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Aspen Aerogels, Inc. NYSE:ASPN

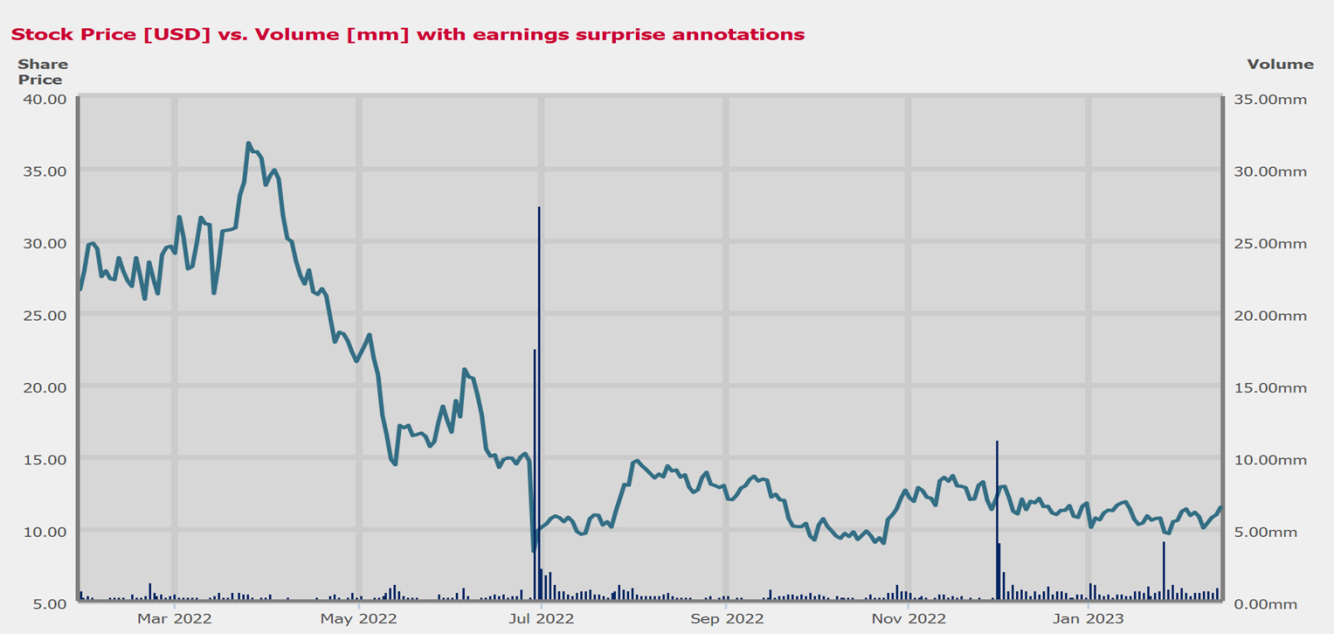
FQ4 2022 Earnings Call Transcripts

Thursday, February 16, 2023 1:30 PM GMT

S&P Global Market Intelligence Estimates

	-FQ4 2022-			-FQ1 2023-	-FY 2022-			-FY 2023-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS
EPS Normalized	(0.29)	(0.20)	NM	(0.28)	(2.22)	(2.10)	NM	(1.10)
Revenue (mm)	56.91	59.61	▲4.74	55.29	177.58	180.36	▲1.57	241.86

Currency: USD
Consensus as of Feb-14-2023 3:34 PM GMT



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ1 2022	(0.47)	(0.59)	NM
FQ2 2022	(0.56)	(0.68)	NM
FQ3 2022	(0.55)	(0.75)	NM
FQ4 2022	(0.29)	(0.20)	NM

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Table of Contents

Call Participants	.....	3
Presentation	.....	4
Question and Answer	.....	11

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Presentation

Operator

Good morning. Thank you for attending Aspen Aerogels, Inc. 2022 Financial Results Call. [Operator Instructions] I would now like to turn the conference over to your host, Laura Guerrant, Aspen's Vice President of Investor Relations and Corporate Communications. Thank you. You may proceed, Ms. Guerrant

Laura J. Guerrant-Oiye
Vice President of Investor Relations & Corporate Communications

Thank you, Elliot. Good morning and thank you for joining us for the Aspen Aerogels fiscal year 2022 and fourth quarter financial results conference call. With us today are Don Young, President and CEO, and Ricardo Rodriguez, Chief Financial Officer.

There are a few housekeeping items that I would like to address before turning the call over to Don. The press release announcing Aspen's financial results and business developments as well as a reconciliation of management's use of non-GAAP financial measures compared to the most applicable U.S. generally accepted accounting principles or GAAP measures is available on the Investors section of Aspen's website, www.aerogel.com. Including in the press release is a summary statement of operations, a summary balance sheet and a summary of key financial and operating statistics for 2022 fourth quarter and full year ended December 31, 2022.

In addition, I'd like to highlight that we have uploaded to our website, a slide deck that will accompany our conversation today. You can find the deck at the Investors section of our website. An archive of today's webcast will be on our website for approximately one year.

Please note that our discussion today will include forward-looking statements, including any statement regarding outlook, expectations, beliefs, projections, estimates, targets, prospects, business plans and any other statement that is not a historical fact. These forward-looking statements are subject to risks and uncertainties. Aspen Aerogels' actual results may differ materially from those expressed in these forward-looking statements. A list of factors that could affect the company's actual results can be found in Aspen's press release issued yesterday, Page 1 of the presentation and are discussed in more detail on the reports Aspen files with the SEC, particularly in the company's most recent annual report on Form 10-Q. The company's press release issued yesterday and filings with the SEC can also be found in the Investors section of Aspen's website. Forward-looking statements made today represent the company's views as of today, February 16, 2023. Aspen Aerogels disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

During this call, we will refer to non-GAAP financial measures, including adjusted EBITDA. These financial measures are not prepared in accordance with GAAP. These non-GAAP financial measures are not intended to be considered in isolation or as a substitute for results prepared in accordance with GAAP. The definitions and reconciliations of these non-GAAP financial measures to the most directly comparable GAAP financial measures and a discussion of why we present these non-GAAP financial measures are included in yesterday's press release.

And one final note, during the Q&A session, in the interest of time, we ask that you limit your questions to 2 questions at a time. If you have additional questions beyond the initial 2, please get back into the queue, and we will get to all questions.

And I'll now turn the call over to Don. Don?

Donald R. Young
President, CEO & Director

Thanks, Laura. Good morning, everyone. Thank you for joining us for our Q4 2022 earnings call. I will start with comments on our performance, our Q4 financing, our outlook for 2023 and our highlights from

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our EV OEM development work. Ricardo will discuss business results and outlook in detail. We will conclude with a Q&A session.

During the fourth quarter, we had record PyroThin thermal barrier revenue slightly surpassing the $25 million mark and a robust energy industrial order book which together enabled us to achieve our target of $180 million with growth for the year of nearly 50%. PyroThin thermal barrier revenue for the year surpassed $55 million, up nearly 9x from the 2021 levels. As we look out over 2023, we expect PyroThin thermal barrier revenue to build over the year as automotive OEMs scale their operations, which we believe will result in materially more PyroThin thermal barrier revenue in the second half of the year compared with the first half. At the same time, we expect our energy industrial business to remain strong through the year and provide a steady baseload of revenue.

Our demonstrated capability both supply and demand to generate nearly $60 million of revenue in Q4 2022 supports our target of reaching approximately $240 million of revenue this year, consistent with our objective to double revenue from 2021 to 2023. The Q4 gross margin of 24% demonstrates the value of higher capacity utilization and the progress we are making to eliminate redundant costs as we scale. Our teams did an outstanding job in Q4 and are now focused on continuing to make additional productivity gains in 2023. While our longer term gross margin target remains 35%.

We are pleased with the progress we made in Q4. We continue to deepen our technical and commercial engagement with both current and prospective automotive customers. During Q4, we experienced a record number of OEMs ordering prototype parts. Several of the OEMs entered our thermal barrier development pipeline during 2022 driven at least in part we believe by their earlier non-PyroThin designs being unsuccessful at mitigating the risk of thermal runaway propagation. As we have described in the past, mitigating the dangers of thermal runaway presents a challenging and multifaceted problem. We believe our value to the automotive OEMs is based on our unique technical solutions and our deep subject matter expertise.

In that we are well positioned to achieve our goal of deepening our technical and commercial relationships with existing customers at the same time that we add important new customers. There were several interesting developments since our last earnings call. We received a letter of intent from the luxury brand of a major German OEM group where the thermal barrier parts are targeted for a battery platform intended for use across several of their models. The LOI captures the advance stage of the qualification process and related negotiations and we believe puts us on a firm track for a full design award.

We also received an order for approximately 1.5 million prototype parts for a commercial vehicle brand within the same German OEM group. We believe that this LOI and the advanced parallel work with other brands within the group position us well to earn broad adoption with this important German OEM. More broadly, we have been invited by existing and prospective new customers to quote approximately $15 billion of PyroThin thermal barrier business. Again, we believe we're well positioned to succeed.

On the energy industrial side of our business, we have a deep order book. We already have purchase orders for 2023 of over $100 million. We have robust commercial activity levels across our refining, petrochemical, LNG and subsea segments and across all of our major regions. We have implemented price increases for all products across our energy industrial business, which should positively impact Q2 and beyond. Furthermore, we are competing successfully in both maintenance and project work.

Even with the probability of a slowing global economic growth, we believe our strong outlook for energy industrial is fueled by our value drivers of efficiency, resiliency and safety by geopolitical pressures that promote LNG and by the balance sheet strength of our end users. The energy industrial revenue stream is a valuable base load for us as we manage our overall revenue growth during this early stage of the EV megatrend. This flexibility is a good example of the benefit of our strategy to leverage the Aerogel technology platform into a diverse set of large and dynamic markets.

During the fourth quarter, we executed a successful publicly marketed equity offering, raising approximately $265 million, including $100 million from coke industries. We intend to use the proceeds from the offering to partially fund the construction of Phase 1 of our second Aerogel manufacturing facility in Statesboro, Georgia and for other general corporate purposes. At the same time, we entered into

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a definitive loan agreement with General Motors for a secured lending commitment of $100 million in connection with the equipment and construction of our Plant 2. The loan proceeds can be drawn on a periodic basis as construction milestones are met.

The financial commitment from General Motors adds another dimension to our long-standing technical and commercial relationship. We are deeply involved with GM's current and next-generation battery platforms and, of course, are building Plant 2, in part, to meet GM's demand in the coming years. We appreciate GM's commitment to our success. During our last 2 earnings calls, I said that Plant 2 would not be immune from the macro challenges marked by supply chain and inflationary challenges that are impacting virtually all major construction projects. We are proactively managing the project in order to try to minimize cost and schedule pressures and doing so such that Phase 1 has more than adequate manufacturing capacity to achieve our 2025 revenue target of $720 million.

This level of manufacturing capacity will be critical as we serve General Motors, Toyota, and we believe other EV OEMs who are now deep in our business development pipeline as demonstrated by our recent LOI from the German OEM. With the successful financing completed in Q4, we will continue over the next couple of years to take in all of the above approach to financing our growth plan. As we explore prospective sources of equity and debt capital, we will continue to focus on strategic investors on more fully utilizing our significant assets as collateral and on government grant and loan programs to supplement private sector capital.

We believe these avenues are most efficient, validate our business strategy and, of course, strengthen our balance sheet. We believe battery performance and safety and the resiliency of supply chains in the U.S., especially for critical areas of energy transformation and electrification will continue to attract capital from a wide range of sources. We are confident that all of the above approach to raising the necessary capital for us to execute our long-term strategy is correct.

Before I turn the call over to Ricardo, I would like to express my appreciation to the employees of Aspen. The past year presented many macro challenges, but our team stayed focused on executing our plan to double revenue from 2021 to 2023 and I'm preparing to triple revenue from 2023 to 2025. We are guided by our desire to create a positive cycle of mutual benefit with our customers, suppliers and communities. We have a very talented and dedicated group of people working here at Aspen, and I am happy to be part of the team.

Ricardo, over to you.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Thank you, Don. I'll start on Slide 4 and our financial highlights for the fourth quarter of 2022 and recap on the last year.

Starting with revenues. We delivered $59.6 million of revenue in Q4, which translates into 90% growth year-over-year. This record level of run rate in Q4 contributed to our delivery of $180.4 million of annual revenues for the year. This is a 48% year-over-year increase over our revenues in 2021 of $121.6 million. This growth rate is well in line with our long-standing targets of doubling our 2021 revenues by the end of 2023 and then tripling them by the end of 2025.

I'm truly thankful for our team as it came together in Rhode Island, Mexico, the Boston area and all our international sales locations to produce high-quality EV thermal barriers and get all the last possible energy industrial deliveries out the door. In Q4, we proved that when the EV thermal barrier demand is there, our assets can deliver in a world-class way. Speaking of EV thermal barrier demand, this came in line with our expectations for the quarter, thanks to a supplemental order from General Motors that spans Q4 of 2022 and Q1 of '23.

This order is meant to stabilize their volumes as GM ramps up their demand in the second half of 2023. This order also enabled us to leverage the productivity of our manual assembly operation in Mexico to deliver a total of $25.2 million in EV thermal barriers during Q4. This is a 111% increase over the prior

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quarter and a 5x increase over last year. Our total EV thermal barrier revenues in 2022 were $55.5 million, an almost ninefold increase over the prior years.

Our Q4 energy industrial revenues of $34.4 million was 39% higher than the prior quarters and a 31% higher year-over-year. They brought our total for the year to $124.8 million, an 8% year-over-year increase that would be higher if we weren't allocating aerogel production capacity towards EV thermal barriers. Our Q4 product mix demonstrated that when it is tilted towards EV thermal barriers, our revenue run rate can start aligning with our growth plans. I couldn't be more excited about our prospects to continue growing profitably as we get more productivity out of our aerogel plant in Rhode Island and implement those learnings on Plant 2 in Georgia. I'll go into more detail on this later.

Next, I'll provide a summary of our main expenses. Material expenses of $24.4 million for the quarter, made up 41 percentage points of sales, which was close to where we want to be long term, actually within single-digit percentage points. This quarter-over-quarter improvement of 17 percentage points of sales is indicative of what can be delivered at a higher run rate. It's also worth highlighting that our margins in Q4 were slightly enhanced due to the fact that the scrap costs of manufacturing aerogel that was converted into EV thermal varies in Q4, but made in prior quarters, was accounted for during those prior quarters.

For the year, our material cost of $92.2 million made up 51 percentage points of sales. And as we've mentioned previously, these are at least 11 percentage points away from our long-term target. Conversion costs, which we describe as all production costs required to convert materials into finished products were $20.9 million and made up 39 percentage points of sales in Q4. These costs include all elements of direct labor, manufacturing overhead, factory supplies, rent, insurance, utilities, process logistics, quality and inspection. These compare with costs of 61 percentage points of sales in Q3 at 35 percentage points of sales we're within 15 percentage points of where these need to be as we continue to grow revenues. It is encouraging to see our team's ability to drive towards our conversion cost targets as our revenue run rate increases, and we expect to continue making improvements in these areas to increase our operating leverage and continue driving down the cost of making every incremental unit.

For the year, our conversion costs were $83.1 million, and these made up 46 percentage points of sales. In Q4, our investments to increase the productivity of our aerogel plant in Rhode Island, combined with the establishment of our assembly facilities in Mexico, enabled our gross profit margins to go from negative 17% in Q3 to positive 24% in Q4. Both product lines contributed positively to our gross profit of $14.3 million in Q4, with $7.8 million of that coming from our energy industrial segment and $6.5 million coming from EV thermal barriers. These represent positive gross profit margins of 23% and 25%, respectively, for the quarter. For the year, our gross profit was of $4.9 million, reflecting a 3% gross profit margin with margins in our energy industrial segment of 15% and negative 25% in EV thermal barriers or a gross profit of $18.8 million and a gross loss of $13.9 million, respectively.

Operating expenses, which are enabling our growth were of $22 million. These increased by $2 million quarter-over-quarter versus an increase of $4.6 million in Q2 over Q1 and had an increase of $0.6 million in Q3 over Q2. As I've mentioned in prior quarters, we're leveling off our OpEx increases and have focused them precisely on delivering 3 things: one, tangible productivity benefits through new process development and the implementation of systems that streamline our methods and drive productivity; two, new OEM production awards through our EV thermal barrier technical sales efforts and managing these awards and pursuits with world-class levels of service; and three, clear milestones in our R&D efforts.

Putting these elements together, our adjusted EBITDA was a negative $4.5 million in Q4 compared to negative $12.2 million during Q4 of the prior year and negative $23.2 million during the prior quarter. For 2022, our adjusted EBITDA was negative $60.6 million compared to a loss of $26 million in the prior year. As a reminder, we define adjusted EBITDA as net income or loss before interest, taxes, depreciation, amortization, stock-based compensation expenses and other items that we do not believe are indicative of our core operating performance.

In Q4, these other items included $2.7 million of stock-based compensation and $50,000 of net interest income. Our net loss in Q4 decreased to $9.6 million or [indiscernible] 21:19 $0.26 per share versus a net loss of $16.4 million or $0.50 per share in the same quarter of 2021. Our quarter-over-quarter net loss was reduced by $20 million from $29.6 million. For the year, our net loss was of $82.7 million or $2.10

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per share, which compares to a net loss of $37.1 million in 2021 or $1.22 per share. It is worth clarifying that for all these earnings per share calculations, our number of fully diluted shares outstanding was $30.4 million at the end of 2021, a weighted average of 39.4 million shares in 2022, and our number of shares outstanding at the end of 2022 was 70 million shares.

On the topic of share count, I would like to note that over the next 2 weeks, in connection with the vesting of restricted stock units issued in the ordinary course under our long-term equity incentive program, our Section 16 officers will file Form 4s to report the withholding of shares by the company to satisfy statutory tax obligation related to the vesting of these RSUs. I would also want to emphasize that the shares that were held by Aspen will not be sold into the market and will remain unissued.

Next, I'll turn to cash flow and our balance sheet. Cash used in operations of $18.6 million reflected our adjusted EBITDA of negative $4.5 million and an increase in cash needs of $23.4 million that reflects a quarterly increase in accounts receivable of $30.3 million. These put our operating cash needs for the year at $89 million. Capital expenditures during the quarter of $64.1 million included the partial construction of the main buildings in Statesboro, Georgia for Plant 2, assembly equipment for our automated thermal barrier operations, upgrades to our R&D labs and significant progress in the construction of our advanced thermal barrier development center in the Boston area.

These brought our total CapEx in 2022 to $183.4 million. below the $200 million to $225 million range. Progress on these projects is in line with our expectations. As progress on the construction of our second aerogel manufacturing plant continues, we have incurred $165.5 million in capital expenses through the end of 2022 towards it. I'll provide a more meaningful update on Plant 2 later in this presentation. Net cash provided by financing activities of $262.9 million during Q4 included $267.9 million of net proceeds from our equity offering and a $5 million repayment of BASF's prepayment balance, which was originally received in February of 2018.

2022 was a pivotal year for funding our growth. with $478.4 million in net financing activities that featured proceeds driven by $100 million from the issuance of a convertible note and $50 million of common stock issued to coke industries at a price of $27.90 per share. $73.3 million of net at the market offering proceeds from the sale of common stock at an average price of $17.70 per share; and most recently, $267.9 million of net proceeds from our upsized public equity offering at $9.50 per share on November 30. We ended the quarter with $281.3 million of cash and shareholders' equity of $443.3 million.

I will now turn to Slide 5 and walk you through our thinking and full year 2023 outlook. Having expressed a target of doubling our revenues every 24 months since our Q4 2020 earnings call, it'd be logical to expect our 2023 revenues to be double to $121.6 million that the team delivered in 2021. That would be $243.2 million. In our Q4 2021 earnings call, we reiterated our plan to double our 2021 revenues to 2023 and to then triple them into 2025. With what we know today about our customers' demand for PyroThin thermal barriers in 2023, we're setting our revenue outlook for the year to be between $200 million and $250 million. This is equivalent to growth of between 11% and 39% compared to 2022.

We realized that this is a wide range that will tighten as the year progresses. However, just as in 2022, our revenues are being driven to a significant extent by what we expect to be an increasingly steep ramp in the production of Ultium battery platform powered vehicles by General Motors. This ramp was subject to a delay in the second half of last year, and this may continue. Doubling our 2021 revenues for the year continues to be our target in north side with 2023 being a year of continued transition for the OEMs that we're supplying. Because we expect the second half of this year to see a significant number of new nameplate launches.

We expect at least 60% of our total revenues to materialize during the second half of the year. This split is of at least 70% in our EV thermal barrier revenues. Therefore, we believe that our quarterly revenue run rate will not surpass our Q4 2022 run rate until Q4 of 2023. Optimizing our aerogel production capacity throughout the year will play a critical role in executing a steep ramp towards the end of 2023.

Last year, we demonstrated that we're flexible and can rise to this type of challenge when the demand is there. With this in mind, we also expect 95% of our gross profit in the second half of the year. We are executing several initiatives that would improve our profitability in 2023 and that we believe can

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reduce our cost of goods sold by over $10 million for the year and our OpEx by approximately $5 million. However, this early in the year, we're also conscious of the fixed expense base that we're carrying in anticipation of revenues in the second half of the year. Historically, the team has exceeded our expectations at minimizing the fixed expenses. But given the high variance in quarterly demand that we expect, investing in flexibility will pay dividends.

Our investments in personnel and resources to capitalize on the growth that we're expecting will be more tempered in 2023 as we optimize our OpEx and aiming at commissioning Plant 2, driving productivity through processes and systems and maintaining our technological and commercial lead in EV thermal barriers. With these actions, we expect adjusted EBITDA of between negative $50 million and negative $60 million and EPS of between a loss of $1.46 and a loss of $1.31 per share. This EPS outlook assumes a weighted average of 70 million shares outstanding for the year. In addition, this 2023 outlook assumes depreciation of $22.3 million, stock-based compensation expense of $11 million and interest expense of $8.6 million. We also expect to incur between $350 million and $400 million of capital expenditures during the year, principally for our Plant 2 project.

In 2023, as Don mentioned in his earlier remarks, we will continue strengthening our balance sheet by raising capital from a wide range of sources. In the near term, we can rely on the $100 million secured loan commitment that we announced from General Motors in November of last year to support the ongoing funding of Plant 2. We've also made progress to supplement that with up to $100 million of equipment backed financing. We also continue managing several strategic discussions to ensure that we have -- that we make the most of our collateral and profitable growth potential as we fund our strategy in a very supportive regulatory landscape.

Turning over to Slide 6. I'd like to provide an update on Plant 2, how its design has evolved, how the team has been navigating a rising construction and material cost environment and the results of efforts in 2022 aimed at increasing the productivity of our processes and the flexibility of our overall capacity. In December of 2021, with a roughly 15% completed design, our team estimated that the cost of Phase 1 of Plant 2 would be of $575 million. Now two weeks after having completed 85% of the design and having spent $165 million towards the project through the end of 2022, we estimate the cost of Phase 1 to be of $710 million, $135 million increase.

Approximately $90 million of this increase or 16% is driven by higher material and construction costs. With the backdrop of a 21% rise in the cost of industrial building construction, a 15% rise in the cost of cement and the 14% rise in the cost of industrial valves over the last 12 months, the team is optimistic about being able to manage through what is proving to be a difficult time to commission a construction project of any scale.

The remaining increase of $45 million or 8% is driven by a higher level of planning the design of the plant. For example, 15% design completion we were defining the length of the plant's pipeline while 85% of the time completion, the team has a plant's pipeline specifications involving the final detail. In light of this and what we all know is the higher cost of capital environment we challenge the team to increase all our aerogel production capacity flexibility by implementing our latest design and production process improvements in 2023. We have also thought about how to optimize our product mix. As we optimize our revenue mix our total annual revenue capacity for our plant in Rhode Island can be about $400 million per year.

And the capacity of Phase 1 of Plant 2 can be about $1.2 billion. For a total avenue revenue capacity of $1.6 billion. This compares to our prior revenue capacity estimate from just over a year ago of $250 million for our plant in Rhode Island and $650 million for Phase 1 of Plant 2. At the time we estimated that these assets provided a total revenue capacity of $900 million. In light of having to spend an incremental $135 million on Phase 1 of Plant 2, we focused on driving the flexibility to not just deliver our 2025 revenue plans but to be ready for additional opportunities. We are seeing the long term volume plans for EV thermal barrier awarded business increase to the point where we believe these can make up anywhere between 80% and 170% of our target 2025 higher than revenue.

Finally let's focus our attention on Slide 7. Throughout last year, we laid out our views on the battery chemistry to form factors that were most logically compatible with PyroThin. Later we used a map to relay

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our team's level of engagement with various customers around the world. Today, we'd like to dive deeper into our award quote pipeline through 2030.

In North America, we assessed that we have the potential to capture an estimated $10 billion of revenues between 2023 and 2030. Our discussions have progressed with a second North American OEM from their testing of the material to us providing quotes and being engaged on various nameplate. In Europe, we estimate the value of our active quotes to be of approximately $3 billion. These include the revenues from the potential vehicle platform award linked to the Letter of Intent that Don mentioned in his remarks.

We mentioned this LOI because while it isnâ€™t an award, in this particular OEM sourcing process it serves as important communication to our supplier that is technology has been selected to be procured and that it is being packaged protected for in the platforms designed. The value of this award can also expand as more nameplates are announced for this EV platform. we are also scheduled to supply the same OEMs commercial vehicle division with a meaningful prototype part order for approximately 1.5 million parts as part of the development work required to get sourced on a commercial vehicle platform.

In Asia, the team continues making progress and [indiscernible] 36:04 quoted and awarded opportunity to be of over $2 billion to 2030. As one can see, NMC and LFP chemistries with Prismatic and Pouch cell opportunities alone can provide $15 billion of revenue by 2030. LFP chemistries are popular in China but we are seeing some OEMs in the west inquire about solutions to enable safety in LFP and several of our quotes are for these types of programs.

Our teams have also built relationships with battery Tier 1s or entities that have been established to supply multiple OEMs with assembled battery packs as part of a battery platform. These present a significant opportunity to expand within multiple OEMs and we have two of these opportunities within our active quote pipeline.

With that I'm happy to turn the call back to Don.

Donald R. Young
President, CEO & Director

Thank you, Ricardo. We have covered a significant amount of ground today in reviewing 2022 and in setting the stage for 2023 and beyond. I would like to emphasize four points. First, we had record revenue in 2022, finished with a strong Q4 and positioned ourselves to achieve our target of doubling revenue from 2021 to 2023 to $240 million. Second, our business development pipeline for PyroThin thermal barriers is robust, between existing customers and new customer prospects we have been invited to quote $15 billion of PyroThin thermal barrier business. We are in a strong position to serve existing customers and to add important new customers.

Third, we are actively managing cost and schedule procedures of Plant 2 in a way that enables us to achieve our 2025 revenue target of $720 million and provides maximum flexibility to meet the potential for significant customer demand. And fourth, we are focused on leveraging our operating efficiencies to achieve our gross margin target of 35% and to drive significant profitability as we scale.
Let's turn the call to Q&A, please.

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Question and Answer

Operator

Thank you. [Operator Instructions] Our first question today comes from Eric Stine from Craig-Hallum.

Eric Andrew Stine
Craig-Hallum Capital Group LLC, Research Division

Good morning, everyone. So maybe we can just start with Plant 2. And I know over the last couple of months, the thought process has been to get away from kind of Phase 1, Phase 2 because it was a bit confusing. But I guess maybe first, given that you still are talking about Phase 1 here and at $1.6 billion of overall revenue capabilities, that's where you were when you were talking about where you'd be for Phase 2. So maybe thoughts on what you would be able to get to when Phase 2 is completed? And then also maybe just more detail on some of the steps. How are you expanding this? It's pretty meaningful in Georgia, but also in Rhode Island.

Donald R. Young
President, CEO & Director

That's a good question, Eric. I mean, -- in an ideal world, we wouldn't be talking about phases anymore. I think we just used the Phase 1 label given that we had put that out there just over a year ago, alongside Phase 2 as well. It is worth highlighting, though, that Phase 1 has still the infrastructure to pave the way for us to add the capacity that had been outlined for Phase 2. But obviously, if you recalculate that, that is now a much higher amount using the methods that we're now referencing. And so I would argue that Phase 2 would now be more like Phases 4 through, Phases 2 through 5. And so we have the ability to more incrementally add equipment to the plant, particularly in what happens to be the longest cycle time process of our facility, which is the extraction of the liquid from the roles.

And so I mean, right now, frankly, we're more focused on just the demand being there in the second half of 2023 before going to plan for these additional phases of expansion to the plant. But as I've outlined in my remarks, we think that what we're planning to do with Plant 2 now does give us the flexibility to capture our 2025 revenues and to flex well beyond that as we allocate revenue capacity.

And to your question on really what changed in the process, I think it's -- I mean it's really been multiple things that the team has applied to our site in Rhode Island, frankly, to get us to the run rate that we delivered in Q4, that was a big, meaningful step. But it's also worth within our product range, the roll length that we can make at the plant actually vary significantly between one product and the other. And as we prioritize those products that we make in higher roll lengths, we're able to get more square feet of aerogel, which, assuming the price is the same for all of them, which is not, you can see how it's just a much leaner mix on the plant and we're able to crank out more product as a result.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Eric, just the key point, just to reiterate, just one point I would just reiterate is as we were managing -- as we are managing the build first and foremost was our ability to be sure we were able to meet our 2025 revenue target, the tripling of revenue to $720 million. And the design does have that capability and more, frankly, as we see potential upside as we scale our business and as the mega trend continues to take shape.

Eric Andrew Stine
Craig-Hallum Capital Group LLC, Research Division

Got it. And so -- but maybe another way to think about this, you were targeting with Phase 2 $1.6 billion in revenue capacity. And I think the CapEx number was $700 million. So effectively, I mean, yes, you're increasing $575 million to $710 million, but you're really -- it's an increase of $10 million for a like amount of capacity. I mean, is that a fair way to think about it?

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Donald R. Young
President, CEO & Director

It is. I mean I think there's more product mix trade-offs that are implied in the $1.6 billion revenue number. But yes, I mean, the math is the math, right. It is a lot more capital efficient now with how we planned the capacity.

Eric Andrew Stine
Craig-Hallum Capital Group LLC, Research Division

Got it. And then maybe just on the award and quote pipeline and thanks for all the details there. But I do notice that you no longer have people in kind of the testing phase. They've all moved to the quote phase. I mean, is it still fair to say that although you're not in charge of when you're able to announce these things, the OEM is that -- your expectation is that you'll be adding more, I mean, beyond the German OEM and the opportunities that you've detailed today?

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Yes. I mean, we're sort of playing with 2 charts here, right? One is the map that we had before and now this soon on the quote pipeline. I would argue that those OEMs that we're testing that are testing the material or frankly, that where we've quoted and sold prototype parts to, there are several who were quoting those testing parts or prototypes that would need to be added to this list when we actually quote a production program for them.

So one thing that's worth clarifying is that here on Slide 7, what we included are only production vehicle quotes. So this is our production vehicle quote pipeline.

Donald R. Young
President, CEO & Director

Eric, I think one other point I would make one observation I would make, Eric, is I would say that our -- the testing period seems to be shorter than maybe originally and it's, I think, in part because our domain expertise, our knowledge is much greater. Our product is better characterized as we've gone through the process with several of these OEMs. And so -- and I think there's more urgency on the OEMs part to move through the process more quickly as well. And so for a combination of reasons, I think that testing period is tending to be a little shorter than it was a year or so ago.

Operator

Our next question comes from Colin Rusch from Oppenheimer.

Colin William Rusch
Oppenheimer & Co. Inc., Research Division

Could you talk a little bit about the pricing dynamics as you're going through this quoting process? How much leverage you guys have from a pricing perspective as well as the volume of content per vehicle and how that's trending?

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

I mean we definitely have not seen any weakness. We -- as Don mentioned, the fact that the testing goes through much faster and that we're able to leverage some of our own testing data to advance the pipeline further has given us leverage to not only accelerate these discussions but I mean, I think when -- we have a pretty -- I wouldn't say simple or easy message to deliver to customers. But when one looks at the capital that we're investing here, we're laser-focused on paying it back and more. And I think with that, we can justify the pricing and not really go into the pricing dynamics of selling something that's been commoditized, right? And so we solve a very special need here. We're well aware of that.

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But at the same time, we realize that we're having to spend a lot of capital to supply that. And we're focused on paying it back in more and therefore, the price is the price.

Donald R. Young
President, CEO & Director

And we're very focused, Colin, of course, on our stated target of 35% gross margin as a business here as we scale here in the near future. So that that underlies our pricing strategy, that concept. We also believe we're bringing significant value to these customers, and that has also given us the latitude to be firm in our quoting process.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

It's funny. We have a short list Yes, we have a short list of companies that sell into our markets that are doing 70% plus gross margins on a good year. And we've actually shown that here across our team because -- I mean, in some ways, like we really shouldn't be having to apologize for being profitable. I think when you have something unique and when you're solving a problem, we strongly believe in capturing our fair share of the value, but most importantly, paying all this capital back.

Colin William Rusch
Oppenheimer & Co. Inc., Research Division

That's super helpful. And then as you scale this business, obviously, you need to grow the team a fair amount. Could you just talk a little bit about the kind of OpEx spending and investments that you need to make here over the next 12 to 18 months to really support the growth trajectory that you guys are talking about?

Donald R. Young
President, CEO & Director

Yes. So you've probably heard in my remarks here over the past 3 quarters where our tone on this has changed. So I think we've gone through, I would say, 2 significant step function increases in OpEx, one big one in 2021 and then another one at the beginning of last year, then it was really during the second half of last year where we started seeing that we could actually leverage a lot of the work that has been done, I mean, literally throughout all of our functions to get more efficient and ultimately really change how we work.

And we've started switching the spigot from investing in just adding more people to investing in our IT systems, implementing more processes. And really, the hiring has slowed on the OpEx side. And we've only focused it, as I mentioned in my remarks, on just delivering very clear R&D milestones that are time-bound and that are not research expeditions, but that are actually driven towards improving our processes and reducing our manufacturing costs.

And then on the commercial side, it's really been encouraging to see the -- how the team has been able to leverage baseline work from when we were initially working with General Motors to actually build an archive of our own test data that we used to accelerate these commercial discussions. And then, I mean, on the support functions, I think we've added capability, and we've hired a lot of new people from the outside who are bringing their ways of working and their tools and their knowledge of these different tool chains that we're now working to implement and they're yielding results.

So I mean, our hope is that we actually taper the OpEx growth this year. But at the same time, this need of being flexible and this transition as we implement new tools and processes I think we'll sign up to take more OpEx out of this -- or to actually start taking OpEx out of this ramp that we've had as these things start being implemented on the support function side particularly.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

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Yes, I would just emphasize that we have invested in our OpEx in anticipation. And so as we scale, as we grow, you're going to see a disproportionate amount of growth relative to any OpEx increases at this point by a wide margin.

Donald R. Young
President, CEO & Director

I mean, Colin, maybe to summarize it. In my mind, OpEx as a [indiscernible] 53:12 should not be more than 10 percentage points of sales. And so right now, we're pretty high. I think the revenues would need to be $1 billion for us to absorb all of our OpEx run rate. And so we're just -- we're not just focused on letting the revenues get to $1 billion but also bringing the OpEx back down to something that aligns with 10% on the $725 million in 2025.

Colin William Rusch
Oppenheimer & Co. Inc., Research Division

Really appreciate. That's exactly helpful for understanding the long-term model.

Operator

Our next question comes from Chris Souther from B. Riley.

Christopher Curran Souther
B. Riley Securities, Inc., Research Division

Can you give us any sense of the timing of that German OEMs platform. I'm curious if that win adds to the 2025 visibility? Where do you think that's 2026-plus? And then I think on the call, you said the awarded business represents anywhere from 80% to 170% of the target for 2025. Is that saying kind of in future years beyond 2025, we see just those programs kind of growing beyond the 2025 target or is that including any of the people that you're quoting?

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Yes. So I'm happy to take the one on the platform first and then go into that remark around the percentage of the -- the 2025 revenue target that is made up by the existing awards. So yes, I mean the LOI is for an SOP. I think the first SOP on that platform is in 2025. So we do expect a little bit of revenue from that in 2025. And then I mean we have been fairly conservative as we estimate the value of these awards, right.

And yes, I mean, at the same time, it's one of those things where if you put together all of the volumes of all the OEMs, you end up with a market that's 2x larger than the vehicle market, right. Everybody has high aspirations here as they ramp up their production forecast. And we just want to be cautious, but at the same time, just given how profound this transition to electrification is looking, whether 2025 is the year when all of this becomes mainstream or 2026, we just don't want to be wrong. And that's why we thought that expressing that and just showing what the value of these awards can be not just in 2025 and beyond, plus the quote pipeline that the team is actively working.

If people see the scope of that, one can then understand why we are pushing the team to flex our capacity in the way that we're doing it.

Christopher Curran Souther
B. Riley Securities, Inc., Research Division

Okay. No, that certainly makes sense. So the incremental move from 60% visibility. I think you previously talked about the 80% is just more confidence around the volumes with just those 2 folks.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Yes. I would say it's the same level of confidence applied to more volume.

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Christopher Curran Souther
B. Riley Securities, Inc., Research Division

Okay. Got it. And then maybe just it looks like the gross margins are going to fluctuate pretty largely from the beginning of the year to the end of the year. It sounds like a lot of the part then you're going to be producing kind of ahead of time to be shipping in the second half. So we probably have a similar phenomenon where scrap costs are incurred in the first half, or product you shipped later.

But maybe if you could give us a sense where you think higher in gross margin should land for the full year. And then look at it like the exit rate probably pretty similar to what we saw in the fourth quarter here? And how does that trajectory shape for 2024? What the ramps kind of continue or stabilize?

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Yes. I mean, so really, for us, the profitability of PyroThin, it's hard to go into that one because it really all hinges on the volumes during the second half of the year. However, if our expectations really align there, particularly in the middle of our revenue range, then we do believe that we can make PyroThin gross margin positive for the year and then have that progress in 2024 and 2025 to the point that our gross profit moves into the mid-teens in 2024 if the growth rate continues.

I mean, you kind of can draw a line from 35% to where we're at today. And I think we've shown in Q4 that when the demand is there, we can easily dig ourselves out of negative gross margins. And we think we'll dig out PyroThin this year if the demand is there in the second half.

Operator

Our next question comes from Alex Potter from Piper Sandler.

Alexander Eugene Potter
Piper Sandler & Co., Research Division

So first question, I was wondering if you could comment on whether you think you're going to draw on any of the loans from General Motors. I know that some of that money was contingent on construction milestones at Plant 2 and that you weren't necessarily going to draw on the money in the first place. So just curious on your updated thoughts on that topic.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

Yes. So we basically have a window between now and the end of September of this year to draw it. The requirement to draw the first $33 million is that we complete the site work in Georgia, which has actually been completed already and that we spend the $100 million that we got from the public offering from coke. And we will most likely have spent that here by the end of March, early April. And at that point, is we would draw these first $33 million from the loan. We've been in close contact with General Motors on this, and they're basically ready to receive our draw form here at the end of March, early April.

Alexander Eugene Potter
Piper Sandler & Co., Research Division

Okay. Very good. And then maybe just going back to pricing. I can appreciate the comments you were talking about earlier with regard to Aspen is adding value. You don't have to apologize, they're being profitable, things like this. I'm just curious, when you go into these conversations like the LOI, for instance, with this German OEM, is pricing more or less set in stone? Like are you just coming into it saying, this is the price. Now let's talk about everything else or is pricing sort of -- you have a placeholder there that you'll come back to and finalized at the end of the agreement? Just how much visibility do you have on pricing at this stage in the discussion with that relationship in particular and with others more broadly?

Ricardo C. Rodriguez

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Senior VP, CFO & Treasurer

Yes. I mean I think at this point, there have been several turns on a lot of these quotes. You usually go through an iteration of them. And the team knows what the art of possible is, right and at some point, I mean you just really stop making sense. But I mean, yes, at this point, the indicative pricing has been agreed on that. We think it's worth allocating the capacity for it. And then that may evolve really more -- it's more driven by the design of the part itself than I would say any sort of negotiations.

Donald R. Young
President, CEO & Director

Yes. I think, Alex, the LOI both technically and the commercial terms are pretty fully negotiated at this point. There's not much mystery left on that.

Operator

Our next question comes from George Gianarikas, Canaccord Genuity.

George Gianarikas
Canaccord Genuity Corp., Research Division

I'd like to focus on General Motors and there's obviously been a lot of ink spilled on their potential decision to move some of their manufacturing -- battery manufacturing capacity to cylindrical. Just your thoughts on that, the fourth plant, et cetera, any guidance there as to what it means for your volumes? And second, I'd like to ask about Ford. It appears that I'm just going to venture and guess that, that might be the North American OEM that you're quoting. And I guess they halted production of their Ford F150 an overnight, there's been a discussion in the press around that production halt being related to a battery fire. So if you could just touch on both questions, I'd appreciate it.

Donald R. Young
President, CEO & Director

Well, the -- on the GM question, I would just kind of categorize it as speculation as most of that ink has done. And we're closely engaged with General Motors, not only on their current activities, but with development activities as well. So I don't want to comment too much on that. I think it makes sense for any OEM to be exploring various chemistries, various form factors as they think through their ultimate lineup of vehicles. And so all of these things, I think one can imagine companies doing those sorts of things. But so specifically to General Motors, I would just put it in the category of speculation, and we don't really have any particular knowledge of anything that was talked about in those Korean trade publications.

With respect to Ford, yes, we've read and come to understand, I think, the same things that you have, George, that you highlighted, the stop production, the stop shipments originally articulated around a battery issue. I think now a more refined and this may fall into the category of speculation. But in fact, or as I read at least around a battery fire of a stored vehicle that propagated across the battery platform and to at least to a vehicle -- another vehicle next to it. And so I think my view of Ford is that they are highly focused on battery performance and safety, and they're engaged in getting these platforms right for the long term. And they are certainly sensitive to creating any brand damage that comes from these kind of events. So that's sort of our view. We don't know a lot more about this specific situation than you do.

George Gianarikas
Canaccord Genuity Corp., Research Division

Can I just go back to the General Motors question just for a second because I think, ultimately, this is about can Aspen hit their 20 -- their tripling of revenue by 2025. If GM decides in this fourth plant or maybe even a third plant to switch some production to cylindrical and therefore, they don't -- they might not need your material. Is that something we should worry about? Or has this -- have these other potential wins, these quoting, these LOIs have they kind of reinforced your conviction that, that's a real target in those out years?

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Donald R. Young
President, CEO & Director

Yes. Thank you, George. 2025 and Ricardo knows this better than I do, 2025 is not very far away when it comes to building battery factories and having battery factories and having product, form factors and chemistries. And so I don't really view this as a 2025 issue. And I should say potential speculative issue. And again, I think it will make sense for all OEMs to experiment with form factors and chemistries that may differ over certain parts of their fleet. And again, I'm not assigning this to General Motors. I'm assigning this to just logic. And -- but 2025 is, again, a very short time away in sort of battery development and battery factory building. So again, we don't think that's an enormous risk for us today.

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

I mean it's kind of interesting. I think that for every 100 people that are out there writing and speculating about what direction any particular OEM will take. There's probably about one engineer working on this stuff. And there's also some pretty significant CapEx decisions behind the direction that these OEMs decide to take. And I mean when we speak to engineers that we're quoting stuff to, I mean, they basically tell us this train is moving. The track is built and it's not really switching direction. And even if a parallel track is being built in some of these cases, that's really more of a, I would say, a 7-year decision than a quick switch of one train from one track to the next.

Operator

Our next question comes from Jeff Osborne with Cowen.

Jeffrey David Osborne
Cowen and Company, LLC, Research Division

Don, in your prepared remarks, you mentioned some references to failed attempts to mitigate [indiscernible] 75:04 as sort of a driver, particularly for the order in Europe or for other engagement. I was just wondering kind of question I get from investors is your differentiation around technology and other approaches, what -- why those fail and why you win? Is that something you can articulate more on?

Donald R. Young
President, CEO & Director

Well, I think what I would say, Jeff, is that it's a complex problem. And there are thermal management, fire safety issues involved. There are mechanical self-stabilization issues involved and I think it is not an easy task to triangulate on those various constraints or factors. And our material touches upon each of those critical areas, I think, very effectively and very uniquely. And we do believe that there are materials that do one thing or the other, perhaps.

But again, it is that combination of attributes that I think is setting our material apart and has us in the position that we are in today, both with existing customers and with prospective customers here during this really critical stage of this EV activity here.

Jeffrey David Osborne
Cowen and Company, LLC, Research Division

Got it. That's helpful. And then maybe for Ricardo, I might have missed this, but on Mexico, you obviously showed the ramp up in Q4 and the margin potential. But can you give us a sense of perspective on where we are with the automation. I think you made reference that most of the product in Mexico is manually made, but are those automation lines in place? And have they been fully validated and are up and running or when will that transition take place?

Ricardo C. Rodriguez
Senior VP, CFO & Treasurer

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Yes, that transition basically takes place in the second quarter fully and then our -- so our production in the second half would be off of the automated equipment. We still -- we're still keeping the manual equipment to be able to flex up if the demand is higher, but that transition will be fully in place for the second half of this year.

Operator

[Operator Instructions] Our next question comes from Amit Dayal from H.C. Wainwright.

Amit Dayal
H.C. Wainwright & Co, LLC, Research Division

Just in terms of guidance for next -- for 2023, can you hear me?

Donald R. Young
President, CEO & Director

Yes, perfect. Yes.

Amit Dayal
H.C. Wainwright & Co, LLC, Research Division

Okay. Just wanted to see how much concentration from GM there is in the guide for 2023?

Donald R. Young
President, CEO & Director

I mean quite a bit. We've got their volumes from IHS there on the slide, right, so they are a big driver. They were a big driver in Q4 as well, and they're a big driver right now. I mean they make up a disproportion portion of our thermal barrier demand.

Amit Dayal
H.C. Wainwright & Co, LLC, Research Division

Okay. Understood. And then just with respect to the energy, industrial orders, I think you guys highlighted $100 million worth of orders for -- that you have at hand. Is this all expected to be delivered in 2023?

Donald R. Young
President, CEO & Director

Yes. Those orders are or people who like to receive those materials, and we will -- again, we're trying to be mindful of keeping that business strong at the same time when we have a single plant, making sure that we feed the EV thermal barrier side of this as well. So we do have some flexibility in the way we deliver that material, but all of those purchase orders are -- have been requested for 2023 and even in the first couple, 3 quarters of the year.

Operator

This concludes our Q&A. I'll now hand back to Mr. Young for closing remarks.

Donald R. Young
President, CEO & Director

Thank you, Elliot, for your help today. We appreciate your interest in Aspen Aerogels, and we look forward to reporting to you our first quarter 2023 results in April. Be well, and have a good day. Thank you.

Operator
Today's call has now concluded. We'd like to thank you for your participation. You may now disconnect your lines.

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