

Event Name: FY2021 Financial Results and 2021 Medium-Term Business Plan Progress  
Date: May 12, 2022  
Speaker: Seiji Izumisawa, President and CEO  
Hisato Kozawa, Executive Vice President and CFO

### Questioner 1

**Q:** The FY21 business profit plan for Energy Systems was ¥100 billion, but the actual result was ¥86.2 billion. Could you tell us about the factors causing this?

**Kozawa:** At the time of the Q3 Financial Results announcement, we believed that if everything went well, we could achieve the plan. However, in February and March, another issue was found in Integrated Gasification Combined Cycle (IGCC), and the booking of provisions for the maintenance costs associated with this caused us to fall below the plan. The majority of the unachieved portion comes those from those IGCC-related costs, and all other businesses within Energy Systems performed well overall.

**Q:** I understand that the cumulative total of additional expenses related to IGCC for Q1-3 FY21 was ¥25 billion. If the deficit in FY21 Energy Systems business profit vs. the plan can mostly be explained by IGCC, then does that mean the cumulative total of additional expenses in FY21 was around a little less than ¥40 billion? Also, will there be any more such expenses in FY22?

**Kozawa:** The total amount of provisions booked in FY21 was around the figure you mentioned. As this is a new type of plant, an issue occurred that was caused by a kind of wear brought about by operating the plant for more than a certain amount of time. I cannot say definitively that there will be no further costs, but we are working very hard to avoid any more issues.

**Q:** The FY22 business profit forecast for Aircraft, Defense & Space (¥20 billion) is around the same as the FY21 actual figure. Does this forecast assume no recovery in the Boeing 787 business?

**Kozawa:** We don't know exactly how much B787 production will recover, but the forecast makes the assumptions you mentioned.

**Q:** Your presentation indicates that the business profit impact of forex effects in FY22 will be +10 billion and undetermined currency amounts are USD 3.1 billion. As the exchange rate assumption is ¥120/USD, which is ¥8/USD higher than the FY21 average rate (¥111.6/JPY), a simple calculation leads me to believe that there will be a ¥24-25 billion increase in profit. Please give us more details on the impact of the undetermined foreign currency amount of USD 3.1 billion on business profit.

**Kozawa:** Of the USD 3.1 billion, business profit exposure is roughly half, or around USD 1.5-1.6 billion. If you assume around an ¥8 devaluation of the yen, this amount would be a little more than ¥10 billion.

## **Questioner 2**

**Q:** In Energy Systems, the difference between FY21 actual business profit and the FY22 forecast can basically be explained by the absence of additional IGCC costs. Due to market recovery in Aero Engines, I think profit should be a little higher. Could you explain the FY22 revenue and profit forecasts in each of the Energy Systems sub-segments?

**Kozawa:** In addition to the recovery associated with a decrease in IGCC additional costs, we also expect to see a certain amount of increase in profit in Aero Engines. That said, we project a YoY decrease in revenue in Steam Power excluding IGCC in FY22. We expect that this will be offset by an increase in after-sales service revenue, but excluding the recovery in IGCC, Steam Power overall will show a decrease in profit. In the end, we are hoping that business profit in Energy Systems as a whole will exceed the forecast.

**Q:** During the 2021 Medium-Term Business Plan (MTBP) Progress presentation, New Mobility & Logistics was reconceptualized as Smart Infrastructure. Has there been any change to the positioning of New Mobility & Logistics? Please also explain the background of this reconceptualization. Also, how does the current level of focus on Smart Infrastructure compare to that of the energy supply area?

**Izumisawa:** There are two main reasons for redefining New Mobility & Logistics as Smart Infrastructure.

First, there was an issue with the name, as the word "mobility" brings to mind cars or other vehicles, which doesn't match the area in which we are working.

Second, as we moved forward with MISSION NET ZERO, which we announced last October, we found that it was easier to understand if we explained our Carbon Neutrality initiatives as being focused on the energy supply and use areas. Since we felt this approach makes our company's direction clearer, we have decided to reframe New Mobility & Logistics in this way.

In the Smart Infrastructure space, we have made progress with several Proofs of Concept (PoC) over the past year. We are collaborating with our customers in this area to develop solutions and establish new businesses. We have already commercialized highly maneuverable forklifts and natural refrigerant chillers as individual products, but we are now focusing on combining these and other products to create new solutions. We expect that this will lead to concrete business inquiries in the future.

### Questioner 3

**Q:** Growth investment increased by ¥10 billion from FY20 to FY21, and it will further increase by ¥20 billion in FY22. Please provide a breakdown of investment amounts by target area.

**Kozawa:** Growth investment will increase by ¥30 billion from FY20 to FY22, with money going to R&D, PoC, and business development. We are planning a certain amount of investment in business development. Targets for investment include our growth areas, the Energy Transition and Smart Infrastructure. Data center projects are another target area.

**Izumisawa:** To provide some additional information on growth investments, focuses in the Energy Transition space are mainly hydrogen and CO<sub>2</sub> Capture, Utilization, and Storage (CCUS). In the Smart Infrastructure space, we are investing in software and solutions development.

We will pursue development alone in areas where we can. In areas such as CO<sub>2</sub> utilization and hydrogen production, where standard methods are not yet established, we will invest in start-ups and work together with them to establish new businesses.

**Q:** There were many asset management projects in FY21, but the FY22 profit variance analysis shows -¥20 billion. Does this mean that you are expecting no asset management gains in FY22-23?

**Kozawa:** The actual amount of asset management gains in FY21 was around ¥37 billion. The forecast for FY22 is between ¥15-20 billion, a difference of -¥20 YoY. The actual number may be higher than this. In FY23 and beyond, we will implement asset sales in a phased manner, taking into account our own preparations and the appropriate timing.

**Q:** In which segments will you invest ¥30 billion over the next two years? Also, will investment increase in FY23 over FY22?

**Kozawa:** Rather than investing in individual segments, our Growth Strategy Office acts as a hub and makes investments together with related segments. We are not planning to change the current level of R&D and start-up investments. That said, there may be a slight increase when considering M&A, so there is room for investment to increase in FY23 and beyond.

**Q:** You explained that you are making good progress on the 2021 MTBP. In terms of ROE and profit level, it seems that it will be difficult to achieve 2021 MTBP targets unless you make another significant jump from the FY22 forecast in FY23. Of course, many unforeseen factors have come about since the 2021 MTBP was originally formulated, such as the Russia/Ukraine conflict and materials cost inflation. Could you please tell

us how likely each major segment is to achieve these targets? Please also share with us Management's level of confidence in this and what some risks might be.

**Izumisawa:** The probability that Logistics, Thermal & Drive Systems will achieve its targets is high, although this will depend on economic trends. I think that the business will show solid progress given the current circumstances. There is some uncertainty in the Aero Structures business, so I think we will have to wait and see how the economy and air travel demand recover. In some cases, we may have to consider recovery measures as well. In Energy Systems, I believe that Nuclear Power will show good progress as well, including in profit margins. Gas Turbine Combined Cycle (GTCC) is also firm. However, I think that risk remains in the decline in Steam Power and the resolution of various technical issues in IGCC. Based on recent national security trends in Japan, performance in Defense will be in line with the plan or even better.

**Q:** Is it correct to understand that 1) the FY21 results were quite difficult for the first year of the 2021 MTBP, but additional expenses in IGCC projects were the main cause of this; and 2) excluding the impact from IGCC, the 2021 MTBP can be achieved?

**Izumisawa:** Although there were some additional costs in IGCC, we were able to achieve and in some cases even exceed our plan for FY21. Our results in FY21 would have been even better without these IGCC costs, but I think we performed very well in FY21. We also believe that the 2021 MTBP can be achieved.

Moreover, we are aiming to expand Steam Power after-sales service this year. In the Aero Structures business, we have factored some amount of risk into our current plan. If the market recovers, then we will benefit from it, but even if recovery is delayed, I think we will still be able to achieve the plan. We are now entering a phase where we will reap the rewards of past efforts to strengthen our organizations and increase profitability, which were carried out from 2H FY20 through FY21.

I believe that we will see those results in FY22.

#### **Questioner 4**

**Q:** Please let me know how much impact was seen in FY21 from materials and logistics cost inflation and semiconductor shortages. Please also provide a breakdown of the impact on the FY22 forecast (+¥10 billion).

**Kozawa:** The total impact in FY21 (-¥40 billion) was the net of negative impact (-¥50 billion) and upside from price increases (+¥10 billion). In FY22, we estimate +¥30 billion in upside from price increases and -¥20 billion in additional downside from materials cost inflation, which gives us a total of +¥10 billion in impact.

**Q:** In FY21, you booked orders for 16 large gas turbines. Please let us know your target for unit orders in FY22 and the latest trends in customer demand. Also, in the case that demand increases, how much manufacturing capability do you have?

**Kozawa:** We are currently projecting orders for the same number of units as in FY21 (16 units) in FY22. We have enough manufacturing capacity to accommodate more orders than this. However, procuring materials and other processes require a significant amount of lead time.

**Q:** Please let us know your progress toward your new business revenue target (¥100 billion in FY23), including FY21 actual and the forecast for FY22. Please also let me know how you view this progress.

**Izumisawa:** Feasibility studies inquiries for CO<sub>2</sub> capture account for 27 million tons per year of capture, which converted to market value is around ¥200 billion. It is difficult to predict how much of this will become direct business for us. Also, since actual order amounts will vary widely, it's difficult to make accurate business size projections at this moment. The size of business in FY23 will be determined by the number of projects that we are able to book through inquiries we are working on now, as well as the number of bookings for compact, modular CO<sub>2</sub> capture systems for hard-to-abate industries (sectors where CO<sub>2</sub> emissions reduction is difficult).

In Smart Infrastructure, as e-commerce expands, there is increased need for flexible warehouse operations. We also have customers with manufacturing plants who want to change their products seasonally, and we are seeing a positive response to our efforts to facilitate logistics in this area. Also, the validation testing of container type data centers is an interesting undertaking, although it may not result in orders in the short term.

**Q:** How much revenue do you expect to achieve in FY22 against the revenue target for FY23 (¥100 billion)?

**Izumisawa:** We are aiming for around 20-30% of the target.

**Q:** If your target for the current fiscal year is 20-30%, will the rest come in FY23?

**Izumisawa:** If we are able to book orders, revenue recognition will probably begin in 2H FY22. We do not expect to see half of the revenue in each of FY22 and FY23, but rather it would start low in 2H FY22 and increase into FY23.

## **Questioner 5**

**Q:** Regarding gas turbine order intake, you mentioned at the Q3 Financial Results briefing that the number of unofficial confirmations from customers for FY22 were in the double-

digit range or higher. Compared to that time, have you seen an increase in the number of unofficial confirmations? Are inquiries increasing as well?

**Kozawa:** I don't believe that the number of unofficial confirmations has changed much, and they remain in the double-digit range. The number of inquiries hasn't changed over the last 2-3 months either.

**Q:** Please explain the relationship between the value of CO<sub>2</sub> capture (¥200 billion) corresponding to the CO<sub>2</sub> capture volume of feasibility study inquiries (27 million tons) and revenue levels for plant construction.

**Izumisawa:** The value of CO<sub>2</sub> capture I mentioned, ¥200 billion, was calculated by multiplying the cost to capture 1 ton of CO<sub>2</sub> by the capture volume (27 million tons/year). However, it isn't realistic to expect us to construct all of these plants with our resources alone. I imagine that there will be cases where we are directly involved in constructing CO<sub>2</sub> capture facilities, while there will also be cases where we provide licenses to third parties or develop business through CO<sub>2</sub>NNEX (a digital platform aiming to visualize the distribution of CO<sub>2</sub> within the value chain and link CO<sub>2</sub> emitters with utilization providers). Given this context, we cannot provide specific monetary amounts at this time. That said, although we are unsure as to how exactly we will participate in these projects, we would like to achieve ¥50 billion in orders or revenue in FY23.

**Q:** Have you already received orders for data center projects? You mentioned that your revenue target for data center-related business in FY26 is around ¥40 billion. Could you let us know around how much revenue you expect in FY23?

**Izumisawa:** We have not received any orders yet. We recently conducted a test at Yokohama Hardtech Hub (YHH) where we achieved a higher than expected reduction in power consumption using an innovative cooling method. How we commercialize this in the future will be key.

We already have a high market share in turbo chillers for large data centers, which is already being realized as revenue. We have also delivered many engines for data centers.

There are increasing needs from customers who, seeking higher data speeds, want to place compact, distributed data centers close to their customers instead of building large, centralized data centers. We believe that micro data centers can address these needs, and we are now pursuing development in this area.

**Q:** Are these efforts mainly taking place in Japan, or are you planning to expand to the U.S. and other countries?

**Izumisawa:** We are also looking to expand to the U.S. and Southeast Asia. Moreover, we already sell engines for use in data centers all over the world.

#### **Questioner 6**

**Q:** Have there been any changes in inquiries for LNG, nuclear power, hydrogen, ammonia, or CCUS related to the EU Taxonomy or the Russia/Ukraine situation?

**Izumisawa:** I don't believe that there has been any noticeable change in inquiries, but I do feel that the tide is turning. For example, customer needs are increasing with the perspective of how to aim for Carbon Neutrality while using LNG as a transitional energy source. As a specific example, there are needs for gas turbines designed with LNG reforming or hydrogen fuel conversion in mind, as well as for CO<sub>2</sub> capture facilities for use in hard-to-abate industries. Customers are thinking about how to prepare for realistic paths to reduce CO<sub>2</sub>, and the idea is beginning to take hold that, rather than running a gas turbine with 100% hydrogen on day one, they can operate their plants transitionally with 30-50% hydrogen or another mix of ammonia and then gradually step up to completely carbon-free solutions. I'm seeing a positive response in these areas.

**Q:** Is it correct to assume that the transition to hydrogen, ammonia, or CCUS will not lose steam in the short term due to increased customer demand for LNG and nuclear power?

**Izumisawa:** My understanding is that the transition is not slowing down. Rather, there continues to be a strong desire for proposals with an eye to eventually realizing CO<sub>2</sub>-free plants. I don't think there are any customers who think it would be a good idea to use only LNG without pursuing hydrogen, because actual implementation is still a ways off. I think there is a strong desire to invest in systems that are designed to accommodate mixed or 100% hydrogen firing.

**Q:** Are all Pressurized Water Reactor (PWR) restart projects in Japan handled by MHI Group? Also, could you let us know MHI's role in Boiling Water Reactor (BWR) restarts and the scale of revenue generated by a single unit restart?

**Izumisawa:** MHI Group will handle all PWR restart projects. As for BWRs, Specialized Security Facilities (SSFs) to handle security incidents have to be built before they can be restarted. The design for these SSFs is the same for both PWRs and BWRs, and we have already built a large number of these facilities for PWRs. As such, we are receiving requests for cooperation from electric power companies, and we are actively supporting them.

The scale of revenue involved in a restart project varies depending on the plant in question. In the lead up to a plant restart, inspections and safety screenings are

conducted, during which equipment is replaced and control equipment and systems are updated as necessary. The size of this business will depend on the scale of updates required. That said, the largest portion of the order value of a restart project is from SSF construction, which is a large project unto itself including earthwork.

**Q:** Your presentation materials do not seem to mention ammonia very much and tend to feature hydrogen more. Does this mean that MHI Group is focusing more on hydrogen than ammonia?

**Izumisawa:** Because we are already close to the practical stage with ammonia, we purposely avoided mentioning it in today's presentation. We are working with our customers on mixed ammonia firing at existing coal-fired power plants as well as on international ammonia-related businesses.