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Shane Brett *Morgan Stanley & Co Ltd - Analyst*

PRESENTATION

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Hi, everyone. I'm Shane Brett, US Semiconductor Equipment Analyst. Joining me today from Advanced Energy are Paul Oldham, EVP and CFO; Edwin Mok, Senior VP, Strategic Marketing and Investor Relations.

I have a quick disclosure read. For important disclosures, please see the Morgan Stanley research disclosure website at www.morganstanley.com/researchdisclosures. If you have any questions, please reach out to your Morgan Stanley sales representative.

Before I start my question, I hand it over to you guys for disclosure.

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Sure. So just quickly, obviously, we just reported our results on February 10. So obviously, any outlook that we provide is based on what we reported. There's no update to our guidance. For any risks and uncertainty factors, feel free to check our SEC filings.

QUESTIONS AND ANSWERS

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Great. So I want to start with some longer-term questions. So you hosted your Analyst Day about 1.5 years ago where you outlined growth across end markets past the $3 billion in revenue by 2030. Just a lot has changed in that 1.5 years. So can you discuss how the industry environment has evolved, how that's sort of influenced your sort of forward outlook?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. Great question. Obviously, it was an exciting year last year, and we think it's going to be an exciting year this coming year. But some things have changed. Data center has grown much faster than we expected. We more than doubled in that market last year based on new products that we brought out, our new focused strategy on really looking at areas within that market where we could be more differentiated and a good embrace of our products.

Semiconductor also grew last year as a second year of growth for us, and we expect it to grow again this year. And of course, I think everybody is getting more and more excited about the opportunities in semiconductor and WFE, particularly in the second half of this year and into next year.

Industrial & Medical is probably the one area that's a little bit behind. It had a pretty tough start last year. We bottomed out in the first quarter. But since then, we've seen sequential growth every quarter. And in the fourth quarter, we saw a 10% sequential growth, and it was the first quarter of year-over-year growth in two years.

So that market is largely normalized, and we think it will grow pretty steadily from here, kind of paced by the health of the overall macro economy. So on balance, we think we're a little ahead. We grew 21% last year. We guided to high teens growth this year. And there's potential for upside to that depending on kind of how the market goes over the next few years. So on balance, we feel pretty good about where we're at from a revenue perspective.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

I feel like saying a little ahead might be underselling yourself as your 2030 model implies $2.5 billion revenue, and it's probably not inconceivable that you could reach that level as early as 2027. Just relative to the financial model you outlined for 2030, in a world where that $2.5 billion is earlier, just what could gross margin and operating margin look like, just given there may be some longer-term initiatives there?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. Great question. Gross margin, we've made a lot of progress there. We moved from about 35% margins at the beginning of '24 to exiting 2025 at almost 40%. So we think we're well on track to our goal there. Obviously, tariffs are new. That wasn't contemplated in our model. That's 100 basis points roughly impact.

And frankly, the data center mix is also growing, and that's good margins for us as we changed our strategy, but of the three markets, that's the one that's lower and it's approaching corporate average. At the same time, we've made really good progress in our manufacturing consolidation and other actions that we've taken.

The biggest lever for us going forward on gross margin is going to be our new products starting to take more traction in the market. We think we can get 200 to 300 basis points more benefit from the portfolio mix there.

And then finally, volumes. I mean, obviously, we're getting the benefit of higher volumes, and we'll continue to see that from this point forward. I think on operating expenses, while we might be made good progress on gross margin, we have a couple of headwinds there. We may have a little bit of tailwind in operating expense if things are growing this fast. We said we'd grow revenue or operating expense at half the rate of revenues.

Last year, we grew revenues 21%, and we only grew operating expenses about 7%. So we're probably a little ahead of that game if we can get there earlier because we won't have five years of growing expenses to support that revenue. And we don't need to make any new fundamental large investments to get to that $2.5 billion. Our products seem to be doing very well.

I think below the line, there are some pluses and minuses. The biggest one, of course, is our interest income or other income probably doesn't quite get to our model that assumed five years of growing cash and getting interest, we might have less.

And then based on the performance of our stock, we have some dilution to the to the share count. So I think those are kind of the pluses and minuses. But on balance, we're very excited about where we are and our ability to grow earnings at a faster rate than was in that original plan.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

And let me drill into that kind of the investment needed for growth and how that looks like for CapEx. As you've sort of indicated that 2026 CapEx will remain at the Q4 run rate and you're able to supply $2.5 billion of revenue capacity. But just what's the CapEx involved in sort of supporting this kind of dynamic growth environment right now?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes, it's really two things. One is capacity growth. Obviously, we're getting, particularly in data center to the numbers much faster than we had originally anticipated. So think of that as a pull-in of capital we had already planned into more like late '25, '26 and maybe early '27 versus more spread out over the five or six years.

Second is investment in capability. With the explosion in kind of the power levels that are required for our products, we're investing in capability of just more power in our factories, more power in our R&D centers. So it's those two things that are the primary driver. We'd already contemplated the expansion in our number of sites. So the Philippines was always contemplated in our [2030] growth numbers.

Obviously, with the growth, we'll probably be opening that earlier than we probably otherwise would have. But we expect after this next maybe four to six quarters of higher spending, we would see that moderate back down. Again, a lot of this is a pull forward based on the fact that we're seeing.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

The Thailand capacity coming online. Is that sort of -- how should I think about the Thailand facility relative to the kind of $2.5 billion you guys are prepared for right now?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

So the Thailand facility would be 100% incremental to the $2.5 billion in revenue. The status of that is we did start that investment back in 2023. So we kind of thought ahead about what we would need. So the factory is built out. It's basically finished.

What it needs to be done now is just facilitized for manufacturing. We can do that in about a six-month process. So from kind of a go signal, we can have lines in that factory producing product. So we'll look at that, the timing of that a little bit.

We've said right now that we would largely use that for the second wave customers in data center, which would be qualifying this year and would look to ramp next year. So it's likely an early '27 opening of the Thailand factory. And we could accelerate that or slow it down based on how we see the market evolving. I'll also note that, that's a good place for us to add semiconductor capacity.

When we first started that facility, we actually thought semiconductor would be the first products in there. But as you know, this very exciting ramp we're seeing now had been predicted for each of the last two years as well and didn't quite materialize. So we'll probably start with data center products there, but be looking closely at semiconductor as kind of a business continuity additional capacity there as well.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Okay. I know you guys are a data center stock right now, but I'll start with semi equipment and on -- markets, but --

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Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

We're happy to be both.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Okay. So I've hosted your biggest customers just over the last two days, and they're very excited over the next two years. I had one of your customers say, Hey, we have eight quarters of visibility. And another customer say, we have a lot more visibility than we did this time last year. It just looks really good.

Just at your recent earnings call, you mentioned that Q4 -- so the December quarter revenue upside was not from pull-ins from '26. You expect Q1 '26 to grow quarter-over-quarter and that second half '26 will be stronger than first half '26, almost just a sequential increase through the year.

Just can you walk us through what are those customers that have been on stage the last two days telling you? And what are you prepared to do in '26?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Maybe I'll answer that at a high level, and then Edwin could talk a little bit about some of the details. But you're right. I mean, even as late as our earnings call in -- for Q4, which was in kind of early November, we talked about the semiconductor market declining a little bit.

Since that time, obviously, we ended up growing 8%, so a new level. And we said Q1, where we thought it would stay at the lower level is actually going to -- most of our Q1 growth will come from semiconductor. So definitely, the tide -- the water level has increased. It's not like a pull-in and a onetime thing. We see that the water level is increasing, and it seems to continue to increase.

Obviously, I think the comments from our customers, even some of our peers have been pretty positive. I think that gives us increasing confidence that the second half will be higher than the first half and that it's a good setup for another strong growth year in 2027.

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Yes. In terms of growth in WFE, I mean, typically, we don't predict WFE, right? As a company, that's kind of our policy. But generally, there's a pretty big consensus that generally, you are seeing strong pull for both leading edge foundry logic as well as in the DRAM side. On the DRAM side, historically, the last few years, there's a lot of investment in HBM, but it seems like this year, there's incremental spending on wafer, either wafer start or moving to advanced node process.

The good news is that these leading-edge process, we generally have higher dollar content. So that should be positive for us. The flip side is we do have lower content for NAND, which seems like it still grow this year, but it's mostly on upgrade, which we generally have lower content. And also trailing edge, we do have healthy exposure. I think the consensus is around flattish this year.

So in aggregate, I think some of the growth trend this year is positive for us for where we sit. So we should benefit from that. And in terms of beyond this year for '27 and beyond, I think we -- I read all the reports that Shane writes and how foolish it is. So I'm all for that.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Okay. I appreciate that. Those are my numbers, not yours. So I want to hold you guys accountable to those.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

So I guess one thing I would just add to that, though, Shane, I think it's important is, obviously, this industry is inherently hard to project a little bit because you do have the sort of everybody moves in mass. But the one thing that we've tried to do short of being prognosticators of what the actual numbers are is to be prepared. So we mentioned in our last call that we're leaning into inventory, both for semiconductor and data center so that we can capture upside of business that's coming.

We've just talked about capacity. We made capacity investments. We've retained people through the softer parts of the industry. And so we're well prepared. So if WFE grows faster, that's great. We'll be prepared to participate in that. And all the trends that you've talked about from a technology perspective, from a leading edge node perspective, those directly benefit us as well. So we're pretty excited about where things are going, and we'll be prepared.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

So I guess across the semiconductor ecosystem because of AI, there's always a bottleneck somewhere you guys are not going to be that bottleneck because you're prepared.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

We are not going to be the bottleneck. That's our goal.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Okay. Great. I guess kind of when I think about your growth relative to the customers, a dynamic that I have to consider for subsystems is inventory. And throughout the course of 2025, some of your customers did lower inventory, but now that we're sort of headed into these two strong years of growth, there's -- it's probably unlikely that they kind of lower inventory. What are they kind of telling you on how much AE products that these guys need right now?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

I think on balance, what we've seen is the -- as we talked about in our call, the forecasts have increased. And I think they've been public about talking about having their suppliers get ready. So we hear those messages as well. We've said recently that inventory levels are largely normalized at our customers. And so we think we're sort of feeding at the demand level.

Now having said that, it's typical that we would see higher volumes a little bit ahead of them, maybe a quarter or a part of a quarter because as their volumes ramp up, they need to make sure there's enough on the shelves for them to pull.

So we think we're heading into this from a normalized inventory position. And as we see this growth accelerate, we should be able to keep pace with that. If they start to add additional inventory in front of that, then we could see a little bit of the benefit of that early.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

And when I also think about your growth this year, kind of a good aspect of that is also just new products. Just where are these sort of new products? Can you kind of give the audience a little bit of clarity on where the new products are kind of generating these wins? And just how are they going to layer on to the growth this year?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes, Edwin, why don't you jump into that?

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

So in terms of new products, we launched these new products, eVoS, eVerest and NavX in 2023. These are next-generation plasma power generator that we believe is substantially advanced versus current generation of product versus our as well as our competitors.

And therefore, we've been working very hard to secure design win. Unfortunately, in this space, it takes a few years to win the design to translate to revenue. The good news is that we start to have some win in two areas that we've historically had stronger position, conductor etch and deposition. And those wins start to translate to initial revenue in 2025, which we expect to contribute greater revenue in '26 and beyond.

These initial wins are largely at 2 nanometer as well as kind of 1 DRAM node, which is just a limited number of steps. Typically, that's how it works in the space. The first win is going to be of nodes. But our customers have our product design into their tools, and they are working on winning the next node, which is sub 2-nanometer and also 1D and beyond. And we believe there will be more applications for those nodes as they ramp.

So overall, for what we have won and what we expect to come just from conductor etch deposition, we expect incrementally higher demand as we go through the next few years. It depends -- partially depends on timing of when those next nodes will come.

In addition, in dielectric etch, where we have very low, almost no share in dielectric etch, we have been working hard with multiple customers on multiple programs to win those. Initial feedback or feedback from our customers has been really positive, and we believe that it really demonstrates the yield and throughput benefit of our product that we can bring to bear at the wafer fab. We're still working towards that. There's nothing to report at this point, but we expect some wins which should translate to initial revenue as early as '27 and beyond.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

So I guess to kind of sum up your answer, the areas where you have had historical success in conductor etch and deposition, you're sort of strengthening your share there and sort of seeing if there's other end markets that you can kind of penetrate.

And then -- so you've also mentioned system power ramping this year on your latest earnings call. Just can you give us some clarity on just what are the applications for those wins? What's the kind of competitive landscape for those products?

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Okay. So system power is actually power solution that we offer that power other part of the equipment. It could be powering the actual equipment itself, right? It could be power heater or it could be other applications such as test and measurement or ATE or assembly and semiconductor equipment space. We historically are not in that space.

But through a number of acquisitions, including Artesyn Embedded Technology that we bought in 2019, we have the product that actually go after those opportunities. Over the last few years, we've increased our focus into winning some of these opportunities in some of these applications. And we won some design that we expect to start generating revenue as early as this year.

On our Analyst Event in 2024, we have set a goal for this portfolio of product to add an incremental $40 million of revenue by 2030, and we believe we are well on the way to achieve that.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

So this will be revenue with the semiconductor test players in the back end?

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

It's both our leading wafer fab equipment customer, where it's used not for generating plasma, but it's to power the system, different part of the system or could be heater or other pieces or it could be like the test manufacturer.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Got it. Before moving on to data center, just -- as you think about where AEIS is allocating R&D dollars within semiconductors, which areas are you giving the most focus? And can you kind of give us a glimpse into sort of the road maps that your customers are outlining for you guys?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. I'll maybe take the first part and Edwin can talk about the road maps. But clearly, our main investment is in our core area of plasma generation. I mean, this is -- it's the largest part of the market. Frankly, it's very hard to do, particularly you get into these next-generation nodes. These are quite complex products.

And they take a lot to win. But as you know, once you've won them, it's a decade-long payoff or longer. And so we think we're -- I mean, Steve said in our last call, we think we're better positioned as a company than we've ever been in semiconductor, not because we're generating a lot of revenue from these new products right now, but because we see how the qualifications are going and how that sets us up for success for many, many years to come.

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Yes. In terms of road map, I think we launched this product in '23, partially because we start to see increased demand for more complex etch and deposition process. A lot of these devices are moving to 3D device, which then requires much more -- number one, more number of steps.

And second thing is higher power requirement, higher plasma requirement. In one example, for example, much higher and much narrower high aspect ratio etch process, actually, both conductor etch and dielectric etch that we're seeing.

So we believe our product has allowed our customer to achieve some of those goals. And again, beyond the process itself, also allow them to maintain the throughput because as you etch deeper, it slow down your etch process and also allow them to achieve the low level and therefore, the high yield level that they could achieve in the existing technology.

So I think this transition to 3D really plays well and really result in our customers pulling these new products from us. And I think we think we're well positioned to on that.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Got it. Let's move on to data center. So you're guiding more than 30% growth in 2026, but that's after doubling in 2025. Just -- but we're also seeing just hyperscaler CapEx forecast that might be a little bit higher than 30%. Just can you discuss the gap between this hyperscaler CapEx growth and your own data center revenue growth? Just give us a little bit more clarity around that.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. It's a really good question. We get it quite a lot because I don't think -- it's difficult to draw exactly what that correlation is. Obviously, in 2025, we won a lot of new designs. I think we really established ourselves with our strategy of focusing on some of these higher precision, higher differentiated applications. And we grew over 100%, which was much faster maybe than the CapEx growth.

A lot of those designs are in place, and we're winning the next generation of those in 2026. So you don't see quite as fast of growth related to that per se. But we're very excited about our position, and we think there's opportunity potentially biased to the upside based on kind of some of the demand signals that we could be seeing.

So the last thing I would say is that there's a lot in the hyperscale capital projections, right. They're investing in buildings. They're investing in GPUs, which are going up in price significantly year-on-year. Memory, we know prices are doubled.

So by the time you get down to the rack and to the power in the rack, we're a pretty small percentage of that total number. And remember, we're focused on the more precision areas. So I think our growth will be more driven by our ability to continue to expand the places that we play and get those next-generation wins than necessarily just aggregate growth.

Obviously, that's a good sign. That means they're putting -- continue to put a lot more money into these. But I think we have to think of ourselves a little bit more like based on our targeted approach to these markets.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Got it. And kind of when I think about this year, if I'm correct, you have nine months visibility right now, which probably takes us to the later point of this year. But what are these customers, I guess, telling you about '27, '28? Just can you provide any color on just what those discussions with those customers might be looking like?

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Sure. So in terms of like demand visibility, we have our customers' demand planning for this year. That's what we use as an input to come up with this up 30% growth, right? Our customer is telling us that there's a lot of volatility in the supply chain. In fact, we comment about this for the last two, three quarters in terms of that result in the demand or the type of product they demand from us changing pretty rapidly sometimes.

And we have to flex our manufacturing to meet that demand. And that is also factored in this up 30% guidance that we have. In terms of kind of outlook beyond that, I mean, obviously, the AI trend is pretty strong, right?

And then our customers want to make sure that we are prepared for -- ready for long-term growth. That's part of the reason why we are building additional capacity this year so that we have this $2.5 billion capacity to meet that high demand, with Thailand be ready for additional ones, right?

So overall, the trend is positive. And last thing to point out is in terms of technology development, we're also working on technology that is ready for '27 and '28 beyond technology launch. Some of the programs that we are ramping this year are stuff that we won last year, and we have been going on this annual cadence of winning design that expect to ramp for the coming year. So we expect the same kind of cadence for probably this year and next year at least.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. I think the aspect of continued technology evolution in terms of power requirements, architecture, all of those things are as important as the absolute investment that's been making because that's driving change in the industry, which is going to drive continued investment to get to the next generation and that plays in our favor because that's what we do.

That's what we do as a leading-edge technology provider is stay with our customers as they make these rapid changes. So we think as long as that pace continues as well, that's going to continue to drive growth for us in the industry.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

I guess, I want to talk about that point of just, I guess, you're seeing accelerated growth, but it's mainly with kind of a select few customers. You've talked about this kind of new second wave of customers coming that might not be as sort of engineering intensive as you can apply kind of your learnings from your first group of customers to your second group of customers.

I want to hear about that kind of how that sort of, I guess, investment for these customers might change with the second wave of customers. And the reason why I'm asking this is data center has been a higher growth segment, but a lower gross margin segment. Just how does that change with the second wave of customers?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

And maybe starting with the last part of your question first. I think from a gross margin perspective, we would assume it's the same or better. That's the first thing. But I think on a total contribution perspective, it should be substantially better because essentially, what we're able to do is take technology blocks at the very leading edge or these very specific applications and pivot them relatively easy to another set of customers who are now looking at that and saying, hey, that fits really well with the requirement, I would like. We've already developed it. And so we're able to pivot that to them with relatively few changes.

So there may be a little bit of customization or tailoring for exactly their former fit, but we're essentially able to take leading-edge products and/or technology building blocks and repurpose them to these other customers who are coming along in the wake of the investments that the large hyperscalers are making.

So there's a lot of R&D leverage from that perspective, which is important for us because we want R&D engineers focused on the leading edge. And then we want to repurpose that into this next set of customers that are coming along. And we'll still have a very differentiated product, performs extremely well, but we're able to leverage that investment that we've already made.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

So it's a quite margin accretive development that you're hopefully going to see over the next few years with data center.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Certainly, from a total margin, that's correct. And from a gross margin, it should be the same or better.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Okay. Got it. So it's just kind of R&D is probably less for the second wave.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

R&D will be substantially less.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Okay. Got it. I want to switch over to Industrial & Medical, and then I'll open it up to questions. But 2025, a bit of a digestion year. You're forecasting sort of revenue growth in '26. Just what's driving this recovery? Is it inventory normalization, new product adoption? Can you kind of give us some color there?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

You want to take that one, Edwin?

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Sure. So 2025, Q1 was the bottom for the industrial medical revenue. Since then, we have three quarters of sequential growth. And throughout that period, we track, especially our distribution data to see kind of how healthy the industry is, if you will, right? And we've seen both -- over the last few quarters, we have seen channel inventories continue to come down. We've seen our bookings start to pick up, especially in the latest quarter as well as our order book start to expand.

So we think that we are at a point where channel inventory is largely normalized demand, both our sell-in as well as sell-through start to approach a normalized level as we come to this year. That give us confidence that we can have sequential growth over the next few quarters.

In terms of demand, with the exception of the -- obviously, we are seeing demand for existing products that we have already sold in. On top of that, last few years, we've been working on some new design. And some of them, we believe we will start to see a ramp. On the recent call, we highlight, for example, some design that we won in defense and aerospace as well as some additional design that we have won in the factory automation space.

Some of the design we won them because the industry is going through or the channel is going through inventory digestion, customer doesn't want to buy the new stuff, right? But now that we are normalizing, we are starting to see this new design ramp. So that combination give us confidence that we can see growth this year and probably extend beyond.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

I just want to clarify on that. So for the sequential growth outlook, is that kind of your customers giving you strong orders? Is that kind of lead times extending out? Like what kind of gives you confidence on that sequential growth outlook?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. I would say it's a combination of things. One, we are seeing more orders. So we reported much higher orders in the fourth quarter. Those weren't all for deliveries in Q1. We are seeing customers look out on the horizon now and say, okay, I want these products over this period of time. So I think the order book has clearly strengthened. With that, the backlog strengthened.

I also think when we look at the other metrics about inventory at distributors, as Edwin was saying, sort of a sell-in versus sell-through, those things are largely normalized today. And so as this market grows, even if it's modestly, we should participate in that at that level. And then there are some parts of the market that are growing faster than others.

So I think all those factors contribute to seeing kind of continued steady growth. If the market gets better, that's great. Edwin mentioned our new products. We're actually seeing some uptake of those new products already. It's just overshadowed by the depth of this kind of digestion period as well as some winnowing that we've done within the portfolio. So as the market recovers, we should actually start to see a more disproportionate impact of the new products helping to drive growth.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

The audience has any questions. Sharon, there's a mic right behind you.

Unidentified Participant

I just have one question related to your power offering for data center. We all know that the power architecture for data center is kind of moving toward high-voltage DC. What does that mean for your offering? And would you -- when would you expect the contribution will start to come -- ?

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Yes, I'll take that question. So on the last two earnings call, we actually talked about working with our customers to develop next-generation power solution. Typically, frankly, this development takes two, three years. So we are already working on things that we expect to ramp in '27 and '28, right, because you can't -- otherwise, you can get those out by '27, '28 realistically.

And some of those applications or actually a good chunk of that is related to HVDC. In terms of what impact it has, we will have an advanced how we kind of think about it. We generally believe that high-voltage DC will translate -- number one, it increase the power level per rack generally higher power level per rack means we have a higher dollar content per rack, right? So that's positive for us.

In addition, we believe we are developing some unique technology and based on initial feedback from our hyperscale customer, lead us to believe that, that might allow us to further expand our footprint across our hyperscale customer and eventually other customers. So there's a potential SAM expansion for us as a result of adoption of high-voltage DC.

As Paul described, our first goal usually is to work with the hyperscaler to partner with them to develop the technology. That's still going to be the case. And based on the program that we're working with them right now, we don't expect production revenue to come until maybe second half of '27 and more meaningful in '28 and maybe '29 for different variants. There's a few different flavor approach that people are taking. Naturally, eventually, some of those might not fully ramp, right? So -- but we are working on multiple programs at the same time.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

I think the exciting thing about HDC is it is more power per rack. And what's required are exactly the things that we're good at, high power efficiency, high power density, the ability to work with an engineering team to get product to market and then ramp that quickly as needed. So we see that as an opportunity. That should create more opportunities for us that play to our strengths.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

So it's a very kind of attractive content per rack opportunity for you guys?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

We believe so. I mean, obviously, as Edwin said, that architecture is still being very much defined and what it will look like is being defined. But based on the early discussions that we've had and the development work we're doing, we think that's right.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Got it. Any other questions? I guess then I'll ask a financial question. So you've historically pursued opportunistic M&A, but it's focused on Industrial & Medical markets, but the kind of explosive growth that you're seeing is for data center, then semi is probably a second. Just has your capital allocation or M&A priority shifted given kind of these dynamic end market shifts?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. If you take a look at total capital allocation, we've said the majority of our capital we want to put towards growth. The reality is for the data center and semiconductor markets, that's largely internal investment, and you see a lot in the form of CapEx. So we are, I'll say, doubling down on those markets. I'll say, from an internal organic perspective.

There is also some technology things we can pick up there. Like we bought Airity Technologies, I guess, almost two years ago. Two years ago. That's highly embedded in some of our next-generation products, and we're using it across the portfolio.

So there's opportunities certainly in those markets. But if you think about large-scale M&A, the semiconductor and data center are very concentrated. And while there's things along the periphery, they're not really our -- what we're good at. And so that kind of leads us to Industrial & Medical. Industrial & Medical is almost the opposite.

It's highly fragmented. That market has all the characteristics that we like being like designed in, long life cycle, sole sourced, good margin. But because it's so fragmented, the organic growth on that path is probably slower. You're not going to have these periods of explosive growth.

So the way we think to grow that market is building a bigger beachhead, and you can do that through M&A. And in this case, we're able to basically take a broader product portfolio, better customer access, more scope, if you will, and leverage the scale we have as a company.

So the synergies in this market would be very natural where we can essentially expand our offering without and being able to rationalize some of the infrastructure and the scale. We think it's important to have three strong pillars.

Obviously, data center has been all the rage, semiconductors becoming the rage. But I'll remind you that in 2023, we performed much better than our peers because Industrial & Medical actually outperformed both those markets substantially. So over the long run, we think it's a good ballast for the company to have a strong position in all three markets. And so we're very committed to that M&A inside Industrial & Medical. We're also prudent.

So I think the valuations have been a challenge. And so we've taken our time to make sure we look at the right opportunities, and we create value with those. And we've said recently that as the I&M market has normalized, that maybe is creating a better baseline to have more constructive discussions from an economic perspective. So we're -- it's an area we're committed to, and we'll continue to invest in, but we'll do it wisely.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Got it. We have a minute left. But -- so you've sort of transformed into kind of you're in a great neighborhood and you're building a great house in this great neighborhood of data center and semiconductor equipment. But is there anything that you think the financial community might be sort of underappreciating with Advanced Energy in any way?

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Yes. I think this idea that we're becoming a more diversified company that has more paths to growth is actually starting to sink in. And we're seeing that obviously in revenue growth. We're seeing that in earnings growth. And so I think that's probably the most important thing is we have multiple vectors for growth. And particularly as we look at the next year or two, we think we're in a period of time where all three of these markets could grow.

Shane Brett - *Morgan Stanley & Co Ltd - Analyst*

Got it. Great. That brings us to time. Thank you, Paul. Thank you, Edwin. Appreciate it.

Paul Oldham - *Advanced Energy Industries Inc - Chief Financial Officer, Executive Vice President*

Thank you, Shane, and thank you, everybody, for joining us.

Edwin Mok - *Advanced Energy Industries Inc - Senior Vice President of Strategic Marketing, Investor Relations*

Appreciate it.
