

Q&A for Aero Engine, Space & Defense Business Area Briefing

1. Mass production of the GE9X engine is slated to start in fiscal year 2020. Do you expect losses per unit to be roughly double those with the PW1100G?

- The engine is equipped with a large jet Boeing 777X. There will therefore be fewer units than the medium-sized PW1100G. As discount rates for large engines are generally lower than mid-sized engines and the number of engines also smaller, losses should be less than that of PW1100G.

2. We understand that there are several reasons for the performance downturn in this fiscal year, for example FX, and we assume program-related additional expense is also the reason. How do you respond to requests of such additional expense? Are you not in a position to negotiate to broaden the scope of your responsibilities, such as to become able to handle high-compression components in the future? Please explain your long-term views on cost sharing with partners and opportunities in the future.

- We are experiencing solid and tremendously profitable spare parts sales of the mature V2500, GE90, and CF34. We have already commercialized or are about to bring out next-generation models of these products. It would be fine that GE90 engine for B777 switch to GE9X to be equipped with B777x, while there are some customers who consider to switch to A350 whose engine is Rolls-Royce's. We analyze OEMs and markets, and formulate strategies to ensure that we retain customers for the long term instead of them choosing new models from competitors at replacement times. We will leverage information and communication technology and the Internet of Things to optimize maintenance and lower customer operational costs while discounting spare parts prices to an extent as part of our strategy.
- Overall, we share our business strategies based on business viability analysis, reinforce relationship with partners and receive order of subsequent programs.

3. Please provide a breakdown of the 490 billion yen sales target for the Aero-Engine, Space & Defense business area in fiscal year 2021. Can we understand that a defense business sales downturn is stem from shrinking defense budgets?

- Civil aero-engines accounted for two-thirds of 492.2 billion yen sales in fiscal year 2018, more than 20% was defense business, and the remainder came from subsidiaries related business. Thanks to the delivery of a prototype engine for a next-generation fighter, Defense-related sales in fiscal year 2018 were 115 billion yen which is extraordinary high level. We see the level of sales in fiscal year 2019 in defense business would return to normal level i.e. 90 to 100 billion yen.
- The Japanese government's new medium-term defense plan started this fiscal year. Under the new plan, the government would procure fewer P-1 maritime patrol aircraft equipped with our key engines than under the predecessor plan. Another thing to consider is that gas turbines on new escort ships

will not employ our engines. Given that, we see the sales in defense business would decrease by 10 to 15 billion over several years from 90 to 100 billion yen. We aim to cover the shortfall by executing comprehensive agreements for rear support to supply services customers seek and strengthening parts repair and supply management to expand our business through such services. We will also propose engine improvement. With regards to the development of future fighters which will start in earnest in the 2020s, the Japanese government states that they would launch the development at their initiative with a view of international collaboration. We look to play a key role in fighter engine development with keeping such objective and we expect it to become an important new business for us.