

Summary of Q&A at the online Briefing Session on the progress report of Medium-Term Management Plan (2021-2025), held on December 6, 2021

TOYO Explainer: Haruo Nagamatsu, President & CEO

Questions	Answers
<p>P.6 and P.7: The profits compositions are shown because you emphasized gross profit rather than sales. How do you feel about the amount of profit?</p>	<p>In non-EPC contracts such as EPsCm (Engineering, Procurement Service, Construction Management), the amount of sales is small because equipment materials and construction costs are not included in our sales. Our sales target is ¥300 billion, but considering the customer's investment base, it is actually the level with an amount of more than ¥300 billion. From this perspective, we believe that the actual amount of orders received for the non-EPC portion will also be large in the future.</p> <p>At the end of the current fiscal year, we expect net income of ¥1.5 billion. We believe that even if the scale of sales is not so large, we can achieve average net income of ¥5 billion from 2023 to 2025.</p>
<p>P.10: Seven cases are introduced in Carbon Neutral field. I guess you are considering receiving orders with EPC, but are there any non-EPC models?</p>	<p>In case of fuel ammonia, we would like to engage in not only EPC but also non-EPC businesses including participation in investment to the project by playing some role in building the overall value chain.</p> <p>In addition, there are other non-EPC businesses such as HERO and SUPERHIDIC, which are energy-saving and GHG-reduction services. We introduced only a part of our businesses today.</p>
<p>P.10: It seems business areas are wide such as development of technology for electrification of ethylene cracking furnace and direct methanol synthesis from CO₂. Which business do you think is the most likely to expand besides fuel ammonia and SAF?</p>	<p>We believe that CO₂ value chain can grow as a business by making use of our technologies and further developing technologies in the future. It is also hoped that this field will be expanded by electrifying the ethylene cracking furnace and using non-hydrocarbon materials as raw materials.</p>
<p>P.13 g-Methanol pilot plant in India will be completed in 2023. When will it be commercialized?</p>	<p>Since the schedule after the pilot plant has not been disclosed by Indian customer, I can't say anything about it at this moment.</p>

<p>P.13: How much do you expect in terms of the scale of net sales and profits from this business? What impact does this have on business performance?</p>	<p>We explained the pilot plant in India this time, but customers are very interested in green methanol in Japan as well. The MRF-Z reactor of our technology can also be large. However, it will take a little bit more time to contribute to profitability as a business.</p>
<p>P.13: What is the plan of g-Methanol business in Japan?</p>	<p>In Japan, g-Methanol has received inquiries for multiple projects and has been talking with customers. However, we can't disclose each case in detail now.</p>
<p>P.14: Please tell us if you have any updates on the East Siberia Value Chain, including the hurdles and speed of commercialization.</p>	<p>In this fiscal year, we are examining construction and transportation costs as Phase 2 study. We are working with our Russian partners to see if the cost of transportation can be reduced. It is necessary to show the price to customers by investigating and deciding the production capacity and the timing of commercialization based on the cost and the stable supply. However, this project is proceeding at a stage where we decide on targets with partners rather than searching in the dark.</p>
<p>P.14: As demand increases in the future, it seems impossible to supply fuel ammonia plants unless they are larger than in the past. Please tell us the current state of technological development for large-scale plants.</p>	<p>Currently, ammonia plants are predominantly 3,000 tons /day. Technological studies for scale up close to double are under way.</p>
<p>P.14: Addition to this in Eastern Siberia project, are there other projects in the world you are involved in?</p>	<p>The Eastern Siberia project alone will not be able to meet large future demand. Trading companies and a wide range of companies are investigating fuel ammonia and hydrogen businesses around the world, and we are also discussing and investigating with our partners.</p>
<p>P.14: Are you also working on green ammonia?</p>	<p>In addition to blue ammonia, we also receive inquiries about green ammonia and hold discussions and studies with customers and partners.</p>
<p>P.16: When will a pilot plant be built for the electrification of an ethylene cracking furnace?</p>	<p>Specific plans will be made in the future.</p>
<p>P.16: The ethylene cracking furnace facility requires high heat. What if there are issues for commercialization other than electricity?</p>	<p>Electrification of ethylene cracking furnaces has begun in Europe, and we have now been adopted in the NEDO program. In addition to technical issues, cost issues need to be considered. The key is how much electricity from renewable energy is available at low price. This is my opinion, but I think it will take years.</p>

<p>When will the ethylene cracking furnace be commercialized?</p>	<p>We are trying to keep up Europe with the progress of electrification using electricity from renewable energy sources.</p> <p>Apart from electrification, ammonia and hydrogen can be used as fuel. Research and development of such methods is expected to proceed in the future.</p>
<p>P.17: There was an opinion that biomass power plants in Japan would leave the boom when the FIT was over, while others say that a large-scale power plant would emerge. Please tell us how the market will look next year.</p>	<p>Since the FIT expires, there are many projects this year. These are expected to converge in the current fiscal year or the first half of the next fiscal year. We have received more than 100 MW of inquiries, and it is expected the domestic market to become larger in the future.</p>
<p>P.17: There were many biomass power plant projects so far, but competition is severe. What factors have contributed to the company's past record of orders?</p>	<p>The total of 10 orders has resulted in the accumulation of Lessons & Learned. Efficient proposals can be made through tie-ups with major equipment manufacturers. In addition, the number of customers who evaluate the results is increasing, and we recognize that we have won projects despite the difficulties.</p>
<p>P.20: How much is the current achievement of DXoT's FY2025 target? How are costs and man-hours reduced? Will you conduct a quantitative evaluation in the future?</p>	<p>The amount of funds including man-hours to be invested in DX and R&D is expected to be around 7 billion yen this fiscal year. Invested amount in the 1st half was low, but in the 2nd half, the company will make steady efforts and invest both funds and personnel. Quantitative explanations of the effects are difficult at this moment. Although qualitative, there are cases that the space cost for contingency was not used because engineering modification was reduced by DXoT. These initiatives were started last year, and the projects will take several years depending on the scale of the projects, so the results will be generated in the future. Quantitative evaluations will be conducted in the future.</p>
<p>P.20: Is the use of DX also being undertaken by foreign engineering competitors?</p>	<p>Engineering companies in Japan and all over the world are working hard for DX so it is not just our activity.</p>

(Note)

- On the same day, we held 2 different briefing sessions, one is for media, and the other is for analysts and institutional investors. We combined Q&A from those 2 sessions.
- In some cases, the contents have been reordered to help readers to naturally be understood.