



CHINA STEEL CHEMICAL CORPORATION

Investor Conference
August 2025





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Agenda

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Operating Performance

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04

Prospects and Opportunities



01

Company Profile



Basic Information

China Steel Chemical Co., Ltd. was established on 1989.

Capital

2.369 Billion

The only coal
chemical plant in
Taiwan.

stock symbol

1723

The first professional
graphitization plant
in Taiwan.

Number of Employees : 334

PhD-8 、 Master-97 ; Male-87% 、 Female-13%

Manufacture Base

Coal Chemical Plant : Kaohsiung Linhai Industrial Park

Carbon Material Plant : Pingnan Industrial Park



Major Shareholder

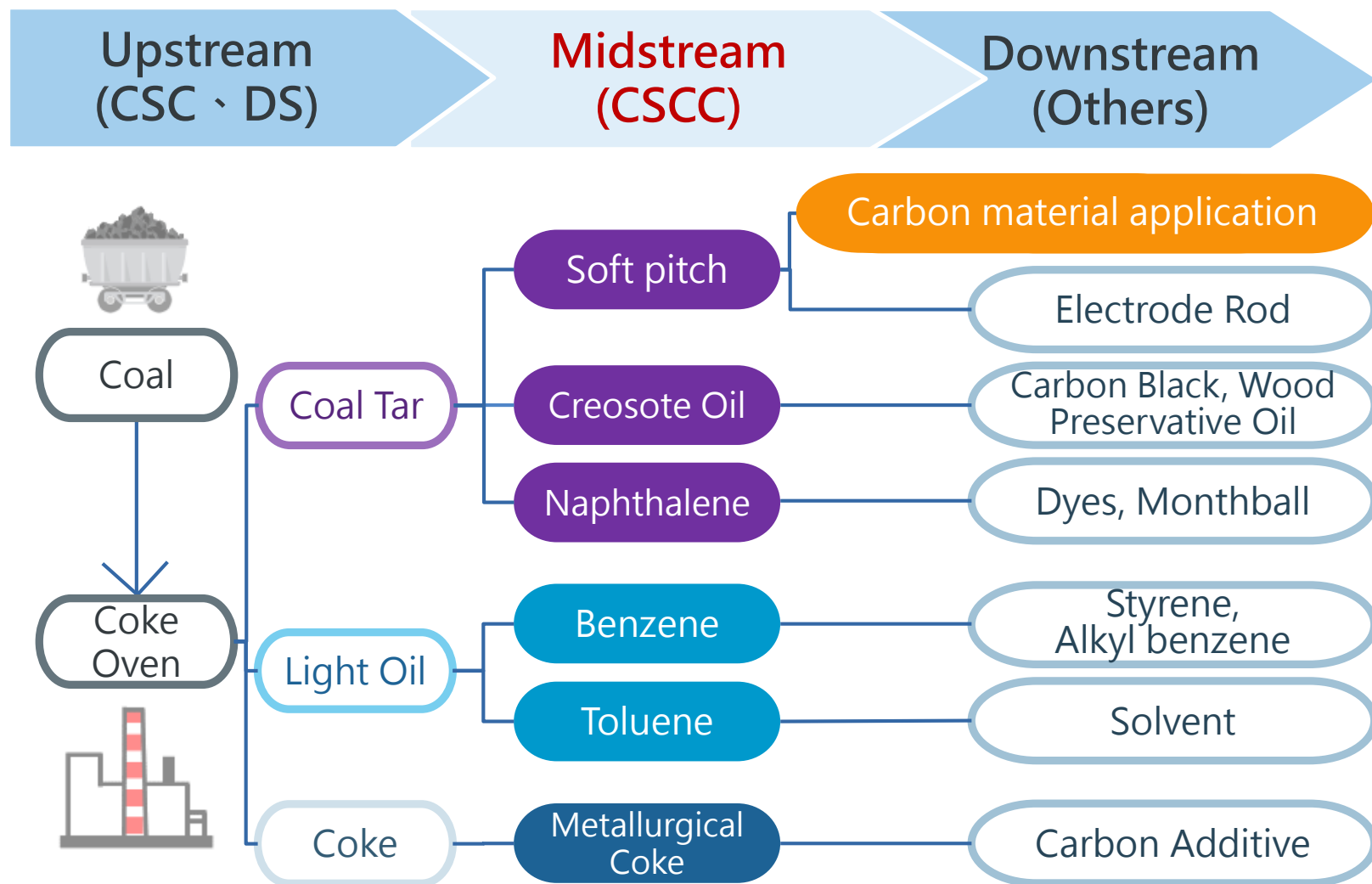
Major shareholder	Percentages
China Steel Corporation	29.04%
International CSRC Investment Holdings Co., Ltd.	4.96%
Ever Wealthy International Corp.	2.01%
Chichengte Investment Co., Ltd.	1.46%
KGI Life Insurance Co., Ltd.	1.32%
Hsinyang Investment Co., Ltd.	1.14%
Mega International Commercial Bank Trust Account - CSCC	0.93%
Chang Gung Medical Foundation	0.93%
Vanguard Total International Stock Index Fund Investment Account	0.90%
Hui-Ping, Yen	0.86%

As of : July 12, 2025

43.55%

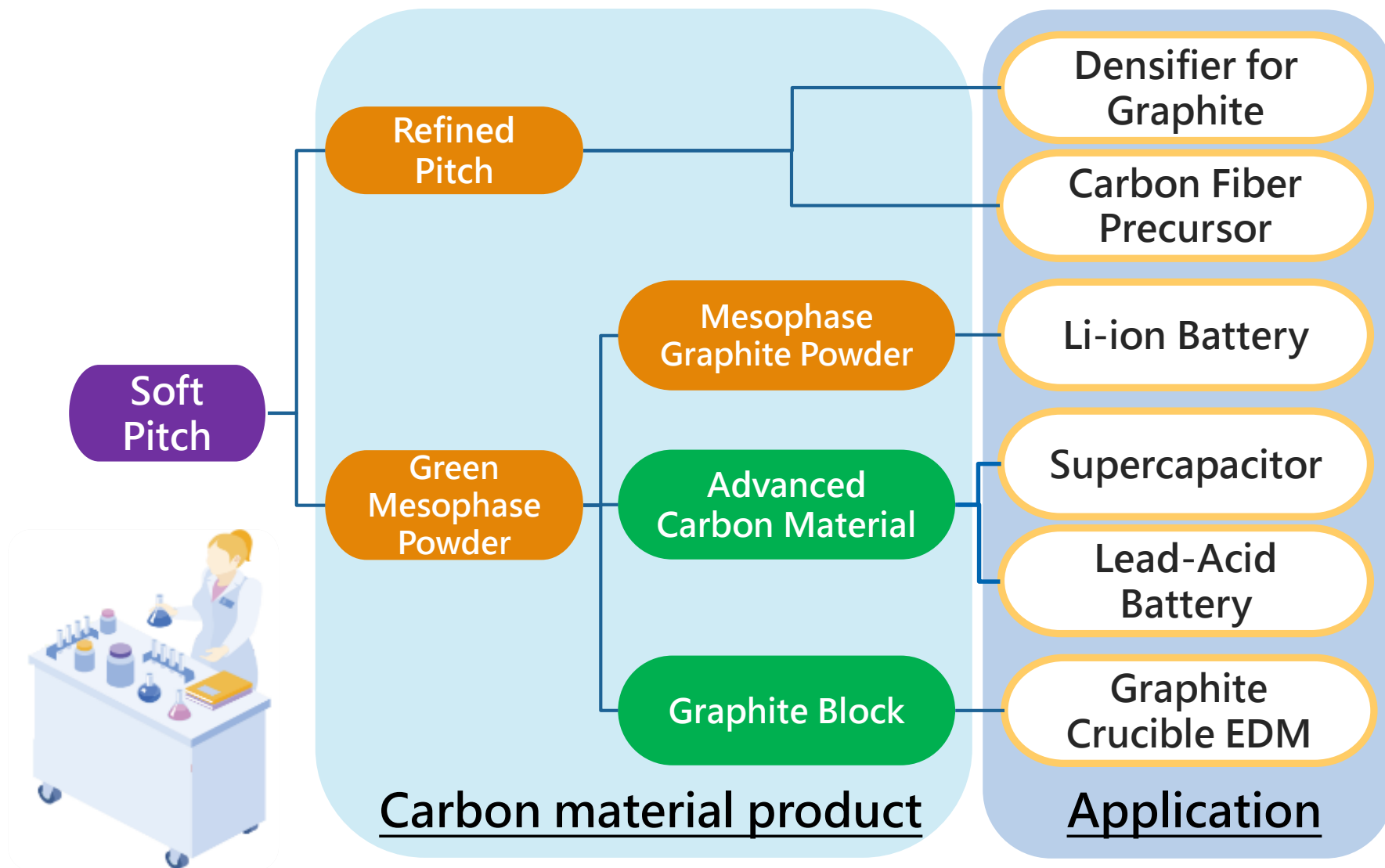


The Relating Product Map of Coal Chemical Industries





Applications of Carbon Material Product





02

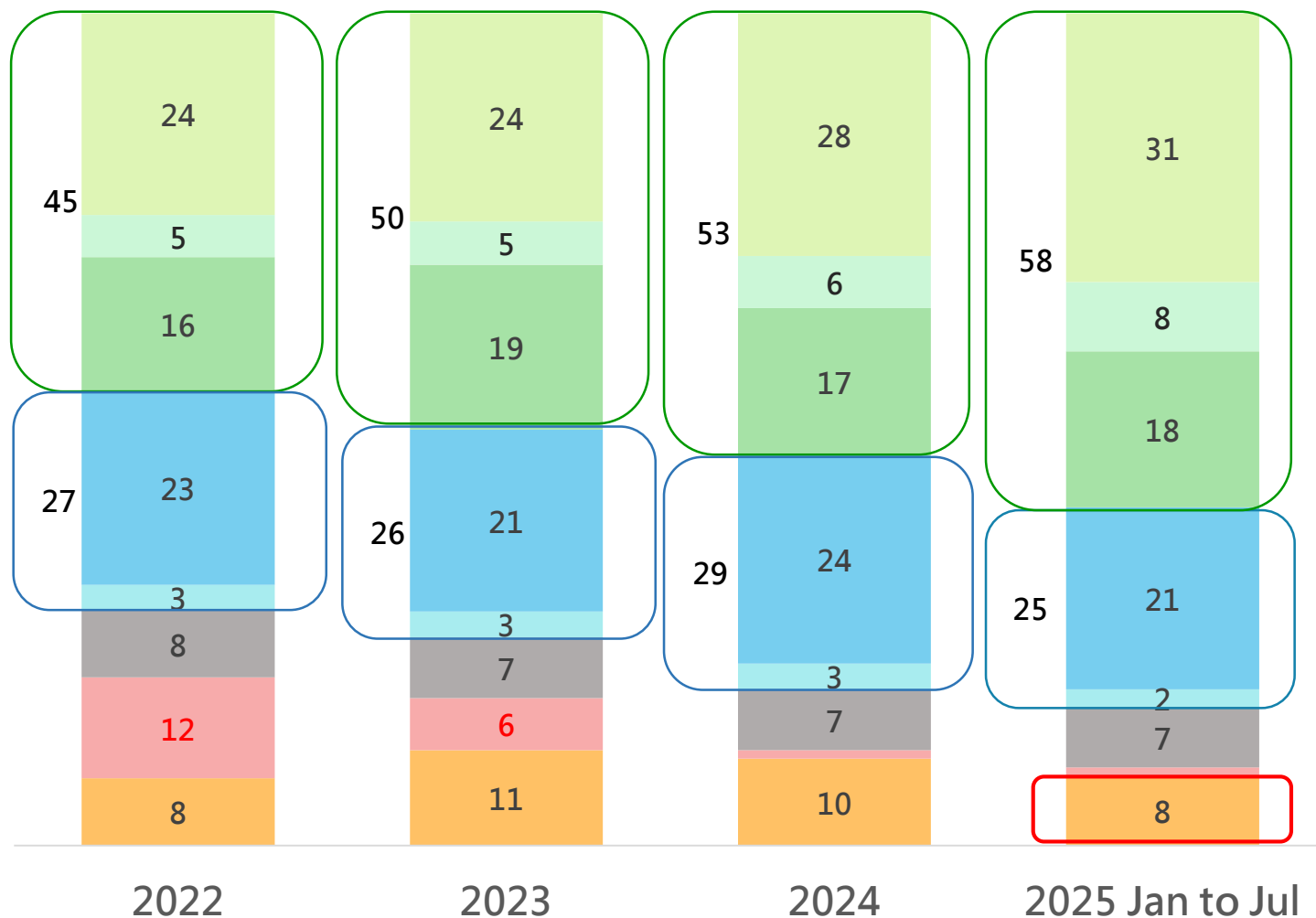
Operating
Performance



Revenue breakdown by Products in the past three years

Unit : %

- Creosote Oils
- Naphthalene
- Soft Pitch
- Benzene
- Toluene
- Small Size Coke
- Trading
- Carbon Material
- Others(Balance)





Coal Chemical Products Sales

Product	Domestic	Export	Product Overview
Soft Pitch	1%	99%	Used for baking aluminum anode materials, mainly exported to long-term customers in Australia.
Creosote Oil	46%	54%	Used for making carbon black, a raw material for tires. Export market mainly in Japan.
Naphthalene	13%	87%	Used for making naphthalene balls and dyeing pigments. Naphthalene balls exported to Southeast Asia, and dyeing pigments exported to India.
Benzene	100%		A basic raw material for the petrochemical industry with wide applications. Insufficient domestic supply must rely on imports, and now for all are domestic sales.
Toluene	1%	99%	Used as a solvent, mainly exported to Singapore.
Metallurgical Coke	100%		After partial processing, supplied to domestic customers for making carbon- additive.

Note: The ratio of domestic and export is the ratio of revenue in 2024.



Carbon material product

Product

■ Domestic ■ Export

Product Overview

Mesophase
Graphite
Powder

38%  62%

Sold to battery cell factories for making Li-ion Battery, with exports primarily to China, Japan, and Southeast Asia.

Green
Mesophase
Powder

45%  55%

Mainly sold to anode material factories for producing anode materials, with exports primarily to China. And also used for other applications in non-anode materials.

Refined Pitch

 100%

Sold for use in steelmaking electrode rods for dipping processing, with exports primarily to China, Southeast Asia, and Japan.

Advanced
Carbon
Material

Mainly sales materials for supercapacitors, advanced lead-acid batteries, and lithium-ion capacitors, with markets including China, Japan, South Korea, and Taiwan.

Graphite Block

Mainly used for graphite components in silicon carbide semiconductors, metal casting, and hot-press glass molds, with a primary focus on domestic sales.

Note: The ratio of domestic and export is the ratio of revenue in 2024.



Product Coverage of a Variety of Industries

Creosote Oil



Car industry tire
- Carbon Black

Benzene



**Petrochemical
industry**
- Basic raw material

Soft pitch



**Aluminum smelting
industry**
- Electrode Rod



Carbon- Material

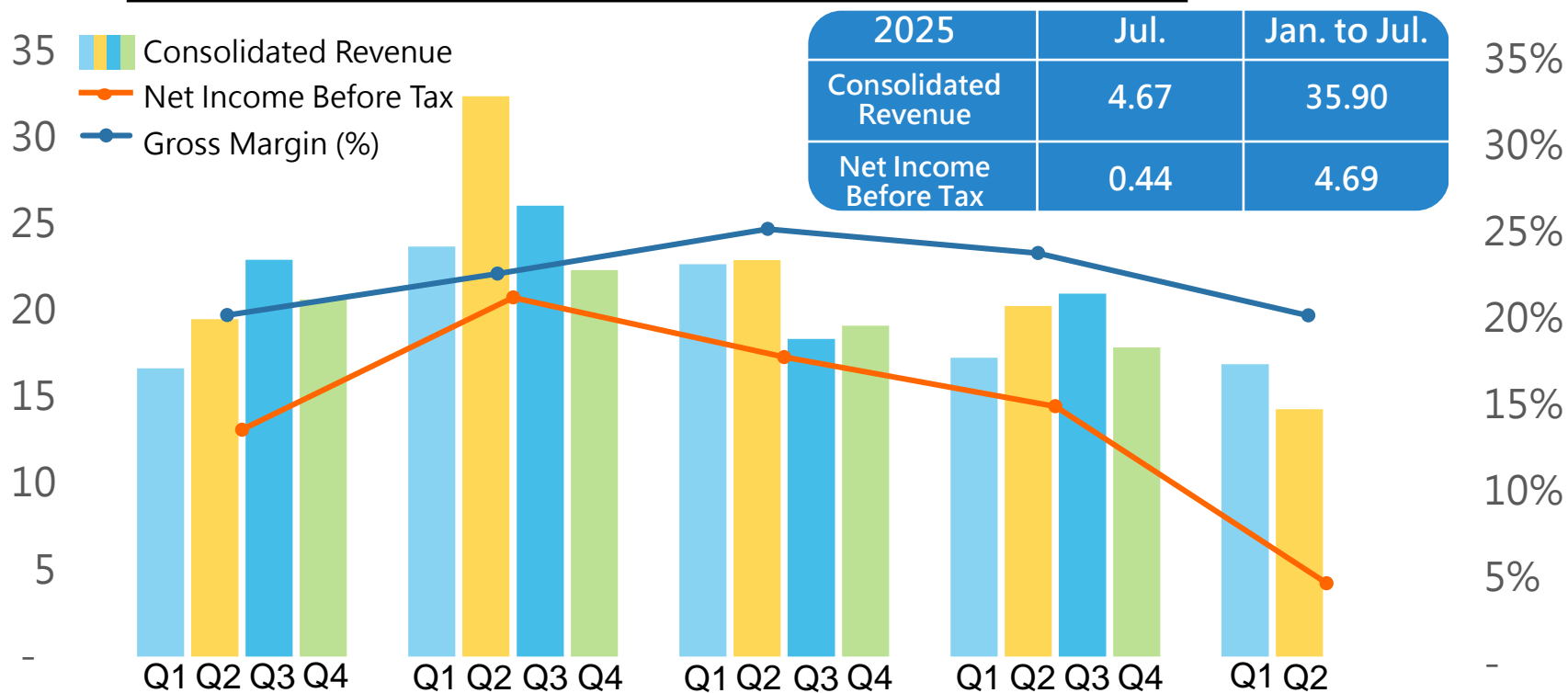


**Green energy
industry**
- Energy storage
/electric batteries



Consolidated Revenue and Net Income Before Tax in the Past Four Years

Unit : NT\$100 Million



2025	Jul.	Jan. to Jul.
Consolidated Revenue	4.67	35.90
Net Income Before Tax	0.44	4.69

	2021	2022	2023	2024	2025 H1
Consolidated Revenue	79.82	104.60	83.18	76.47	31.23
Net Income Before Tax	13.13	20.78	17.33	14.48	4.25
Gross Margin (%)	20.22	22.62	25.20	23.81	20.20



Update on Recent Business Performance

NTD Appreciation

Approximately 50% of the Company's revenue is derived from exports. Including NTD-denominated products, which converted using the USD benchmark, the proportion reaches around 80%. The sharp appreciation of the New Taiwan dollars from the beginning of May through June, and led to a decrease in profitability.

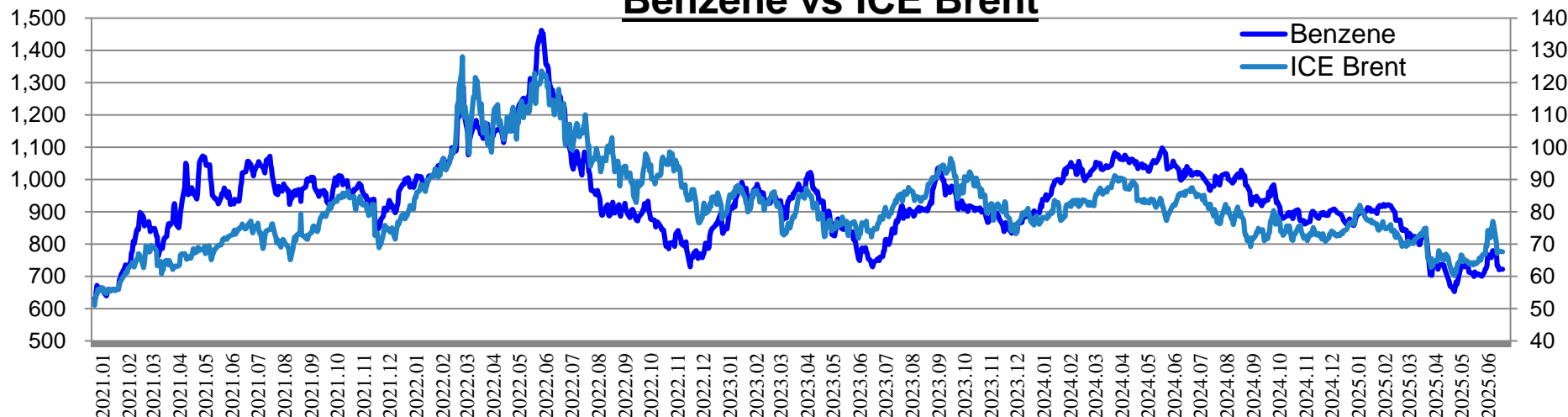
Global Market Conditions

Some of the company's key products prices are directly tied to oil prices. This year, oil prices have fallen by about 15% compared to last year. International benzene prices have dropped by 22%, and soft pitch, which is not related to oil prices, has also fallen by 18%. This has impacted the company's revenue and profitability.

Carbon Material

Due to significant overcapacity in China and uncertainties in the external economic environment, customer demand has been impacted. Many clients have reduced or delayed mass production in response, resulting in weaker revenue performance.

Benzene vs ICE Brent





Future Market Outlook

Oil Prices

- OPEC+ increases production, putting pressure on oil prices.
- Geopolitical conflicts continue to have an impact.



Uncertainty remains high.

Benzene Prices

- Increased demand in China, and driven by U.S. tariffs.
- Oil prices have downward pressure, but the benzene price-to-oil price ratio is low.



Consolidation with an upward bias.

Pitch Prices

- Operating rate for deep processing of pitch in China has increased.
- As a major Chinese celebration approaches, environmental protection efforts are intensified, affecting the operations of coking companies.



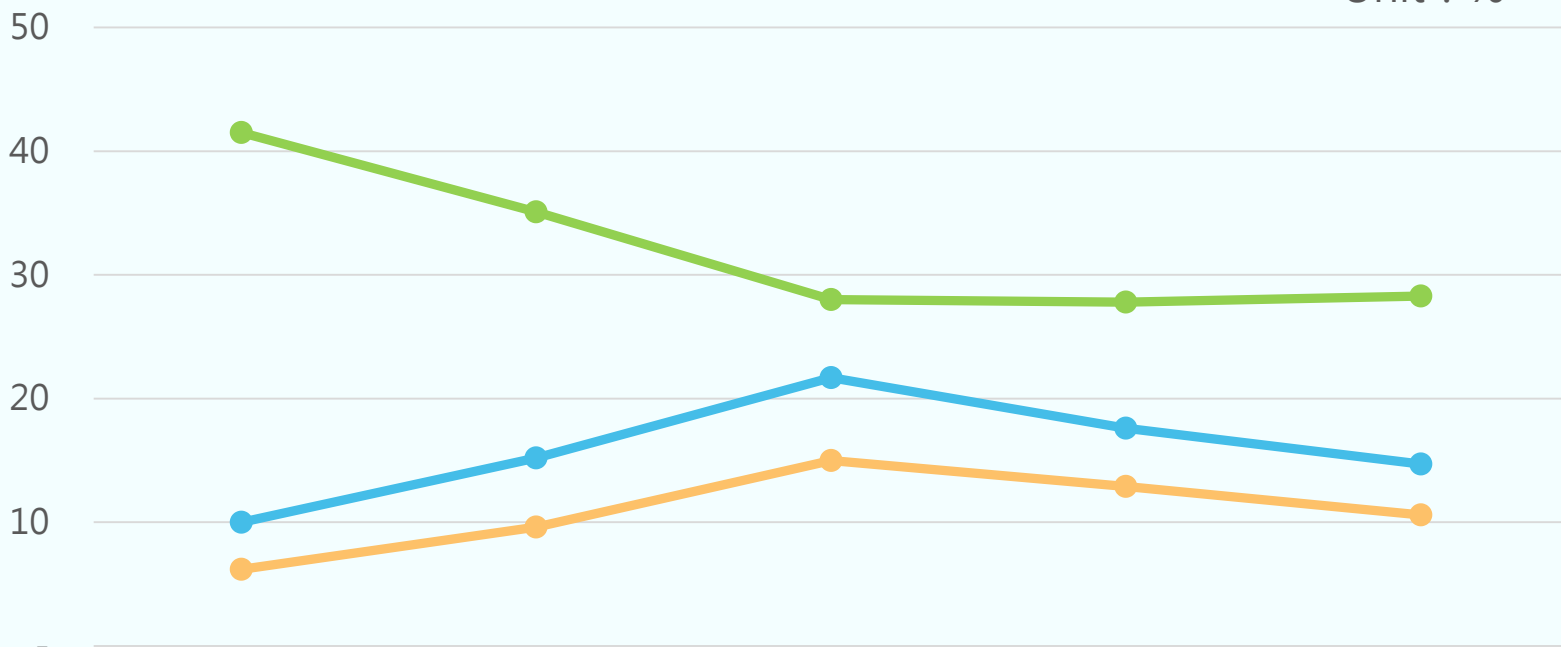
A minor pullback followed by a steady uptrend.

Foreign media reported that --the Chinese government plans to implement regulations on the petrochemical industry, which is expected to improve the industry structure and reduce price competition.



Major Financial Indicator

Unit : %



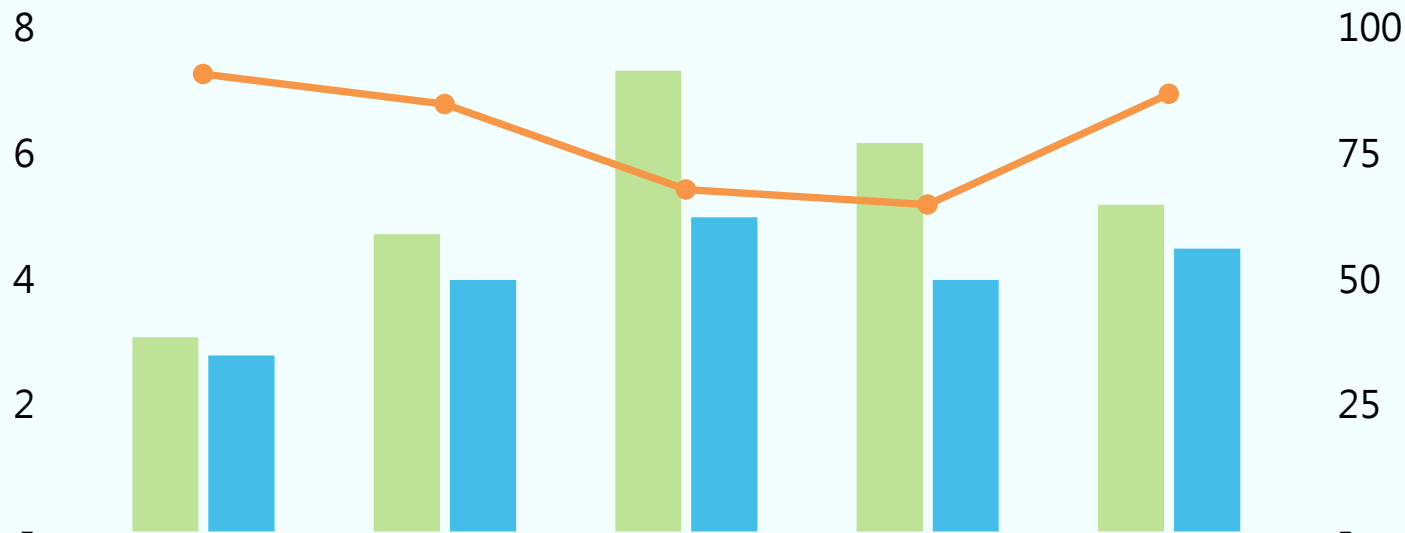
	2020	2021	2022	2023	2024
Debt ratio	41.5	35.1	28.0	27.8	28.3
ROA	6.2	9.6	15.0	12.9	10.6
ROE	10.0	15.2	21.7	17.6	14.7



Dividend Policy

EPS and Dividend in the past five years

Unit : NTD/Per share

 Dividend payout ratio
Unit : %


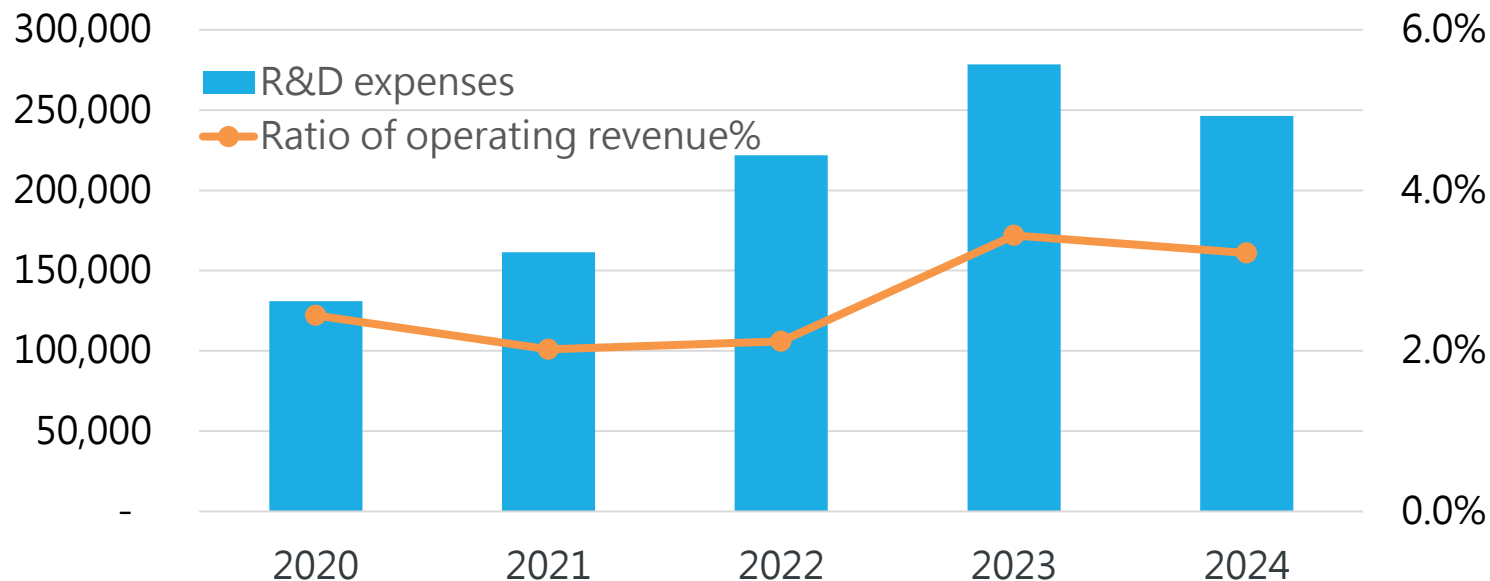
	2020	2021	2022	2023	2024
■ EPS	3.09	4.73	7.33	6.18	5.20
■ Cash Dividend	2.8	4	5	4	4.5
—●— Dividend Payout Ratio	91	85	68	65	87

- ✓ CSCC has been profitable for 30 consecutive years. The total amount of distributed dividends (including stock dividends) is above NT\$130.



R&D expenses and Industrial innovation

Unit : NTD Thousand



Industrial innovation subsidy projects in recent years	Execution situation
I - The development of high-purity carbon powder and isotropic graphite for use in compound semiconductors.	Completed
II - The development of anode materials for electric bus batteries	Completed
III - The development of high-purity graphite crucible for SiC crystal growth used in compound semiconductors.	Executing
IV - Anode Material Development and Verification Program for Ultra-High Power Batteries	Executing



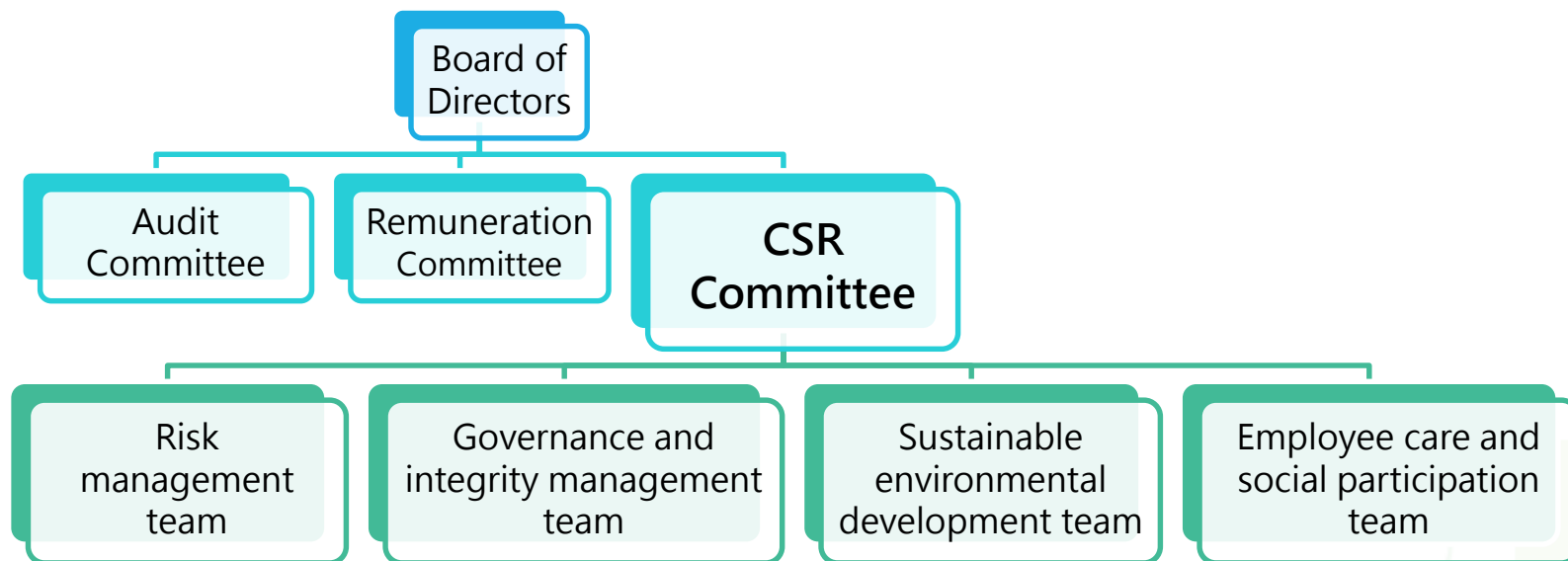
03

Sustainable
Development



Corporate governance

- 🌱 To establish Sustainable Development Committee.
- 🌱 CSCC was in the second grade(6%~20%) according to the lasted corporate governance evaluation results(2024), and for five consecutive years.
- 🌱 CSCC was selected as a constituent stock of the "TIP Customized Taiwan Green Energy and Electric Vehicles Index" in November 2023.





Carbon neutrality by 2050

Following the group's policy, the company has pledged to achieve carbon neutrality by 2050. We have established short, medium, and long term strategies and targets, outlining various carbon reduction strategies and a pathway to carbon neutrality.

Short-term

- By adopting mature, readily implementable carbon reduction technologies, we have **completed a cumulative total of 65 carbon reduction projects** since our baseline year of 2022, **achieving a reduction of 7,016.7 tons of carbon emissions**.

Medium-term

- By leveraging innovative technologies, AI intelligence, and replacing absorption chillers, we aim to enhance energy efficiency and **achieve a 20% carbon reduction target by 2030. (Compare to 2022)**

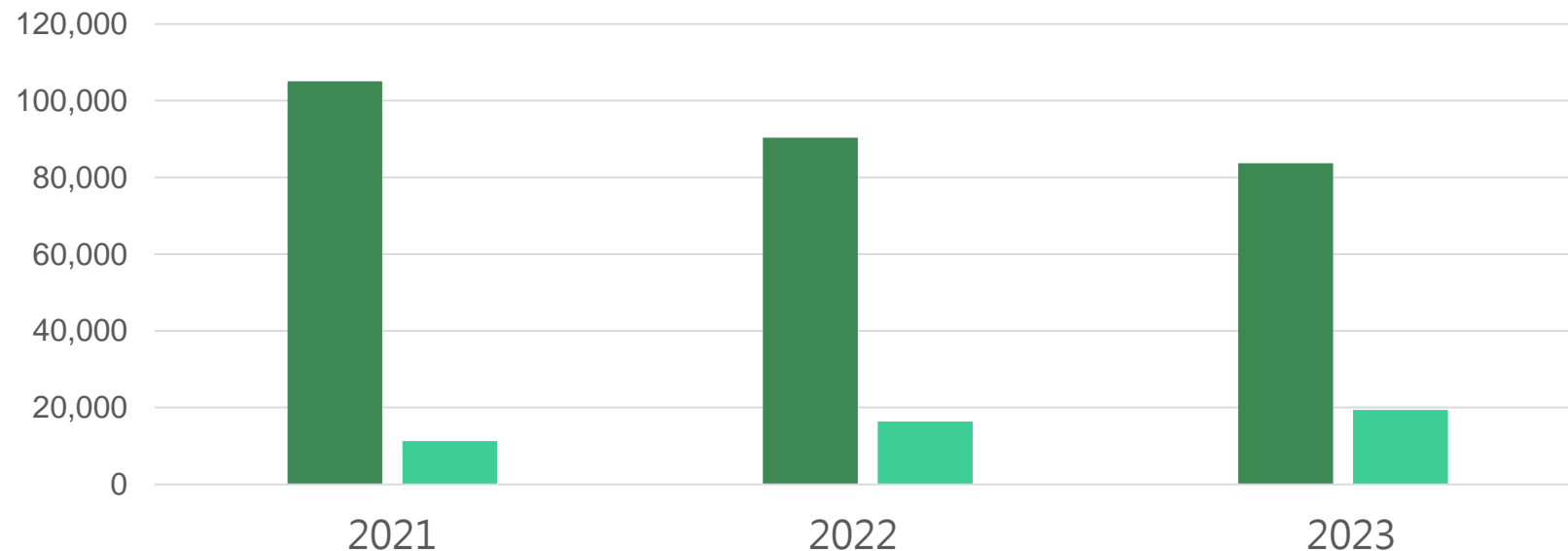
Long-term

- Utilizing clean energy technologies such as green electricity and hydrogen, complemented by carbon capture techniques, we aim to reduce emissions first and then remove residuals, progressing toward **carbon neutrality by 2050**.



Greenhouse gas inventories conducted over the past three years.

Unit : metric tons



<div><div></div><div>Plant of Xiaogang</div></div>	Through process improvements, waste heat recovery, and enhanced energy efficiency measures, Xiaogang Plant's audited emissions have steadily decreased.
<div><div></div><div>Plant of Pingnan</div></div>	<div><div></div><div>The Pingnan plant is still undergoing expansion and production capacity continues to increase, so carbon emissions are rising.</div></div> <div><div></div><div>The subsequent plan includes electrification of energy systems, the transition to green electricity, the installation of renewable energy equipment, and an increase in green energy usage, all aimed at gradually reducing carbon emissions each year.</div></div>



ESG Implementation and Award Achievements

2019-2023

➤ Gold Award from TCSA

2023

- Awarded for Environmental Protection Sustainability Contribution Award
- Awarded for Excellent Trading Business
- Ministry of Health and Welfare "Healthy Workplace Certification - Promotion Label"

2022

- National Enterprise Environmental Protection Award-Bronze medal
- Top 100 Carbon materials competitiveness on Business Weekly

2021-2024
2023


Awarded TIPS level A patent and certification



Awarded Certification of information security ISO 27001

2024

- Award for The 9th National Environmental Education Award of the Excellence Award
- Award for Affairs 113 Industrial Park Greening and Beautification-Second Place
- Pingtung Excellence Enterprise Award - Investment Model Award
- Sports Administration, Ministry of Education - Sports Enterprise Certification
- Taiwan Electrical and Electronic Manufacturers' Association - Digital Transformation Model Award
- Top 100 Carbon materials competitiveness on Business Weekly



04

Prospects and
Opportunities

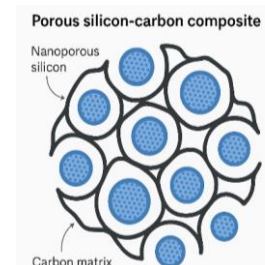
Development Trends of Lithium-ion battery

Graphite Anode

With excellent cycling stability and superior electrical conductivity, it is currently the most reliable anode material for lithium-ion batteries, accounting for more than 98% of the market share.

Silicon-Based Anode

- (1) Incorporating silicon-based materials into graphite anodes can significantly increase capacity; however, the high expansion of silicon severely affects the cycle life of batteries.
- (2) The mainstream solution at present is porous silicon-carbon composites, which provide expansion space for silicon within the porous carbon structure. Nevertheless, **the proportion of silicon addition is currently limited to only about 5–10%.**



**Porous Carbon
+ Nano-Silicon**

Semi-Solid State Battery

- (1) Solid-state batteries are the ultimate solution, but they still have the significant challenges in terms of large-scale production and cost control.
- (2) Semi-solid-state batteries have become the current transitional solution.



Application of Silicon-Carbon Anodes in High-End Smartphones

- **UF series anode materials** **Low expansion, Long cycle life, High rate.**
 - The manufactured battery electrodes can exhibit the following characteristics:
 - Achieving an ultra-thin thickness of 0.18 mm.
 - The silicon material addition ratio can reach a new high of 25%.
 - Energy density is over 28% higher than typical competing products.
 - Has been incorporated into the **High-End smartphone supply chain**, and create flagship-level smartphone functions.

**Extremely
thin and light**

**High
capacity**

**Fast
charging**



- **Advanced Carbon Material**

- It has excellent material properties for preparing silicon-carbon, and now is actively developing it.

**Multi-pore/layered structure,
High specific surface area,
High electrical conductivity.**



24M Semi-Solid-State Battery Applications

- 24M semi-solid-state battery is already in mass production in Japan. In addition, a production line for a new customer in GW has been completed and test runs have been done. A product launch is scheduled for September, with energy storage and vehicle use as the main applications. °
- **CSCC Mesophase Graphite Powder**, when applied in 24M semi-solid-state batteries, have the following features:

High Density

Maintains high conductivity and increases capacity.

High Interface Stability

Reduces side reactions and impedance, extending cycle life.

Excellent Fast-Charging Performance

Spherical structure and high conductivity support the demand for 24M fast charging.

High Cycle Life and Safety

Can maintain a long cycle life at high rate and high temperature.

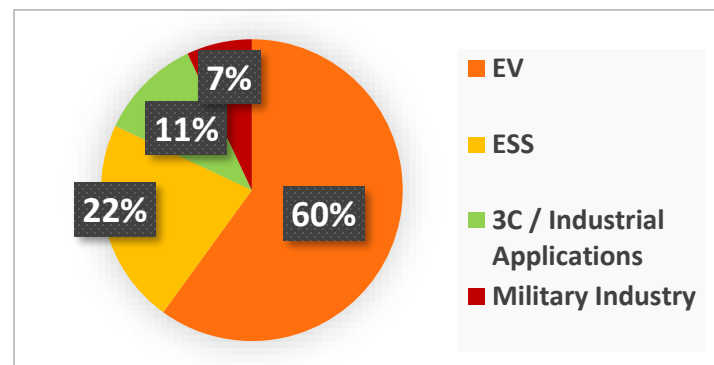
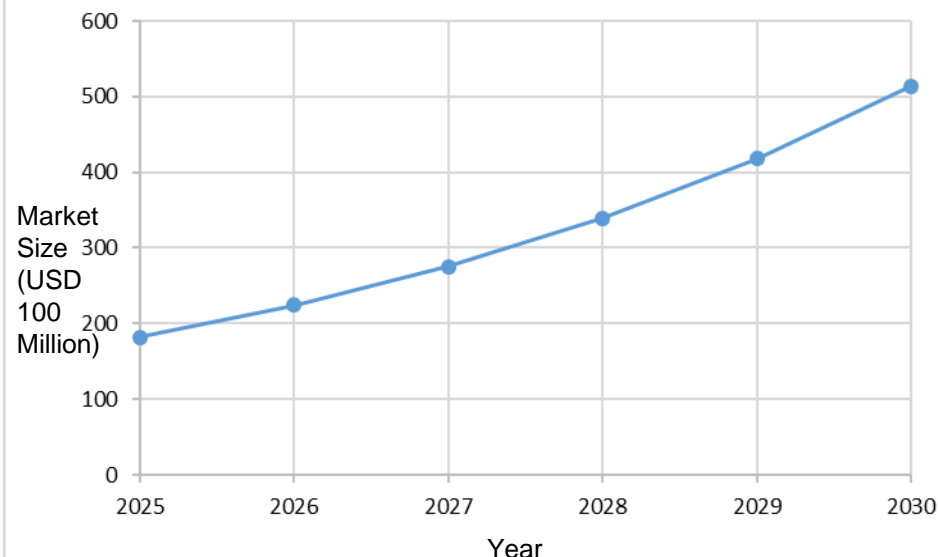
CSCC Mesophase Graphite Powder **are the only anode material that has passed the verification** for 24M semi-solid-state battery. With the ramp-up of the customer' s production line, demand is expected to surge.



Expanding Opportunities in North America

- The U.S. Department of Commerce has preliminarily ruled that Chinese graphite products are being dumped, imposing an anti-dumping duty of 93.5%, with the combined actual tariff reaching 160%.
- In 2024, the U.S. imported nearly 180,000 metric tons of graphite products, with approximately two-thirds coming from China.

North American Lithium-ion Battery Market Growth(2025-2030)



CSCC North American Project

- Establish a factory in North America
- Co-develop synthetic graphite products
- High-end products manufactured de-sinicization

Applications of ACS



中鋼碳素
CHINA STEEL CHEMICAL

Steady Supply

Supercapacitor Applications

High-Power Discharge Applications

3.0V High-Voltage Supercapacitor



⇒ Rail Vehicles, Wind Power, Smart Grid

Advanced Lead-Acid Battery

Enhanced Conductivity and Extended Lifespan

High-Rate Discharge



⇒ Automotive Start-Stop Battery, UPS Uninterruptible Power Supply System

Customer Validation

Lithium-Ion Capacitor

High-Power Discharge Applications

Long Cycle Life Characteristics



⇒ Data Center Power Backup System

Capacitive Deionization

High Surface Area Adsorption

High Conductivity



⇒ Industrial Ultrapure Water · Water Purifier



Opportunities for Advanced Carbon Materials Development - Battery Backup Unit for AI Servers (BBU)

• Battery Backup Unit for AI Servers (BBU)

1. **LIB (Li-ion battery)** : Currently the mainstream application.

CSCC Graphite Anode

2. **LIB + EDLC (Supercapacitor)** : CSCC Advanced Carbon Materials

Due to LIB's lower discharge power and cycle life, it cannot meet the power fluctuation demands of AI servers. Therefore, it is combined with EDLC. °

3. **LIC (Lithium-Ion Capacitor)** : CSCC Advanced Carbon Materials

Because of higher technical difficulty. It is a new product that combines the high capacity of LIB with the high power and long cycle life of EDLC.

Advantages of CSCC Advanced Carbon Materials :

1. **High Capacity**

2. **De-Sinicization** creates opportunities to expand market share.

3. Actively developing **porous carbon anode materials**.

→ CSCC Board of Directors approved the **500-ton advanced carbon materials factory expansion project** in February 2025.

✓ Phase 1 is scheduled for completion in early 2027.

✓ Phase 2 is scheduled for completion by the end of 2030.

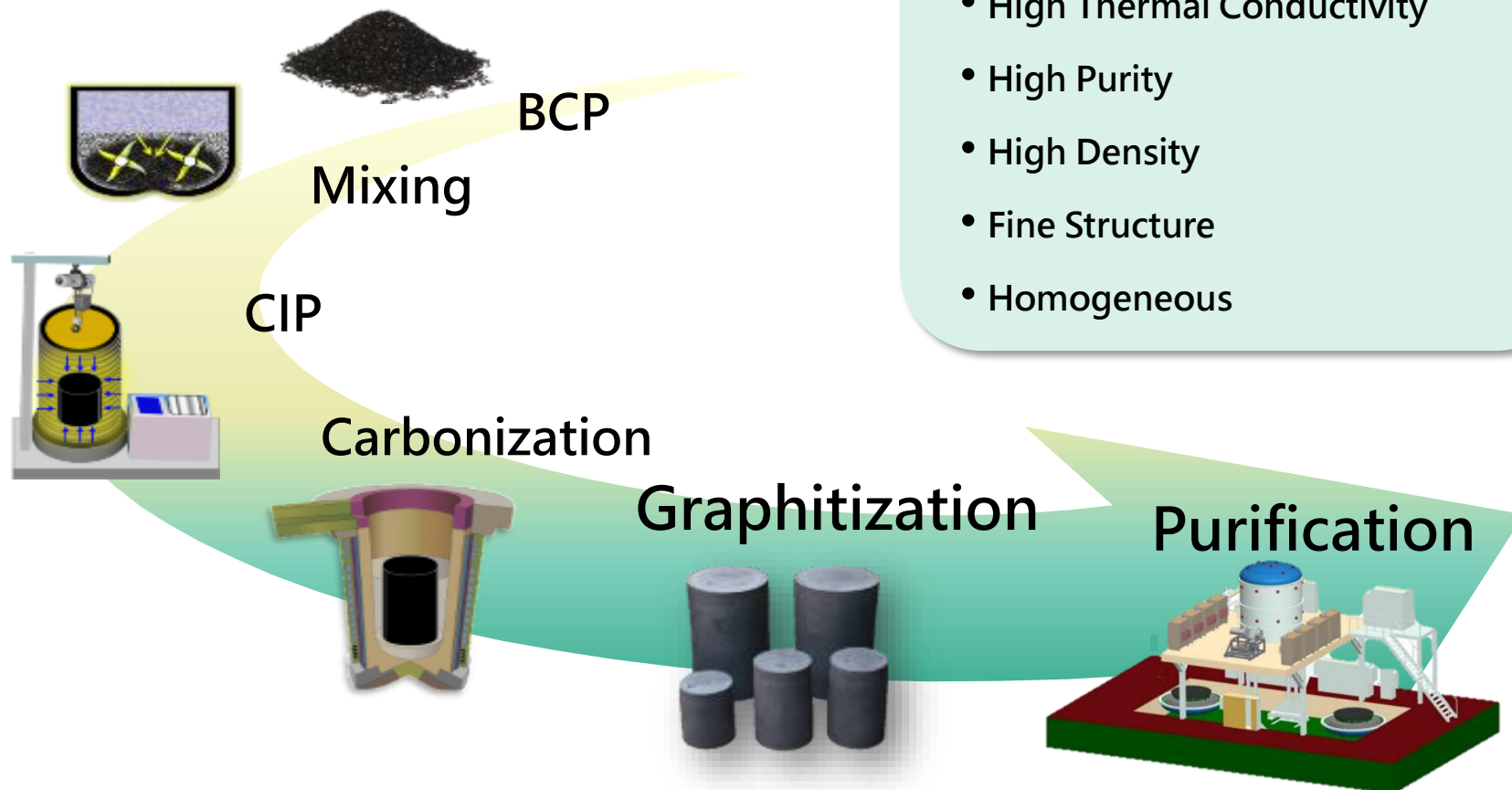
Graphite Block Development

High
Purity

High
Density

High
Strength

- Thermal and Chemical Resistance
- High Thermal Conductivity
- High Purity
- High Density
- Fine Structure
- Homogeneous





Graphite Block Material Development

- Graphite block materials are mainly used for Sic crystal growth crucibles and industrial hot zone components.

- SIC

- Advantages

High voltage

High current

High-heat tolerance

High frequency

Low-loss

- Application

- Electric vehicles, charging piles, etc., can save 75% of power
- AI servers, meeting high voltage (HVDC) demands
- AR glasses lenses (latest applications)
→ Possessing **High refractive index** and **good thermal conductivity**, it can expand the field of view and display stably.



Advantages of CSCC Isotropic Graphite Block Materials :

High strength, High density, and High purity.

- The products have been verified by multiple customers and meet the supply standards of manufacturers.
- China has listed graphite products as export-controlled items, so customers are actively introducing localized supply chains.

→ CSCC Board of Directors approved the **240-ton isotropic graphite block factory expansion project** in February 2025.

✓ Expected to be completed in early 2027



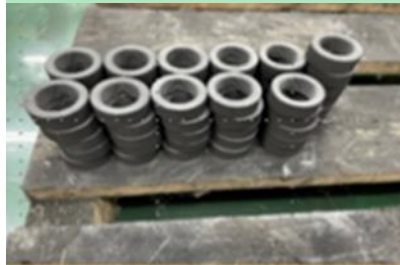
Application of Graphite Block

Industrial
hot zone
components

Connection board



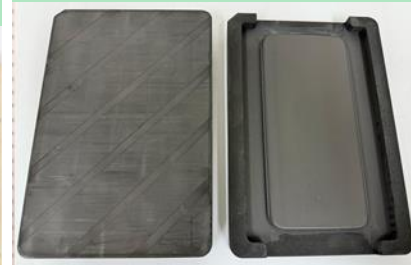
Nut



Continuous casting
tools



3D-Glass mold



Support shaft



Continuous casting
mold



Heater



Graphite Electrode



Semiconductor
components



SiC crystal growth
crucible



SiC crystal growth
crucible



High purity carbon
powder



Silicon carbide compound semiconductor



Creating a sustainable and friendly environment, and precision manufacturing in green energy.

To become a key carbon material supplier for the green energy industry.



Customer Satisfaction 、 Sincerity 、 Credibility 、 Cooperation



中鋼碳素
CHINA STEEL CHEMICAL

Q&A

T h a n k y o u

