GS Yuasa Corporation Summary of Q&A Session at Briefing of Vision2035 (Long-Term Vision and Sixth Mid-Term Management Plan)

<Outline of Briefing of Vision2035 > Date: April 6, 2023 15:00-16:30 Description: Long-Term Vision and Sixth Mid-Term Management Plan FY2023-2025) Explainer: Osamu Murao, President Hiroaki Matsushima, Director and CFO

*Please note that this "Summary of Q&A session" is not a verbatim transcript of everything said at the financial results briefing, but a concise summary at the Company's discretion.

*Abbreviations in the text
Company Name
BEC: Blue Energy Co., Ltd.
LEJ: Lithium Energy Japan Ltd.
Others
BEV: Battery EV
EV: Electric Vehicle
PHEV: Plug-in Hybrid Vehicle
HEV: Hybrid Electric Vehicle
Lithium-ion Batteries

[Question 1]

You mentioned how the company will be carrying out a total of 190 billion yen in capital expenditures over the three-year period corresponding to the Sixth Mid-Term Management Plan.

I believe this to be a very high level of capital expenditures, especially in the Automotive Lithium-ion battery segment, namely 105 billion yen. Capital expenditures at BEC, too, are also expected to grow to seventy million cells production capacity per year, and then there is the new joint venture. Do these figures include capital expenditures other than R&D for the new joint venture, such as, for example, plant construction expenses and the preparation of production, etc. I would also like to inquire as to when this plant will become operational and the scale of sales it will generate. Will this plant make a significant contribution during the Sixth Mid-Term Management Plan?

As such, I would like to inquire about the new plant together with Honda Motor and the content of the capital expenditures totaling 105 billion yen in the Automotive Lithium-ion battery segment, and lastly, about plant manufacturing and the sales scale going forward.

[Answer 1]

Allow me to answer your question pertaining to capital expenditures totaling 105 billion yen in the Automotive Lithium-ion battery segment throughout the duration of the Sixth Mid-Term Management Plan. As I mentioned during my presentation, we view this period as one in which to further strengthen our foundation.

This figure of 105 billion yen contains the acquisition of land and costs associated with construction.

An approximate amount stands at between 60 and 70 billion yen. Additionally, there is also investment that will be carried out at Blue Energy, and also at Lithium Energy Japan and for 12V lithium-ion batteries. These bring the investment total to 105 billion yen, with the approximate breakdown being as I just mentioned.

In terms of sales, I cannot reveal any details at the present moment, but we expect a significant contribution to sales and profits to take place during the Seventh Mid-Term Management Plan, starting in fiscal year 2026.

As such, the Sixth Mid-Term Management Plan running through to 2025 will be a time for us to first acquire land, then carry out construction of our plant, and then put in place a production line following capital expenditures.

[Question 2]

The joint venture with Honda Motor will take place as an equity method affiliate. Would it be safe to assume that, since GS Yuasa is investing 100 billion yen in this joint venture for batteries for EVs, Honda Motor too is also investing a similar or greater amount? In terms of the total scale, is it reasonable to assume a size of 200 billion yen or greater?

[Answer 2]

Indeed. I am not at liberty to discuss the details at the present stage, but we are currently planning for a production capacity of over 20 GWh per year by fiscal year 2035. Given an investment requirement of approximately 10 billion yen per GWh per year, a rough estimate would be 200 billion yen. Additionally, we will also be utilizing subsidies.

[Question 3]

Earlier, you mentioned that the free cash flow for the three-year period corresponding to the Sixth Mid-Term Management Plan will be negative 50 billion yen. Naturally, this takes into account very high levels of capital expenditure. Looking at the company's balance sheet, debt borrowings exceed 100 billion yen and, while I am not certain, I do not believe this to be equity financing, so I would like to inquire about the financing path the company will be pursuing. You mentioned the company will be looking at both internal and external sources of funds. In light of an increase in bank debt, would it be reasonable to expect the debt ratio to increase for the foreseeable future?

[Answer 3]

As you mentioned, this negative 50 billion yen in free cash flow carries a heavy weight. As President Murao mentioned earlier, we have started considering a variety of funding methods, be they direct or indirect. It has not yet been decided whether the total amount will come from bank loans. Even if this turns out to be the case, we do not expect any significant changes to our financial structure and position. At the present moment, we are not at liberty to disclose the specifics regarding financing, so we request your understanding on this front.

[Question 4]

This is my personal opinion, but I believe past investments carried out by the Company didn't see much success. I would like to ask what went wrong in past investments in the Automotive Lithium-ion battery segment, and what elements are different with the investment the company will now be carrying out.

[Answer 4]

While we did struggle at times, looking at GS Yuasa's current level of technical capabilities, etc., I do not view past investments as having failed. In other words, GS Yuasa boasts its current level of technical capabilities thanks to the execution of past investment, which formed a base and foundation for this. With that being said, an objective analysis reveals that Lithium Energy Japan struggled significantly in terms of batteries for EVs and plug-in hybrid vehicles. However, even within this struggle, I believe we nevertheless were able to learn and obtain a variety of technical knowledge and expertise.

[Question 5]

You said these past investments were a learning opportunity that translated into an increase in the Company's technical capabilities. The Company has carried out investment in a variety of forms in terms of capital, such as in the form of partnerships, etc.

Would it have been preferable if the Company had carried out this investment on its own?

[Answer 5]

As I have mentioned on previous occasions, it would be very challenging for GS Yuasa to carry out this type of investment using exclusively its own resources. As such, I believe GS Yuasa's strategy is to work together with Japanese OEM automakers. As such, looking back, I believe doing things on our own was never an option.

[Question 6]

The Company will be carrying out over 100 billion yen in investment within the scope of the Sixth Mid-Term Management Plan. Are there any

differences between this and past investments carried out by the Company?

[Answer 6]

Up until now, we have carried out investment at Lithium Energy Japan and Blue Energy, and I believe there isn't much difference between past investment and the investment we will be carrying out within the scope of the new Mid-Term Management Plan. In terms of batteries for BEVs, we are currently applying for subsidies. We also received subsidies to some extent in the past, but support on the part of the Japanese government represents a tailwind for us this time, as it pertains to public-private consortiums, etc.

[Question 7]

To summarize your previous comments and explanations, naturally, the Company will be carrying out R&D through a joint venture as an equity method affiliate. Is the Company also considering the use of an equity method affiliate for the new manufacturing company? Additionally, in terms of profits, in addition to profits accounted for using the equity method, will the Company be receiving royalties, as you mentioned on previous occasions?

The company is aiming for a production capacity of 20 GWh per year by 2035. These figures are for one plant, so I believe this is quite achievable even by 2030. Naturally, things have not been finalized yet, but I would like to hear your thoughts on this. Additionally, the Company will also be strengthening the area of batteries for plug-in hybrid vehicles, as shown in the slide dealing with Lithium Energy Japan. There was another talk about GS Yuasa within the Briefing of Mid-Term Management Plan of Mitsubishi Motors. This didn't come to fruition, but does the Company consider there to be room for new developments and growth on this front?

[Answer 7]

Naturally, as shown here, we will transfer the technical expertise derived from our joint R&D efforts with Honda Motor to the manufacturing company, in the form of intellectual property. As shown in the diagram, we want to carry out manufacturing within the GS Yuasa Group. As you can imagine, we won't be doing this 100% on our own, but we will be carrying out production through a manufacturing company within the GS Yuasa Group. In terms of returns, as you mentioned, we are considering a royalty system, paying a royalty fee to the development company.

Regarding your second question, you mentioned how a production capacity of 20 GWh per year by fiscal year 2035 might be a somewhat low number. As I mentioned during my presentation, we are planning for a production capacity exceeding 20 GWh per year. These numbers reflect things as they stand today in terms of talks we have had with OEMs, but there is a possibility this might change between 2030 and 2035.

Third, on the topic of plug-in hybrid electric vehicles, we currently supply batteries to the Eclipse Cross by Mitsubishi Motors. Naturally, we intend to increase production capacity, taking this and other elements into account. Additionally, this production capacity of over 20 GWh per year will center primarily on BEVs, but some of this capacity will also be dedicated to plug-in hybrid vehicles.

[Question 8]

My question pertains to the Industrial Battery and Power Supply segment, namely the supply of lithium-ion batteries for renewable energy uses. As you discussed, the company expects an increase in sales, but profit to remain somewhat stagnant. Indeed, the business model is not to make money from new batteries, but from replacement and maintenance services. Is my understanding accurate that it is difficult to change this basic premise when it comes to the business model, against the backdrop of increasing adoption of renewable energies in Japan?

[Answer 8]

During the Fifth Mid-Term Management Plan we supplied batteries for the interconnected system of large wind power generation in Hokkaido for reducing output fluctuations. Supplied batteries are equivalent to about 45,000 EVs. I believe this model will become the template going forward, which generates very little upfront operating income at the time of installation. Profit is therefore generated over time, over a period of 20 years or so, in the form of replacement and maintenance. We currently receive inquiries for implementation at the plant level and for interconnected power generation systems, and supply batteries in the domain of supply and demand adjustments of electricity. As such, we believe we can recoup costs and generate profits over long periods of time, and we already established this business model during the Fifth Mid-Term Management Plan. Going forward, we want to further expand this business model.

[Question 9]

The company is aiming for a total return ratio of 30% or more. I would like to know about the breakdown and more details, in terms of dividends, share buybacks, etc. Will the Company only carry out these buybacks should there be stock sales by large shareholders? You mentioned the Company is considering both direct and indirect funding methods, but it would strike me as inconsistent if the company were to pursue direct funding while at the same time carrying out share buybacks. Could you therefore expand upon your thoughts on this breakdown?

[Answer 9]

Generally speaking, as it stands, we are not currently actively considering share buybacks. As President Murao mentioned just now, we expect this to be the case over the short term. However, our basic approach to shareholder returns involves both the distribution of dividends and the execution of share buybacks. There is no set percentage in terms of the breakdown for these two. The dividend amount is based on consolidated net income, and, in addition to that, in the presence of surplus capital, we would like to consider share buybacks.

[Question 10]

I have one question for you, pertaining to the Company's BEV strategy. Could you give us a little more detail on this front? As in the case of hybrid vehicles, will the target market for BEVs be Japan? I believe GS Yuasa currently boasts a high market share in Japan, through its supply of batteries for hybrid vehicles manufactured by Honda Motor. In terms of batteries for BEVs, as well, do you believe you will be able to secure supply orders from Honda Motor as the first supplier? Additionally, could you discuss the possibility of partnerships with additional companies other than Honda Motor? The Company positions the Sixth Mid-Term Management Plan as a preparatory phase in terms of the business of supplying batteries for BEVs. Lastly, could you share with us a profitability timeline and profitability estimates after mass production has stabilized?

[Answer 10]

First, these figures refer to the domestic market in Japan. As such, as it stands, we are currently planning on a production capacity exceeding 20 GWh per year in fiscal year 2035, and this refers to the domestic market in Japan, as figures for overseas are not included in this. Naturally, we are considering other partnerships in addition to Honda Motor.

In terms of the profitability timeline and profitability estimates, we are currently in the planning stage, so we are not at liberty to discuss specific figures.

[Question 11]

Allow me to ask two questions, the first pertaining to the Automotive Lithium-ion battery segment. The Company expects 6 billion yen in operating income for fiscal year 2025, in this segment, on 110 billion yen in net sales, for an increase of approximately 40 billion yen. As you mentioned, the company will be incurring costs related to the development of batteries for EVs, for an increase of approximately 15 billion yen in R&D. I believe the largest portion of this will go to R&D in the Automotive Lithium-ion battery segment. I would therefore like to know how much of an increase we will be seeing in this segment.

[Answer 11]

In terms of the figures, they are an extrapolation from current existing

businesses. As such, sales and profits from batteries for BEVs are not yet included in the figures for fiscal year 2025. We are planning on carrying out R&D and capital expenditures in the Sixth Mid-Term Management Plan, so these 110 billion yen in net sales and 6 billion yen in operating income for fiscal year 2025 are a forecast based on the expansion of current existing businesses.

We expect to invest a certain amount in R&D of batteries for BEVs, within the context of the joint venture we will be establishing as an equity method affiliate. The graph on page 28 shows operating income, and equity gains or losses of affiliated companies are a non-operating line item. This line item includes a certain amount in R&D investment.

[Question 12]

Looking at the Company's projected path toward 2035 and beyond, one gets the impression that public infrastructure will play an increasingly larger role. Currently, mobility accounts for the majority of the Company's operations.

What companies does GS Yuasa view as benchmarks when it comes to this forecast for the field of public infrastructure?

If possible, I would like to know which - if any - companies GS Yuasa views as a benchmark, separately for the regular and emergency fields.

[Answer 12]

I believe you are referring to the section colored light green, corresponding to growth in the field of public infrastructure. This refers to ESS for use in controlling fluctuations and adjusting supply and demand, to interconnected systems, and to peak cut and peak shift at the operational site and plant level. We have received a very large volume of inquiries, exceeding our current capacity.

Here, together with batteries for BEVs, we also want to set up and enhance our production and supply systems. We view as models and benchmarks the overseas manufacturers newly entering the Japanese market.

However, this field pertains to economic security. As such, from the perspective of economic security, it is relevant that these are batteries made in Japan, and that we offer after-market maintenance services

domestically, following the initial installation.

[Question 13]

This question pertains to the joint venture with Honda Motor, as shown on page 30. I would like to know what kind of synergies are expected to arise between mobility and public infrastructure. Not many companies offer batteries and also power supplies on the supply side. Against the backdrop of GS Yuasa executing both businesses, I would like to hear your thoughts on synergies between both businesses, like cross selling opportunities, for example.

[Answer 13]

First, regarding batteries, there is a high degree of compatibility between batteries for BEVs and ESS used in interconnected systems for reducing output fluctuations and adjusting supply and demand. Compared to high input-output lithium-ion batteries for hybrid vehicles, batteries for BEVs have lower rates of input-output and consequently have better synergies with ESS. As such, we are currently manufacturing batteries for ESS at our production lines for batteries for EVs. We have a power supply systems division within GS Yuasa, which manufactures a variety of devices, such as power conditioners. Within the process of developing batteries for BEVs, going forward, we will be putting in place a manufacturing structure.

Once this has been accomplished, by making small changes to the "recipe," if you will, of batteries for BEVs, this allows us to manufacture batteries for ESS - due to this high level of compatibility. Coupling this with GS Yuasa's technical expertise in power supply systems allows us to offer public infrastructure solutions.

Such is GS Yuasa's business, and in that sense, by expanding batteries for BEVs and other businesses in the field of mobility, this will also allow us to make a contribution to public infrastructure.

[Question 14]

As shown in the presentation, GS Yuasa will be implementing a fundamental review of the business in China. Could you share with us concrete measures to this end, going forward?

[Answer 14]

As I mentioned in my presentation, we are seeing a significant increase in competition in China. Additionally, our operations in China offer very low profit margins. As such, while I am not at liberty to go into the specifics, going forward, we will be focusing investment in regions boasting high profit margins, regions such as Southeast Asia and Turkey. During the Sixth Mid-Term Management Plan, we will be executing a variety of measures and initiatives, although I request your understanding that I am not at liberty to disclose any specifics.

[Question 15]

This question isn't directly related to the Sixth Mid-Term Management Plan, but looking at the sales forecasts for 2035 and 2050, for lead-acid batteries, one sees a rapidly sloping line. In light of this, does the Company have plans to increasingly scrap its plants for the manufacture of lead-acid batteries, in Japan and Overseas?

Or will the Company greatly reduce the scale of its plants in Kyoto and Gunma, and use the sites to build new plants for the manufacture of lithium-ion batteries?

I would therefore like to hear your thoughts on this, regarding scrap and build, and the ways the Company intends to address the rapidly decreasing sales of lead-acid batteries.

[Answer 15]

This graph shows a rather conservative trend when it comes to sales going forward of lead-acid starter batteries for gasoline vehicles. Currently, we continue seeing strong demand from Southeast Asia and other regions like the Middle East and Africa. As such, like I said, we took a rather stringent approach when it comes to this forecast. These are 12V batteries and these continue to be included in some EVs powered by lithium-ion batteries, as these are used to start the car and for redundancy purposes. The graph shown here is based on the assumption that all of these uses shift entirely to lithium-ion batteries. Consequently, this is a business domain boasting very high levels of profitability, so should this be a partial rather than a complete shift, we would welcome this scenario. With that being said, in light of the themes of the Sixth Mid-Term Management Plan and Vision 2035, we decided to take a more conservative approach when it comes to the forecast for this business. As such, we have no plans to concentrate investment in lead-acid starter batteries, as we will be focusing investment on lithium-ion batteries.

We will be taking a conservative approach to lead-acid batteries - which boast high profitability - changing our approach to production efficiency and to our plants. There is a need to utilize this business in order to generate funds to fuel growth, so we intend to generate strong profits in this area.

[Question 16]

In developing batteries for BEVs, what are some of the challenges the Company faces, compared to the legacy process of developing batteries for HEVs? I believe that GS Yuasa boasts high yield rates when it comes to batteries for HEVs, so I would like to know if the Company will be able to maintain these levels.

[Answer 16]

We already possess plant capacity to manufacture 70 million cells per year, and we can increase equipment capacity to keep up with demand. However, these and batteries for BEVs are two completely separate things.

We do not expect any difficulties whatsoever in expanding to 70 million cells per year, and believe we will be able to maintain current capacity utilization levels and yield rates, both of which are high. Furthermore, we would like to leverage our expertise in manufacturing technology in the manufacture of batteries for BEVs.

Naturally, we have technical expertise derived from Lithium Energy Japan, so we expect to be able to leverage this with batteries for BEVs.

[Question 17]

As shown in the graph, sales of batteries for HEVs will start decreasing in 2030 and beyond. Going forward, and once this happens, how does the Company plan to shift Lithium Energy Japan's production capacity? Do you plan to shift the entire production capacity of 70 million cells to the Industrial Battery and Power Supply segment, or do you have additional uses planned? In summation, how does the Company plan to shift Lithium Energy Japan and Blue Energy's production capacity?

[Answer 17]

Blue Energy manufactures batteries for HEVs, while Lithium Energy Japan manufactures batteries for EVs, for PHEVs, and for ESS. As such, as the manufacture of batteries of HEVs decreases over time, we expect manufacture and sales of batteries for HEVs at Blue Energy to decrease around mid-2030s.

Furthermore, we are currently in the process of considering what course of action to take once this decrease in batteries for HEVs has taken place, around mid-2030s.

I believe this shift will be to a type of battery with a high share, against the backdrop of electrification.

[Question 18]

My question has some overlap with the first question, and pertains to the topic of financing and the acquisition of funds. Earlier, you mentioned subsidies. What is the priority hierarchy within the various methods of procuring funds, also in terms of the Company's balance sheet? For example, does the Company consider subsidies to be of great significance, or, for example, will the company prioritize increasing its equity ratio?

[Answer 18]

We prioritize financial discipline, and I believe ensuring this to be my mission. In light of this, we view an equity ratio of 40% as a minimum, and we therefore prioritize our ability to generate operating cash flow from our core operating activities. We believe operating cash flow will not cover the entire amount and that we will need to procure funds totaling 80 billion yen. As such, our first priority is further maximizing operating cash flow so that we can minimize the amount in procurement funds.

Beyond that, we are still in deliberations regarding the method to

procure funds, so I am not at liberty to discuss any further details.

[Question 19]

In regards to new businesses, the presentation materials mention the regular field as a second business pillar for the company. In concrete terms, what type of new businesses does this refer to? Second, you mentioned the Company is in the process of developing next-generation batteries. In the past, you mentioned the Company had developed a new battery with enhanced performance, which had received a high volume of business inquiries. Would it be reasonable to assume a similar dynamic for these new batteries?

[Answer 19]

First, regarding new businesses, GS Yuasa has acquired expertise in a vast array of fields, so we would like to create businesses leveraging this expertise, making a contribution to Company results, and also naturally to society at large. We are carrying out a number of actions within GS Yuasa. Taking inventory reveals we possess a number of interesting technologies. It may take some time until these bear fruit, but we would like to focus on these as a company, as it would be a waste not to leverage what we have.

To be honest with you, it is not yet certain whether these have the potential to grow into new battery technologies themselves, but we have a number of proposals. We have a number of proposals, but it is still unclear if these new businesses will be peripheral technology related to batteries, or new businesses in a completely different field, born out of R&D. Starting around 2035, we would like to nurture these proposals so that they can make a contribution to Company results. Additionally, what I referred to previously as next-generation batteries are batteries for use in ESS. We refer to these as LEPS, and we are currently developing a new LEPS model, with these being batteries for ESS. ESS are used in controlling fluctuations and adjusting supply and demand, and we manufacture batteries for these in the production line for batteries for EVs. This is what I was referring to when I mentioned next-generation batteries.

[Question 20]

My question pertains to lead-acid batteries, with GS Yuasa aiming to increase the usage rate of recycled lead to 70% or more. A new Battery Regulation recently went into effect in the EU, calling for minimum levels of recovered lead of 85%. I believe the recovery rate for GS Yuasa in Japan is 100%, so I believe this number is due to the Company's operations in Asia.

However, GS Yuasa does carry out considerable business in Europe and while perhaps it will use its sites in Turkey and Indonesia - will the Company be able to comply with this stipulation of 85%, once the new regulation kicks in? Would the company incur costs in formulating a course of action to address the regulations?

[Answer 20]

I am not at liberty to discuss the specifics in terms of addressing the new EU regulations. In terms of the presentation materials, as well, we are still in the process of devising a concrete action plan, so I would like to request your understanding on this front.