Mid-Term Plan

Rolling Mid-Term Management Plan 2023/02/10





Introduction

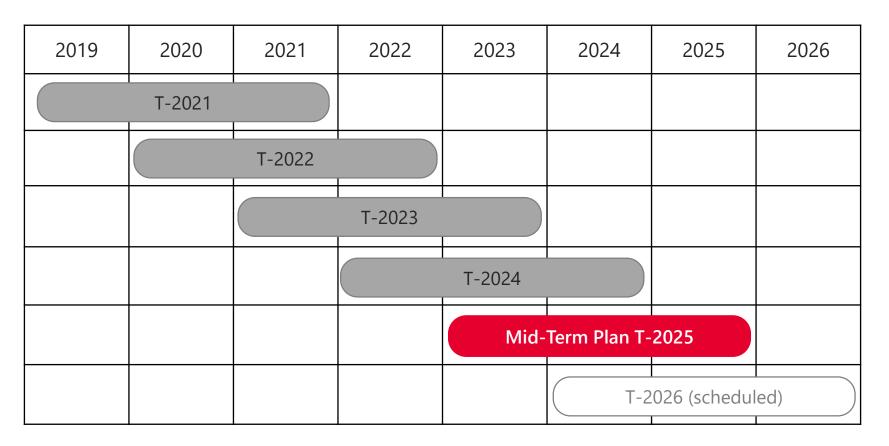
From 2015 to 2016, we drastically revised our governance structure and implemented structural reforms, including reducing our production capacity, optimizing our workforce and withdrawing from non-core businesses, while working diligently to shape the mindset of our employees. From 2017, we shifted our focus to growth strategies and carried out overseas M&A in the graphite electrode, fine carbon, and carbon black businesses. Thus, our business performance improved significantly, along with the recovery of sluggish graphite electrodes and fine carbon markets.

We have strived to strengthen our management base since then, and responded to various environmental changes, such as the spread of COVID-19, the carbon neutral trend, and surging energy prices caused by the Ukraine crisis. At the same time, we have been seeking our vision. Aiming to contribute to the realization of a sustainable society, we continue to actively address challenges to increase our corporate value.

Since the three-year mid-term management plan "T-2021" was disclosed in 2019, we have adopted a rolling format in which we revise our plans for the next three years on an annual basis, as a method to promptly respond to accelerating changes in an increasingly tough management environment and avoid the obsolescence of plans and awareness. We have also formulated T-2025 for this year. We hope it will help your understanding about our management policy.

Tokai Carbon Rolling Mid-Term Management Plan

We have adopted a rolling format to respond flexibly to changes in the management environment and will update the Mid-Term Management Plan annually.



Current plan announcement

Scheduled for next year

^{*&}quot;T" of the "Mid-Term Plan T "series stands for "Tokai Carbon" and "Target".



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01 >>> Long-Term Vision

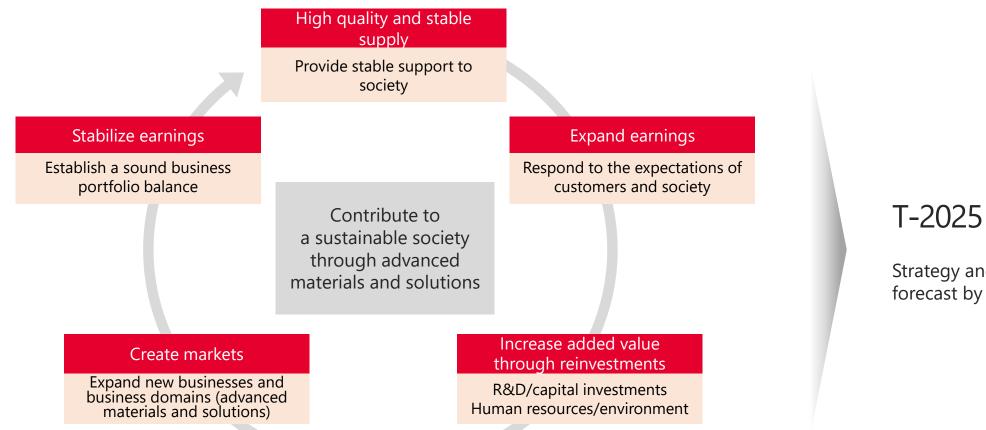


Our vision for 2030

Contribute to
a sustainable society through
advanced materials and solutions

To achieve the long-term vision

We will contribute to a sustainable society through a stable supply of key materials that support social infrastructure.

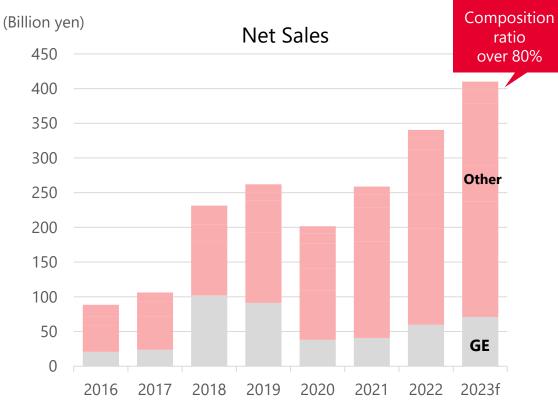


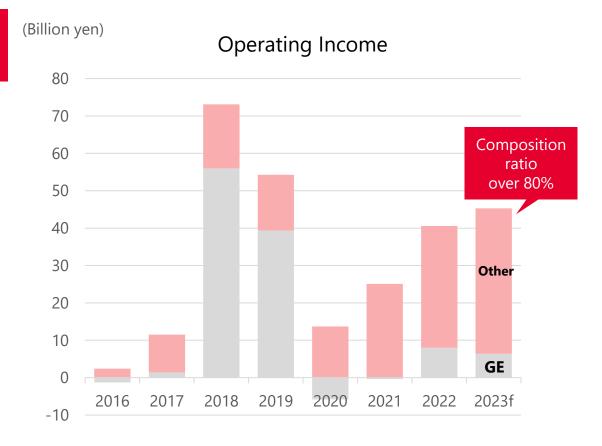
Strategy and forecast by 2025



>>> Retrospectives

We established a sound business portfolio as a result of structural reforms from 2015 and five M&A for a total amount of ¥180 billion. We have developed a structure capable of continuously growing as a whole company, while mutually complementing market volatility in each segment.

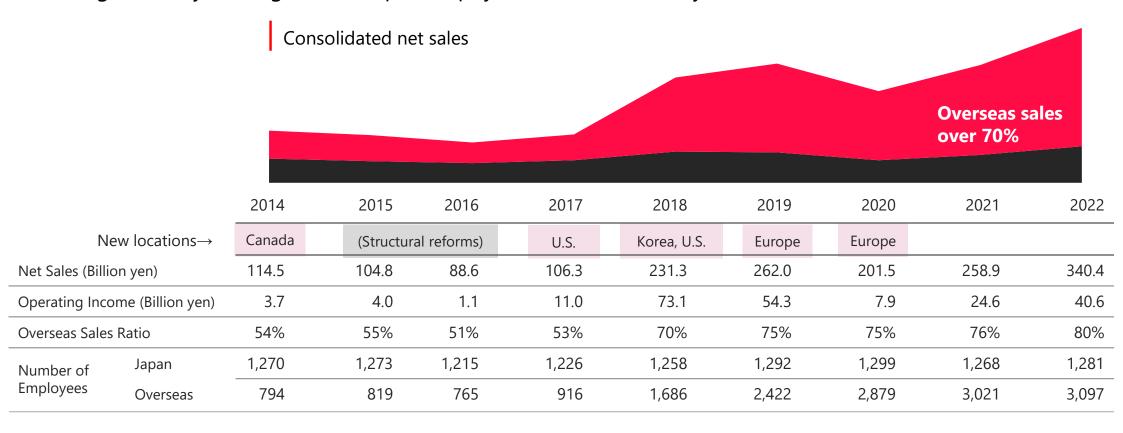




^{*} f: forecast, GE:Graphite Electrode

Group management—new challenge arising from rapid global expansion

We have rapidly developed into a global company with over 70% of sales and employees overseas after the expansion of business domains mainly in Europe and the U.S. We will engage to establish a unified group management by sharing the basic philosophy of "Ties of Reliability" and new Guidelines.



Returning core businesses to a path of growth

- Implemented price increases of graphite electrodes
- Reflected costs of investments in environmental facilities, etc., in sales prices. Started stable operation in U.S. location from 2023
- Constructed a new carbon black plant in Thailand to establish a sustainable supply system

Future initiatives

- Respond to delay in the recovery of the graphite electrodes market
- Maintain stable operation in carbon black plants to recover sales volume

Selection & Concentration

- Expanded equipment in China, Korea, and Japan in the fine carbon business
- Acquired additional shares of Tokai Carbon Korea
- Sold the carbon black subsidiary in China

Future initiatives

- Continually revise composition of businesses, locations and products
- Increase production capacity for high value-added products

Strengthening the consolidated governance structure

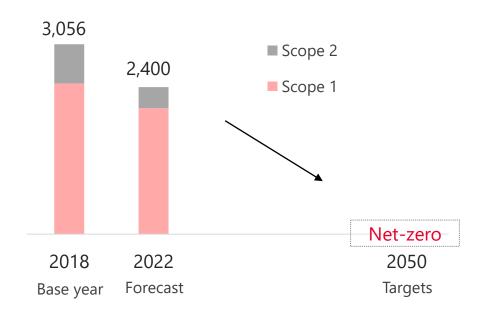
- Launched the Sustainability
 Committee (renewal of the Long-Term Vision, Guidelines and Global Code of Conduct)
- Company-wide efforts for carbon neutrality (obtain a third-party certification for total CO₂ emissions, collaboration with business partners)

Future initiatives

- Collectively manage environmental safety, human rights and carbon neutrality (CN)
- Industry-wide CN initiatives including supply chain

In January 2022, we established the CN (Carbon Neutral) committee chaired by the president and the CN office. The CN committee functions as the command post for the group's CN initiatives an its subcommittees and study groups pursue innovative technologies for CN on a cross-divisional basis.

Tokai Carbon Group's CO₂ emissions (thousand tons)



^{*} Scope 1: Direct CO₂ emissions from corporate activities at Tokai Carbon (fuel combustion and industrial processes)

Current initiatives

- Energy savings and use of renewable energy
- Conversion to fuels with lower environmental impact
- Research for product recycling
- CO2 emissions data assured by the third party. Now establishing Scope 3 data control system
- Various collaborations and projects started with customers, business partners, industry associations, etc. for the development and implementation of the CN

^{*} Scope 2: Indirect CO₂ emissions associated with use of externally delivered electricity, heat and steam

^{*} Scope 3: Indirect CO₂ emissions other than Scope 1 and 2 (emissions from other companies' corporate activities)



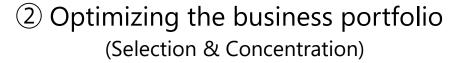
T-2025 Basic Policies

T-2025 Basic Policies

- ① Return core businesses to a growth trajectory to stabilize the revenue base
- 2 Engage in a process of selection and concentration of businesses based on changes in the environment such as carbon neutral and supply chains
- ③ Establish a sustainable management base in light of the new long-term vision

 Returning core businesses to a path of growth

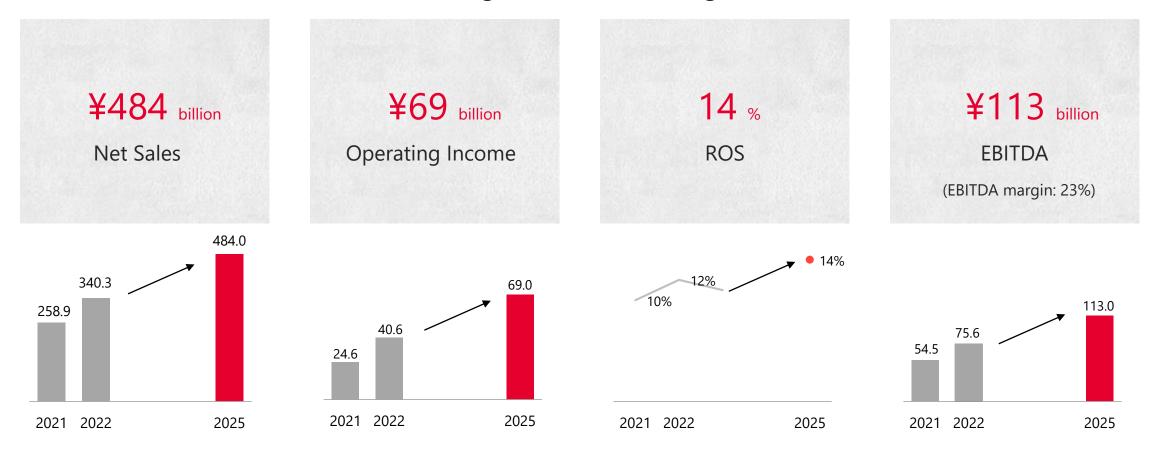
- Improving and stabilizing the profitability of graphite electrodes and carbon black
- Reflecting equipment investment costs in sales prices



- Continually revising business composition and product composition
- Increasing production capacity for high value-added products
- Concentrating investment in promising businesses and product development
- ③ Establishing a sustainable management base
- Pursuing carbon neutrality as the entire Group
- Strengthening initiatives on environmental safety and human rights
- Improving employee engagement
- Strengthening the governance structure of subsidiaries in Japan and overseas

T-2025 Quantitative targets

We aim to achieve targets by returning core businesses to a path of growth, pursuing selection and concentration of businesses and establishing a sustainable management base.



^{*} ROS: Return on Sales = Operating income as a percentage of total net sales (operating margin)

^{*} Exchange rate assumptions for T-2025: JPY130/USD, JPY140/EUR

T-2025 Key performance indicator

Adopting an ROIC tree to manage Internal KPI from 2023, we will seek to increase the invested capital turnover ratio mainly by improving profitability, carefully selecting capital investment targets and reducing CCC (expected reduction of 12 days). However, we will continue to make active capital investments in growth domains, aiming for long-term and continuous improvement of ROIC.

	ROE 1)	ROIC 2)	ROA 3)	WACC 4)
2022 Results	9%	7%	4%	4%
T-2025 Plan	13%	10%	7%	4%

¹⁾ ROE: Return on Equity = Net income as a percentage of equity

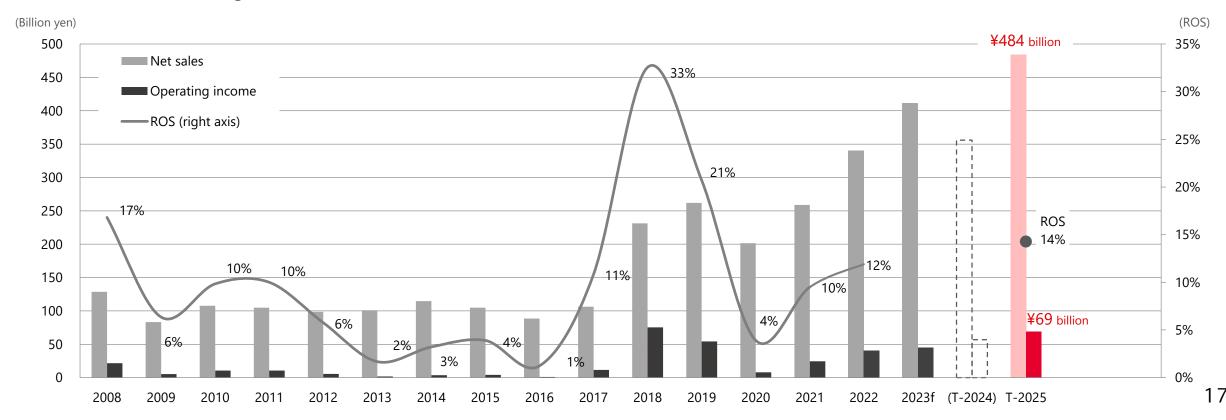
²⁾ ROIC: Return on Invested Capital = Operating income after taxes as a percentage of the sum of working capital and fixed assets

³⁾ ROA: Return on Asset = Net income as a percentage of total assets

⁴⁾ WACC: Weighted Average Cost of Capital

Comparison to T-2024, the previous plan

- Although demand had been on a recovery trend primarily in our core businesses since 2021 after a substantial decline in demand caused by the COVID-19 pandemic, the economy started to slow down again mainly in Europe due to the Ukraine crisis in 2022.
 Consequently, recovery has come to a pause in core businesses.
- Under T-2025, we aim to increase net sales by 40% and operating income by 70% (compared to 2022, respectively), based on our basic policies: "Returning core businesses to a path of growth," "Selection and concentration of businesses" and "Establishing a sustainable management base."



Net sales and operating income by segment

		2022 (Results)	2023 (Forecast)	T-2025 (Reference)
let Sales (Billion yen)		340.4	410.0	484.0
Graphite Electro	odes	59.6	71.0	103.0
Carbon Black		138.5	166.0	185.0
Fine Carbon		49.4	52.0	65.0
Smelting and L	ining	65.2	89.0	94.0
Industrial Furna	aces	16.3	20.0	23.0
	Friction materials	9.4	11.0	11.0
Other	Anode materials	1.9	1.0	3.0
Operations	Other	0.1	0.0	0.0
	(Total other)	11.4	12.0	14.0
Operating Income (F	Billion yen)	40.6	45.0	69.0
Graphite Electro	odes	8.0	6.0	19.0
Carbon Black		12.3	16.0	17.0
Fine Carbon		14.8	16.0	19.0
Smelting and L	ining	1.3	2.0	7.0
Industrial Furna	aces	4.5	6.0	7.0
Other Operation	ns	1.1	1.0	2.0
Inter-segment	eliminations	(1.4)	(2.0)	(2.0)

^{*} Exchange rate assumptions for T-2025: JPY130/USD, JPY140/EUR

EBITDA by segment

	2022 (Results)	2023 (Forecast)	T-2025 (Reference)
BITDA (Billion yen)	75.6	81.0	113.0
Graphite Electrodes	13.5	12.0	25.0
Carbon Black	20.5	24.0	31.0
Fine Carbon	21.3	22.0	27.0
Smelting and Lining	14.8	16.0	20.0
Industrial Furnaces	4.8	6.0	8.0
Other Operations	1.7	2.0	2.0
Inter-segment eliminations	(1.0)	(1.0)	0.0

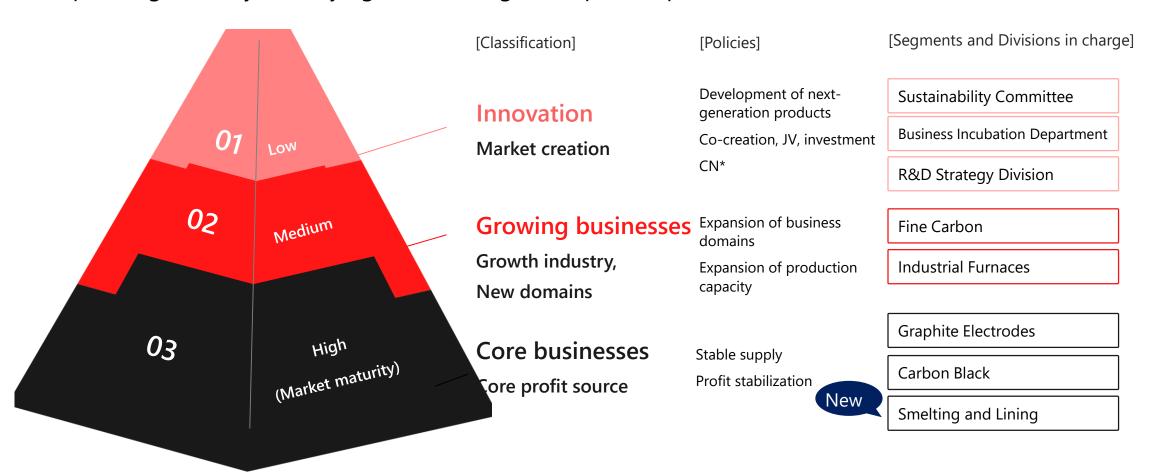
^{*} Exchange rate assumptions for T-2025: JPY130/USD, JPY140/EUR



T-2025 Corporate Strategy

Segment classification

Based on three categories—innovation, growth and foundation businesses—we aim for sustainable corporate growth by identifying and working on respective policies and roles.

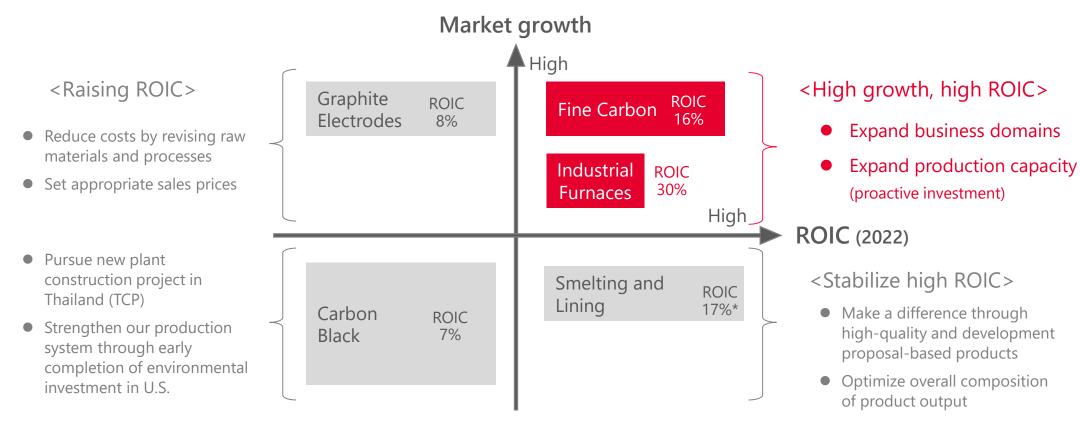


* CN = Carbon Neutral

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Direction of measures by segment during the period of T-2025

We will expand facilities in the high-growth and high-ROIC segments. In the Graphite Electrodes and Smelting and Lining businesses, we will carefully consider the effectiveness and the timing of capital investment. In the Carbon Black business, we will seek to increase profitability by stably responding to customer demand.

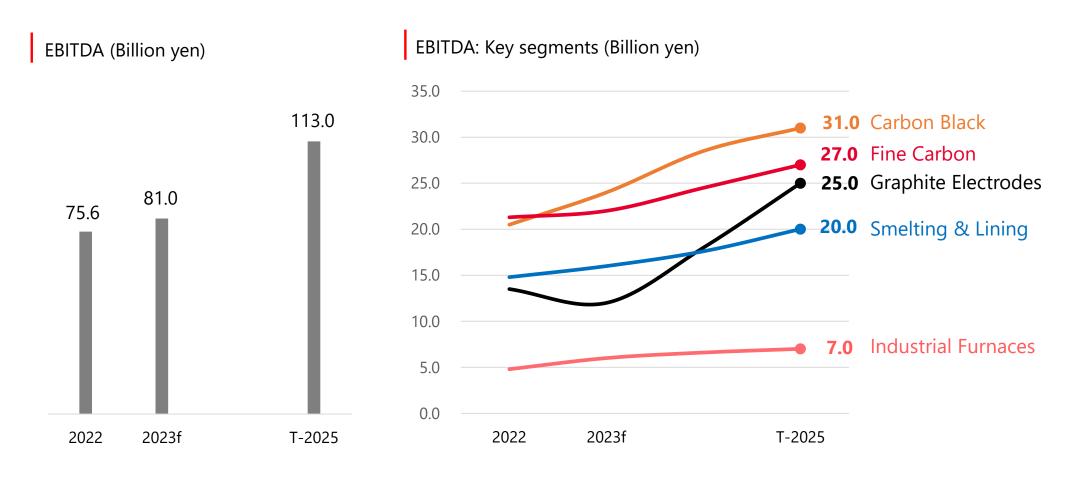


^{*} The frame size of segments represents the approximate sales volume (2022 results).

^{*} ROIC for Smelting and Lining business is the performance result of Tokai COBEX Group

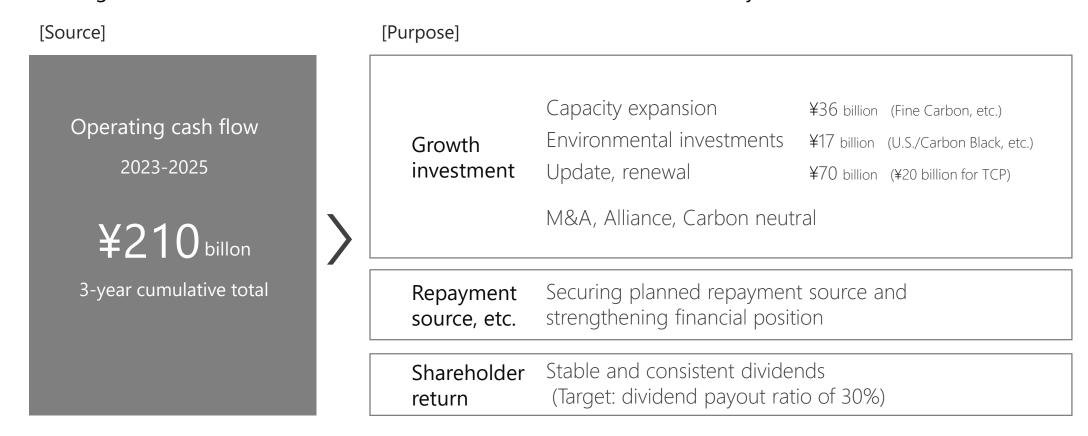
EBITDA growth forecast during the period of T-2025

EBITDA for T-2025 is expected to be 1.5 times higher owing to the recovery of our two core businesses Graphite Electrodes and Carbon Black, stable growth in the Smelting and Lining business and the strengthening of production capacity in the Fine Carbon and Industrial Furnaces businesses (compared to 2022).



Capital allocation

We will, in principle, allocate operating cash flow generated from our businesses and liquidity on hand to capital for growth investments. While fulfilling our responsibilities as a manufacturer such as stable supply and environmental efforts, we will carefully select capital investment targets to expand growing business from the perspective of maximizing medium-term ROIC. For shareholder return, we will focus on stability.



Major planned investments

Unit: 3-year cumulative, Billion yen

	Investment	Main target business	Estimate	Description
		Fine Carbon	22	Increase production capacity of graphite materials and at TCK, etc.
Growth	Vac Irillian	Smelting and Lining	1	Anode production in Europe (also use subsidies from EU authorities)
investment	¥36 billion	Industrial Furnaces	3	Increase production capacity
		Other Operations	10	Optimize overall operations, resolve bottlenecks, develop products, etc.
	¥17 billion	Carbon Black	12	Address environmental issues mainly at North American plants
Environmental investment		Smelting and Lining	3	Exhaust gas treatment systems, etc.
investment		Carbon Neutrality, etc.	2	
		Graphite Electrodes	14	Regular updates, facility renewal, etc.
Facility renewal		Carbon Black	40	Regular updates, relocation of the Thai plant, etc.
and updates, Regular	¥70 billion	Fine Carbon	3	General repairs
maintenance		Smelting and Lining	7	General repairs
		Other Operations	6	General repairs

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^{*} The above planned investments represent our medium-term strategies and may differ substantially, depending on various future f actors. The Company is not obligated to update this information.

Finance management policy

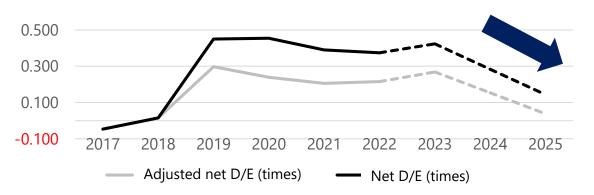
We work to reduce debt to secure a sound liquidity pursuing net cash basis ahead of the redemption and repayment of hybrid financing. Our policy is to increase our ability to invest by generating cash flow through sustainable profit growth, improving capital efficiency, and strengthening financial governance.

Cash flow management

We are to improve our corporate value over the medium to long term by increasing our ability to generate cash flow and enhancing capital efficiency. As for the enhancement of capital efficiency, we aim for an ROIC of over 10% through an increase in EBITDA and further transformation of our cost structure. We simultaneously work on balance sheet management such as by ensuring appropriate inventory management with a cash conversion cycle (CCC) of 100 days or less.

(Fiscal year)	2020	2021	2022	T-2025
EBITDA (Billion yen)	35.2	54.5	75.6	113.0
CCC (Days)	207	158	151	148
ROIC (%)	2	5	7	10

Lower adjusted net D/E ratio to 0.0 times soon

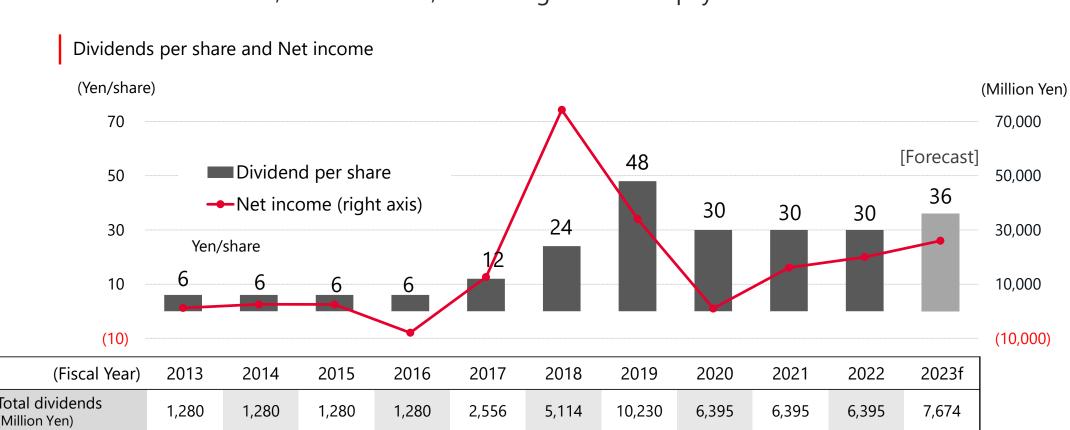


(Fiscal year)	2018	2019	2020	2021	2022
Adjusted net interest bearing debt (Billion yen)	2.9	70.3	56.5	54.4	65.5
Adjusted equity (Billion yen)	187.1	236.8	236.3	264.2	303.7
Adjusted net D/E (times)	0.016	0.297	0.239	0.206	0.216

^{*} Adjusted net debt/equity is the debt/equity ratio used by the rating agencies that rate hybrid financing to confirm capital

Shareholder return

Tokai Carbon will distribute stable and consistent dividends to shareholders by collective consideration of the consolidated results, free cash flow, and a target dividend payout ratio of 30%.

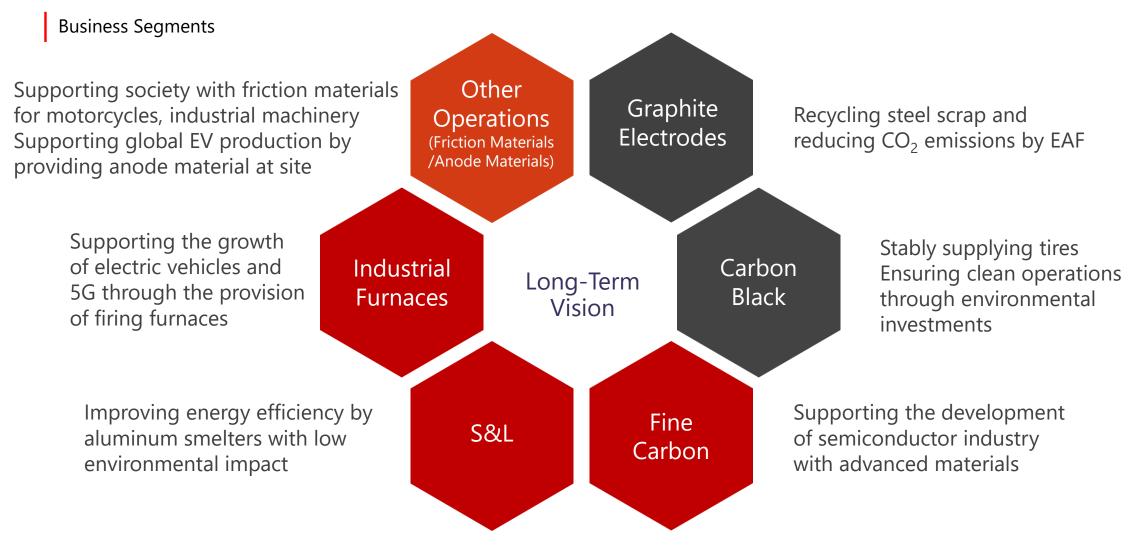


(Fiscal Year)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023f
Total dividends (Million Yen)	1,280	1,280	1,280	1,280	2,556	5,114	10,230	6,395	6,395	6,395	7,674
Payout ratio	106%	50%	52%	-	21%	7%	32%	627%	40%	28%	30%



T-2025 Business Strategy

Deliver value to society by creating and stably supplying high-quality products



* S&L = Smelting & Lining Segment 29

Outlook for the business environment

Favorable medium- to long-term trends

Busir	ness	Short-term trends. + positive - negative	Long-term trends + positive - negative
100	Graphite Electrodes	 Decline in steel demand due to the global economic slowdown Operation slowdown at European customers due to higher costs 	+ Recovery of steel demand in Europe + Higher EAF steel production ratio to reduce CO2 emission (5% annual growth)
	Carbon Black	Sluggish demand for new vehicles+ Robust demand for replacement tires (trucks, buses)	+ Recovery of demand for car production+ Tighter demand-supply balance in U.S.
	Fine Carbon	- Reduction in production of semiconductors for PC and smartphone	+ Continued increase in demand for electric vehicle use products with focus on SiC semiconductors
	Tille Carbon	+ Increase in demand for SiC semiconductors	+ Growing demand for semiconductors for data center and telecommunication
	Smelting and	- Reduction in production at European customers & Increasing demand in Middle East and other regions	+ Vigorous capital investments by customers (2-3% annual growth)
	Lining	- Higher costs due to soaring energy prices in Europe	+ Decrease in energy costs after a peak in 2023
	Industrial	- MLCC market slowdown	+ Increase in demand for 5G and electric vehicle use MLCC (10% annual growth)
	Furnaces	+ Robust demand for LiB use materials	+ Increase in capital investments by customers along with accelerating shift to electric vehicles



Graphite Electrodes

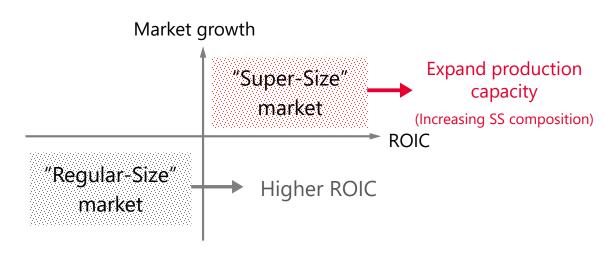
Although steel demand is falling mainly in Europe, we expect an increase in demand for electrodes over the medium term, on the ground of the future global economic recovery and a shift to EAF steel production.

T-2025 Quantitative targets (Billion yen)

	2022	2023f	T-2025
Net sales	59.6	71.0	103.0
Operating income	8.0	6.0	19.0
ROS	13%	8%	18%
ROIC	8%	6%	16%
EBITDA	13.5	12.0	25.0
Tangible fixed assets	35.2	36.2	38.6

- Steel market is slowing due to Russia's invasion of Ukraine, a rise in U.S. interest rates, and other factors.
- Soaring manufacturing costs caused by rising energy prices, etc., will be passed on to sales prices.
- In the mid- to long-term, demand for electrodes is expected to increase, mainly in the Super-Size market, along with the construction of new large EAF following a shift to EAF steel.

T-2025 Strategy



- Increase production capacity of supersized electrodes with high added value through minimal investment to increase ROIC.
- Improve ROIC for the Regular-Size market by revising raw materials, size composition, manufacturing processes, etc.

^{*} Super-Size (SS) refers to a large diameter electrode with a diameter of 28 inches and higher. High quality supersized electrodes are required for large EAF handling high current.



Carbon Black

We will focus on a stable supply in the U.S., where the demand-supply balance is tightening. We will fulfill our responsibilities to stably supply to tire manufacturers through investments in environmental facilities and carbon neutral initiatives.

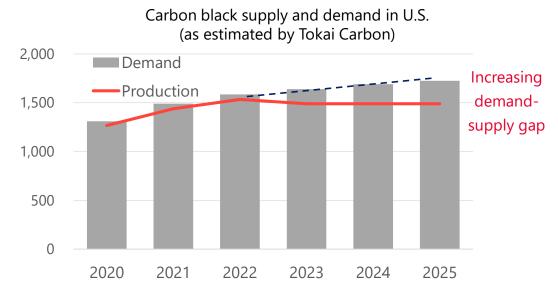
T-2025 Quantitative targets (Billion yen)

	2022	2023f	T-2025
Net sales	138.5	166.0	185.0
Operating income	12.3	16.0	17.0
ROS	9%	10%	9%
ROIC	7%	7%	7%
EBITDA	20.5	24.0	31.0
Tangible fixed assets	78.1	107.4	107.9

- The Carbon Black business is expected to maintain annual growth of 4% by 2025 backed by replacement tire demand.
- We will develop a stable operation and supply system, such as by introducing environmental facilities at our U.S. plants.
- Operation of new plant in Thailand is expected from 2025. We seek to establish a sustainable supply system by reducing environmental impact and improving productivity and quality.

T-2025 Strategy

Operation making full use of the scarcity of our U.S. plants



 Despite a steady production of tires in U.S., carbon black supply is reduced due to the strict environmental standards. On top, lower imports from China and Russia.



Fine Carbon

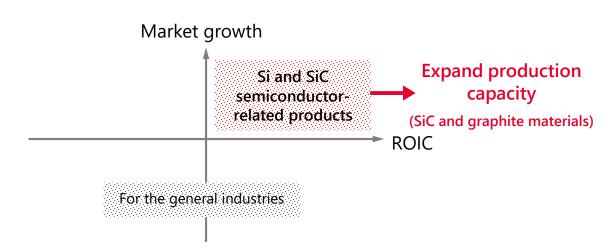
We will promptly respond to a surging demand by expanding SiC production capacity to maintain our position as a top global company in the high value-added product market. For the isotropic graphite materials (CIP materials), we plan for a capacity expansion in anticipation of the medium- to long-term growth.

T-2025 Quantitative targets (Billion yen)

	2022	2023f	T-2025
Net sales	49.4	52.0	65.0
Operating income	14.8	16.0	19.0
ROS	30%	31%	29%
ROIC	16%	15%	18%
EBITDA	21.3	22.0	27.0
Tangible fixed assets	24.9	30.7	40.4

- Demand for electric vehicle use components from the SiC semiconductor market began to increase, and consequently, the overall demand is growing, combined with conventional Si semiconductors. Risk of supply shortages is increasing.
- Increase SiC production capacity of the entire group by 50% by 2025, compared to 2022.
- Increase production capacity of isotropic graphite materials (CIP) by 30% by 2025, compared to 2022.
- Improve CCC by shortening the lead time.

T-2025 Strategy



- We will lead the industry in terms of quality, scale and costs by further increasing the world's largest production capacity for solid SiC and SiC coated products.
- For the general industrial market, we will expand production capacity and fulfill our responsibilities to stably supply, with the aim of supporting the development of social infrastructure.



Smelting and Lining

We will improve profitability by reflecting higher manufacturing costs including soaring energy costs in sales prices. In terms of supporting the sustainable society, we will provide next-generation cathodes and local supply of anode materials for the LiB used in electric vehicle.

T-2025 Quantitative targets (Billion yen)

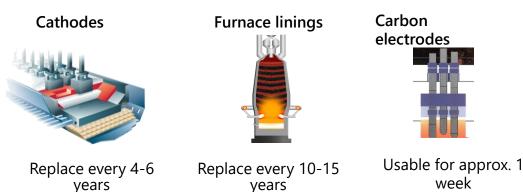
	2022	2023f	T-2025
Net sales	65.2	89.0	94.0
Operating income	1.3	2.0	7.0
ROS	2%	2%	7%
ROIC ¹⁾	17%	14%	17%
EBITDA	14.8	16.0	20.0
Tangible fixed assets	35.8	37.8	42.9

¹⁾ ROIC for Tokai COBEX group

- Improve profitability by passing on the surge in raw materials costs and energy costs caused by the Ukraine crisis to sales prices.
- Expand next-generation cathodes RuC (Ready-to-Use Cathodes) that enable reduction of environmental impact.
- Local production of anode materials in Europe expected to start in 2024.

T-2025 Strategy

Maximize profits through industry-leading products by leveraging our competitive advantages





- These products have very high barriers to entry due to huge capital investment costs, required manufacturing expertise, and risks associated with changing materials which are critical components in the production process.
- We hold an overwhelming market share in the high-quality market. Our strength lies in our internal structure that enables us to immediately apply accumulated knowledge and latest sales information to our production sales strategies, as well as the mindsets of employees that make them possible.



Industrial Furnaces

A large market share in each niche market. We will create new markets through next-generation furnaces and R&D furnaces.

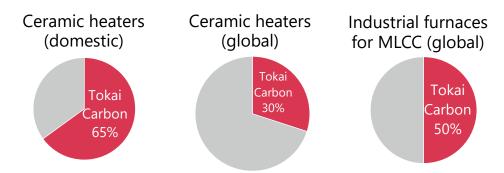
T-2025 Quantitative targets (Billion yen)

	2022	2023f	T-2025
Net sales	16.3	20.0	23.0
Operating income	4.5	6.0	7.0
ROS	28%	30%	30%
ROIC	31%	33%	28%
EBITDA	48	6.0	8.0
Tangible fixed assets	26	2.5	4.3

- Demand for MLCC (Multi Layer Ceramic Capacitors) and LiBs (Lithium-Ion Batteries) are increasing along with accelerating global shift to electric vehicles. Compound Annual Growth Rate (CAGR) during the mid-term plan period is expected to be 10-30%.
- We will expand production capacity of industrial furnaces and EREMA heating elements in line with market growth. Capacity of EREMA heating elements will be up by 60% until 2025.

T-2025 Strategy

- Capture new market share by promptly complying with new specifications for heating furnace for battery materials
- Increase permanent customers and repeat orders in new and traditional niche markets





 In line with our corporate culture of thoroughly responding to customization requests, we will cultivate our own strength to develop industrial furnaces that cannot be imitated, even with drawings.



Composition Ratio of Segments

Net sales and operating income by segment (Composition ratio)

		2022 (Results)	2023 (Forecast)	T-2025 (Reference)
let Sales		100%	100%	100%
Graphite Electrodes		18%	17%	21%
Carbon Black		41%	40%	38%
Fine Carbon		15%	13%	13%
Smelting and Lining		19%	22%	19%
Industrial Furnaces		5%	5%	5%
Other Anode n Operations Other	Friction materials	3%	3%	2%
	Anode materials	1%	0%	1%
	Other	0%	0%	0%
	(Total other)	3%	3%	3%
perating Income		100%	100%	100%
Graphite Electro	des	20%	13%	28%
Carbon Black		30%	36%	25%
Fine Carbon		36%	36%	28%
Smelting and Lining		3%	4%	10%
Industrial Furnaces		11%	13%	10%
Other Operations		3%	2%	3%
Inter-segment eliminations		(3)%	(4)%	(3)%

^{*} Exchange rate assumptions for T-2025: JPY130/USD, JPY140/EUR

EBITDA by segment (Composition ratio)

	2022 (Results)	2023 (Forecast)	T-2025 (Reference)
ITDA	100%	100%	100%
Graphite Electrodes	18%	15%	22%
Carbon Black	27%	30%	27%
Fine Carbon	28%	27%	24%
Smelting and Lining	20%	20%	18%
Industrial Furnaces	6%	7%	7%
Other Operations	2%	2%	2%
Inter-segment eliminations	(1)%	(1)%	0

^{*} Exchange rate assumptions for T-2025: JPY130/USD, JPY140/EUR

Disclaimer regarding forward-looking statements

- Forward-looking statements in this document are based on information obtainable at the time this document was published and assumptions as of the date of publication concerning elements of uncertainty that could affect future earnings.
- Actual results may differ substantially, depending on various future factors. Factors that affect business performance include, but are not limited to, economic conditions, trends in product demand and market prices, and fluctuation in exchange rates.
- The quantitative goals, reference values, investment amounts, and other numerical goals in this document only express the medium-term strategy and vision of the company; they are not performance forecasts. The company is not obligated to update such information.
- Please see the disclosures in the Consolidated Financial Results for the official earnings forecast, based on the rules of Tokyo Stock Exchange, Inc.



