 2029 KPC Plant Unit 3 in Operation (+30kt)
- Precursor Production Capacity 80kt

KZAM (Copper Foil)

KZAM Plant View

- 2020.03 KZAM Establishment
- 2022.06 KZAM Completion of Plant 1 (13kt)
- 2023.11 KZAM Plant 2 Start of Construction
- 2025 Completion of KZAM Factory 2 (+13kt)
- 2028 KZAM Capacity Expansion (+34kt)
- Copper Foil Production Capacity 60kt

Business Partnership

- 2022.04 KZ-LG Chem Precursor JV
- 2023.08 Investment from Hyundai Motor Group, MOU to cooperate in Secondary Battery Value Chain

Calculation Method for Nickel Content in Nickel Sulfate: $NiSO_4$ (Containing 22.3% Nickel)
Nickel Sulfate 100kt: (100kt * 22.3% = 22.3kt Nickel basis)

Secondary Battery Materials

Secondary Battery Materials

Risk

1. **Policy uncertainties** due to protectionism and **export ban** on critical minerals
2. **Slowdown in the secondary battery material business** due to delays or changes in energy transition policies
3. **Volatility in raw materials prices** triggered by supply/demand imbalance

Opportunity

1. **Differentiation** from competitors backed by China given IRA* regulations
2. **Expansion into new business** using in-house technologies
3. **Flexibility in the use of raw materials** for All-in-One nickel smelter
4. Diversification of raw material supplier to **brace for potential trade conflicts**

* Inflation Reduction Act

Secondary Battery Materials

KZ's Nickel Business Value Chain

Target — In Operation · Completed

UP-STREAM | MID-STREAM | DOWN-STREAM

Mines → Refining and Smelting

Nickel Oxide
Nickel Sulfide

Metals — Long-term Supply Agreement
MHP/MSP — Long-term Supply Agreement
Matte — Long-term Supply Agreement
Nickel Concentrate

KEMCO
Ni Metal 85k tons per year
(Including 3k tons Ni from BM per year)

In Operation
Existing Facilities (Nickel 22k tons/year)
(Metals→ Nickel Sulfate)

Started in Nov '23
Phase 1-1 (Nickel 20k tons/year)
(MHP→ Nickel Sulfate)

Started in Nov '23
Phase 1-2 (Nickel 20k tons/year)
(Matte→ Nickel Sulfate)

Starts in the early '24
Phase 2 (Nickel **20k tons/year**)
(Nickel Concentrate→ Nickel Sulfate)

KPC
NCM precursor 80k tons per year
(Approximately 44k tons in nickel equivalent)

Operational by Jan '24.
Phase 1
(Cathode materials: 20k tons/year)

Operational by the early '26
Phase 2
(Cathode materials: 30k tons/year)

Operational by the early '29
Phase 3
(Cathode materials: 30k tons/year)

Precursor Producers

Cathode material producers

Battery makers

Auto makers

Scraps

Waste Batteries

Recycled Vehicle

- Securing IRA-Compliant raw materials given heightened protectionism and trade conflicts
- Nickel refinery +43kt Ni capacity accounts for 4.9% of global nickel production for battery use in 2026 (Source: Wood Mackenzie)

Secondary Battery Materials

KZAM's Competitive and Expansion Plan

Stable Raw Material Supply

① Stable supply of electrolytic copper

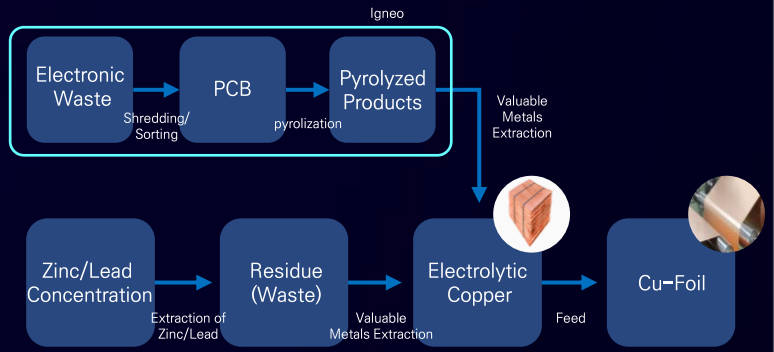
- Procurement of electrolytic copper from KZ via vertical integration
- Domestic and international sourcing to support KZAM's copper foil production

② 100% recycled Copper feedstock

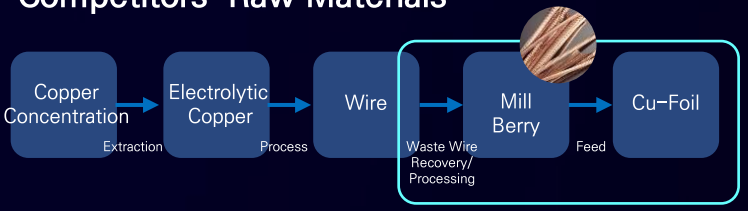
③ Diversification of feedstocks source

Environmental-friendly Raw Material Utilization

KZAM Materials

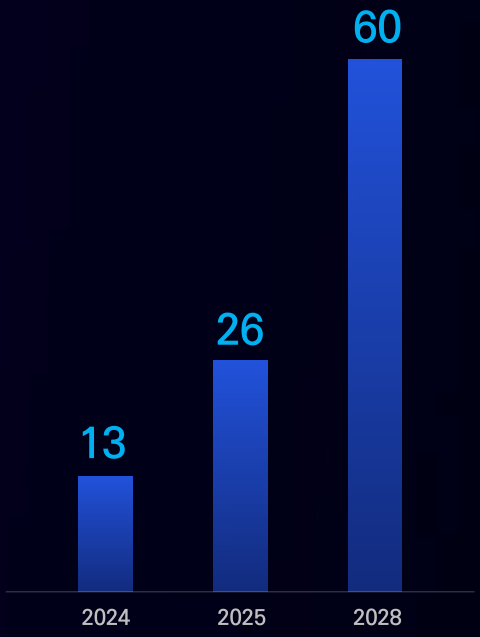


Competitors' Raw Materials



Copper Foil Capacity

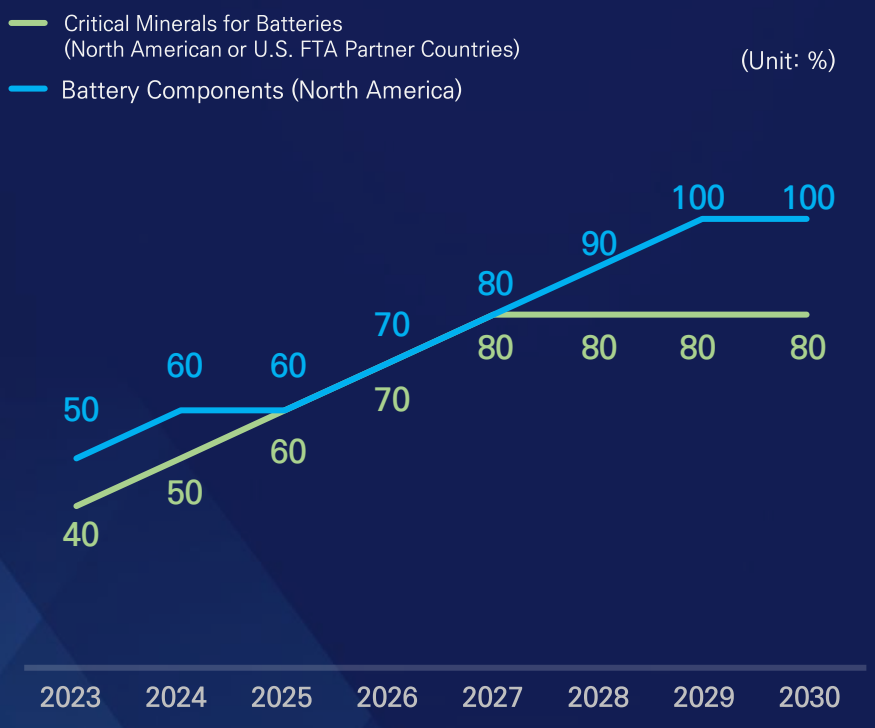
(Unit: kta)



Secondary Battery Materials

U.S. IRA and FEOC Guidelines

Requirements for Electric Vehicle Subsidies



* Source: US Treasury

FEOC Guidelines

FEOC Definition

A foreign entity "subject to the jurisdiction" or "owned by, controlled by, or subject to the direction" of the government of a foreign country that is covered nation (China, Iran, North Korea, or Russia)

1) Subject to the Jurisdiction

If it is incorporated, domiciled or has its principal place of business in a covered nation or engages in specific activities related to critical minerals, components, or materials in a covered nation.

2) Owned by, Controlled by, or Subject to the Direction

1) If 25% or more of the entity's board seats, voting rights, or equity interest are held by another entity

2) If there's a licensing arrangement of contract giving effective control over production.

FEOC Regulations

1) Starting in 2024, vehicles containing battery components manufactured or assembled by an FEOC will be ineligible for all benefits, including clean vehicle tax credit.

2) Starting in 2025, vehicles whose batteries contain critical minerals extracted or processed by an FEOC will be ineligible for all benefits.

Critical Minerals

Lithium, Nickel, Cobalt, Manganese, Graphite, and Aluminum

FEOC: Foreign Entity of Concern

* Source: US Department of Energy

Secondary Battery Materials

Total Capacity* in 2033

Nickel Sulfate : **85**ktpa Ni

Precursor : **44**ktpa Ni

Copper Foil : **60**ktpa Cu

Revenue in 2033

KRW 5.3 tn

EBITDA Margin : 10.4%

Accumulated CAPEX (2024~2033)

KRW 2.1 tn

* Metal based capacity.
All figures are based on real values.
Revenue: Simple sum of revenue before the elimination of intercompany sales (unit: KRW tn)
CAPEX: Cumulative basis from 2024 to 2033.

Resource Recycling

History & Roadmap

● Completed ● In Progress ● Target

2016 2018 2020 2022 2024 2026 2028 2030

E-waste (Copper)

- 2022.7 Igneo Acquisition (E-waste Capacity 84kt) (MHF Capacity 24kt)
- 2024-2025 Maximization of Purchasing and Production Capacity
- 2026-2029 Expansion of First E-waste Collection hubs (+48kt)
- 2030- Expansion of Second E-waste Collection hubs (+96kt)
- E-waste Process Capacity 230kt

Onsan Refinery Copper Refining Production

Hydrometallurgy Capacity	30kt → 2024 1st Expansion (+10kt) → 2025 2nd Expansion(+10kt)
Pyrometallurgy Capacity	2025 Fumer conversion (+26kt) → 2027 Additional Fumer Conversion (+37kt) → 2028 Additional Fumer Conversion (+37kt)

Solar Panel Waste (Silver)

- 2024-2025 Start of Business (20kt)
- 2026-2029 1st Expansion (+100kt)
- 2030- 2nd Expansion (+200kt)
- Solar Panel Waste Process Capacity 320kt

Waste Battery (Nickel/Cobalt/Lithium)

- 2026-2029 Completion of Overseas Pre-processing/Post-processing Plant (40kt/20kt)
- 2030- Expansion of Overseas Pre-processing/ Post-processing Plant (+20kt/+20kt)
- Waste Battery Process Capacity Pre-Processing 60kt Post-Processing 40kt

Resource Recycling

Resource Recycling

Risk

1. **Unstable supply of secondary raw materials** given high dependency on local markets
2. **Stricter constraints on cross-border trade of secondary raw materials** amid growing environmental regulations
3. **Increasing competitions in the resource recycling** backed by various policy supports
4. **Volatilities** in logistics costs and metal prices
5. Cross-border supply chain control and country-specific environmental **regulations**

Opportunity

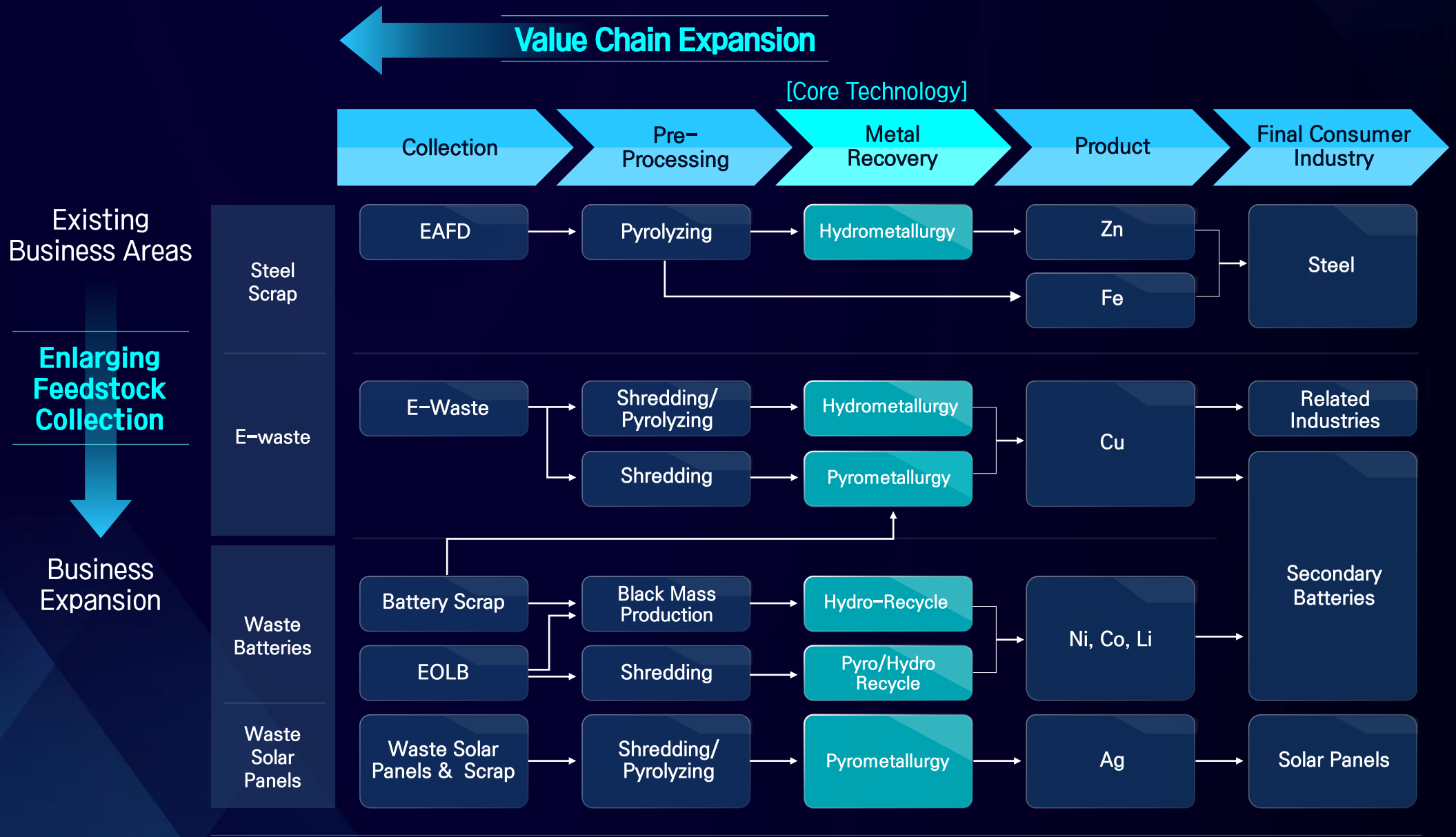
1. **Ongoing supply constraints of natural resources and tighter rules** on the new development projects
2. **Increasing supply of secondary raw materials** from industries such as electric vehicles, solar and IT
3. **Proliferation of regulations** to encourage recycling and mandatory usage of recycled metals
4. **Technologies and facilities** to retreat and recycle various secondary raw materials
5. **Improving profitability** through the integration of collection, pre-processing, and recycling operations

Resource Recycling

	Phase I: 2024~2026	Phase II: 2027~2029	Phase III: 2030~
	Build Supplier Network for Securing Business Capabilities	**Stabilize Recycling Operations**	**Expansion of Recycling Business**
E-waste	80k tons	130k tons	230k tons
Waste Solar Panels	20k tons	120k tons	320k tons
Waste Batteries	[Pre-Processing] 20k tons; [Post-Processing] -	[Pre-Processing] 40k tons; [Post-Processing] 20k tons	[Pre-Processing] 60k tons; [Post-Processing] 40k tons
Primary Activities			
E-waste	• Maximizing E-waste procurement capacity and productivity	• Addition of two or more E-waste processing hubs	• Addition of four or more E-waste processing hubs
Waste Solar Panels	• Commencement of solar panel recycling business	• Initial expansion	• Secondary expansion
Waste Batteries	• Expanding to overseas black mass manufacturing pre-processing business	• Expanding to overseas black mass post-processing business and expansion of pre-processing facilities	• Ongoing expansion of overseas pre-processing/post-processing facilities

Based on annual processing capacity

Resource Recycling



Resource Recycling

Total Capacity in 2033

E-waste : **230**ktpa

Waste Solar Panels : **320**ktpa

Waste Batteries : **60/40**ktpa
(Pre-processing / Post-processing)

Revenue in 2033

KRW 6.0 tn

EBITDA Margin : 9.5%

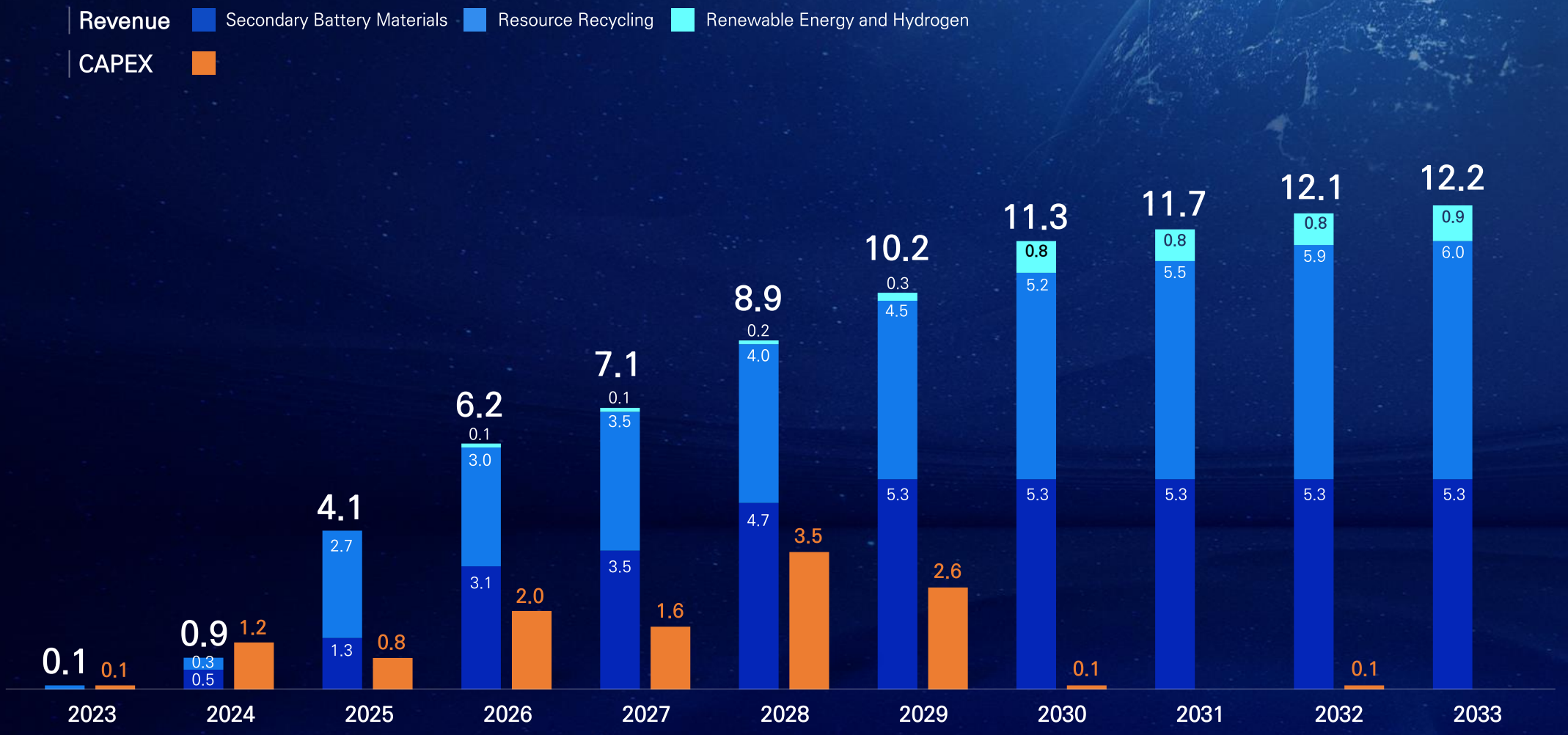
Accumulated CAPEX (2024-2033)

KRW 1.5 tn

All figures are based on real values.
Revenue: Simple sum of revenue before the elimination of intercompany sales (unit: KRW tn)
CAPEX: Cumulative basis from 2024 to 2033

Projected TD Business Revenue and CAPEX

KRW 12.2 tn Revenue Forecast for 2033



Unit: KRW tn
Figures related to the conversion of renewable energy into hydrogen are not included.
All figures are based on real values (2023 figures are internal estimates)
Revenue: Simple sum of revenue before the elimination of intercompany sales

TD Business

Renewable Energy and Hydrogen

Revenue : KRW **0.9 tn**

EBITDA Margin : **79.4%**

Cumulative CAPEX : KRW **8.3 tn**

+

Secondary Battery Materials

Revenue : KRW **5.3 tn**

EBITDA Margin : **10.4%**

Cumulative CAPEX : KRW **2.1 tn**

+

Resource Recycling

Revenue : KRW **6.0 tn**

EBITDA Margin : **9.5%**

Cumulative CAPEX : KRW **1.5 tn**

TD Business in 2033

Revenue : KRW **12.2 tn**

EBITDA Margin : **14.8%**

Cumulative CAPEX : KRW **11.9 tn**

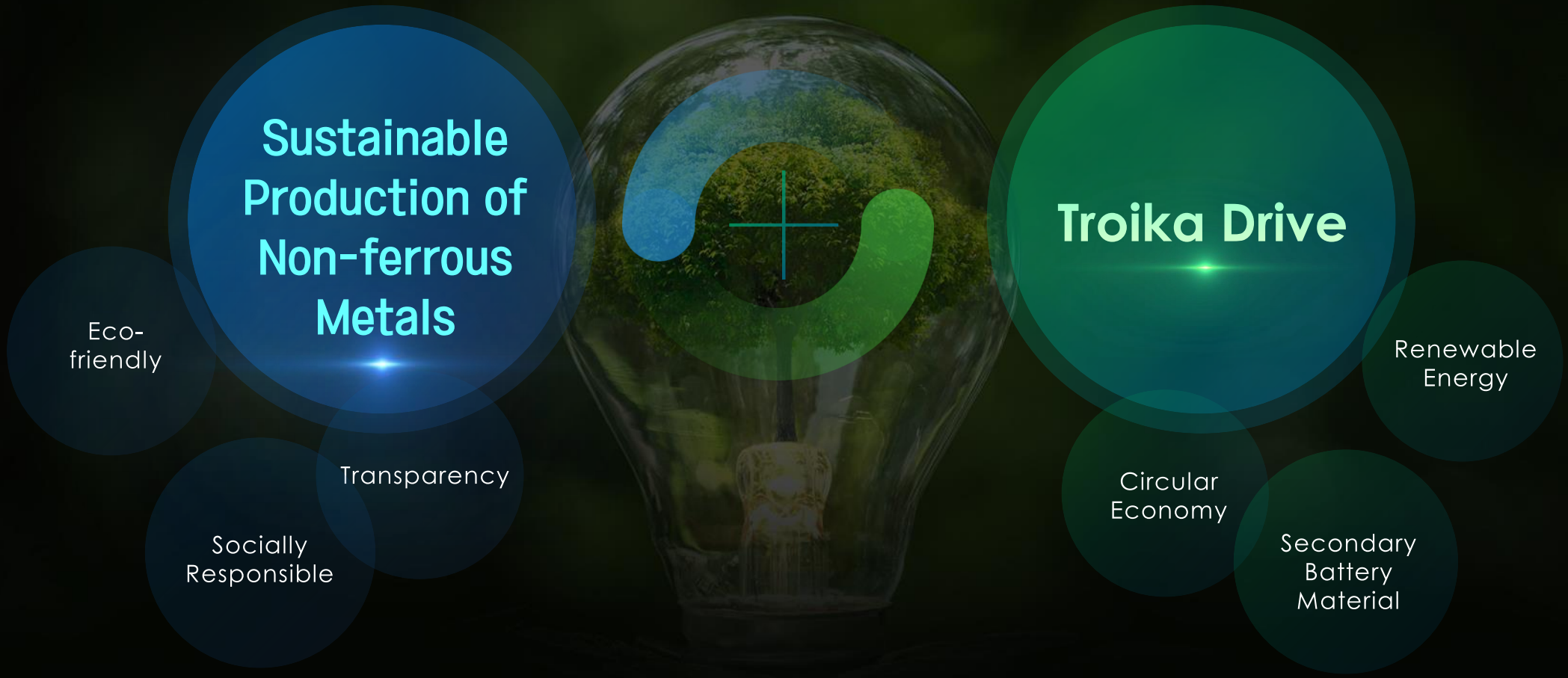
All figures are based on real value.
Figures related to the conversion of renewable energy into hydrogen are not included.
Revenue: Simple sum of revenue before the elimination of intercompany sales.
CAPEX: Cumulative basis from 2024 to 2033.

04

Sustainable Management Division

KZ ESG Management Strategy

Venturing Into New Environmentally Friendly Businesses Through Sustainable Refining Practices



Establishing an Eco-Friendly Production System for Green Metal Production

Establishing a groundwork for green metal production by minimizing carbon emissions throughout the entire refining process

Fostering environmental competitiveness by establishing a robust system for renewable energy and recycling

KZ Comprehensive ESG Strategy

Mission

Continuous Innovation, Identification of New Growth Engines, and Enhancement of Sustainability through ESG Management

Strategy Goals

Enhancement of Corporate Value and Creating Social and Environmental Value

Strategy Directions

Strategy Areas	Advanced Eco-friendly Management	Advanced Safety Management	Advanced People-Centered Management	Advanced Governance
	Expanding the use of renewable energy	Striving for a workplace with ZERO major accidents	Building a corporate culture of co-prosperity and collaboration	Establishing an ESG decision-making system
	Saving energy and reducing greenhouse gas	Introducing a smart safety system	Protecting the human rights of stakeholders	Ensuring diversity of the Board of Directors and strengthening the independence of independent directors
	Minimizing environmental impact due to business activities	Reinforcing site-centered safety culture	Fulfilment of a GWP	Strengthening the compliance system
		Establishing a risk management system for suppliers		Implementing integrated risk management

Sustainable Management Implementation System

Systematic Implementation of ESG Management through Establishment of a Dedicated Organization

Organizational Structure and Functions of the Sustainable Management Division

In December 2021, the establishment of the Sustainability Management Committee, alongside the dedicated ESG Management Team, laid the groundwork for our ESG management. Through a systemic implementation process, we oversee and evaluate the performance of sustainable management

Committee Operations Support

Responsibilities of Sustainable Management Committee

Systematic Management and Oversight of Sustainable Practice Across the Environmental (E), Social (S), and Governance (G) Sectors

- Comprehensive review of strategic directions of corporate sustainable management and evaluation of related performance, achievements, and challenges
- Professional consultation on long- and short-term sustainable management plans and related investments

Risk, Effort and Opportunity

Global No.1

Boosting Corporate Value

Risk — **Opportunity** — **Effort**

Risk

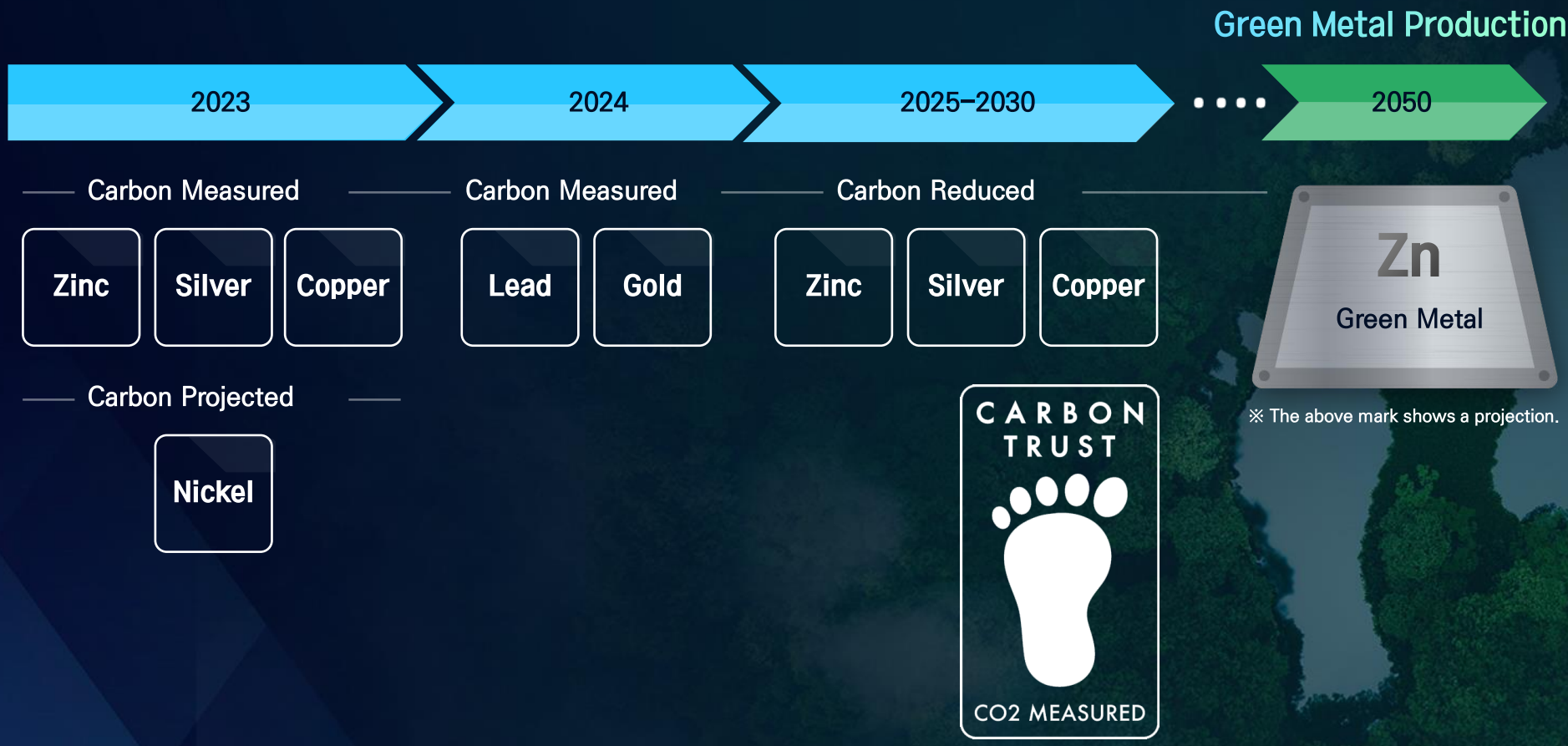
1. Greenwashing
2. Industrial accidents and disasters
3. Lack of communication

Effort

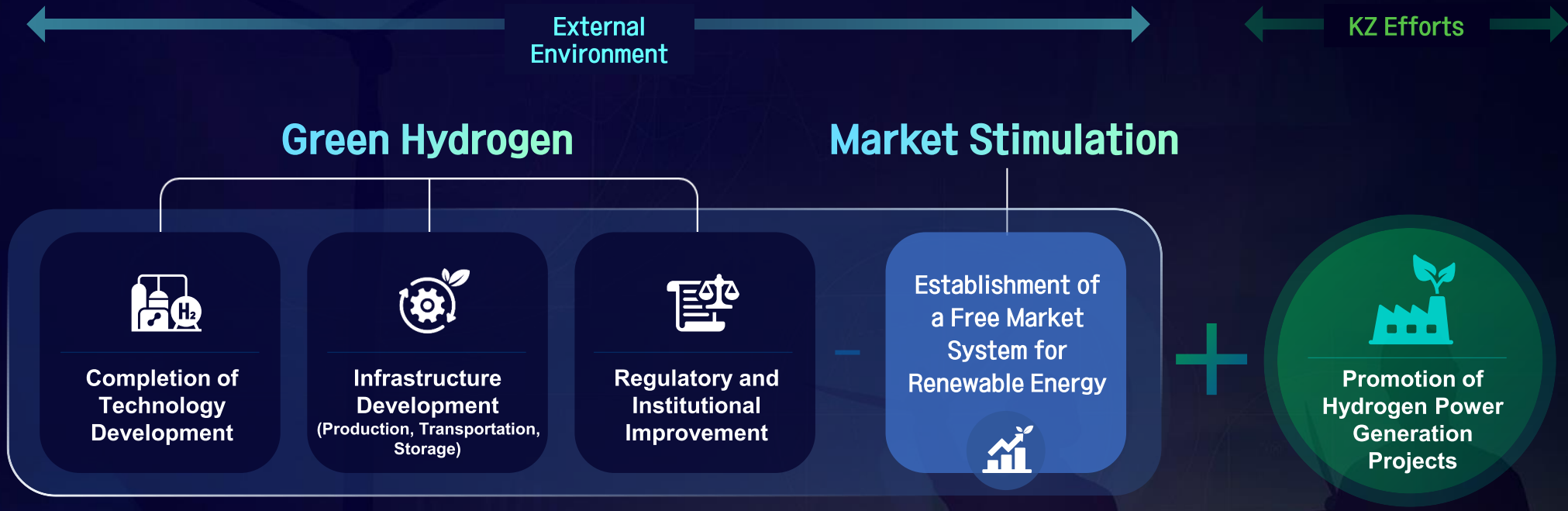
1. Substantive ESG implementation through Troika Drive
2. The safest refinery through expansion of organization, human resources, and investments
3. Strengthening communication with stakeholders

Green Metal Project

Scheduled Carbon Footprint Calculation
→ Targeting Carbon Trust Certification
for Zinc, Silver, Copper, Nickel (2023) / Lead, Gold (2024)



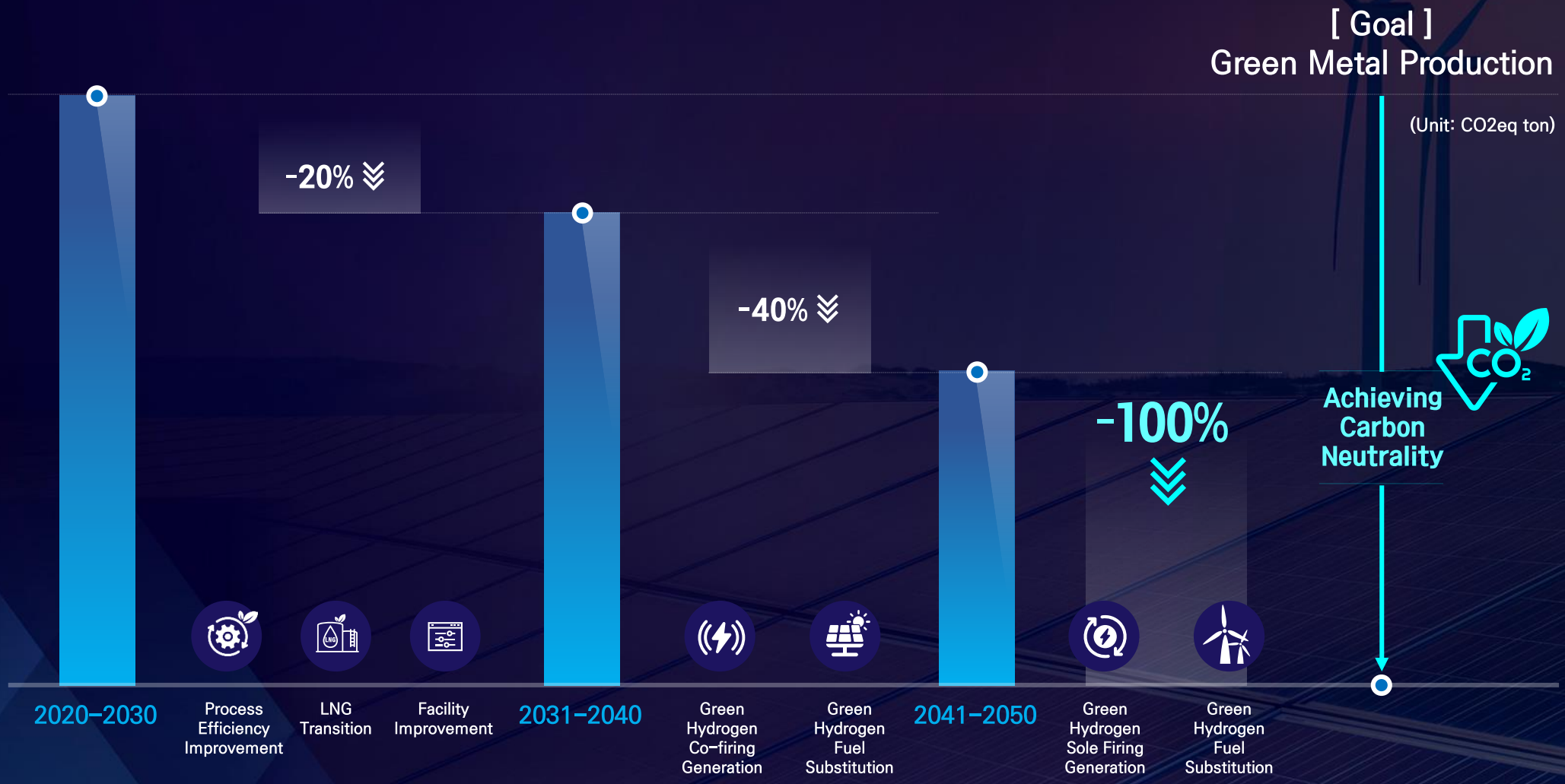
Prerequisites for achieving carbon neutrality by 2050



- Development of hydrogen turbine technology (~2027)
- Completion of alternative technologies for hydrogen reduction materials and other fuel & raw material substitutes (~2040)
- Infrastructure development for transport, storage, and usage of green hydrogen and ammonia (~2040)
- Establishment of regulations related to renewable energy

- Hydrogen Station for Forklifts Demonstration Project in Onsan Complex (~2030)
- Australia 1MW Hydrogen Mobility Demonstration Project (~2030)
- Completion of Hydrogen Co-firing Power Plant (~2030)

KZ Carbon Neutrality 2050 Roadmap for a Greener Earth



Strengthening Safety Management System

Strengthening Organization

- Expansion of Safety Management Personnel: 26 → 131 individuals
- Safety Management Inspection and Support

Enhancement of Work Safety

- Elimination of Hazardous Causes: Completed internalization for 6 Companies and 7 Processes
- Revision and Computerization of Work Permit Regulations

Support for Partner Companies

- Joint Seminar on Voluntary Safety Practices for Partner Companies
- Grade A in the Safety and Health Cooperative Program by the KOSHA (Korea Occupational Safety and Health Agency)

Dissemination of Safety Culture

- Implementation of Safety Campaign and Reinforcement of Safety Education
- Monthly Publication of Accident Casebook

Strengthening Safety Management System

Mission

Accident Prevention by Fostering a Safety Culture, Supported by the Operation of Safety and Health Policies and Systems Embraced by All Members

Safety-related Investment

(Unit: KRW 10 bn)

Step 1 (2023)
- Safety Culture Diagnosis
- Establishment of a Safety and Health System
- Establishment of a Self-regulation Prevention System

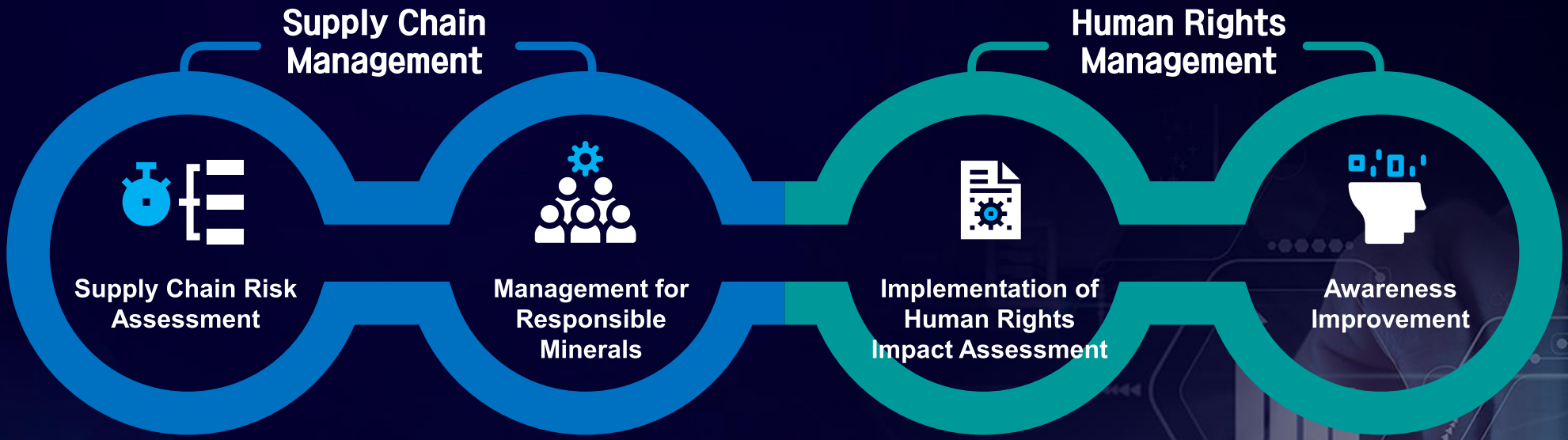
Step 2 (2024)
- Establishment of an Improvement Roadmap
- Improvement of Operability in the Safety and Health System
- Establishment of a Self-regulation Prevention System

Step 3 (2024-2026)
- Implementation and Optimization of Improvements
- Expansion of Applications of the Safety and Health System
- Establishment of Comprehensive Prevention Safety Management System

Step 4 (2027)
- Continued Improvement

Improvement of Stakeholder Sustainability

Risk Management for Various Stakeholders, Including Employees, Supply Chain, Partner Companies, Clients, and Local Communities



Conducting self-assessments and due diligence to identify problems and support improvements in environmental, human rights, and safety risks within the supply chain

Establishing a responsible supply chain with no social issues such as human rights violations and terrorism in the procurement of minerals

Conducting impact assessments to pinpoint human rights risks and identify vulnerable stakeholders

Undertaking awareness improvement activities through various forms of communication on human rights, environment, and sustainability

Sustainable Management Division

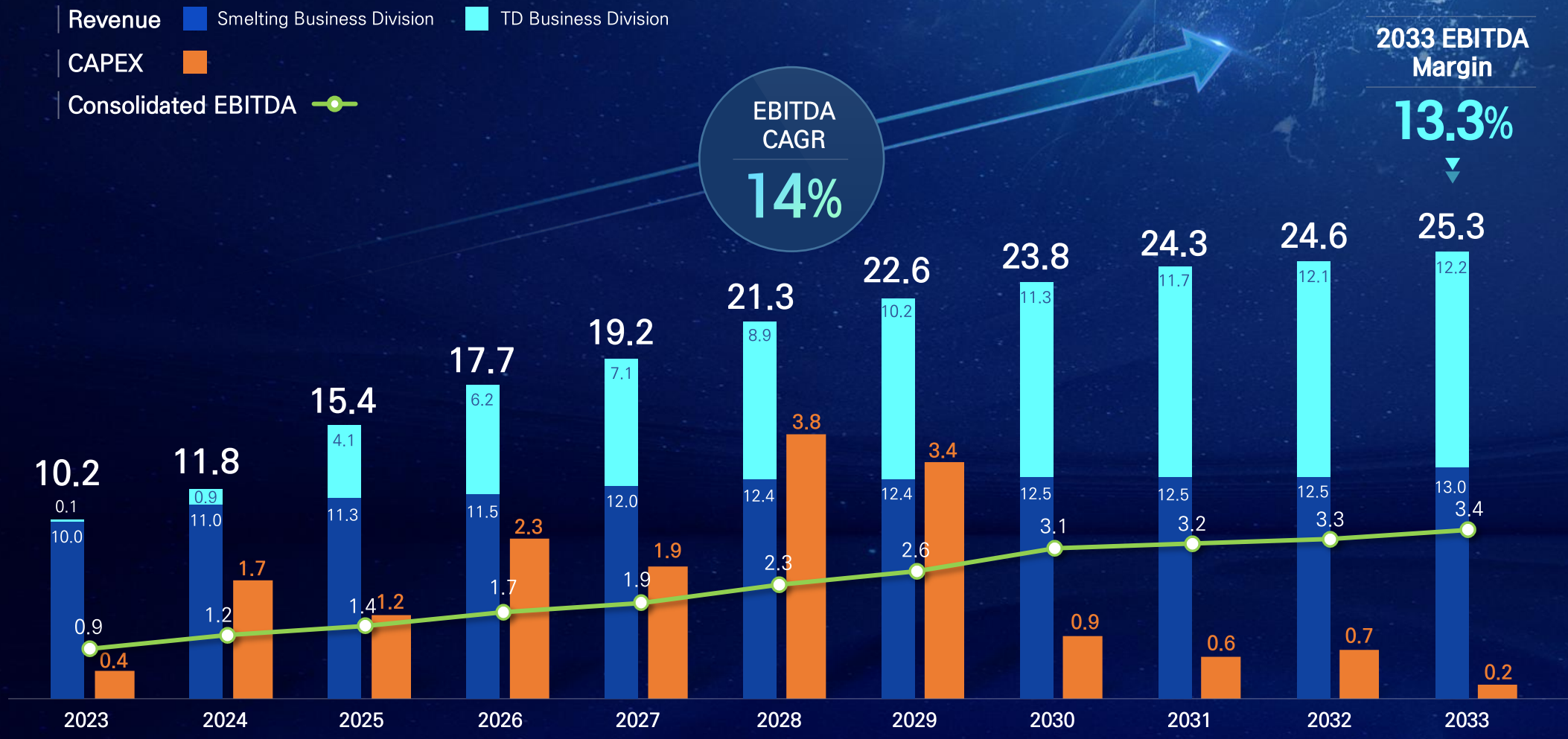
Korea Zinc refines today to forge the value of a new tomorrow.

05

Financial Strategy and Shareholder Return Policy

Projected Consolidated Revenue and EBITDA

KRW 25.3 tn Consolidated Revenue Forecast for 2033



Unit: KRW tn
Figures related to the conversion of renewable energy to hydrogen are not included.
All figures are based on real values (2023 figures are internal estimates).
Revenue: Simple sum of revenue before the elimination of intercompany sales

Smelting and TD Business

Smelting Business

Revenue : KRW **13.0** tn

EBITDA Margin : **12.0%**

Cumulative CAPEX : KRW **5.2** tn

+

TD Business

Revenue : KRW **12.2 tn**

EBITDA Margin : **14.8%**

Cumulative CAPEX : KRW **11.9 tn**

Consolidated

Revenue : KRW **25.3** tn

EBITDA Margin : **13.3%**

Cumulative CAPEX : KRW **17.1** tn

All figures are based on real values.
Figures related to the conversion of renewable energy to hydrogen are not included
Revenue: Simple sum of revenue before the elimination of intercompany sales
CAPEX is based on cumulative figures from '24 to '33

Capital Allocation Strategy (2024-2033)

A Long-term Strategy Maximizing Shareholder Value and Return

– Available Funds –
~ KRW 32 tn + α

Sources

EBITDA	~ KRW 24.2 tn
Cash and Cash Equivalents (As of the end of 3Q23, including short-term investments)	~ KRW 1.9 tn
Debt Financing	~ KRW 6.1 tn*
Other Funding Sources	TBD

Uses (KRW 22 tn ± α)

Growth

Existing Business Investment	KRW 4.9 tn
New Business Investment	KRW 11.8 tn
M&A	TBD

Shareholders

Dividends & Share buybacks/ cancellation	KRW 4 tn ± α

Cash

Cash and Cash Equivalents	KRW 1 tn ~

All figures are based on real values.
2023 net cash, given debt is raised to net debt/EBITDA〈1.5x would be KRW 1.02 tn (based on 3Q23, short-term investments included)

The World's Largest,
Global No.1 Non-ferrous Metal Refining Company

Korea Zinc

Korea Zinc refines today to forge the value of a new tomorrow.