S&P Global
Market Intelligence

SES AI Corporation NYSE:SES

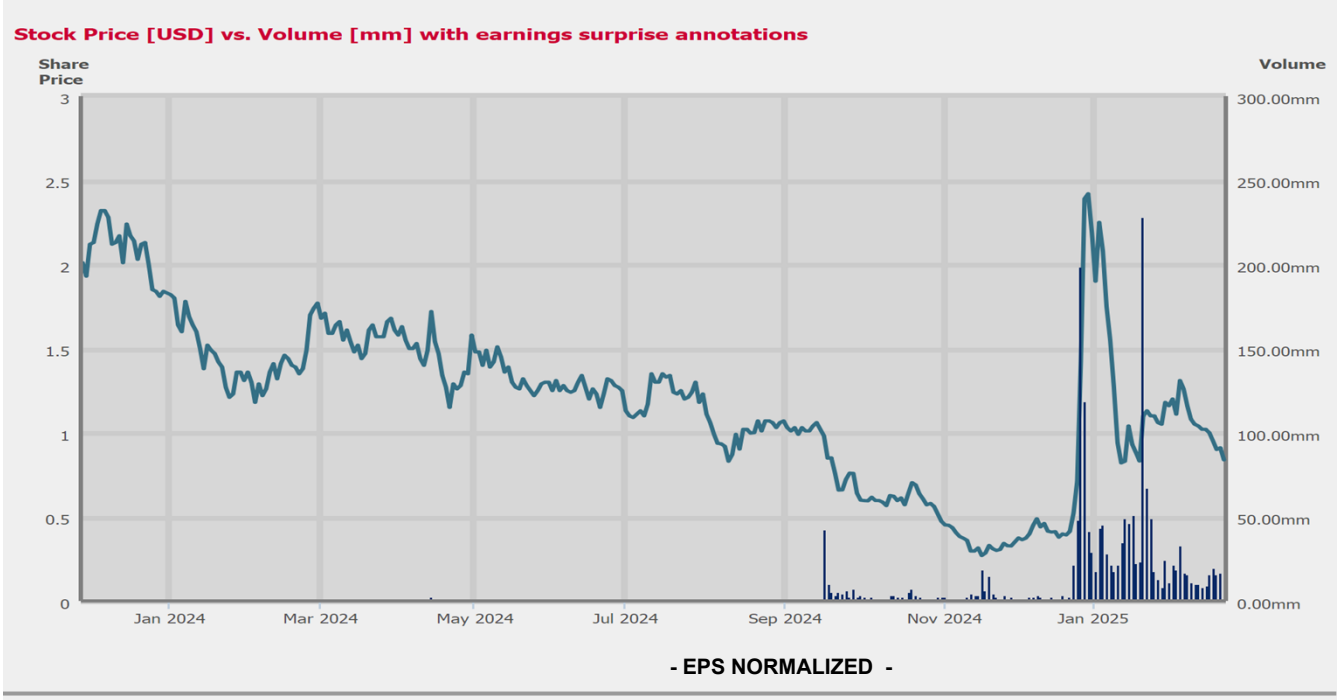
FQ4 2024 Earnings Call Transcripts

Tuesday, February 25, 2025 10:00 PM GMT

S&P Global Market Intelligence Estimates

	-FQ3 2024-			-FQ4 2024-	-FY 2024-	-FY 2025-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	CONSENSUS
EPS Normalized	(0.08)	(0.09)	NM	(0.09)	(0.27)	NA
Revenue (mm)	NA	NA	NA	NA	NA	NA

Currency: USD
Consensus as of Nov-05-2024 12:14 PM GMT



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ4 2023	(0.12)	(0.03)	NM
FQ1 2024	(0.05)	(0.05)	NM
FQ2 2024	(0.07)	(0.06)	NM
FQ3 2024	(0.08)	(0.09)	NM

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Call Participants

EXECUTIVES

Jing Liu Nealis
Chief Financial Officer

Kyle Pilkington
Chief Legal Officer

Qichao Hu
Founder, Chairman & CEO

ANALYSTS

Brian Gordon
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Mark Haywood Shooter
William Blair & Company L.L.C., Research Division

Yan Dong
Deutsche Bank AG, Research Division

Presentation

Operator

Good afternoon. Thank you for attending today's SES AI Fourth Quarter 2024 Business and Financial Results. My name is Shana, and I'll be moderator for today. [Operator Instructions]

I'd now like to turn the conference over to our host, Kyle Pilkington. You may proceed.

Kyle Pilkington
Chief Legal Officer

Hello, everyone, and welcome to our conference call covering our fourth quarter and full year 2024 results. Joining me today are Qichao Hu, Founder and Chief Executive Officer; and Jing Nealis, Chief Financial Officer. We issued our shareholder letter just after 4:00 p.m. today, which provides a business update as well as our financial results. You'll find a press release with a link to our shareholder letter in today's conference call webcast in the Investor Relations section of our website at ses.ai.

Before we get started, this is a reminder that the discussion today may contain forward-looking information or forward-looking statements within the meaning of applicable securities legislation. These statements are based on our predictions and expectations as of today. Such statements involve certain risks, assumptions and uncertainties, which may cause our actual or future results and performance to be materially different from those expressed or implied in these statements. The risks and uncertainties that could cause our results to differ materially from our current expectations include, but are not limited to, those detailed in our latest earnings release and in our SEC filings. This afternoon, we will review our business as well as the results for the quarter.

With that, I'll pass it over to Qichao.

Qichao Hu
Founder, Chairman & CEO

Thanks, Kyle. Good afternoon, and thank you for joining us on our fourth quarter and full year 2024 earnings call. Today, we are pleased to present an update on the new era for SES AI as we reap the benefits of our All-in on AI strategy, deepen existing EV relationships, move to the next stage of our evolution to a revenue-generating company and share our plans for additional revenue streams with new market expansion in drone/robotics and Battery Energy Storage Systems, BESS. As you may have seen, we have made several announcements over the last several weeks, including that SES AI is reporting revenue for the first time in the fourth quarter. We are no longer a pre-revenue company and look forward to continuing on our commercialization path by growing revenue in 2025 and beyond.

First, I would like to address the highlights in our EV space. Since the fourth quarter, we signed contracts totaling up to $10 million to develop AI-enhanced lithium-metal and lithium-ion batteries for EVs with 2 automotive OEM partners. These contracts solidify our relationships with our OEM partners and continue to demonstrate the value these partners see in the use of AI for battery material development, especially the value that an enhanced electrolyte can provide for both lithium-metal and lithium-ion batteries.

Second, I want to address the important work we have accomplished in Urban Air Mobility or UAM drones and robotics. In January, at the CES 2025 show, we unveiled an AI-enhanced 2170 cylindrical cell for humanoid robotics. Earlier in 2024, we signed a significant purchase order with Data Blanket for drones for forest fire management and with SoftBank for HAPS communication satellites. This was a game changer as these AI-enhanced 2170 cells are the first batteries to use an electrolyte discovered by SES AI's Molecular Universe effort, which maps the physical and chemical properties of the entire universe of small molecules suitable for battery electrolytes 10^11 molecules.

Our human scientists and AI agent learned that there's great similarity between lithium-metal and high-silicon lithium-ion cells in terms of electrolyte anode interfaces, and our development in lithium-metal electrolyte could also address high-silicon lithium-ion challenges, especially swelling and cycle life. We are now in both lithium metal and high silicon lithium ion.

2170 is an industry standard format and is available on a large commercial scale. The electrode discovered through our Molecular Universe effort is a [dropping] replacement. This allows us to have a CapEx-light model through contract manufacturing and to deliver a high-energy density and high-power density cell for customers in humanoid robots, drones, EVs, power tools and other applications.

Third, SES AI is planning to expand into a new and growing field, Battery Energy Storage Systems, BESS. Last month, we announced that SES AI signed an MOU with AISPEX targeting up to $45 million to provide up to 100-megawatt hours of advanced Battery Energy Storage Systems, BESS solution with AI for Safety and the first deployment at a crypto mining site in Texas. This relationship is the first of its kind for SES AI, and we believe that this is something that can be replicated with additional partners in the future. This project will involve our battery safety platform, Avatar, which includes our AI for Manufacturing and AI for Safety solutions.

Powering our commercial success are our 2 focus areas: upstream material discovery, Molecular Universe; and downstream battery safety, Avatar. In Molecular Universe, our collaboration with NVIDIA on GPU-enhanced computational chemistry software, helped accelerate this effort to map the entire 10^11 universal small molecules from more than 8,000 years to just a few months. We have now mapped 10^8 0.1% of the Molecular Universe. We think this is the world's largest single-molecule density function theory database, and we're also mapping solution and interface levels. This unique proprietary synthetic data help train our AI model that will accelerate novel electrolyte discovery, as we have seen for lithium metal and high silicon lithium ion and later, even LFP cells for BESS and other chemistries.

With Avatar, we have developed a new foundation model to monitor battery health and predict incidents before they happen. This AI-based model works in conjunction with conventional physics-based battery management system, BMS, but is agnostic to chemistry, form factor emission profile and currently has been pretrained on manufacturing data and cycling data across a variety of cell chemistries, including NCM, LFP cathode and high-silicon graphite and lithium-metal anode and form factors, including pouch, prismatic and cylindrical emission profiles ranging from BESS to EV, drones and robots.

In closing, SES AI has seen some exciting advancements during the end of 2024 and at the start of 2025, especially with us recognizing revenue for the first time in our history. All-in on AI is not only critical but is the future. We see great things continuing going forward. Here are some of the things I see happening. The change in our business model. Originally, we envisioned CapEx-heavy plans to manufacture cells for EVs and UAM at scale and then offsetting some of the required costs through JVs. Now our business model focuses heavily on selling our AI models and core battery materials, contract manufacturing of cells using our electrolyte and selling of contract imported cells.

A focus on hiring of AI scientists and sales and marketing teams to pursue greater expansion of revenue opportunities from 2025 to 2027, continued evolution from a pre-revenue, EV-focused battery technology company levered to one battery chemistry to a company that can leverage its prior work, along with its AI technology and AI-enabled electrolytes to generate revenue in a CapEx-light model much earlier than anticipated and with an ability to tap 2 new adjacent verticals that we believe will be much larger than EV.

Thank you for your continued interest in SES AI. And now I'll turn it over to Jing for financial updates.

Jing Liu Nealis
Chief Financial Officer

Good afternoon, everyone. I will discuss our financial performance for the fourth quarter and full year 2024. I am pleased to share our financial results and provide insights into our fiscal health, strategic priorities, commercialization plans and 2025 outlook.

For the fourth quarter ended December 31, 2024, revenue milestone. We reported Q4 2024 revenue of $2 million, marking the beginning of our evolution into a commercialized and revenue-generating business. This revenue was primarily driven by contracts with our automotive OEM partners to develop AI-enhanced lithium-metal and lithium-ion batteries for EV applications and initial delivery of our lithium-metal cells to our customers like SoftBank for HAPS and Data Blanket for drone applications. Importantly, this revenue comes with a 63% gross margin, demonstrating the strong value proposition of our technology and All-in on AI strategy.

Operating expenses. Our GAAP operating expenses were $30.4 million for the quarter, primarily driven by research and development initiatives and general administrative costs. Cash flow. We utilized $12.3 million in cash from operations and invested $0.2 million in capital expenditures during the quarter. Liquidity. We concluded the quarter with a strong liquidity position of $262.5 million, ensuring our ability to fund ongoing and future projects.

For the full year 2024, we achieved a total cash usage in operations and capital expenditures of $78.3 million, below the low end of our previous guidance of $80 million to $95 million. This includes operational cash usage of $66.1 million and capital expenditures of $12.2 million.

As we look ahead, SES AI is well positioned for continued growth and disciplined investment in 2025. The greater visibility we now have on revenue has allowed us to provide some guidance for 2025. As you know, this will be the first time that we are providing

this outlook. Therefore, we are being conservative in our expectations and focusing on the full year outlook rather than any particular quarterly cadence of revenue or expenses. We intend to update this outlook during the year as needed.

Revenue outlook. We anticipate 2025 revenue to be between $15 million and $25 million, reflecting growth from our expanding partnerships and commercialization efforts. We expect to generate revenue from development of AI-enhanced lithium-metal and lithium-ion batteries for EV applications, delivery of battery cells to UAM, drones and robotics customers and delivery of integrated Battery Energy Storage Systems with our AI solutions.

Planned spending. We forecast total cash usage in operations and CapEx to be between $70 million and $80 million, prioritizing R&D advancements, commercialization and strategic market expansion with a capital-light business model. Cash management. Our strong liquidity position extends our runway and continues to support our long-term vision with a focus on financial discipline and strategic investments. With our CapEx-light business model, we expect to maintain adequate liquidity well into 2028. We see tremendous organic and inorganic growth opportunities ahead of us. We are well capitalized to capture these opportunities in a disciplined fashion, particularly with additional funds from our projected revenue growth and/or potential capital markets activity further enhancing our liquidity.

2024 was a transformative year for SES AI. Achieving our first revenue milestone with a positive gross margin is a pivotal moment that signals our evolution from an R&D-focused company to a commercial and revenue-generating business. With high-margin revenue, growing partnerships and disciplined financial management, we are excited about the opportunities ahead. We appreciate your continued support and confidence in SES AI. Thank you.
Now I will turn the call back to the operator.

Question and Answer

Operator

[Operator Instructions]

Our first question comes from Winnie Dong with the company, Deutsche Bank.

Yan Dong
Deutsche Bank AG, Research Division

Qichao, I was wondering maybe you can talk about the shift in strategy here. In particular, what led to this shift? And then it was mentioned that there were signing of contracts totaling up to $10 million for 2 leading auto OEM partners. If you are able to reveal, are they the same OEM partners that SES has JDA partners with? And how is it different from those previous ones with Honda, Hyundai?

Qichao Hu
Founder, Chairman & CEO

Yes, Winnie. So previously, we just focus on just lithium metal for EVs, right? And then- and I think our work in lithium metal, it wasn't just at a battery cell level, it was more fundamental. It was more at the material discovery level for the electrolyte and then also at the lithium-metal battery safety side. And then these 2 core, we noticed and also the OEMs that we're working with noticed that we could actually apply these to lithium ion. And then once you expand to beyond just one technology, just one battery technology, and you can apply a platform to actually 2 platforms to multiple chemistries, then the addressable markets become much larger. So of course, we -- of course, I think anyone would just make us jump from a single technology in a single market to 2 platform across almost every battery technology out there. So that was a very obvious jump and I think quite exciting jump.

And then in terms of the 2 OEMs, I think you can guess, it's the 2 OEMs that we have been working with for a long time and they saw this transferability from just a single chemistry in a single market to every battery chemistry across multiple markets that they target, not just EVs, obviously EVs being one of the most important ones, but also drones, they do drones and then robotics. Both of them do robotics as well and then also Urban Air Mobility. So yes, that was the motivation for why we switch from just a single chemistry to multiple markets.

Yan Dong
Deutsche Bank AG, Research Division

Got it. I just have a follow-up on the contract manufacturing. Are you able to unveil any sort of economics behind that? It's interesting that the gross margin was 63% in Q4, which was very impressive. Is this sort of like an initial type of metric that we should look at? And how will this evolve, I guess, heading into 2025?

Qichao Hu
Founder, Chairman & CEO

Yes. I think it's too early to address that. And that margin was actually a mix of the AI models, the service as well as the actual selling of the sales. But going forward, in terms of the contract manufacturing, I mean, our goal to do contract manufacturing is to have a high margin. And I think it's well known that these next-generation battery companies just cannot compete at scale with any of the large incumbent battery players. So that's why we do contract manufacturing to achieve high margin. But the actual numbers, that's going to evolve based on volume, based on the particular application and customers.

Operator

Our next question comes from Brian Gordon with the company, Water Tower Research.

Brian Gordon
Water Tower Research LLC

First of all, congratulations on achieving revenue. It's a really significant event for the company. I did want to follow up on the gross margins, though. It seems like there are 2 different ways that you guys are sort of transitioning the business model. One is kind of, let's say, selling software versus selling hardware. Could you talk a little bit about how you see both the revenue opportunity for that and how that could potentially impact margins going forward?

Qichao Hu
Founder, Chairman & CEO

Yes. Obviously, we want to sell just the software because that's a pure high-margin business. At the same time, for both the materials and the battery safety, it's hard to just sell the software without the hardware. So the hardware is like a hook to get a customer and then you sell the software on top of that. And the hardware on the material side, we contract manufacture these cells. And the cells are like a carrier for our materials, and that demonstrates the benefit and the power of this Molecular Universe [indiscernible] software. So initially, it's going to be the margin is going to be a mix between the sales and the software. But once we grow this demand and then we do plan to shift to more of a pure software business.

And same thing for Avatar. The pure Avatar itself is, of course, very high margin, but then it's hard to sell just a software to BESS. You want to attach it to a hardware. And that's why initially, we -- for example, in the partnership with AISPEX, it will be the entire solution is the BESS hardware with the software.

Brian Gordon
Water Tower Research LLC

So that definitely makes sense. Should we expect then going forward that the company will be able to layer on something like an ongoing subscription revenue as it's selling these batteries?

Qichao Hu
Founder, Chairman & CEO

Yes. That is the plan. And then we have a few discussions with a few battery companies where we actually offer subscription to the models. For example, that map that we show in the shareholder letter, that is a treasure map that actually tells any battery company or any company that needs to develop a battery where to look for in terms of new electrolytes. So that map, so we sell that map. We sell products discovered from that map, and we'll also sell this AI model that was used to create that map. That's the annual subscription that you mentioned.

Operator

Our next question comes from Jed Dorsheimer with the company, William Blair.

Mark Haywood Shooter
William Blair & Company L.L.C., Research Division

Mark Shooter on for Jed Dorsheimer. I'll echo those sentiments. Congratulations again on the quarter and the revenue outlook. The business is fundamentally different with multiple different revenue streams. So in that guide for the revenue, can you give a rough breakdown of where do you think that's coming from?

Qichao Hu
Founder, Chairman & CEO

Yes. So this year, just roughly high level, as we mentioned in the letter, we expect bulk of this year to come from BESS and then the rest to come from a combination of the EV and drones and robotics just this year. Now next year and then going forward, that could change.

Mark Haywood Shooter
William Blair & Company L.L.C., Research Division

Got it. Okay. And then that BESS, the application you're using -- you're doing -- you're providing the full stack. Did I hear that correctly, with contracted contract manufacturing for the cells plus the pack integration and the BMS?

Qichao Hu
Founder, Chairman & CEO

Yes.

Mark Haywood Shooter
William Blair & Company L.L.C., Research Division

Okay. And is that a difficult market to break into?

Qichao Hu
Founder, Chairman & CEO

Good question. It depends on the market. It's a very fragmented market. And I think you have behind-the-meter and also in front-of-the-meter and then some parts of the market are obviously pretty dominated by the big players and some parts are more fragmented. But at the core, in terms of the types of cells they use are actually quite common. And you see about 4 to 5 different types of cells being used across all these different parts of the market.

And then -- so we break into the more fragmented ones and then the medium size. But then by doing that, we get access to all the data. And then these data -- so the manufacturing data, the formation data, these data we use to pretrain the Avatar, and then we use the life cycling data from these to also train the Avatar to monitor health. And the nice thing is these data come from the same cells that are used by the larger players. So once we break into the medium size and then get the data, train this Avatar, this Avatar can be used as a demo that we used to show the larger players.

Mark Haywood Shooter
William Blair & Company L.L.C., Research Division

Got it. That's very helpful. And last one for me regarding the drone applications. Where are your contract manufacturers? And are any of your drone customers supply chain sensitive regarding the region?

Qichao Hu
Founder, Chairman & CEO

Yes. For now, they are mainly in Asia. And yes, the drone contract manufacturers are sensitive and then they would like us to move to a more U.S.-based manufacturing. And then we do have plans to do that. And then we have a phase where we go through this Asia-based contract manufacturing first and then switch to a U.S based.

Operator

At this time, I'd like to pass the conference back over to Kyle Pilkington to answer a few questions. Kyle, you may proceed.

Kyle Pilkington
Chief Legal Officer

Thanks. As with past quarters, we solicited questions from investors prior to the call. We received a number of submissions, and we'll go through a selection of those submissions now. The first question is the performance limit today of cells with high-silicon anodes is the stability of the electrolyte. With SES' new electrolytes and the new advanced silicon anodes, what is the expected specific energy density cycling durability and charge rates for 2170 cells made with these materials? What is the likelihood of these cells would be preferred for EV applications?

Qichao Hu
Founder, Chairman & CEO

Yes. The high-silicon anode lithium ion behave actually quite similar to lithium metal. And then in fact, the higher the silicon, the more it behaves like a lithium metal from the perspective of this electrolyte anode interface. And so high silicon currently suffer from swelling and also gassing challenges, and that lead to short cycle life.

And with this new electrolyte, we can significantly enhance the cycle life. And then how much improvement in cycle life really depends on the amount of silicon that's used. And if we go to 100% silicon, we actually expect to improve the cycle life. We actually expect to more than double the cycle life. So the improvement is actually higher as we increase the amount of silicon.

Kyle Pilkington
Chief Legal Officer

Great. The next question we have is, can competitors copy the new solvent your AI discovered? Is it patentable or just trade secrets?

Qichao Hu
Founder, Chairman & CEO

Definitely can. And in this industry, especially if you have something that works really well, people will copy. And so the only way to compete is the speed, and we try to focus more on the speed of innovation and not just the innovation itself. For example, that map

that we showed in the shareholder letter, that's a very good example. And others -- so we're not just finding a new electrolyte and then this new electrolyte or this new solvent, yes, if it works well, it will get copied. And that's just how it works in the industry.

Anytime you have a new material, if it works well, it gets copied. And if it doesn't work well, then people won't copy it. But in our case, we're not just selling a new solvent. So each dot on the map is a solvent. We're selling the map and this map, no one else has that, and the tool to create this map to find this map, no one else has that. So we have the ability to know where these new solvents are for different applications. And this ability for now, no one can copy that.

Kyle Pilkington
Chief Legal Officer

Thank you. Going down the list, next question. As AI technology evolves, how is SES improving its AI models to enhance battery performance, safety and manufacturing efficiency?

Qichao Hu
Founder, Chairman & CEO

So the cost of AI has come down a lot, and this has allowed us to train these models, both large language models and foundation models with more data and then visibility. And we are getting more data and both actual data from actual battery recycling and also a lot of synthetic data, basically data that did not exist before, especially for the molecule properties. And the more data we have and the more data we use to train these models, it gets more sophisticated. So -- and also the cost and efficiency have improved a lot. So it's now possible to actually run training on these massive database in a much more cost-effective way than before.

Kyle Pilkington
Chief Legal Officer

Thank you. We'll do one more from the pre-submitted questions. EVs are the #1 market for 2170 cells. If SES has a better one, what is the prognosis for selling these into automotive? It seems the high-silicon version might be an earlier candidate than lithium-metal cells.

Qichao Hu
Founder, Chairman & CEO

So the high silicon and lithium metal are sort of parallel tracks. And previously, we focused just on lithium metal. And then now we are actually improving the cycle life of high silicon. So we're doing both. And then we already have been working with 3 OEMs quite closely. And I think a few quarters earlier, we mentioned that there were OEMs that use 2170 cylindrical cells that we did not address because we only make pouch. So now our pouch lithium metal, we use that to address OEMs that use pouch. And then our 2170 cylindrical high silicon, we use that to address OEMs that we did not address before because we didn't have the form factor. So -- and also same thing for robotics, a lot of OEMs that make EVs also make robotics. And this 2170 really allows us to address a really big market that we did not address before.

Kyle Pilkington
Chief Legal Officer

Excellent. Thank you. With that, I'll turn it back over to the moderator for a conclusion of the call.

Operator
That will conclude today's conference call. Thank you for your participation, and enjoy the rest of your day.