

Summary of Questions and Answers at a Briefing on SDK's New Medium-term Consolidated Business Plan "The TOP 2021"

16:00 - 17:30, Tuesday, December 11, 2018

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*All contents are based on the information available as of the date and time of the briefing.

[General]

Q. In the next medium-term business plan, you position "Maximization of CUSTOMER Experience" (=Value) as a means to realize your Vision (=KOSEIHA Company). How do you incorporate Value into your services?

A. As a specific example of "Value," we add high value to our high-purity gases for electronics through establishment of effective and efficient distribution bases and system. We think offering such experience to our customers is necessary for our all businesses in order to realize our Vision.

Q. What are the key performance indicators (KPIs) for your business portfolios defined in your new medium-term business plan?

A. As KPI, we assign growth of operating income to "Enhance," growth of net sales to "Grow," and improvement in operating margin to "Change."

Q. You announced considerable amount as a budget for investment. How is your policy about the uses to which your cash is spent?

A. We think it is very important for us to plan the appropriate uses of cash we will earn. We set a target for total return ratio. We also set a target for total investment which is also a KPI in the new medium-term business plan. It is our basic policy in the new medium-term business plan to establish a virtuous cycle in which we increase the amount of cash we earn as return on our positive investment.

Q. If you have a considerable amount of cash surplus, are you going to use it for return to shareholders?

A. We think it is very important for us to have reasonable investment plan. We will not have investment nor M&As as foregone conclusions. However, we have many investment programs which need cash. As for investment in facility improvement, we will invest in renewal of old plants and seismic reinforcement which we held back for a while, and the amount of the planned investment in facility improvement we announced is still not enough. We are also scrutinizing potential M&As. The main theme of the new medium-term business plan is "Growth." Therefore, it is very important to

have a good investment plan which will contribute to sound growth of the Showa Denko Group.

Q. Will the planned investment of ¥120 billion in facility improvement pay?

A. We need the announced amount of investment in facility improvement not to get return on the investment but rather to secure long-term sustainability of our businesses. Therefore, it will take longer time to get enough return on the investments in facility improvement than those in organic growth.

Q. You foresee relatively limited growth in Chemicals, Electronics and Aluminum segments, which need more growth. Why?

A. We plan to increase our total operating income for the three-year period of "The TOP 2021" by about 60% from that for the period of "Project 2020+." We will invest to improve facilities and execute M&As during the period of The TOP 2021, aiming to expand these three businesses. The effects of these investments will take time to be realized. Thus we see the period of The TOP 2021 as that to strengthen the basis of our earning power to increase the profit we will earn in the period of the medium-term business plan after the next.

Q. How is your policy on return to shareholders toward the future?

A. Today we announced we would increase dividends and repurchase the Company's own shares amounting to ¥10 billion. The total return ratio of this year will be about 24%. In and after 2019, we will increase the amount of return to shareholders and total return ratio, and will make the latter 30% in 2021, which is the final year of The TOP 2021.

[Petrochemicals segment]

Q. Production of resins from shale oil in the US has started, and production capacity of ethylene plants in China will be increased. How will the supply-demand balance of petrochemicals be in East Asia?

A. Supply-demand balance of petrochemical products in East Asia will continue to be favorable for manufacturers due to active demand for daily

necessaries caused by an increase of the middle class in China, India and ASEAN countries.

[Electronics segment]

Q. Electronics segment's sales including that of SiC epi-wafers under the new medium-term business plan seems lower than we expected.

A. Sales of SiC epi-wafer will increase by 50% every year. The reason why the increase in the Electronics segment's sales is lower than you expected is the restructuring of our rare earth business in 2018. Shipment volumes of HD media will level off during the first half of 2019 and remain on the same level after that.

[Inorganics segment]

(Graphite electrodes)

Q. You expect operating margin of the Inorganics segment to be 33% during the period of the new business plan, which is lower than the current level of 50%. How do you expect the supply-demand balance of graphite electrodes will be in the near future?

A. We have almost finished contract negotiations about the sale of graphite electrodes for the first half of 2019, which ended in higher sales prices than those for the second half of 2018. Our Inorganics segment will record rising sales and operating income in 2019. We expect that tight supply-demand condition in the graphite electrode market will continue during the period of the new business plan. However, we see diversity in forecasts for the prices of needle cork as raw material. Therefore, we had conservative approach in setting assumptions about the performance of the Inorganics segment when we formulated the new medium-term business plan.

Q. Does the increase in production of graphite electrodes by Chinese manufacturers ease the tightness of supply-demand balance?

A. The demand for graphite electrodes in China is strong. The share and production of electric furnace steel will increase in China. Production of steel in the US also continues to be strong. The share of electric furnace steel in the US is about 70%, and there is no sign of slowing down in demand for graphite electrodes. We are wondering how much the volume of increase in production of graphite electrodes will be to respond to the increase in demand for them in the US market. Production of UHP needs needle cork made from petroleum. However, supply-demand situation of petroleum-based needle cork is tight.

Q. Why don't you introduce formula for pricing graphite electrodes in order to stabilize your profitability?

A. I think it is a good idea to introduce price formula. However, supply-demand situation of graphite electrodes and needle cork is so tight that their market prices are still going up. Our customers give top priority to securing numbers of graphite electrodes supplied. Therefore, we expect it takes time to introduce formula-based pricing system.

Q. How do you expect your investment to maintain your facilities to produce graphite electrodes will be?

A. Many of facilities to produce graphite electrodes installed in plants held by Showa Denko Carbon Holding GmbH (former SGL GE Holding GmbH) are subject to investment for maintenance and renewal during the period of the new medium-term business plan because SDCH refrained from investment for a long period of time. Our nominal capacity to produce graphite electrodes is 250 thousand tons per year. However, some of our plants will be stopped during the period of maintenance and renewal works. Therefore, the operating rate of our graphite electrode plants will be slightly lower than 100% in each year of the period of the new business plan.

*Performance forecast and other statements pertaining to the future as contained in this material are based on the information available as of the date and time of the briefing regarding risk factors that could affect our future performance. Actual results may differ materially from the forecast due to a variety of risk factors, including, but not limited to, the economic conditions, costs of naphtha and other raw materials, demand for our products including graphite electrodes, market conditions, foreign exchange rates, changes in laws and regulations, and lawsuits. As to the assumptions about the consolidated performance forecast including exchange rate and domestic naphtha price, please refer to the presentation material for our new medium-term business plan "The TOP 2021" which was announced on December 11, 2018.