

2022.4Q

**SK Inc. Advanced Materials Business**  
Earnings Briefing

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March 2023



# DISCLAIMER

This presentation includes the recent earnings results and business performance of SK Inc. (the “Company”) and its major subsidiaries. It has been prepared for shareholders and investors for information only.

The financial information presented herein is based on K-IFRS. As the forward-looking statements herein reflect the current business environment and the Company’s business strategies, actual developments may differ from those in the statements due to changes in the business environment and Company’s strategies as well as other uncertainties.

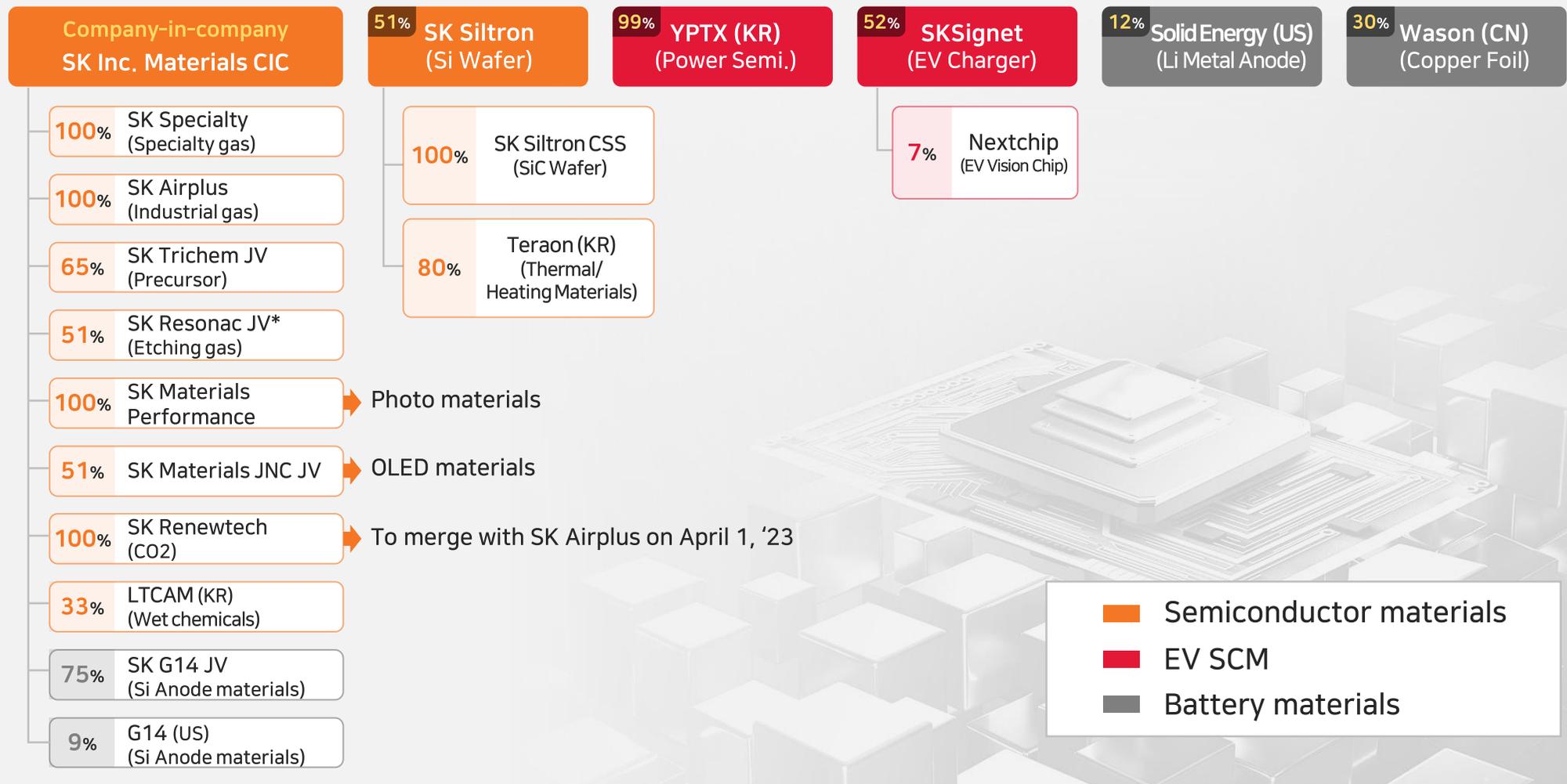
Materials CIC-linked earnings are calculated according to internal standards, and consolidated with SK Siltron earnings to derive the earnings of SK Inc.’s advanced materials business. Please note that this data has been prepared for investors' understanding and is not audited.

Under no circumstances should this material be considered as evidence of legal responsibility to investors’ investment results.



Focusing on industries with strong mid- to long-term growth potentials  
as demand from high performance computing chips and the EV megatrend increase  
- semiconductor materials, battery materials, and EV SCM

## SK Inc. Advanced Materials Business



\* Formerly 'SK Showa denko JV'

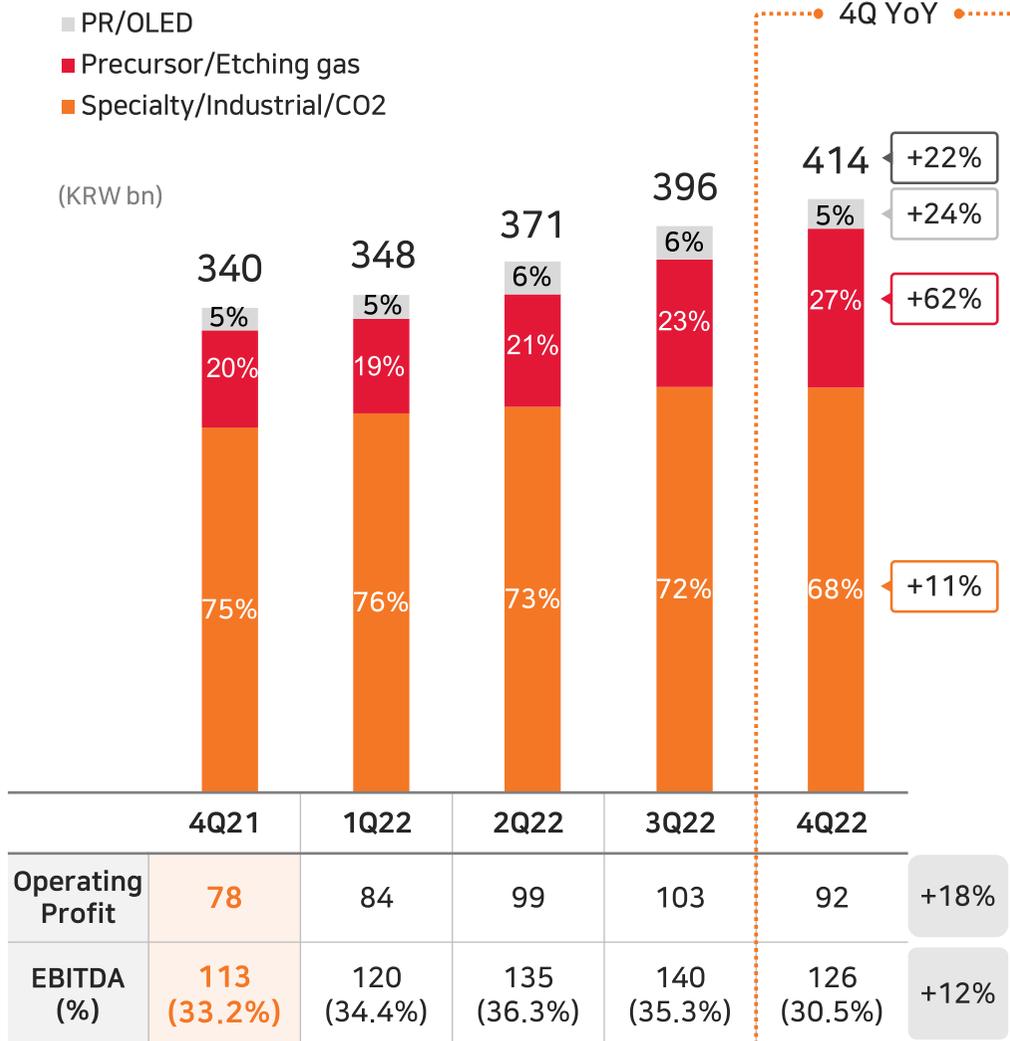
**Despite sluggish market conditions in 2H22,  
FY22 revenue and operating profit increased by +28% and +65% YoY  
from increase in long-term agreement (LTA) volume and launch of new products**

(KRW bn)	2022	2021	YoY	4Q22	3Q22	QoQ
Revenue	3,885	3,039	+28%	987	1,026	-4%
• Materials CIC	1,530	1,189	+29%	414	396	+5%
• SK Siltron	2,355	1,850	+27%	572	630	-9%
Operating Profit	944	573	+65%	223	259	-14%
• Materials CIC	379	291	+30%	92	103	-10%
• SK Siltron	565	282	+101%	131	156	-16%
EBITDA	1,479	1,053	+40%	361	391	-8%
• Materials CIC	521	427	+22%	126	140	-10%
• SK Siltron	958	626	+53%	235	251	-6%
Income Before Tax	1,326	567	+134%	646	250	+159%

※ Total revenue/operating profit/EBITDA/income before tax above are sums of Materials CIC and SK Siltron results

Driven by core product LTAs and increase in high value-added product offerings, Materials CIC achieved record quarterly revenue despite slow demand

## SK Inc. Materials CIC



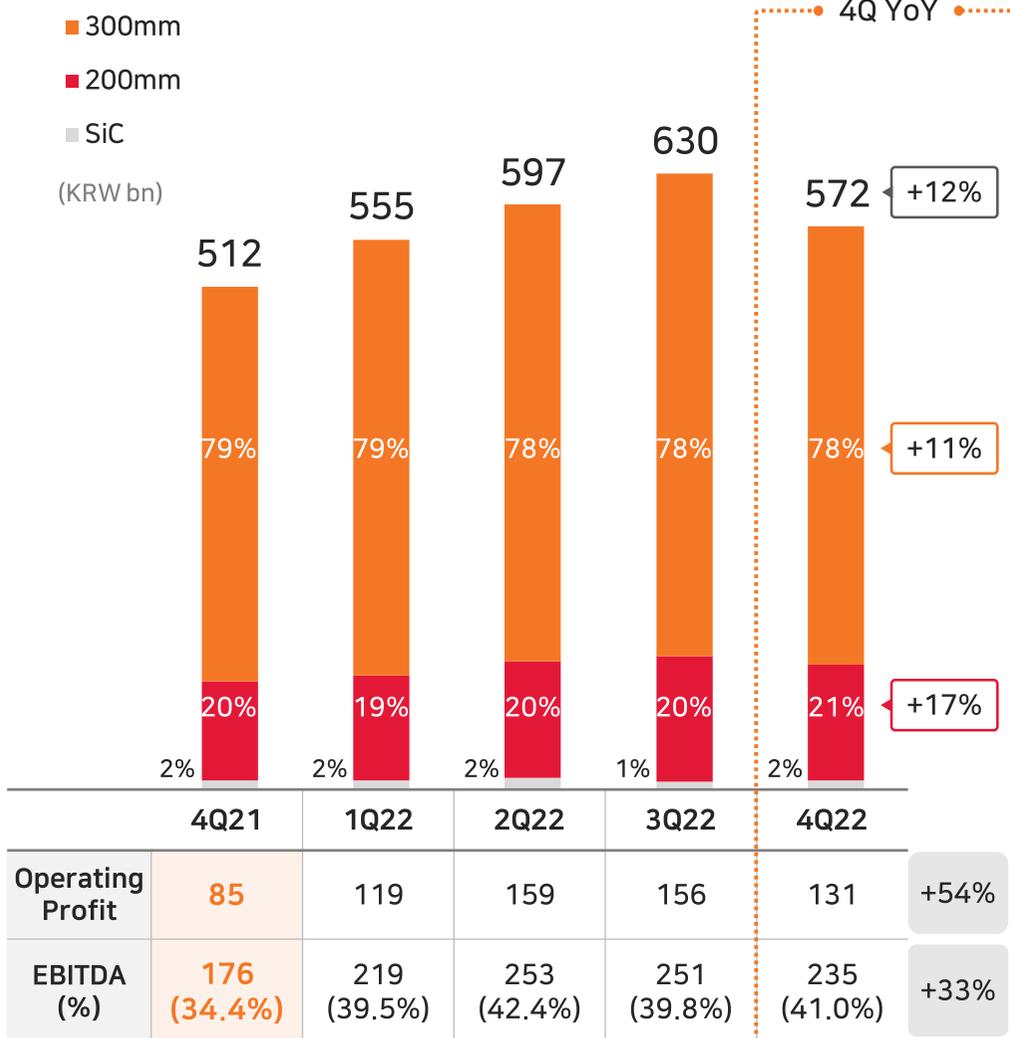
### Highlights

- 4Q22 revenues from specialty gas LTAs and new products led to robust results**  
 (Revenue +22% YoY, EBITDA +12% YoY)
  - Specialty/ industrial gas: Sales of rare gas (i.e. Xe\*), led top line growth, whereas drop in specialty gas demand weakened margins
  - Precursor/etching gas: Demand from semiconductor tech migration led to strong sales in precursor (CpHf\*) and supercritical CO<sub>2</sub>
- With demand expected to slow in '23, focusing on maintaining stable results through LTAs and cost competitiveness**
  - Specialty gas/industrial gas: LTAs and improvements in cost-efficiency to lead to stable earnings
  - Precursor: Growth to continue with expansion in next-generation precursor (CpHf\*) customer base
- Focusing on increasing sales of battery materials and new products in '23**
  - New products ready for commercialization: Si anode materials (G14 JV 1Q23), next-generation etching gas (HBr, 3Q22), new photoresist (SOC\*, 2Q22), wet chemical (PMA, 4Q22), etc.

\* Xe: Gas to improve the straightness of PR in photo processes  
 CpHf: Deposition gas for the most advanced DRAM Capacitor  
 SOC: Replenished etching resistance & improved pattern accuracy of PR in precision photo processes

## LTAs and favorable exchange rate environment led to stable results in the midst of slowing demand from semiconductor companies

### SK Siltron



### Highlights

- Market conditions led to weakened QoQ earnings but maintained YoY growth**  
 (4Q22 Revenue +12% YoY, EBITDA +33% YoY)
  - Revenue decreased ( $\Delta$ 9% QoQ) as sales of 200mm and EPI products waned
  - Profitability less affected as pricing remains stable
- With demand from chipmakers expected to slow in '23, focusing on maintaining stable results through LTAs and improved productivity**
  - '22  $\rightarrow$  '23 : 300mm Si wafer production volumes expected to increase
- SiC Wafer (SK Siltron CSS US): Anticipating significant top-line growth with the completion of the new Michigan plant in '22, and full-scale production in '23**
  - '22  $\rightarrow$  '23, Revenue expected to more than double YoY
  - ※ As strong demand in SiC and tight supply conditions continue, have secured orders for product shipment

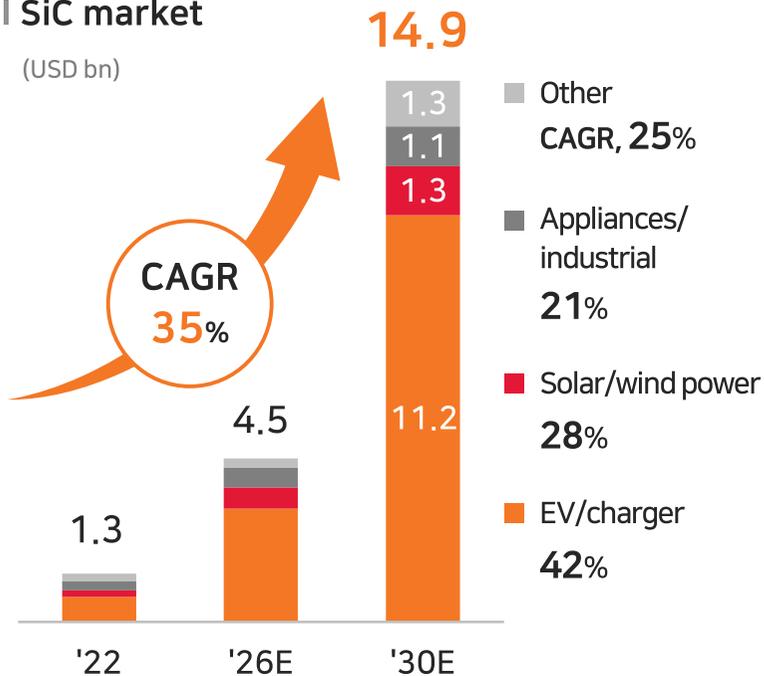
## Post-acquisition by SK Inc., relocated 150mm fab to Busan to increase manufacturing competitiveness and proximity to demand

### SiC Power Semi. Market

Acceleration of Si → SiC transition in EVs will trigger growth

#### I SiC market

(USD bn)



### SiC Power Semi. Business

- May '22: Acquired YPTX to accelerate the expansion of wafer value chain

- Total Cost of Acquisition : KRW 124 bn (99% ownership)

- Mar '23: Completed relocation of 150mm fab to Busan and began commercial production

- Capacity : 100mm 10K/yr ('22) → 150mm 29K/yr ('23 year-end)



Location	• Power Semiconductor Commercialization Center, Gijang-gun, Busan
Manufacturing Capacity	• 150mm Wafer 29K/yr*

\* Equipment including high-performance ion implanter, high-resolution lithography system installed for capacity expansion and 150mm product performance improvement

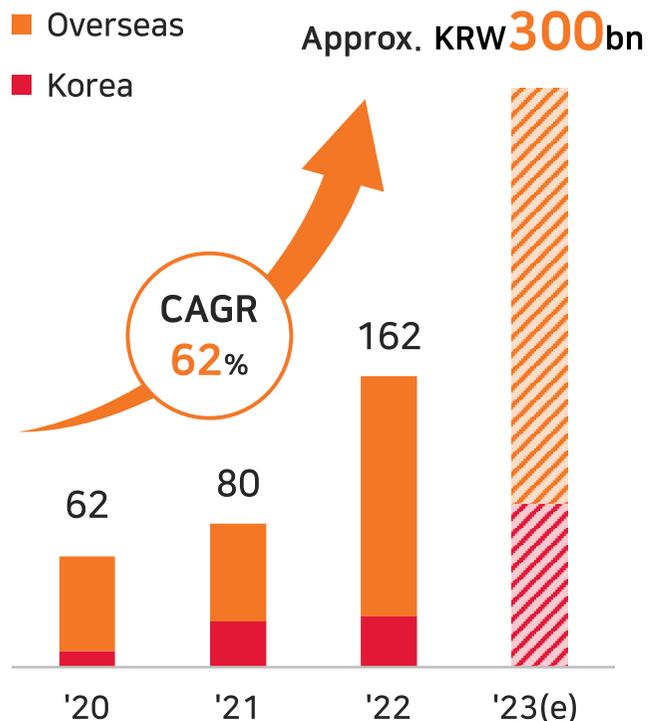
#### Growth Strategies

- ① Cooperate with CSS (US) to achieve global top-tier quality
- ② Target foundries of global SiC fabless companies and cooperate with large OEMs
- ③ Reduce COGS by developing 4<sup>th</sup> generation diodes and 3<sup>rd</sup> generation MOSFETs

## Establishing manufacturing sites (US), sales & marketing operations (Europe), and advancing R&D for expansion into the global market

### Revenue Growth

Rapid post-acquisition growth in revenues



### Global Market Expansion

#### Production (US)

- Establishing US manufacturing sites to increase supply chain stability and eligibility for US government subsidies

- \$5bn Natural Electric Vehicle Infrastructure (NEVI) program effective as of March 30, '23



Location	• Plano, Texas
Manufacturing Capacity	• 10,000 Unit/yr

#### Marketing (EU)

- Developing sales & marketing operations in Europe to secure major clients | Dec '22~

- Opened branch office in Frankfurt, Germany (Dec '22), service center in UK (Dec '22)
- Received first Europe-based order (Dec '22, approx. KRW 10 bn)

#### Tech (Korea)

- Building integrated R&D Center and recruiting tech talent to advance core competitiveness | ~ 2Q23

- At the R&D center, new teams will develop product lines for different regions and new charging technologies (i.e. remote diagnosis, PM\*)



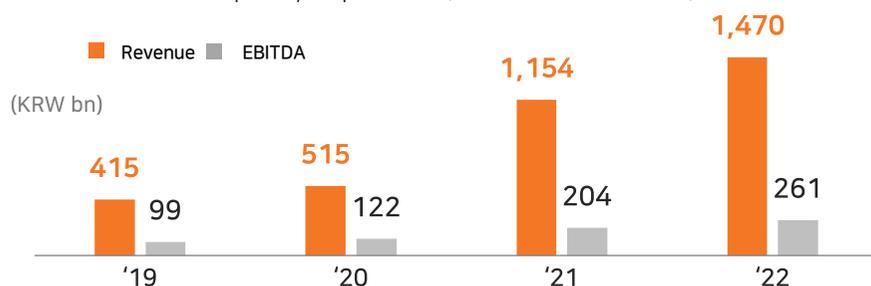
\* Preventive maintenance

With current battery materials business showing stellar performance, aiming to enter the highly anticipated next-generation market

## Wason (Copper Foil)

Revenue and EBITDA growing at 52% and 38% CAGR after SK's investment in '19 (30% ownership)

- Stable growth to continue in '23 with the reopening of China and incremental capacity expansion (Revenue +30% YoY)



Maintaining market leadership in Chinese market via preemptive capacity expansion

- Additional expansion of 30K tons in '23 to retain market leadership

10K ton	'19	'20	'21	'22
Shipment	1.8	2.3	4.6	6.5
China M/S*	16%	18%	16%	15%

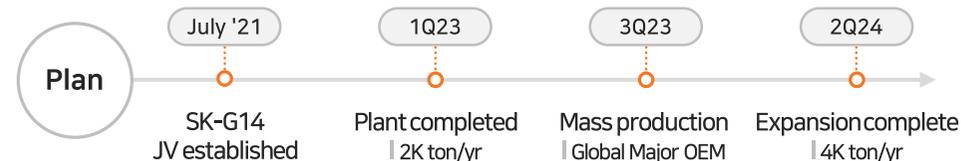
\* Copper foil sales in China (GGII, My Steel)

Preparing IPO in foreign exchanges to raise capital for additional expansion

## SK-G14 JV (Si Anode Materials)

Combining G14's technology with SK's mass production capabilities for next-generation anode materials business

- World-first mass production and commercialization of SiC anode materials for EVs (3Q23)
- In talks to test and supply global major OEMs and battery manufacturers



### Reference: Characteristics of SK-G14 Si-C

Application of Si deposition technology to porous carbon shell enables greater capacity and longevity

① Si-C surpasses graphite in capacity and charging speed

	Graphite + NCM 9 <sup>1/2</sup> 1/2	Si-C + NCM 9 <sup>1/2</sup> 1/2
Energy density	253Wh/kg	373Wh/Kg
Range	440km	660km (1.5x)
Fast charging (~80%)	20 min	Under 10 min (2x)

※ Based on 100% Si-C, equal battery weight & pack capacity, fast charging of 75 kWh battery pack

② 35% more capacity, 75% longer lifespan and 10%p less swelling than competing Si (SiOx) products

# THANK YOU

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