



(Incorporated in the Republic of Singapore)

**Annual General Meeting to be held on 19 July 2024  
Responses to Questions from Securities Investors Association (Singapore)  
("SIAS")**

SIA Engineering Company Limited ("SIAEC" or "the Company") refers to the Company's Notice of Annual General Meeting ("AGM") dated 20 June 2024 released on SGXNet and the Company's corporate website on 20 June 2024. The Company has not received any queries or questions from shareholders in relation to the Company's business, operations and in particular, the resolutions to be tabled for approval at the AGM to be held in a wholly physical format on 19 July 2024, 10.00 a.m.

SIAEC would like to thank SIAS for its questions on SIAEC's Annual Report FY2023/24 sent in advance of the Company's AGM. Please refer to the Appendix for our responses to the questions raised by SIAS.

## **SIA Engineering Company Limited 42<sup>nd</sup> Annual General Meeting Responses to Questions from SIAS**

1. As highlighted by the Chairman in his message to shareholders, the group achieved an operating profit for the first time since the onset of the COVID-19 pandemic four years ago. Air passenger traffic volume reached 94% and 86% of the 2019 pre-pandemic level globally and in Asia-Pacific in 2023 respectively.

For the financial year ended 31 March 2024, revenue grew by 37.5% year-on-year to \$1.09 billion due to increased business volume and higher charging rates. Net profit increased by 46.2% to \$97.1 million, and the group posted its first full-year operating profit in four years of \$2.3 million.

(i) **Line maintenance:**

The group had expanded its scope of services to include the new Embraer E190-E2 fleet with Scoot. **What specific technical and operational challenges has the group faced in providing line maintenance services for the new Embraer E190-E2 fleet with Scoot? What has been the learning curve for the group in adapting to a new aircraft?**

Over the years, SIAEC has been building capabilities on new-generation aircraft fleet, including the Airbus A350 and Boeing 787. We have an established aircraft induction process which covers areas such as maintenance training, tooling and equipment readiness for Entry-into-Service fleet through our close collaboration with the airline, airworthiness authorities and Original Equipment Manufacturers ("OEMs"). The induction process for the E2 fleet is no different from the previous new aircraft fleets.

The group's network expanded to Malaysia through the acquisition of a 49% stake in Pos Aviation Engineering Services and will be expanding its presence to Phnom Penh, Cambodia by March 2025. **What is the expected gestation period for the new Joint Venture ("JV") with Cambodia Airport Investment?**

Preparation for the Cambodia JV, including manpower, training and equipment, has commenced. Subject to regulatory clearances, the JV targets to commence operations in March 2025.

**What are the other major opportunities for growing the line maintenance business?**

We remain open to markets where there are strong growth opportunities. As an example, we have earlier announced in September 2023 the signing of a Memorandum of Understanding ("MOU") with the IPORT Group to explore Maintenance, Repair and Overhaul ("MRO") opportunities, including the Line Maintenance business, in Fujian, China.

(ii) **Base maintenance:**

**What were the average utilisation rates of the hangers in Singapore and the Philippines? Can management help shareholders understand what determines the frequency of light and heavy checks? Specifically, why were the number of heavy checks in FY23/24 lower than in FY22/23? What are some of the features of the new Subang Base, and how will the new facility in Malaysia enhance the group's cost competitiveness?**

Demand for hangar checks at Base Maintenance was healthy during the year, with a notable increase in the number of light checks as more aircraft returned to service. While the number of heavy checks was lower in FY23/24, the work content of these checks were heavier as the work performed to return parked aircraft to service entails significantly more maintenance. These aircraft are also the older legacy aircraft (e.g., Boeing 777 and Airbus A380) which require more work compared to new-generation widebody aircraft like the Airbus A350 and Boeing 787.

The Subang facility establishes the Company's third base maintenance hub in the Asia-Pacific region, at a lower cost location.

The addition of the Subang Hangars, each being able to accommodate two wide-body aircraft, will boost SIAEC's airframe check capacity in providing comprehensive MRO of current and next-generation aircraft for SIAEC's expanding portfolio of airline customers.

We believe that our investment in the Subang hangars complements our component and line maintenance JVs in Malaysia (Asia Pacific Aircraft Component Services Sdn. Bhd. and Pos Aviation Engineering Services Sdn. Bhd.), allowing us to augment our extensive MRO offerings to our customers globally. With the expansion of our MRO network, this will further solidify our position as a leading provider of MRO services.

SIAEC continues to look at opportunities to grow our business and strengthen our competitiveness through potential capacity investments at lower cost locations.

(iii) **Engine and component:**

The engine and component segment reported a higher loss of \$(30.6) million in FY23/24 (FY22/23: \$(24.3) million). This was attributed to low engine output arising from supply chain issues, and higher repair and subcontract services costs. **Even after nearly five years since the pandemic started, what specific global supply chain challenges is the group facing, and what strategies are in place to overcome these challenges?**

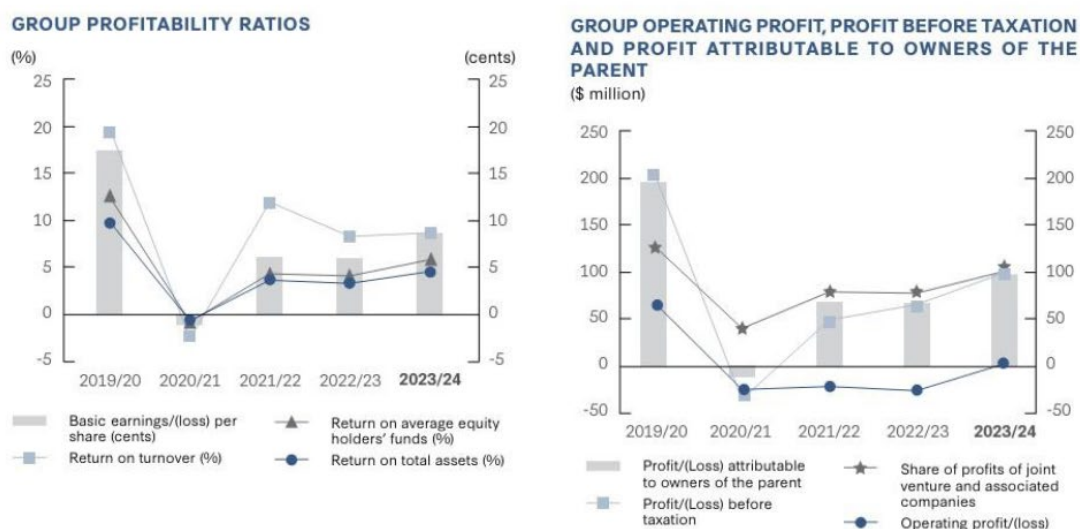
In FY23/24, the Engine Services unit encountered significantly lower than expected engine output. Due to supply chain issues concerning parts availability from OEMs, engine turn times were extended. To mitigate these operational disruptions, the Company has been working together with our OEM partners and introduced alternate module worksopes to reduce the turnaround time.

The group wrote off \$25.1 million in net assets related to its exit from the Pratt & Whitney PW1500G Engine Risk-Revenue Sharing Programme ("RRSP"). **For the benefit of shareholders, has management discussed the critical learnings and technical takeaways from the group's involvement in (and subsequent withdrawal from) the RRSP, especially regarding financial performance and strategic alignment? How does it impact the group's relationship with Pratt & Whitney?**

We had invested in the RRSP where we worked with various stakeholders to secure derived benefits for Eagle Services Asia Private Limited ("ESA"), a joint venture between Pratt and Whitney (51%) and SIAEC (49%) in Singapore, to mitigate the risks whilst partaking in the potential long-term benefits of the programme. These derived benefits included new engine capability and MRO work for ESA, and relevant investment support grants related to the development of new engine capability.

Although we have exited the programme, we have had the opportunity to build on the knowledge and capability of the Pratt & Whitney GTF engine platform, and continue to collaborate with Pratt & Whitney on new capability developments for this engine through our existing JVs in Singapore. This included the recent opening of an expanded facility by ESA in February 2024, to cater to more MRO capacity for the Pratt & Whitney GTF engine. Our reason for not remaining in the programme was based on the need to further allocate capital in other areas to support our ongoing MRO growth strategy. This would include the expansion of our Line Maintenance International network, setting up of Base Maintenance Malaysia, and supporting our strategic developments in India with Air India including component support coverage for Air India Group's existing fleet of Airbus A320 aircraft.

2. The group's financial review can be found on pages 83 to 88. An excerpt is reproduced below:



Profitability ratios of the Group are as follows:

	2023/24 %	2022/23 %	Change % points
Return on turnover	<b>8.9</b>	8.3	+ 0.6
Return on average equity holders' funds	<b>5.8</b>	4.1	+ 1.7
Return on total assets	<b>4.6</b>	3.3	+ 1.3

(Source: company annual report)

In contrast, in FY17/18 when the revenue was at a similar level (\$1.09 billion), the group achieved return on turnover, average equity and total assets of 17.1%, 12.4% and 10.4% respectively. The FY23/24 returns are approximately half of the FY17/18 figures. In addition, total salaries and other staff costs amounted to \$494 million in FY17/18, rising 17% to \$576 million in FY23/24 while revenue has remained flat.

**(i) What structural changes in the MRO industry have most significantly impacted the group's profitability over the past 5 years?**

Besides the low level of activities during the pandemic, we were affected by various issues that have also impacted the broader aerospace industry. With the introduction of new-generation aircraft fleets, the maintenance workload for hangars has reduced due to extended maintenance intervals and lighter work content for these aircraft. OEMs have expanded their presence in the aftermarket business, leveraging their access to intellectual property, design data and manuals.

As the MRO industry recovers from the Covid pandemic along with the return of global traffic growth, it also faces a tight labour market, supply chain disruptions and inflationary pressures that weigh on the near-term operating margins. Being a part of the MRO eco-system, SIAEC is also affected by these challenges.

On the other hand, we were able to benefit from the strong recovery of Singapore Airlines, one of our key customers, and leverage our relationships with OEMs and JV network to deepen collaboration with the OEMs. The Company continues to make investments in new capacities and capabilities, either on its own or through its network of JVs, to mitigate the challenges as well as to drive growth. These are long term investments, for which the returns will take time to materialise.

*Note: According to the latest 2024 Oliver Wyman MRO Survey report ([Aviation MRO Spend Grows Amid Rising Costs And Supply Chain \(oliverwyman.com\)](#)), for the third year in a row, cost management and labour shortages were cited as the top two disruptors for the next five years. As demand roared back, the MRO industry has had to rapidly ramp back up production and maintenance to historic levels, while dealing with fewer employees and struggling suppliers – especially at lower tiers. Labour cost increases for MRO has jumped by a hefty 7.3% on average worldwide last year. For 2024, survey respondents expect overall labour cost increases to slow to 5.8%. This is still high compared to pre-pandemic labour rate increases of 2-3% a year. Similar to labour, supply chain issues and material costs are weighing heavily*

*on the industry. Material costs climbed by about 8.3% last year, according to survey respondents, well above pre-pandemic inflation of 3-4% a year. About half of industry participants expect it to take 1-3 years to resolve current supply chain challenges.*

**(ii) How is the board or management addressing the challenges posed by the manpower supply crunch, and what measure has the group implemented to effectively manage costs?**

To mitigate business disruptions due to manpower supply crunch, the Company has been utilising multiple manpower sources to bring in skilled technicians and Licensed Aircraft Engineers ("LAEs") into the workforce. Besides recruiting locally to support operations demand, we have been building a pipeline of skilled technicians and LAEs from overseas recruitment drives. Through our appointed Labour Suppliers, we are also able to tap on their regional manpower network to further augment our technical talent pool. We have been taking in Technician and LAE trainees to prepare for future business growth.

The Company has been collaborating with Institutes of Higher Learning on pre-employment training like internships, attachments, career talks and projects, to attract fresh school leavers or mid-career candidates looking to join us. To further widen our reach, the Company has expanded our sources of trainees beyond Singapore as well as engaged overseas Approved Training Organisations for joint curriculum tie-ups.

There are measures in place to improve staff retention, including competitive compensation, upskilling and reskilling programmes, career development and pathways as well as employee engagement.

We continue to maintain cost discipline to mitigate inflationary pressures and leverage productivity improvements through our Continuous Improvement programme. In addition to various process improvements initiatives, we have been harnessing innovation, technology, data and digital tools to improve cost efficiency.

**(iii) What guidance has the board provided to management to enhance Return on assets (ROA)? Has management set specific ROA targets?**

As highlighted in the Corporate Governance report within the Annual Report, the Board, working closely with Management (who are held accountable for performance), is collectively responsible for the Group's overall business strategy, direction and long-term goals with appropriate focus on corporate objectives covering value creation, innovation and sustainability; operations and performance (including key workplace safety, aviation safety and quality initiatives); financial performance reviews and annual budgets; funding needs; investments and divestments; human capital management and engagement; corporate governance and risk management practices; and compliance, internal controls and accountability systems. The Board also provides guidance on maximising the impact of Continuous Improvement initiatives to enhance the Group's performance, capabilities and competitiveness.

Management performance is assessed across five broad categories of targets, covering:

- Financial and Business
- Investment and Operations
- People and Organisational Development
- Safety and Quality
- Strategic and Sustainability Initiatives

However, we do not disclose publicly specific targets for each of the categories above.

**(iv) What initiatives has the group undertaken to enhance productivity, and how has the board assessed the progress in achieving these productivity gains?**

We continue to drive productivity and efficiency through our Continuous Improvement Programme. We are institutionalising our Enterprise Operating System (EOS) to standardise key processes across various business units and improve planning and production efficiency. Efforts in Lean, digitalisation and technology adoption have focused on process reengineering for operations and operational support functions and are integrated via the EOS. The Company has also strengthened its continuous improvement competencies, including in-house digital capabilities. These efforts have resulted in increased productivity and throughput, as well as achieving reduced turnaround time and operating costs.

Last year in November 2023, the Board Working Group (“BWG”) was formed to advise and guide the Company in building a stronger foundation towards achieving a set of key objectives which includes but not limited to continuous improvement, optimisation of operational systems and increasing long-term productivity and efficiency for better competitiveness. The progress towards achieving productivity gains is tracked and reviewed at regular BWG meetings.

**(v) In addition, what is the cost of capital used by the board in its approval for new investments and capital expenditure?**

In evaluating new investments and capital expenditure, the Company adopts a hurdle rate that considers the Company’s costs of capital and project risks.

3. The aviation sector has been in the spotlight recently, including incidents like a plane door plug blowing out mid-air and the safety issues, such as the (almost) non-removal of pitot probe covers. The safety bureau's investigation of the latter example highlighted fatigue as a potential contributing factor. Safety risks have also been identified as a key risk in the group’s risk management report (pages 69 to 75).

**(i) How does management ensure comprehensive adherence to safety procedures across the organisation, mitigating procedural omissions and ensuring rigorous compliance with regulatory standards and internal protocols?**

The Company closely monitors significant events occurring in the industry and incorporates learning points from both external and internal incidents into our briefings and training, which are conducted to update employees on the latest

pertinent safety procedures. Regular internal audits and reviews of safety procedures are performed to ensure they are robust in addressing current and emerging safety risks. Regular external audits are also conducted by numerous aviation authorities and customers to assess our systems and processes to identify any procedural omissions or non-compliance with standards. The Company underwent 226 physical and desktop audits in FY23/24, an indication of the large number of checks that the organisation is subjected to. These audits and checks help to review and highlight any area that requires strengthening and identify potential latent high risk or safety issues.

An important element in the Company's Safety Management System is the reporting of safety-related matters. All employees are required to promptly report work-related incidents to their immediate supervisor or section head. A confidential reporting hotline is available for employees to provide anonymous feedback on safety or quality concerns. These inputs enable analysis and the implementation of safety interventions. This encourages a culture of safety and allows staff to participate in the development and review of safety procedures that are practical and effective.

- (ii) **With a tight manpower supply/labour shortages mentioned by management in the Annual Report, how does the board or management effectively monitor and manage fatigue levels, adequacy of training, experience levels and workload demands to ensure inspections and operations meet rigorous standards?**

In the operational areas, shift rosters and overtime are tracked and monitored to ensure adherence to provisions under the Employment Act. This is to ensure that our employees have adequate rest to carry out their tasks in a safe manner. Additionally, the Company has a set of Fatigue Management Guidelines that include stipulating the minimum hours of rest between shifts and the maximum number of consecutive days of work for our staff.

New LAEs and Technicians entering our workforce have to complete various trainee programmes. All LAEs and Technicians undergo continuing training at regular intervals, to stay updated in the areas of regulations, aircraft systems, operational procedures, and processes. Through training-needs analysis, relevant courses or programmes are provided to upskill their technical skills, acquire new aircraft type authorisation, and build new operational capabilities to deliver MRO services.

- (iii) **Can management highlight technological advancements that have been implemented to enhance operational efficiency, particularly in improving safety protocols?**
- (iv) **As one of the world's leading MRO organisations, how is the group currently leveraging artificial intelligence (AI)? Are there specific areas where AI has been implemented or can be utilised to enhance operational efficiency?**

The Company has been exploring and investing in technologies in the areas of Internet-of-Things, Artificial Intelligence and Machine Vision. Ongoing initiatives under these areas include automated tooling management for better traceability, digital tools such as digital torque wrenches, lifting devices to reduce manual efforts and video analytics for Personal Protective Equipment monitoring.



Besides operations technology, processes are being reengineered and digitalised through our paperless taskcard initiatives. To bring an added layer of efficiency, we have also developed and rolled out decision support tools such as resource optimisation applications for materials and manpower.