REFINITIV STREETEVENTS

EDITED TRANSCRIPT

AEIS.OQ - Q2 2021 Advanced Energy Industries Inc Earnings Call

EVENT DATE/TIME: AUGUST 04, 2021 / 12:30PM GMT

CORPORATE PARTICIPANTS

Paul R. Oldham *Advanced Energy Industries, Inc. - Executive VP & CFO*

Stephen D. Kelley *Advanced Energy Industries, Inc. - President, CEO & Director*

Yeuk-Fai Mok *Advanced Energy Industries, Inc. - VP of Strategic Marketing & IR*

CONFERENCE CALL PARTICIPANTS

Amanda Marie Scarnati *Citigroup Inc. Exchange Research - Research Analyst*

Krish Sankar *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Mehdi Hosseini *Susquehanna Financial Group, LLLP, Research Division - Senior Analyst*

Nathaniel Quinn Bolton *Needham & Company, LLC, Research Division - Senior Analyst*

Paretosh Misra *Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst*

Pavel S. Molchanov *Raymond James & Associates, Inc., Research Division - Energy Analyst*

Scott Graham *Rosenblatt Securities Inc., Research Division - MD & Senior Equity Industrial Technology Analyst*

Thomas Robert Diffely *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

PRESENTATION

Operator

Good day, and thank you for standing by. Welcome to the Advanced Energy Industries Second Quarter 2021 Earnings Conference Call. (Operator Instructions)

I would now like to hand the conference over to your speaker today, Edwin Mok, Vice President of Strategic Marketing and Investor Relations. Please go ahead, sir.

Yeuk-Fai Mok - *Advanced Energy Industries, Inc. - VP of Strategic Marketing & IR*

Thank you, operator. Good morning, everyone. Welcome to Advanced Energy's Second Quarter 2021 Earnings Conference Call. With me today are Steve Kelley, our President and CEO; and Paul Oldham, our Executive Vice President and CFO. If you have not seen our earnings press release, you can find it on our website at ir.advancedenergy.com. There you'll also find the Q2 slide presentation.

Before I begin, I'd like to mention that AE will be participating at several investor conferences in the coming months. Let me remind you that today's call contains forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially and are not guarantees of future performance. Information concerning these risks can be found in our SEC filings. All forward-looking statements are based on management's estimates as of today, August 4, 2021, and the company assumes no obligation to update them. Medium- and long-term targets to present today should not be interpreted as guidance.

On today's call, our financial results will be presented on a non-GAAP financial basis, unless otherwise specified. Excluded from non-GAAP results are amortization, stock compensation, integration and transition costs, unrealized foreign exchange gains or losses and restructuring items. A detailed reconciliation between GAAP and non-GAAP measures can be found in today's press release.

With that, let me pass the call to our President and CEO, Steve Kelley.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Thank you, Edwin. Good morning, everyone, and thanks for joining the call today. Second quarter revenue and earnings per share met the midpoint of our guidance. Demand remains very strong, and we recorded significant new design wins in all of our target markets. As forecasted, our second quarter revenue was limited by shortages of integrated circuits and other key components. Additionally, late in the quarter, output from our Malaysia factory was constrained due to COVID restrictions.

Component shortages will continue to limit our revenue into the third quarter, but we expect a healthy recovery beginning in Q4 as supply improves. Near term, our number one priority is resolving these supply constraints. COVID restrictions also remain a concern, but the vaccination of our employees in Malaysia this quarter should mitigate much of that risk moving forward. As we deal with these supply issues, it's important to note that our order book is very strong, which sets us up very well for revenue growth well into 2022 as constraints ease and we are able to bring supply more in line with demand.

During the quarter, customer demand across all of our markets continued to grow. In the semiconductor market, the demand for our plasma power products strengthened as the industry continues to invest heavily in new capacity. After setting a record for sales into this market in the first half of 2021, we expect second half sales to be even stronger. And as supply constraints ease, we expect robust revenue growth in 2022.

In the industrial medical markets, we saw increased demand across a wide variety of applications as macro conditions improved. In medical, we benefited from an uptick in elective care procedures. In the industrial market, we saw strength in flat panel displays, industrial automation, 3D printing and industrial coatings. We also saw stronger demand in horticulture, solar and battery applications. These demand trends should continue into the second half of the year.

Data center computing demand also grew in the second quarter, and revenues from both hyperscale and enterprise customers were up sequentially. In addition, we shipped initial production units to our fourth hyperscale customer. Demand in the telecom market is improving, largely due to increasing 5G infrastructure investment in the U.S. Although second half revenues in both the data center and telecom will continue to be faced by supply, we are winning new, high value-added designs in both markets.

Now let me turn to our strategy and growth initiatives. Our ultimate objective is to drive sustainable increases in shareholder value through profitable revenue growth. We intend to achieve this growth by developing highly engineered proprietary power delivery systems. This approach leverages our core competencies, our technologies and our manufacturing base. Technology leadership, customer intimacy and operational excellence will be the key enablers of our success.

To accelerate our growth, we are putting particular focus on the semiconductor, industrial and medical markets. Customers in these markets build expensive complex machines, which need reliable sources of highly engineered precision power and that's where Advanced Energy excels. We are expanding our product development capabilities in these target markets and focusing our sales and applications teams on leading customers in these markets.

In our other markets, such as telecom, networking and data center computing, the team will continue to develop highly differentiated solutions, which address our customers' most difficult power delivery challenges. We believe that this approach will drive sustainable and profitable growth. By focusing on differentiated solutions and long life cycle applications, we are building a business which should grow steadily and deliver good profitability, and we have a strong starting position with proprietary products accounting for nearly 3/4 of our current revenue.

In semiconductor, we are seeing great traction with our new flagship products. Both the eVoS plasma power system and the MAXstream RPS solution are being evaluated by all of the leading OEMs. Additional customer feedback has been very encouraging.

During the quarter, we acquired TEGAM, an industry leader in RF instrumentation and calibration systems. TEGAM's technology enables our plasma power customers to precisely quantify delivered RF power. This data is critical to the development of repeatable thin film manufacturing processes. TEGAM began also provides a platform to expand Advanced Energy's service business.

In the medical market, we won multiple designs in the second quarter in imaging, therapeutic and life science applications. Winning in medical takes time, but the long product life cycles in this market ensure a steady stream of recurring revenue.

In the industrial market, we had multiple design wins in the second quarter, including 2 new custom power solutions for industrial test systems. In addition, we recently launched a new family of programmable DC power supplies optimized for test and measurement applications.

In the data center computing market, we secured multiple design wins by meeting the stringent power efficiency and density requirements of high-performance computing and AI customers.

In the telecom networking market, our focus on high-performance infrastructure opportunities has already yielded several key design wins. One of those wins is on a 5G base station expected to be deployed by multiple carriers in the U.S. We secured a second win in the 5G space with a customized DC to DC converter, featuring superior power density and efficiency.

Finally, in July, we hired a new global sales leader, John Donahue. John is a seasoned professional with extensive experience selling technology-based products around the world. He will strengthen our customer relationships and help to drive share gains in our target markets.

In closing, our markets are healthy with very strong demand for Advanced Energy's differentiated solutions. Although the operating environment continues to be challenging, our order book is at an all-time high. As the component shortages abate, we expect to catch up to market demand, setting us up for a strong 2022. We continue to be on the lookout for inorganic growth opportunities, which meet our strategic and financial criteria. Just in the past 6 months, we've made 3 tuck-in acquisitions, which have enhanced our technology portfolio and market position. Finally, as we execute our growth strategy, we believe that the company is well positioned to meet or exceed our medium- and long-term financial targets.

Paul will now review our financial results and provide a detailed guidance.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Thank you, Steve, and good morning, everyone. In the second quarter, we delivered revenue slightly above the midpoint of our guidance despite a challenging operating environment. Total revenue of $361 million was up 6% year-over-year and 3% sequentially. We also generated record revenues in our plasma power products and in our service business. Customer demand remained very healthy again during the quarter, resulting in an order book which provides solid demand visibility into 2022.

On the other hand, new COVID-related restrictions in Malaysia resulted in our factory idling for several days and further limited our capacity output for semiconductor products in June. In addition, shortages of critical parts continue to be a challenge across all our markets, limiting revenue upside. Cost pressures associated with the supply chain were worse than expected, resulting in Q2 gross margins below our target. Favorable discrete items in our tax rate largely offset these shortfalls this quarter resulting in earnings of $1.25 per share. We expect the operating environment to remain challenging particularly in the near term. Supply chain and pandemic-related restrictions continue to be very dynamic with a few key suppliers and ongoing COVID risk in Malaysia being the most significant issues. While we have made some improvements, recent decommits and extended lead times are expected to have a meaningful impact on our Q3 outlook before improving in the fourth quarter.

With respect to Malaysia, we are actively working to get our employees vaccinated and plan to leave additional production capacity in Shenzhen through the end of the year to mitigate the impact and enable a quick recovery. More broadly, we are working closely with both our suppliers and customers to optimize deliveries while maintaining capacity across our factory network to be able to respond quickly as supply improves. While these challenges will have a significant impact on our results in the near term, we remain confident in our ability to meet our medium- and long-term strategic goals as the operating environment normalizes.

Now let me discuss our Q2 results. Overall, demand continued to strengthen across our markets, which contributed to the greater than $125 million increase in our order book. Revenues were impacted to a varying degree by market based on parts availability. Semiconductor sales were $177 million, up 21% from last year and just off the record set in Q1. Demand further strengthened throughout the quarter and our team overcame some of the COVID-related restrictions in Malaysia, resulting in record sales of our plasma power products. Without the impact of these restrictions late in the quarter, our semi sales would have increased sequentially.

Revenue from our industrial medical markets grew 6% sequentially and 17% from a year ago to $83 million. Our order book in I&M is particularly strong, giving us visibility to support revenue growth well into 2022.

Data center computing revenue was $69 million, up 17% sequentially with growth coming from both enterprise and hyperscale applications. Telecom and networking revenue was $32 million in the quarter, which was lower than expected due solely to material constraints.

Non-GAAP gross margin for the quarter was 38%. The sequential decline was primarily due to less favorable mix and higher-than-expected logistics and supply chain costs. We also saw lower factory productivity exacerbated by the Malaysia restrictions. While we expect gross margins to come under additional pressure in the second half, we continue to be confident in our ability to meet our long-term gross margin goal of over 40% as the supply chain environment and related constraints improve.

Non-GAAP operating expenses were $82.6 million, up about $3 million from last quarter and slightly above our expectations. The sequential change was due to planned increases in annual labor costs, the addition of TEGAM and higher customer and program spending. Operating margins for the quarter were 15.1%. Other expense was $1.9 million, including $1.1 million of interest expense and $480,000 of FX losses. We continue to expect other expense to be in the $1.5 million to $2 million range going forward.

Our non-GAAP tax expense was $4.7 million or 8.9%, primarily unfavorable discrete items, which will not repeat next quarter. Looking forward, we continue to expect the GAAP and non-GAAP tax rate to remain in the 15% range. Earnings for the quarter were $1.25 per share, up from $1.18 a year ago but down from last quarter.

Turning now to the balance sheet. We ended the second quarter with total cash of $510 million and a net cash of $196 million, up slightly from Q1. Operating cash flow was $34 million or just under 10% of revenue. During the quarter, we invested $15 million in the acquisition of TEGAM and paid $5.4 million in CapEx, $4.4 million towards our debt and $3.9 million in dividend payments. In addition, during the quarter, we repurchased $6.5 million worth of stock at $90.34 a share.

From a working capital perspective, our days of net working capital were about flat at 96 days. However, inventory increased by $49 million as we continued to acquire raw materials to support higher demand levels. Turns were 3.3x. Although it may take a few quarters, we expect turns to rebound as critical part shortages abate and we are able to fully ship demand.

Accounts payable rose to $207 million with associated DPO of 82 days, largely offsetting the increased level of inventory in the short term. Receivables rose slightly to $243 million, and DSO was unchanged to 61 days. Finally, today, we announced that our Board of Directors increased our stock repurchase authorization to $200 million in support of our long-term opportunistic share repurchase strategy.

Now let me turn to guidance. Overall demand continues to be strong, and our order book supports growth well into 2022. However, a more challenging supply chain environment, particularly around a few integrated circuit suppliers and uncertainties related to COVID restrictions, are expected to have a larger impact to our revenue levels in the near term. As a result, we expect Q3 revenues to be approximately $340 million, plus or minus $15 million. However, based on current parts projections, we expect revenues to rebound and grow modestly year-over-year in the fourth quarter, with second half revenues approximately flat to first half levels. We expect Q3 gross margin to be around 35% to 36% on lower volumes and higher supply chain costs with the full impact of material and logistics costs being realized in the fourth quarter before improving early next year.

Operating expenses should be about flat on slightly higher R&D and a full quarter of TEGAM as we continue to invest in critical programs. As a result, we expect Q3 non-GAAP earnings per share to be $0.80, plus or minus $0.20.

Looking forward, we are encouraged about the increasing customer demand for our proprietary power solutions, strong order book and the solid traction we are achieving in our strategic programs. We are taking multiple actions to mitigate the impact of supply chain and operating challenges while staying focused on delivering new products and next-generation technologies to our customers. As the current operating environment improves, we believe that strong demand coupled with actions we are taking will enable us to deliver solid revenue and earnings growth in 2022.

With that, let's take your questions. Operator?

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Your first question comes from the line of Krish Sankar of Cowen and Company.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

I had a couple of them. First one, just to clarify, I think, Paul, you mentioned Q4 should be up on a year-over-year basis. So that basically implies Q4 revenue should be well north of $371 million. A, is that right? And if so, what kind of gross margin should we think about for Q4 given your -- given this constrained environment? And then I have a follow-up.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes, it's a good question, Krish. On balance, we would expect gross margins to improve from Q3 levels based on the higher volumes. But we'll also see the full impact of the material and cost increases that we're seeing in the near term as those roll through. So I would say the gross margins would be up modestly from Q3 sequentially with further improvement as we move into the new year.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Got it. Got it. Very helpful. And then a question for Steve. It seems like you guys are having a little bit of a double whammy both on the revenue side and the cost side given all the constraints. You said that in Q4, at least the revenue side should improve given some of those constraints easing. When do you expect the cost constraints to ease? And more importantly, because of this constrained environment, are you losing any market share to your competitors?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Sure. Yes. So let me just address those 2 questions. You're asking about cost constraints and when those ease and then market share. So we talk about cost issues. We've been talking about 2 things. One is that we're seeing increases in contractual parts. Some of that is just price increases. Some is expert IPs we're paying to get the products quickly. The other area of increase is shipping cost. So we've seen a tremendous amount of pressure on shipping costs from Asia to other parts of the world. So we are taking action. We took action back in the first quarter to pass on at least some of these costs to our customers. And we'll take further actions particularly on the shipping cost front to make sure that we're sharing the burden with our customers on that.

From a market share standpoint, the short answer is no, I don't think we're losing market share. Actually, I think we're gaining market share in semi. So when I think about market share, I think about it over the course of years, not quarters. And as I look at our semiconductor market share, in 2020, we grew at twice the rate of WFE. And that was partly due to our customers ordering products from us somewhat ahead of the demand wave. Now this year, largely due to parts shortages, we're going to underperform relative to WFE. And our customers are coping with our underperformance by consuming more from the hub inventory. So that hub is really designed as a shock absorber. And so far, it's been working pretty well for our customers and for us. Next year, we expect to resume our growth at more than 1.2x WFE as supply catches up with demand and we move the hub inventories to more comfortable levels.

The other point I want to make on market share in semiconductor, in particular, is there's a significant time lag between design win and production and also our products are proprietary. So you need to look at market share gains and losses over the course of years and not quarters. So for us, the key to growing share is bringing out the new innovative products like eVoS and MAXstream and bringing those products to market in a timely fashion. So if we deliver those products and they're deemed to be reliable and cost effective by our customers, then our share is going to continue to grow moving forward.

Operator

Your next question comes from the line of Scott Graham of Rosenblatt Securities.

Scott Graham - *Rosenblatt Securities Inc., Research Division - MD & Senior Equity Industrial Technology Analyst*

So Steve, I mean the plain and simple first question I have is when I kind of take the third quarter guidance and roll it through the old model, it just -- it's hard getting to $0.80 a share. It just seems like maybe you have maybe some fudge factors in there, I don't know but [Woffles] pulls details of flat OpEx and the gross margin. Are you just putting in sort of a buffer in there sort of just in case?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. Scott, maybe let me take that question. I think the biggest impact relative to where we've been, I'll say, most of last year is the change in gross margin. And when we look forward, there's really 3 factors that are impacting that, that are, I'll say, different than they were 3 or 4 quarters ago, number one. And two, that we think they are more transitory. The first is, clearly, there's higher near-term supply chain costs, both in materials and logistics. And as Steve described, some of those are very transitory like expedite fees, we think logistics costs will normalize over time, but also some part piece price increases. That's the biggest factor between where we were adding gross margin to where we see things. And that result, we started to see that in the second quarter. It will be more pronounced in the third quarter, and we'll see the full impact as it rolls through our inventory in the fourth quarter. That's why we think that's going to progressively get a little worse before it gets better.

The second thing is we just have a lower factory utilization because our factory is waiting for parts. We've consciously decided to maintain capacity and capability because as we get parts in, we want to be able to turn them around quickly. And we do believe the supply chain environment will improve, and that will give us a chance to overperform.

And the third thing is we've consciously delayed the closure of our Shenzhen to Malaysia factory in order to preserve from some flexibility. So a year ago, we essentially had one highly efficient factory putting our semiconductor products. Today, we've nearly fully ramped semi, but we haven't ramped down Shenzhen to preserve this a little bit extra capacity. That's inefficient. That will also resolve itself over the next couple of quarters.

So look, I'd like to say we have some upside in margin, and we'll certainly look to drive that. But those are the factors that are impacting gross margin. And again, think of them as things are going to impact us for a couple of quarters, but there's a clear path for those to improve as we move into next year -- move in and through 2022.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Maybe a further comment, Scott. I think the common theme in a lot of these actions that we're taking is to basically keep our customers happy. That's our first priority. And sometimes that costs us a little bit more, but I think it pays off in the long run for Advanced Energy.

Scott Graham - *Rosenblatt Securities Inc., Research Division - MD & Senior Equity Industrial Technology Analyst*

Just a follow-up with the guidance, just to circle on my question here. I mean I don't want to beat the dead horse, but it just -- so you're essentially saying, Paul, that it's possible that the gross margin can be lower than the guidance that you've laid out and you just want to handicap against that?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

We think this is our best view of gross margin given the dynamics in the market and our factories right now. I wouldn't say it's conservative or that we have a lot of downside. We tried to call it the best we can and be realistic about it. And look, we'll try to beat it, but that's our best view.

Scott Graham - *Rosenblatt Securities Inc., Research Division - MD & Senior Equity Industrial Technology Analyst*

Fair enough. Okay. Could you tell us when it comes to the third quarter kind of how you see each of the segments performing and -- just the best you can? And then also how that impacts mix on the gross margins? Is that a fair question?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. Scott, I'll make a few comments there. First, circling back to our prepared comments, we see strong demand across all the markets. So for us, demand is not the issue. It's just purely supply at this point, and that's the case for the next 3 quarters at least. And so we think we're doing very well on the design win front. And on the demand front, it's off the charts in almost all of our markets right now.

Scott Graham - *Rosenblatt Securities Inc., Research Division - MD & Senior Equity Industrial Technology Analyst*

Okay. If I could just squeeze in one more question, if you don't mind, particularly for you, Steve, since you're now steering the company. I know you indicated that semiconductor, industrial and medical are sort of your main drivers. But Artesyn brought a wealth of really nice markets as well. And as you noted, 67% of your sales are proprietary. So am I reading too much into the sort of the main drivers versus the secondary drivers being telecom, data center and networking there?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Well, no, I think what I'm saying is we're accelerating the focus on proprietary opportunities. So Artesyn brought in some very interesting business particularly in industrial and medical, also in telecom, also in data center and some other areas. And so we're basically pushing more of our development resource onto proprietary opportunities because we like those opportunities because they're sticky, they're typically a long life cycle, and we partner with the customers to come up with unique solutions. And that's really in our wheelhouse at Advanced Energy.

Operator

Your next question comes from the line of Mehdi Hosseini, SIG.

Mehdi Hosseini - *Susquehanna Financial Group, LLLP, Research Division - Senior Analyst*

A couple of follow-ups from my end. It seems to me that most of the revenue shortfall at least to my expectations came from the semiconductor segment. And this is a sector that you have had the most experience and your OEM customers have the longest lead time. How should I reconcile that with shortages that you're experiencing? And I'm just curious how you're managing required inventory of components for semi versus other sectors. Then I have a follow-up.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Okay. I'll start, and then Paul will complete our answer on that one, Mehdi. First, we're seeing charges across all of our target markets, including semiconductor. But we are working very closely with our biggest customers in semiconductor to make sure that we satisfy their immediate needs. So obviously, it's a daily struggle, but I think I could say, in Q2, we did a reasonably good job not being the gate to their production. And that's our objective in Q3 as well. And so we work closely with the customer to make sure we're using the components we have in the right products that the customer needs. So that's our number one priority.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. If I could just add on to that. I think, Mehdi, tactically in the short term, to answer your question, you're right, semi was a little lower than our expectations. That was primarily the result of the late movement control orders in Malaysia in June, which we just ran out of time to fully recover. If you remove that, we would have had -- semi would have grown sequentially. And look, that's getting better both in Malaysia and actions we're able to take now that we're able to get vaccines into our people there. And we would expect in the second half, we would see semi grow in total. Now the timing exactly between quarters will depend on parts and timing a little bit, but we'd expect to grow off the record first half levels in semi in the second half.

Mehdi Hosseini - *Susquehanna Financial Group, LLLP, Research Division - Senior Analyst*

Okay. Got it. And regarding telecom and data center, are you finally beginning to see a stronger recovery? Like I look at your data center. It seems to me that the rate of decline on a year-over-year is coming down, which is very encouraging. But the telecom, you had like a 20-some percent decline on a year-over-year basis. And I'm trying to better understand how you see the recovery trending for each one of these subsectors.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. It's a good question. I would say demand in both those markets is strengthening, like we said in our earlier comments. The gating factors is materials. And so certainly, we're seeing the revenue levels uptick in our data center and computing markets. We talked about initial shipments to a fourth hyperscaler. But in the end, as we look over the balance of the year, how much that grows will be a function of how quickly we can get parts.

I'll say similarly, in telecom, we expected that, as we said last quarter, to kind of bounce around the current levels as we begin to see more investment in 5G over time. Well, we're beginning to see that investment, and we commented on a couple of design wins this quarter, but the parts conditions and the telecom products were actually worse, resulting in decline sequentially. And remember, in telecom and networking is where we had the most pronounced impact of our portfolio optimization efforts, which is a big part of the year-over-year decline.

Mehdi Hosseini - *Susquehanna Financial Group, LLLP, Research Division - Senior Analyst*

Great. And then one last item for me is if I were to look at a year from now and assuming that end market demand for different sectors remain strong, should I assume that the margin profile for all the different sectors are similar?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes, I think the margin profiles across the various markets aren't going to be similar because there's different dynamics. But I would say you would expect to see margins improving across all of our markets. Part of that will just be recovery in volumes, part of that is our portfolio optimization programs that we have in place and part of it will be optimizing the factory and supply chain as we're able to get into a more normalized environment.

Operator

Your next question comes from the line of Amanda Scarnati of Citi.

Amanda Marie Scarnati - *Citigroup Inc. Exchange Research - Research Analyst*

The first question I have is on the TEGAM acquisition. Can you just remind us of what the impact is there in semis and what is adding to the portfolio outside of your traditional power businesses?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. Amanda, I'd be happy to comment. Just to remind you, so TEGAM is the industry leader in RF calibration instrumentation. And what we saw was their technology is very complementary to AE's because we're the leader in power generation and impedance matching networks. So when you combine TEGAM and AE together, we think that enables an AE-qualified [watt] ecosystem, which is traceable to international standards. So we think it enhances the overall RF business and our value proposition, particularly with the semiconductor customers.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. I'll just comment on the impact. We said when we acquired TEGAM that the annualized revenues are greater than $10 million. That's in support of a range of customers, but I would say more than 50% would be semiconductor in that market.

Amanda Marie Scarnati - *Citigroup Inc. Exchange Research - Research Analyst*

Great. And then just kind of switching over back to your confidence levels on this Q4 recovery. We're sitting here last quarter, you were talking about growth in the second half around 5% to 10% half over half. And now we're talking about sort of approximately flattish. What gives that sense of confidence in that recovery happening in fourth quarter? I know you've been commenting that demand is so strong at the supply side, but what changes over the next 2.5, 3 months?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. I mean I think there's been 2 constraints to growth. One is parts and one is Malaysia. So in Malaysia, frankly, all of our employees will be vaccinated by the end of this quarter. So I think we're taking the Malaysia COVID restrictions out of the equation, at least as it pertains to our factory. So that's a big plus. So we can go full speed ahead in Malaysia. And that -- again, that's for semiconductor customers primarily.

The other part, and I can tell you that we've solved most of our issues. There's only a few suppliers now that are gating us, and we're having daily conversations with those suppliers. And what I see right now as far as their commitment gives me a lot of hope that things will start to get better in September, and we're going to steam into Q4 with a better parts supply. That said, we've been surprised. We were surprised in Q2 because we thought our Q3 was going to set up a lot better. But I think -- I sense that things are going to get better over the next couple of months, and it's going to help us a lot in Q4.

Amanda Marie Scarnati - *Citigroup Inc. Exchange Research - Research Analyst*

One more question just to kind of follow up here and clarify. You mentioned that Shenzhen is still open and its operating and taking off some of that demand that Malaysia can't fulfill, but that the gating factor here is in part Malaysia. Can you just talk about how that's offsetting each other? And sort of what's going into and how much Shenzhen is actually replacing for Malaysia?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. So the reason we're keeping Shenzhen open is to allow to expand the aperture a bit on some of our high-volume RF generators and matches and this way can supplement what we're doing in Malaysia. It also allows us to have burst capacity because sometimes these scarce components come in, in a lumpy fashion. And so we can basically expand the amount of product we can build in a given amount of time if we have 2 locations as opposed to 1.

Operator

Your next question comes from the line of Tom Diffely of D.A. Davidson.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

So first, Paul, you talked a lot about mitigation actions. I was just curious, does that just revolve around looking for new suppliers and expediting parts? Or is there more to it than that?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

I'd say, as Steve mentioned, this is our number one management priority is resolving these, and we've made a lot of progress. As Steve said, if you look across the broad set of parts, a lot of those are resolved, but we have a few key suppliers where we've not been able to close the gaps like we'd like. So it is looking at all options. Sometimes those are similar but alternative parts. Sometimes those our parts we can get from other places in the channel. Sometimes it's working with those suppliers to find ways to expedite or run hot lots, so we can get a few parts faster. In some cases, we may in the longer run actually redesign some parts to give ourselves more flexibility. So it's a full court press of actions throughout the management chain to help resolve these last few key component shortages. And there's no silver bullet here. It is just down to hard work and a day-to-day effort to improve the situation.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Okay. On that front, have your customers and customers' customers been involved and helped you kind of put pressure on some of the suppliers as well?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. I'll make a few comments here. We're certainly involving our customers where it makes sense and exerting pressure on our suppliers. And certainly, they've made a difference on more than one occasion. So we're involving everybody that can help us extract more parts from our suppliers or from the channel.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Great. That's good to hear, Steve. And then on the Malaysia front, sounds like you've had pretty good success getting access to vaccines. I was wondering how that was worked. And is there going to be an issue or an opportunity in Shenzhen to get the vaccine as well?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

We work with the government in Malaysia and they had a special program to vaccinate key employees in Penang and other parts in Malaysia. So we signed up early, and that's why our employees are getting vaccinated in Q3. So I think the team did a good job getting in front of that. In Shenzhen, I also believe our vaccination rate is pretty high. So that has not been a concern for us.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Okay. Great. And then finally, Paul, you mentioned decommits. Is that when your supplier builds up some contract supplies?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. That's essentially when we have committed deliveries from a supplier. And then as you approach that date, the supplier moves the date out of when they expected to ship the parts. And look, that could be for a number of reasons. When the supply chain is this tight, if you have any hiccup, it ripples through the system, right? And so I think that's where -- we mentioned it's a dynamic environment. You have commitments around when you expect to get parts, and we've seen a few of those move around. And even recently, I think that's maybe the biggest change from our view in -- if you go back a quarter is some parts that we thought we had in hand have moved out. Look, this is a function of lead times. I think if you look across the -- particularly the integrated circuit, broad range of parts, you've seen lead times extend over the last quarter or so. And that ripples through the industry a little bit as people adjust to those changes.

Operator

Your next question comes from the line of Paretosh Misra of Berenberg.

Paretosh Misra - *Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst*

So when I compare your 3-year goal of sales of $1.65 billion with the Q3 guidance, it's about $300 million delta. So I was hoping if you could provide some thoughts on which end markets might provide a bigger improvement if you get to your long-term target.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. It's going to come from a little bit of all of the markets, Paretosh, but certainly semi has been strong and can be stronger. We've been limited in our ability to deliver the full demand in that market. And we think that market is going to continue to strengthen through 2022. And that's -- I think there's conventional -- there's a lot of information in the market that suggests that even these supply challenges we're seeing in the near term essentially could have the effect of extending the upside run. So certainly, we'd expect further growth from semi. Industrial and medical is a focus area for us. We'd expect that one to actually grow faster than the other markets as we are able to expand our product portfolio of configurable products moving to some targeted areas where we're making investments and expand our channel.

Data center computing has been in a digestion period that it's coming out of. So we would expect more growth there even as we focus our efforts on kind of the more differentiated or proprietary parts of that market. Telecom and networking, we've said all along, we don't expect to grow a lot. So it will probably be the slowest grower of the 3. 5G demand as that actually starts to get traction and rollout will help there. But on balance, the capital equipment market, the infrastructure market is not faster -- as faster grower as the other areas. So hopefully, that gives a little bit of color.

Paretosh Misra - *Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst*

Yes. That's very useful. And would you say semi is an end market or segment that's most affected by these supply chain issues?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

No. I would say that all markets are affected by it. So we're working hard to close the gaps in all areas. But obviously, semiconductors is a high priority for us given the importance of our customers in that segment.

Paretosh Misra - *Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst*

Got it. And last one for me. If you could give some more context on your order book. Did it improve in all 3 segments or at least the 3 major segments? And is it at an all-time high on all 3 of them? Or any more color you could provide on that would be great.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. If you just look at the absolute growth in the order book in our earlier comments, clearly, there's a lot more demand that we could ship if we had parts. And that's across all areas. Semi, you hear it in the comments of our customers. Clearly, we don't take orders necessarily there. We ship into jet bins but as Steve said, we've -- that's kind of been the buffer in the meantime. And so getting those back to a more comfortable level and the higher growth there will certainly help. But we think we have good and continuing growth to come in semi.

Our strongest order book is actually in industrial and medical, if you look at the orders that have come in relative to our ability to deliver parts. We think that's really encouraging because that's the market, again, that we are applying additional resources and effort to because we think it's very attractive. But we're also have -- had good demand well over our shipment levels in both data center and telecom and networking. So generally, it's strong overall, but a little stronger. Certainly, our best order book is in I&M., and we have a lot of confidence in the order growth in the semi number from a demand perspective.

Operator

Your next question comes from the line of Pavel S. Molchanov of Raymond James.

Pavel S. Molchanov - *Raymond James & Associates, Inc., Research Division - Energy Analyst*

Back to Malaysia, are you operating under a legally mandatory curtailment restriction in terms of operating hours or factory utilization? Or is it purely a matter of kind of pretty cautionary actions that you're taking at the plant?

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. So in Malaysia, we're definitely operating under constraints, but the constraints are much less than they were back in June. So we think the current operating model of 80% capacity is definitely something we can work with and maintain our production output.

Pavel S. Molchanov - *Raymond James & Associates, Inc., Research Division - Energy Analyst*

And that 80% is...

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

That's the mandated. Yes, that's a regulated and highly monitored or enforced limitation, but that's not our choice.

Pavel S. Molchanov - *Raymond James & Associates, Inc., Research Division - Energy Analyst*

Understood. In the context of the supply shortages that have been amply discussed in the last half hour, presumably, some smaller players in the space are feeling even more pain than you are. And I'm curious that from kind of opportunistic M&A standpoint, if this creates some interesting potential for you that perhaps did not exist 6 months ago.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

I think your thesis is correct that some of the smaller players are feeling even worse pain than we are. And we have seen opportunities open up at customers because of that. But we have not seen any M&A opportunities appear quite yet because of that reason.

Operator

Your next question comes from the line of Quinn Bolton of Needham & Company.

Nathaniel Quinn Bolton - *Needham & Company, LLC, Research Division - Senior Analyst*

Maybe I missed it but maybe just starting off to the third quarter guidance. Looks like you're about 10% below where The Street consensus was. And so wondering if you might be able to sort of ballpark give us a sense, how much of that are the movement restrictions in Malaysia limiting output from that factory in the quarter. How much of it is supply constraints where you can components? Is it split 50-50? Is one a bigger factor? Just looking for any thoughts you might have on the impact of the relative contributors.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. Quinn, for the third quarter, it's predominantly materials availability and parts. We do think the COVID restrictions impacted us in Malaysia in June. We talked about that being a sort of a late quarter additional restrictions there. But we expect that to get much better over the course of the third quarter as we get our workforce vaccinated. And hopefully, things just continue to improve. So it's predominantly supply chain related that's impacting our lower revenues in Q3.

Nathaniel Quinn Bolton - *Needham & Company, LLC, Research Division - Senior Analyst*

Second question, just wanted to follow up on the confidence in the fourth quarter. I mean, obviously, you guys had a more bullish outlook for the second half 90 days ago and you've experienced some decommits from suppliers. So what makes you think that doesn't happen again? I mean you read the press. You talk to other companies in the supply chain. Things are still pretty bad. Hopefully, they start to trend upward on the margin. But for you guys to be kind of talking about 10%, maybe 10% plus quarter-on-quarter is a pretty hefty sequential guide for the fourth quarter.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. As Paul mentioned earlier, we've closed most of our gaps with our suppliers and we're down to the last few. And so we're giving those last few suppliers a lot of focus and a lot of pressure. And from what I could see, most of those commitments from the problem suppliers are getting better in the last 4 months of this year. So I actually see upside in Q3, but I'm not ready to commit to it because of some of the issues we faced recently. But certainly, Q4, I'm relatively confident that we can meet that number and hopefully exceed it.

Nathaniel Quinn Bolton - *Needham & Company, LLC, Research Division - Senior Analyst*

Great, Steve. And then maybe last question. You guys have said you're sole sourced on a good percentage of the solutions you deliver to your customers. You're likely sole sourced in almost everything semi-cap equipment related. I guess I'm just struggling with your ability not to pass along some of these supply chain costs. I mean things like expedite fees obviously, I think, are something that your customers would understand given the supply constraints in the environment. I realize you're trying to protect customer relationships. But on the other hand, you're not running a charity either. So where are you in those negotiations in terms of trying to pass along some of these supply chain costs? I know you're probably not ready to raise pricing across the board, but it feels like there should be a medium here that you could pass along some of these increased costs that you're facing.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

I think it's a good point. And I think we have a continuing dialogue with our customers on how we could share the burden of these increased costs, both the parts cost and the shipping cost. So I think moving forward, I think you'll see hopefully more sharing with our customers because it's a difficult environment and we can't bear the costs alone.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. I think, Quinn, part of that, too, is just timing. I mean, I think in the last quarter, we've seen things become more difficult on that front. And we did take actions early in the year. We've learned more. And so part of that is just timing.

Operator

This concludes our Q&A session. I will now turn the call back over to Steve Kelley.

Stephen D. Kelley - *Advanced Energy Industries, Inc. - President, CEO & Director*

Thanks for joining us today. We're excited about the opportunities in front of us and are executing on our growth strategy. While we are constrained by supply in the near term, we believe that strong demand for our products, coupled with a record order book, positions us well to deliver solid revenue and earnings growth in 2022 and beyond. We look forward to talking to many of you in the coming weeks. Thank you.

Operator

This concludes today's conference call. Thank you for participating. You may now disconnect.
