SES AI Corporation 1Q22 Earnings Thursday, 13 May 2021

Operator: Good afternoon. Thank you for attending today's SES AI Corporation first quarter 2022 earnings call. My name is Amber, and I will be your moderator for today's call. All lines will be muted during the presentation portion of the call with an opportunity for questions and answers at the end. If you would like to ask a question, please press *1 on your telephone keypad at any time.

Operator: I now have the pleasure of handing the conference over to our host, Eric Goldstein, Vice President of Investor Relations with SES. Mr. Goldstein, please proceed.

Eric Goldstein: Thank you, operator. Hello, everyone and welcome to our conference call covering our first quarter 2022 results and outlook for the year. Joining me today are Qichao Hu, founder and Chief Executive Officer and Jing Nealis, Chief Financial Officer. We issued a press release just after 4 p.m. today, detailing our financial results. You'll find press release and today's conference call webcast in the investor relations section of our website at ses.ai.

Eric Goldstein: Before we get started, this is a reminder the discussion today may contain forward looking information or forward-looking statements within the meaning of applicable security legislation. Such statements involve certain risks, assumptions, and uncertainties which may cause the company's actual or future results and performance to be materially different from those that are expressed or implied in these statements. The principal risks and uncertainties that could cause our results to differ materially from our current expectations are detailed in our latest earnings release and in our SEC filings.

Eric Goldstein: This afternoon we will review our business as well as results for the quarter. We'll then provide some milestones we are looking to achieve over the next 12 months. With that, I'll pass it over to Qichao.

Qichao Hu: Thank you, Eric. Good after everyone and thanks for taking the time to join our first earnings call. It's been a very busy and exciting time for our company. In early February, we completed the merger with Ivanhoe Capital Acquisition Corp. and started trading on the New York Stock Exchange.

Qichao Hu: The merger resulted in a total cash position of $126 million at the end of first quarter. This event was the culmination of a 10-year journey that began in the basement of building four at MIT and I believe the best is yet to come. I cannot say thank you enough to all of our employees at our Boston headquarters, SES Korea, and Shanghai Giga.

Qichao Hu: The automotive industry is going through a rapid change. In the past year, almost every major country and car maker in the world has announced that they plan to electrify their entire fleet to address climate change. High energy density and low-cost batteries are key. This is why we believe lithium metal batteries are the next big thing.

Qichao Hu: We are the first and only next generation lithium metal company to have three A sample Joint Development Agreements, JDAs, with global car makers: General Motors, Hyundai, and Honda. And our strategic investors included six car makers: GM, Honda, Hyundai, Geely, Shanghai Auto, and Foxconn as well as Koch, SK, LG, Tianqi Lithium and Applied Materials.

Qichao Hu: We live in an increasingly volatile world. Rapid increases in demand for lithium and other raw materials as well as geopolitics have created great disruptions in the supply chain. Going forward, a sustainable supply chain strategy and innovative business model will be crucial. So first let's talk about lithium metal batteries. We have made significant progress in all three of our technology platforms and our own tracks with our A sample JDAs. Let me go through more details.

Qichao Hu: So first it's Hermes, a platform for material development. Our Boston headquarter has developed several new generations of electrolytes. With each generation, we get one step closer to meeting our OEM partners' complex set of requirements ranging from safety, to cycle life, to temperature performance, to power density, to storage, and so on. We are confident that we can meet the OEM A sample specifications in the next 12 months which will allow us to transition to B samples.

Qichao Hu: Second is Apollo, engineering capability for large automotive cells. Manufacturability is core to our lithium metal system approach. We want to use lithium-ion equipment and process to make lithium metal cells. Most of the EV batteries used in the U.S. today were developed in Korea, China, and Japan during their A sample stage.

Qichao Hu: This is why we chose to do A sample large cell development in China and Korea, the hub of lithium-ion cell engineering, manufacturing, and supply chain. This is also reflected in our CapEx spending this year. Later our CFO, Jing, will talk about it more. It's in line with mature lithium-ion CapEx investment. This will pave the way for eventually building large manufacturing plants in North America for C sample and, ultimately, the Start of Production, SOP.

Qichao Hu: We announced construction of Shanghai Giga last November at our first battery world and unveiled the world's 100Ah lithium metal battery. I am very excited to announce that we have completed Shanghai Giga phase one this March and achieved ready to use RTU.

Qichao Hu: The facility is now capable of producing 0.2 gigawatt hours of large lithium metal cells both 50Ah and 100Ah and we plan to reach one gigawatt hour in phase two the next year. We have begun building and testing these large lithium metal A sample prototype cells and sharing data with our OEM JDA partners. We even started implementing AIoT, Artificial Intelligence of Things, devices and data collection on our production lines for quality control.

Qichao Hu: Our Shanghai team deserves a lot of appreciation. Two years ago, during the peak of COVID when we cut everyone's salary, not a single person left. Recently because of lockdowns, our Shanghai Giga facility was down for more than a month. But when it reopened, our team immediately volunteered to go back and now they eat, sleep, and work in the factory.

Qichao Hu: No other facility in the world can match Shanghai Giga for lithium metal battery production. We currently have two A sample OEM JDAs out of Shanghai Giga and other top global OEMs have expressed interest in forming A sample JDAs that will be sourced from this facility. We also started construction of SES Korea and expect

to achieve ready to use RTU by the end of this year. You'll have similar capabilities as Shanghai Giga initially at a smaller scale, but eventually grow to a similar scale.

Qichao Hu: We partnered with our long-time equipment inventor to fully leverage the manufacturability of lithium-ion equipment and process to build lithium metal cells. Now we serve one A sample OEM JDA out of SES Korea and expect overtime to serve additional OEM JDAs. Our Korea team also worked through spring festival and other holidays to build and test A sample prototype cells for our OEM JDA partners.

Qichao Hu: Third is Avatar. AI software for battery health monitoring. Our Boston headquarter team developed several new algorithms that can actually predict battery health by monitoring battery chemical, thermal, and mechanical data. The goal is to monitor the growth of mossy lithium due to cycling and manufacturing defects and predict cell wear. We also partnered with a world leading AI company, a blockchain platform company, and an AIoT data collection company for data management and algorithm implementation.

Qichao Hu: Well, it's impossible to make any battery 100% safe especially high energy density ones like our lithium metal. 400 Wh/kg and 100Ah. Our goal is to make the user experience 100% safe through inherently safer materials: that's Hermes. Cell engineering; that's Apollo. And AI software; that's Avatar. And, and monitor mossy lithium growth 24/7 and predict failure.

Qichao Hu: Second, let's talk about the supply chain. We expect to transition from A sample to B sample in the next 12 months. As we prepare for the transition, we are focused on what is also the industry's biggest concern, the supply chain which has been impacted by the global lithium rush and geopolitics.

Qichao Hu: It is estimated that most, if not all, of mature producing lithium mines around the world already have their off takes committed until 2026. And many junior mines are at least eight years away from production. So how do we secure supply and how do we build independent regional supply chains to meet geopolitical challenges are the key questions. We are participating in building two independent supply chains and balancing commercial efficiency with geopolitical concerns.

Qichao Hu: So, the first is a China inclusive supply chain. Politics aside, China today has the world's most complete and efficient EV battery supply chain and the biggest talent pool in EV market. Since the number one priority for EVs is low cost and manufacturability is core to our lithium metal battery systems approach, we built our Shanghai facility in 2019 not far from the Tesla and CATL Shanghai Giga and extended it to Shanghai Giga in 2021 to leverage this supply chain and talent pool.

Qichao Hu: We are supported by several global OEMs and will continue to develop A samples with our OEM partners in Shanghai. We also plan to establish strategic partnerships with key material suppliers over the next year, especially for our thin lithium metal foil and lithium salt for our proprietary electrolyte.

Qichao Hu: Second is a China free supply chain outside of China especially for the North American and European markets. We are working with our partners and strategic investors to build a China free regional supply chain. Korea with the world's second most complete and efficient EV battery supply chain is the best choice especially for A sample development.

Qichao Hu: We started partnering with our Korean equipment vendor in 2015 and started to build SES Korea in January 2022. We are currently supported by one global OEM/JDA partner and several material and equipment partners. We also plan to transfer our learnings in China and Korea to build an EV battery supply chain in North America including mining, battery materials, battery manufacturing, vehicle integration, and recycling. While our A sample lines are in China and Korea, our C sample and start-up production will likely be in North America.

Qichao Hu: And third, alternative strategies. In addition to the supply chain strategies previously mentioned, we also started developing recycling capability for mossy lithium and exploring new business models such as battery as a service, which will leverage the data analytics capabilities of our Avatar AI software. These alternative strategies will be done in collaboration with our OEM partners and strategic investors. There's no silver bullet to addressing supply chain issues, it'll be a combination of approaches.

Qichao Hu: And finally in summary, we are dealing with a complex problem that requires a system approach. We're confident that within the next 12 months we will number one, deliver an optimized A sample for our three JDA partners. Number two, begin to transition from A samples to B samples. And number three, continue to establish supply chains for key materials.

Qichao Hu: All of these targeted milestones will help pave the way to achieve our goal to build our first commercial production plant in North America. I'll now pass the call to Jing Nealis, our CFO, who will take us through the financials.

Jing Ellis: Thank you, Qichao. Good afternoon, everyone. Today I will cover our first quarter financial results and discuss our operating and capital budgets for full year 2022.

Jing Ellis: In the first quarter, our operating expenses were $19.2 million which includes $3.2 million of stock-based compensation and $4.6 million of non-recurring transaction related expenses. We reported research and development expenses of $4.1 million. However, our gross R&D spend in the quarter was $12.6 million which was offset by $8.6 million reimbursed from our JDA partners. We received payments from our JDA partners and treat those as contra R&D expenses.

Jing Ellis: Our net loss for the quarter was $27 million which includes a $7.7 million non-cash expense related to the marked to market of our sponsor R&R share. There are 6.9 million sponsor R&R shares that rest in five separate but equal tranches.

Jing Ellis: Tranche one which is 20% of the $6.9 million R&R shares let in early August. While the other four tranches will let when our share trades over 12, 14, 16 and $18 for 20 out of 30 consecutive trading days, respectively, beginning in early July.

Jing Ellis: Tranche two to five are accounted for as a derivative liability measured at fair value with changes in fair value recorded in our P&L every quarter.

Jing Ellis: Some additional housekeeping items. We had 310 million shares issued and outstanding without restrictions at end of the first quarter. Our weighted average shares outstanding for the first quarter were lower since the merger with Ivanhoe closed in early February.

Jing Ellis: Additionally, we have approximately 14 million warrants outstanding with a strike price of 11.5 per share. On February 1, 2020, Ivanhoe warrant holders approved certain amendments to the warrant agreement such that the warrants were recorded in the stockholders' equity and no longer need to be marked to market every quarter.

Jing Ellis: For full year 2022, we expect cash investment and operations to be in the range of $70 million to $80 million as we focus on A sample development with our OEM partners and scale up our facilities. CapEx in the first quarter was $2.5 million in line with our expectations entering the quarter. Approximately 90% of our Q1 CapEx went toward completing phase one of our Shanghai Giga pilot facility which was ready to use at the end of March.

Jing Ellis: At end of the first quarter, our Shanghai Giga facility was capable of producing .2 gigawatt hours of 50Ah and 100Ah lithium metal cells annually. On a gigawatt hour basis, we believe our level of capital spending is similar to a typical lithium-ion battery facility which supports our practical approach to lithium metal batteries. We expect total 2022 CapEx to be in the range of $25 million to $35 million which will largely go towards our facilities in Asia.

Jing Ellis: Looking at liquidity, we entered 2022 with $161 million of cash on our balance sheet. In February of this year following the completion of our merger with Ivanhoe Acquisition Corporation and the PIPE financing, we added $283 million of cash. Our balance sheet is in a very strong position. We ended the first quarter of 2022 with cash and cash equivalents of $426 million which we believe is sufficient funding to get us to commercialization.

Jing Ellis: Our first quarter net cash used in operations and capital expenditures was $17.4 million. For full year 2022, we expect our total use of cash to be between $95 million and $115 million. This should leave us with well over $300 million of liquidity entering 2023.

Jing Ellis: Lastly, I would like to emphasize we are focused on maintaining a start-up culture and investing your capital as efficiently as possible. We are excited about the huge opportunities ahead of us and believe that we will ultimately drive strong returns for our shareholders. With that, I will hand it back to Qichao for some closing remarks.

Qichao Hu: Thank you. With $426 million in cash on our balance sheet at quarter end and deep capabilities in science, engineering, manufacturing, supply chain, and software across our global operations, we have never been in a stronger position. We want to be as transparent as possible about the opportunities and challenges and welcome visitors to our Boston headquarters, Shanghai Giga, and SES Korea. With that, I'll pass the call back Eric.

Eric Goldstein: Thanks, Qichao. We will begin today's Q&A with some questions that we've been receiving from investors. First question, "Can you provide more background on the distinction between mossy lithium and dendrites? Is mossy lithium less dangerous? Can you talk about why our batteries typically fail during testing?"

Qichao Hu: Sure. Um, typically, dendrites refer to these sharp needle-like structures and mossy lithium tends to refer to these flat pancake-like structures. And, uh, dendrites are something that you definitely don't want to have in your battery because then they will cause shorts and impotence.

Qichao Hu: But mossy lithium is something that most lithium battery will start to form at some point. And, in fact, most lithium battery when they die, they typically die, uh, due to the formation of mossy lithium. So, in our case, we have developed materials and, uh, uh, algorithms to really, uh, control and delay the formation of mossy lithium and also to monitor it.

Eric Goldstein: Great. Next question, "How are we being impacted by raw material price inflation and are we experiencing any supply chain issues?"

Qichao Hu: Yeah, so, so the raw material, especially lithium and nickel, it's, it's, it's, it's not as impacting us, uh, but impacting the whole industry in a very major way. Um, for example, all of our lithium and [inaudible 00:19:55] vendors in the past half, uh, year, um, uh, did contact us, uh, to raise price because of the increasing, uh, price of, uh, nickel and lithium. Um, but, um, but in terms of impact on the industry, overall, it just shows you that it, the industry is expanding and the supply need to, um, catch up. And then, um, we had a few strategies to address this.

Eric Goldstein: Okay, next question, "Jing, we have indicated that, uh, SES has sufficient funding to reach commercialization. Can you clarify what classifies as commercialization and can you talk about the potential timeline to get there?"

Jing Ellis: Uh, thanks for the question, Eric. Um, so in our mind, uh, commercialization is a process. The starting point is C samples with an OEM. We expect to get to that stage in 2024 which hasn't changed from our, um, you know, previous discussions. But at the end of the day, we need to have a sustainable business generating gross margins and positive free cash flow to be considered fully commercialized.

Eric Goldstein: Okay thanks. Operator, we are now ready to take Q&A. Please open the lines for questions.

Operator: Of course, thank you. If you would like to ask a question, please press star followed by one on your telephone keypad. If for any reason you would like to remove that question, please press star followed by two. Again, to ask a question, that's *1. As a reminder, if you were using a speakerphone, please remember to pick up your handset before asking your question. We will pause here briefly as questions are registered.

Operator: Our first question comes from Shawn Severson with Water Tower Research. Shawn, your line is now open.

Shawn Severson: Great, thanks. Uh, Qichao, I had a question about the supply chain and, and securing the supply chain going forward. I know you talked about the strategy, um, near, uh, approaching commercial production. I mean, are these things like locking in take or pay contracts or how are you actually securing that supply that hard and fast?

Qichao Hu: Yeah, so two of our shareholders, major shareholders are mining companies. One is Jiangxi Lithium, one of the world's largest lithium producers and another is Ivanhoe, uh, actually our spec partner and the, the leading producer of nickel and copper. And, uh, uh, we are working with them, uh, uh, to, to secure [inaudible 00:22:33] agreement on lithium and on also, uh, other key materials. We'll make some announcements in the next few months.

Shawn Severson: Okay, kind of a derivative question from that. How is LMP fitting in now with the rising commodity costs? Is there more interest in that and paring lithium metal with that from your JDA partners? Is that, uh ... Where, where-

Qichao Hu: Yeah.

Shawn Severson: ... what do you think about the option?

Qichao Hu: Yeah, so the pr-, so the price of lithium carbonate went up more than the price of lithium hydroxide, uh, which means the price of LMP actually went up more than the price of high nickel [inaudible 00:23:07]. So, so LMP is still cheaper than high nickel [inaudible 00:23:10], but then the gap is, is smaller.

Qichao Hu: And then, uh, and then your point about LFP paired with lithium metal, which is actually hugely attractive to the OEMs because ... So, we have these, these four types of batteries right, and lithium ion was L-, the, the LP lithium ion, that's high nickel lithium ion and LP lithium ion, uh, it's for co-, uh, it's, it's for economy cars, the low range. And then high nickel lithium ion, that's for premium, uh, so then it's more expensive.

Qichao Hu: Now if you pair LMP with lithium metal, you can achieve same energy density as high nickel in lithium ion. So, so it, it's, it's really exciting to the OEMs because now you can achieve the same range as a high nickel lithium ion but with LMP, nickel free capital in lithium metal. So, so it, it's actually very exciting.

Shawn Severson: And, and my last question is on the technology roadmap in going from A, to B, to, uh, to C samples are, are there any ... Are these major technology hurdles or are these, uh, you know, called modest, um, modest evolution? I'm just trying to understand if there are any real, uh, technology issues or hurdles that you need to get over as you go through this process?

Qichao Hu: Yeah, so we do have a lot of challenges, um, but nothing, uh, that's fundamental. No showstoppers. For example, in the smallest cells that we demonstrated, uh, last year, the smaller 4Ah cells, the performance was actually, uh, uh, quite good.

Qichao Hu: And then when we first started building these large 50Ah and 100Ah cells earlier this year, we expected the, the performance to be much worse than the smaller cells just because ... And the, and the new cell format at the new line and new [inaudible 00:24:54]. But, but basically, we have lots of small, uh, uh, challenges to get a performance of the large cells to match the performance of the small cells. But that's, that's really ... Those are the, the, uh, just lots of engineering challenges, no showstoppers. This is one.

Qichao Hu: And then second one, uh, really it, it, uh, a B sample is to show that performance at the module level. Once we integrate these large top cells into modules, the performance can also match the performance that we see at the cell level.

Jing Ellis: Okay thank. I'll slip back in the queue.

Operator: Thank you. There are no further questions in queue. So as a reminder, to submit a question that's *1 on your telephone keypad. If there are no further questions, that will conclude today's call. If you have any additional questions, please feel free to contact investor relations with any questions you may have. Thank you for your participation. You may now disconnect your lines.