

## Q&A Concerning ESG Briefing

Reference: ESG Briefing Session on November 20, 2023

Note:

ICP = internal carbon pricing

### ■Q&A Session

Q.

*What are the challenges in using biomass fuels in the processes at Hachinohe Smelting Co., Ltd., such as the actual costs, technical difficulties, or availability of biomass raw materials? Please tell us what the costs are and how they can be finally covered.*

A.

We are currently considering how much the costs will be. According to trade statistics, on average, biomass fuels from overseas cost approximately ¥100,000 per ton and coal costs from ¥20,000 to ¥70,000 per ton, so the costs are quite high. We are looking for different kinds of biomass fuels in Japan, and there are low-cost biomass fuels that are not high quality but can reduce CO2 emissions. As national projects are using biochar to reduce costs, we would also like to use such materials in the future. However, it is unlikely that the costs will become any lower than they are now.

Technically, we are facing challenges in various places. In order to verify whether Miike and other places can really operate their plants as intended, we are conducting tests to check the issues, including fine details such as ensuring that no harmful substances are released.

Q.

*There are competitors in the current technologies for copper paste for power semiconductors. Please tell us about your company's superiority, the size of the market, and whether your customers are chemical manufacturers.*

A.

As described on page 11 of the Briefing Material, our business promotion unit is progressing copper paste for power semiconductors with a system that to some extent can be evaluated internally. Globally, we have many customers in Europe and the U.S., and we are providing samples to leading companies and players located in those regions.

We expect that the power semiconductors market will definitely grow in the future. We believe that copper paste has advantages compared to the currently used silver paste, which is costly and slightly less workable. The reason we have been developing copper paste for several years is that we are highly knowledgeable about copper powders, and we believe that we will be sufficiently able to develop up to copper paste as an evaluation technology for copper powders.

If multiple companies replace silver paste with copper paste, we believe that the adoption of our product will increase rapidly.

Our customers are semiconductor packaging manufacturers.

Q.

*Please tell us if there are any specific investment projects that are producing results since adopting the internal carbon pricing (ICP) system.*

A.

By adopting ICP, the price for Scope1 was set at ¥30,000 and Scope 2 at ¥20,000. In Scope 2, we expect that CO2 emissions from purchased electricity will naturally decrease due to

renewable energy. By setting Scope 1 at 30,000 yen, we are at the stage in which investment projects are gradually emerging to reduce CO2. We are planning to incorporate many projects in the next 2025-2027 Mid-Term Plan (MTP).

Q.

*Regarding governance, the remuneration of directors and officers is explained very clearly in terms of ordinary income. Do you have any plans to introduce capital efficiency indicators, such as ROE and ROIC, as one of the KPIs?*

A.

Currently, the only performance compensation indicator for directors and officers is ordinary income, but some institutional investors and outside directors suggested setting efficiency indicators as well, rather than using only revenue as an indicator, so we are now discussing when to review them.

However, since the performance indicators are not something that should be reviewed annually, we think it would be better to review our indicators after determining the WACC and the target ROIC for each division. By the start of the next MTP at the latest, we would like to set targets for each business division and for directors' and officers' remuneration.

Irrespective of whether we can set efficiency indicators right away next year, we recognize that efficiency is extremely important.

Q.

*Regarding CO2 emissions, a movement is emerging to make data disclosure required and mandatory in Scope 3. If Scope 3 accounts for a large proportion, a reduction plan must also be presented. There is a trend toward making it mandatory overseas, and we believe that the Japanese market will probably move in the same direction as well. Taking this into account, please tell us if you can prepare in advance for Scope 3 and how you will respond for disclosure when some companies have already taken steps to disclose data.*

A.

After Scope 1 and Scope 2, Scope 3 is now attracting a great deal of attention and we are fully aware of it. We are currently in the process of measuring them using the Life Cycle Assessment (LCA) and other methods. We are also considering reduction targets in the future.

Q.

*It seems that environmentally friendly products have not been greatly promoted up to the present time. Your thoughts in terms of their scale are described in the Briefing Material as being a 30-year goal, but how long is the time frame and in what form will you be working on them? Currently you have three environmentally friendly products, but at what pace do you plan to add to such products? Also, could you please explain about their contribution to profits, because the reduction in Scope 3 mentioned earlier will also lead to a reduction in emissions in your customers' industries and may be a key part of the 2050 net-zero plan.*

A.

It's been about three years since we started discussing environmentally friendly products. Other companies have disclosed a rather strict definition of environmentally friendly products, and we have decided to make the definition somewhat acceptable to everyone, so currently we have only these three products.

As described on page 12 (of the Briefing Material), for example, in the case of the Engineered Materials segment, more than 70% of our new products are designed to contribute to the environment. We are also targeting the production of new environmentally friendly products other than for Engineered Materials in the Business Creation Sector.

The Engineered Materials segment is working to make more than 50% of its sales from new environmentally friendly products by 2030. The Business Creation Sector is also working to make products environmentally friendly, although the level of contribution to the environment may vary depending on the product. We make decisions in accordance with the strictest rules to ensure that we are not asked the question, “How can you call these environmentally friendly products?”

Q.

*You explained that environmentally friendly products have been internally certified. Do you plan to obtain third-party certification in the future?*

A.

We have invited well-known external experts in this field to participate in the certification meeting for environmentally friendly products. In discussions at the certification meeting, we assume products that can be objectively certified by an external organization.

Q.

*Your company is working to improve the effectiveness of the Board of Directors, such as by changing the Chairperson of the Board to an outside director. Please tell us about the current state of improvements to Board discussions and whether there is room for further improvement.*

A.

Since the current President took office, persons other than the President have served as the Chairperson of the Board of Directors. At first we appointed an internal director who does not execute business to serve as the Chairperson, but we thought it still might be difficult for outside directors to speak up, so we have appointed an outside director to chair the Board of Directors from the second year. As a result, I think it has become easier for outside directors to speak up. However, we are not yet sure whether this is the best organizational design for our company, so we are considering an organizational design that will further strengthen governance and facilitate even better discussions at Board meetings.

Q.

*Regarding the solid electrolyte for All-Solid State Batteries (ASSBs), Toyota and Idemitsu Kosan announced a collaboration to develop sulfide solid electrolytes. I would like to know if this will have any impact on your company's business plans or if you will need to change your perspective.*

A.

It seems that there is a strong collaboration between Idemitsu Kosan and Toyota, but I do not think it will have much of an impact on our SE (Solid Electrolyte) business. I won't mention individual companies here, but we have relationships with many automakers and battery manufacturers, and if asked whether the products being developed can actually be used as materials for cars on the road, there is still room for improvement in terms of development and cost factors. We are currently fully engaged in producing samples and expanding facilities, and we are aware that development and cost competition will continue going forward.

Q.

*Regarding the carbon capture technology that is being promoted at Hachinohe, is it correct to understand that the adsorbent will be PCP/MOF that your company is working on with Atomis in Kyoto?*

A.



We are in the process of developing adsorbents, not only PCP and MOF, although I cannot give you detailed information since they are currently under development. Since our technology in the catalyst business is strongly related to CO<sub>2</sub> conversion using adsorbents and catalysts, people involved in the development of automobile catalysts have come to our R&D center to develop CO<sub>2</sub> adsorbents and catalysts for conversion into e-fuels. We do not specifically consider Atomis' MOF to be the only adsorbent candidate.

Q.

*The carbon capture technology being promoted at Hachinohe was supposed to be introduced in the second half of this year, but it is already November. What is the current plan?*

A.

We are currently preparing to begin small-scale testing at Hachinohe in March of next year.

Q.

*Will green aluminum, green zinc, etc., create added value for reducing CO<sub>2</sub> emissions? For example, in metals, we hear about green copper and green aluminum in various places, but not so much about green zinc. How do you analyze such a situation? Please tell us how you think the green zinc market will expand in the future, say in 5 or 10 years from now, and what you think will be the trigger for the expansion of the green zinc market.*

A.

In terms of green zinc, we sell the most zinc in Japan and our main customers are steelmakers. Although we have not yet reached the point of talking about the expansion of the green zinc market, as far as carbon neutrality is concerned, it is expected that green zinc, which uses fuels and raw materials that contribute to carbon neutrality, will be used more and more in the future. However, for example, even if we produce green zinc at a very high cost by procuring all the electricity required in the electrolysis process from renewable energy sources, green zinc will still not be purchased at a high price.

Q.

*Three products were mentioned as environmentally friendly products. For copper foils, SnO<sub>2</sub>-X sputtering targets, and recycled abrasives, there will be discussions about carbon taxes and other credits in the future. If these discussions progress, products with added value can be sold. Please explain whether inquiries and demand from end users for products that contribute to the environment are increasing, and whether this demand is expected to increase further in the future.*

A.

In terms of whether demand for environmentally friendly products will increase in the future, we do not expect an immediate increase in response to our current initiatives, but it depends on the needs of our customers. As I explained earlier, we numerically compare the levels to which our products contribute to the environment as a certification condition. Our focus is on the strategic nature and future sales of the products. The three products I mentioned earlier were certified this time because we expect their sales to increase and for them to be strategically important in the future.

Q.

*Regarding the promotion of women, you mentioned earlier that there were many examples and promotions, but could you give some specific details?*

A.

Specifically, I believe that our well-designed women's development plan has contributed to

raising awareness for their promotion to management positions. It was important that top management gave instructions to each sector on what they should work on. We would like to continue this.

Q.

*In other companies' cases, I hear that being in a managerial position can be stressful and difficult and follow-up is necessary. Have you considered how to deal with this?*

A.

Our company employs a meritocracy system, so rather than providing follow-up, our basic stance is to promote employees while adhering to the established requirements for promotion.

Q.

*Have you seen an increase in the number of women raising their hands for promotion?*

A.

Yes. More female employees are raising their hands for promotion, and at the same time, I believe that the continued recruitment efforts have resulted in an increase in the number of women who have the abilities that enable them to be promoted.

One of the initiatives that we have been focusing on is diversity and the advancement of women, but we have not been able to fully achieve our goals for them. However, as you can see, two out of the five members at today's briefing are women, which shows that we are actively promoting opportunities for female employees. As another initiative, we include the percentage of women in managerial positions in the ESG indicators for Board members. We are strongly committed to achieve the target of 5% by 2024, as stated in our integrated report, and I hope you will take a good look at the results of our efforts.