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# Advanced Energy Industries, Inc. (AEIS)

Q2 2022 Earnings Call

## CORPORATE PARTICIPANTS

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### Stephen Douglas Kelley

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

### Paul R. Oldham

*Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

## OTHER PARTICIPANTS

### Scott Graham

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### Krish Sankar

*Analyst, Cowen & Co. LLC*

### Amanda M. Scarnati

*Analyst, Citigroup Global Markets, Inc.*

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### Steve Barger

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## MANAGEMENT DISCUSSION SECTION

**Operator:** Greetings and welcome to the Advanced Energy's Second Quarter 2022 Earnings Call. At this time, all participants are in a listen-only mode. A brief question-and-answer session will follow the formal presentation. [Operator Instructions] As a reminder, this conference is being recorded.

It is now my pleasure to introduce your host, Edwin Mok, VP of Strategic Marketing and IR. Thank you. You may begin.

### Y. Edwin Mok

*Vice President-Strategic Marketing & Investor Relations, Advanced Energy Industries, Inc.*

Thank you, operator. Good afternoon, everyone. Welcome to Advanced Energy's second quarter 2022 earnings conference call. With me today are Steve Kelley, our President and CEO; and Paul Oldham, our Executive Vice President and CFO.

Before I begin, I would like to mention that we will be participating at several investor conferences in the coming months. If you have not seen our earnings press release and presentation, you can find them on our website at [ir.advancedenergy.com](http://ir.advancedenergy.com).

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 3, 2022, and the company assume no obligation to update them. Medium-term targets and long-term aspirational goals presented today should not be interpreted as guidance.

On today's call, our financial results are presented on a non-GAAP financial basis, unless otherwise specified. Excluded from non-GAAP results are stock compensation, amortization, acquisition-related costs, restructuring expenses, and unrealized foreign exchange gains or losses. 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.

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## Stephen Douglas Kelley

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Thanks, Edwin. Hello, everyone and thanks for joining the call. Second quarter revenue and earnings per share surpassed our expectations largely due to improved supply of key components and good execution by our operations team. While delivering record breaking revenue, we also significantly grew our backlog. This is evidence of the strong demand across our target markets. In the near-term, the primary constraint on our financial performance will continue to be the availability of scarce components particularly integrated circuits. While the procurement of scarce ICs is key to our short-term performance, new products and technologies are key to our long-term growth. To that end, our development teams are highly focused on launching innovative products into our target markets. Within those markets, we are focusing on applications which need highly engineered solutions, allowing us to deliver more value to our customers. In addition, we are accelerating the cadence of new product introductions across a wide range of applications.

In the second quarter, we expanded our reach in the medical power market by acquiring SL Power. We are now a top player in medical and aspire to become the number one player within the next five years. Customer reaction to the acquisition has been positive. They recognize that Advanced Energy's engineering capabilities, manufacturing footprint, and strong balance sheet complement the innovative strengths of SL Power.

Now, let me provide some further color regarding the current operating environment. As I mentioned earlier, the supply environment remains dynamic. The availability of key ICs, all of which are built on older process nodes, is the primary issue. To partially mitigate the shortages, we buy certain components through dealer and broker channels. Our customers support this effort by absorbing some of the price premiums associated with these broker buys.

While there are pockets of delivery improvement, we expect that the overall procurement environment will remain challenging in the near-term. We are also mitigating supply issues by working closely with customers to qualify alternative ICs. Where necessary, we have redesigned entire circuit boards to eliminate hard-to-find components. These alternative ICs and redesigned circuit boards contributed to our results in the second quarter. It should have an even larger impact on our second half performance. We continue to maintain surge capacity throughout our factory network. This allows us to quickly take advantage of lumpy deliveries of scarce components.

Now, I'll provide more details for each of our target markets. In the second quarter, revenue from the Semiconductor Equipment market grew 30% year-on-year and 13% sequentially to nearly \$230 million. This is a new quarterly record for Advanced Energy. We continue to expect that Advanced Energy's semiconductor revenue will grow faster than WFE in 2022.

Our strategic development programs for dielectric etch and remote plasma source applications are progressing well, enabling us to deliver evaluation units to our key customers. In addition, we secured multiple design wins for our high-voltage power conversion products. We believe that these strategic programs and products will drive long-term revenue growth and market share gains for Advanced Energy.

In the Industrial and Medical market, revenue grew 26% year-on-year and 27% sequentially. Due to improved parts availability, as well as the addition of SL Power. Our Industrial and Medical order book increased in the second quarter. We secured major wins at multiple Tier 1 medical OEMs and won key design slots in indoor farming, factory automation and industrial printing applications.

In the second quarter, we expanded our thin film industrial portfolio by introducing a new digitally controlled RF generator together with an enhanced matching network. Year-to-date, we have launched a variety of other new products into the Industrial and Medical markets, including several board-mounted power modules, a number of certified medical products, a new parameter for industrial temperature measurement, and a software solution for indoor farm lighting called GROWINSIGHT.

Since the acquisition of SL Power in April, we have combined the medical power development teams of SL Power and Advanced Energy under a single leader. This combined team is now in a position to deliver a broader range of power delivery solutions to our medical customers. Since the acquisition, we are seeing an increase in medical power design activity particularly in regions outside the US. In the Data Center Computing, Telecom and Networking markets demand is solid, but revenue continues to be paced by the supply of critical ICs. During the quarter, we won several high value designs in these markets.

To summarize, demand for our products remained strong. Although the availability of scarce components continues to be the primary constraint, our mitigation efforts are having a positive impact. We believe that we are on track to deliver double-digit percentage revenue and earnings growth in 2022. Looking beyond this year, we are encouraged by customer acceptance of our new products and technologies which we expect will drive improved revenue, market share and earnings. In short, we believe that Advanced Energy is well-positioned to deliver sustained profitable growth in the coming years.

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

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## Paul R. Oldham

*Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

Thank you, Steve. And good afternoon, everyone. In the second quarter, we delivered record revenue of \$441 million and earnings per share of \$1.44 surpassing our guidance ranges. Demand for our products remained strong and our backlog grew 15% sequentially to \$1.17 billion. We believe this backlog which is comprised of predominantly proprietary products provides a runway to solid financial performance as we look over the next several quarters.

Our operations focus remains on securing critical parts and getting products to customers as quickly as possible. Our redesign efforts, ability to move quickly to secure parts even at a premium, and other mitigating actions are having a positive impact. At the same time, the overall supply environment remains very challenging, and we continue to see higher material costs and premium recoveries. As a result, we remain prudent in our planning, but believe our second quarter results are indicative of our ability to achieve our target earnings of over \$1.50 per share by the end of the year.

Now, let me go over our financial results. Revenue of \$441 million grew 22% from last year, and 11% from last quarter. Excluding the contribution of the SL Power acquisition, organic revenue growth was 18% year-over-year and 8% sequentially. Revenue from the semiconductor market was \$229 million, up 30% from last year and 13% from last quarter. Demand was strong and our backlog grew despite the record revenues. We are working closely with our customers to prioritize critical parts and deliveries and expect our semiconductor revenue to grow sequentially again in both the third quarter and the second half.

Revenue in the Industrial and Medical market was \$105 million, growing 26% from last year and 27% from last quarter. Excluding SL Power, organic growth was 12%, both year-over-year and sequentially, driven by strong market demand and improved supply of critical ICs. Revenue in both Data Center Computing and Telecom and Networking continued to be meaningfully impacted by supply of critical components. As a result, Data Center Computing revenue was flat to last year at \$69 million, but declined 9% sequentially. Telecom and Networking revenue was \$38 million, up 19% from last year and 8% from the first quarter.

Gross margin in the second quarter was 37.1%, up 50 basis points sequentially on better mix and increased factory output. Compared to last year, gross margins declined 90 basis points due to higher material costs. Premium recoveries, which reflect costs that we have been able to pass on to our customers but at zero margin, were similar to Q1 on a dollar basis and impacted gross margins by approximately 160 basis points. Given the dynamic supply environment, we expect that higher material costs and related premium recoveries will continue to negatively impact our gross margins in the third quarter and could extend further. Although we believe our mitigating actions should help offset some of the impact, given these challenges, we will take a more conservative approach to our cost assumptions over the next couple of quarters.

Operating expenses were \$94 million, up 14% from last year and 8% from last quarter. The sequential increase was largely due to the addition of SL Power and annual salary increases, which occurred in the second quarter. Second quarter operating margin was 15.8%. Depreciation for the quarter was \$8.5 million and our adjusted EBITDA was \$78 million, up from \$62 million last year and \$66 million last quarter.

Non-GAAP other expense was \$2.2 million, including \$1.5 million of interest expense and \$700,000 of foreign exchanges losses. Our non-GAAP tax rate was 19.4% slightly above our target of 19% and ahead of our historical rate of 15%. The higher rate is due primarily to the change in US tax rules impacting the expensing of R&D that took effect at the beginning of the year.

Second quarter earnings were \$1.44 per share, up from \$1.25 last year and \$1.24 last quarter. Excluding the negative impact of the change in US tax rules, earnings in the quarter would have been greater than a \$1.50 per share. Now let me comment briefly on the SL Power acquisition. In our first partial quarter, SL contributed \$12.9 million in inorganic revenue and approximately \$0.05 of non-GAAP earnings per share. This acquisition makes us a top player in the medical market and we are well on our way to capture cross-selling revenue opportunities and to integrate the business.

Turning now to the balance sheet and cash flow. We ended the fourth quarter with total cash, including marketable securities of \$375 million and net debt of \$8 million. During the quarter, we paid approximately \$145 million for SL Power, and we repurchased \$17 million of common stock at \$74.12 per share. Cash flow from operations was \$38 million. Net working capital improved slightly to 119 days. DSO improved modestly to 55 days and DPO declined slightly to 64 days.

Inventory turns remained about flat at 2.8 times. As we begin to see the impact of our actions to scale back inventories of less critical components. In the near-term, we expect inventory to remain elevated, but turn should

improve as we consume inventories of less critical parts contributing to higher return should improve as we consume inventories of less critical parts, contributing to higher cash flow over the next several quarters.

During Q2, we invested \$12.4 million in capital expenditures, made debt principal payments of about \$5 million, and paid \$3.8 million in dividends. In addition, today, we announce that our board of directors increased our stock repurchase authorization to \$200 million in support of our long-term opportunistic share repurchase strategy. Since our last authorization a year ago, we repurchased approximately \$95 million of stock at an average price of \$83.50 per share through the end of the second quarter.

Now, let me turn to guidance. Although we continue to see strong demand for our products, we remain in a dynamic supply environment, with low visibility to the delivery of critical parts and ongoing material premiums for some components. As a result, we expect Q3 revenue to be approximately \$435 million plus or minus \$25 million. Our Q3 guidance assumes semiconductor revenue will continue to grow sequentially and includes a full quarter of revenue contribution from SL Power. Q3 gross margin is expected to be about flat to Q2 levels, as higher material costs persist into the third quarter. We expect operating expenses to be in the \$97 million to \$99 million range, primarily in a full quarter of SL Power operating expenses. We expect other expenses to be approximately \$2.5 million on higher interest expense, and our tax rate to continue to be approximately 19%. As a result, we expect our Q3 non-GAAP earnings per share to be \$1.30, plus or minus \$0.30.

Let me finish with some closing thoughts. In our second quarter, we executed well in a challenging environment. And although supply chain constraints will continue to pace our performance, our Q3 revenue guidance reflects four consecutive quarters of year-over-year revenue growth, increasing our confidence to achieve our year-end annualized earnings targets of \$6 per share despite persistently higher material costs.

Looking forward, we believe that solid demand drivers in our markets, the profile of our order book, actions we are taking to mitigate supply chain challenges and investments in new products positioned us well to deliver on the pent up earnings potential for the company for many quarters to come.

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

## QUESTION AND ANSWER SECTION

**Operator:** Thank you. We will now conduct a question-and-answer session. [Operator Instructions] Our first question comes from Scott Graham with Loop Capital Markets. Please proceed.

**Scott Graham**

*Analyst, Loop Capital Markets LLC*

Yes. Hi. Good afternoon. Congratulations on a nice quarter, guys.

Q

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Thanks a lot.

A

**Scott Graham**

*Analyst, Loop Capital Markets LLC*

Are you there? Okay. Just making sure. I was hoping you could unpack the semiconductor growth up 30% year-over-year. Just give us a little bit more color on maybe some product lines that were maybe outside strength and the like.

Q

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Yeah. Scott, let me make a few comments there. Like the rest of our markets, our semiconductor market was really constrained [indiscernible] (00:19:44) for us. It has been for the better part of the last year. So, what happened in the second quarter was we were able to procure more parts and turn those parts continue to revenue. There's really no meaningful change in the demand pattern. We're seeing demand exceeds supply, throughout our semiconductor business. I should mention, though, that, some of the work we started last year on qualifying alternative ICs and requalifying circuit boards is starting to pay off in a big way for us, starting Q2 and going into the second half of this year. So, a big thank you to our customers for working closely with us to make those calls happen.

A

**Scott Graham**

*Analyst, Loop Capital Markets LLC*

Okay. So, there are no particular areas of semi, where you were maybe a little bit stronger by product line? It was pretty broad based in semi?

Q

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Yeah. It's very broad based. Again, it's supply limited and customers are taking just about everything we can ship.

A

**Scott Graham**

*Analyst, Loop Capital Markets LLC*

Great. On the data center side, you have a really good business there. That's a market, however, that, half a dozen companies are saying that it's fine and, maybe the other half, say it's weakening or will potentially weaken, tying things back sometimes even to the smartphone market. What are your customers are saying in data

Q

centers? I mean, are your customers in particular, still have plans to, have – continue to build, in the second half of the year and on into next year? Give us an idea of what's going on in that market.

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Scott, we see a lot of strength in that market. And again, there's still a supply constrained market. So, they're taking everything we can build. I think the only thing we see non-market is that some customers are waiting for other components to complete their rack. And so, where we run into [ph] such perturbations (00:21:51) in the market, we're able to quickly ship those products to a different customer. So, so far, we have had no constraints in the hyperscale market and we're just being expedited on a daily basis from these customers.

**Scott Graham**

*Analyst, Loop Capital Markets LLC*

Q

And if I could just sneak one last question in here, if you don't mind, your chart on page 6 is pretty telling you, the growth of the backlog has been like a weed. I guess the concern that I would have there is, is there a percentage of that you think might be double ordering, first available, getting into slots and what have you? How much of that backlog is – do you think is real OEM order versus maybe some double ordering in there? And what is the potential that at closing in on \$1.2 billion that if demand weakens in the semiconductor markets, as I think most people believe it is, in some – in a lot of pockets that there's some cancellations there?

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Yeah. That's a good question, Scott. And we take a look at that backlog very closely because it is an all-time high. So, let me just give you some more data to support the integrity of that backlog. First of all, two-thirds of that backlog that we have currently is shippable in the next six months. So, it's got customer request dates within the next six months, which is important to note, because that means it's demand that's right in front of us. If I take a look at our backlog and addressing specifically your question about perishability, 80% of our backlog is for the Semiconductor, Industrial and Medical markets. So, nearly all that sole source, and we believe that all that is earmarked for specific slots. So, we don't think there's much [ph] that's (00:23:51) perishable there. The part that is perishable is the hyperscale backlog, right? Because that's a business where there's more than one supplier for every one of those boxes. And so, we track that very closely. It's the riskiest part of our backlog, but it only represents 10% of the dollar value of our backlog. So, that's where we take a very cautious approach on buying piece parts and integrated circuits for the hyperscalers. And so, we make sure that we're covered, so we don't get left with unsold inventory.

**Scott Graham**

*Analyst, Loop Capital Markets LLC*

Q

Thank you, Steve.

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

You're welcome.

**Operator:** Our next question comes from Krish Sankar with Cowen. Please proceed.



**Krish Sankar***Analyst, Cowen & Co. LLC*

Q

Yeah. Hi. Thanks for taking my question. I have two of them. First on, Steve, I'm just kind of curious. People do worry about next year and the macro and everything, but your numbers are obviously very impressive and good. But at the same time, your customers like Lam who reported last week are growing their inventory. So, I'm just kind of curious if and when a slowdown happens, is it fair to assume you might see it before your [ph] semicap (00:25:03) customers because they would rather draw down from their own inventory versus buying from you?

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

No. I recently spent a lot of time with our major customers in semiconductor, almost all of them, in the past month. And the message was very clear, ship us more in the second half. And so, they see demand as solid through 2023 and into 2024. And their biggest issues are basically parts issues. Typically, it's not Advanced Energy anymore, it's other suppliers. And so, the nice part about that market is with our biggest customers, we work [indiscernible] (00:25:45) inventory. And so, even if there's no specific need for a product today, we can still ship the product into the customer. They'll put into inventory and then they could turn that when they need it. And so, we're – in addition to filling real demand today, we're also replenishing the hubs that are major semiconductor equipment customers. So, we feel very good about our ability to keep shipping at a high rate into those customers well into 2023.

**Krish Sankar***Analyst, Cowen & Co. LLC*

Q

Got it. Got it. Very helpful, Steve. And then a quick follow-up for Paul. Just a hypothetical question, just on operating leverage. If for some reason revenues are down next year, let's say, 5% or 10% or whatever it might be. I'm just kind of curious how to think about the leverage in the model now that you also have SL Power added on to your portfolio?

**Paul R. Oldham***Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

A

That's a good – it's a good question, Krish. I mean, I think our operating leverage is in the 40% to 50% range. On the downside, it would probably run a little bit higher than that. But remember, at our gross margins, the majority of our costs are variable cost. And so, [indiscernible] (00:26:57) bigger impact on us as companies, we have a large fixed cost base.

Clearly, there are some things that we can do to manage our expenses if, in fact, we saw revenues lower, including, one of those is that every – almost every person in the company is on variable pay protect program. And there's certainly variable expenses that we can manage down. But at the same time, as we mentioned before, we do think that the nature of this cycle is a little different and that it's a supply constraint cycle. And if you look at our inventories, our inventories are up too, [indiscernible] (00:27:37) because we're waiting on critical parts and we found that we see a lot of that at our customers, they have higher inventories, but they have higher inventories of things [indiscernible] (00:27:46) products. So, we do think our backlog provides us some runway as we look forward, even in a softening demand environment where we believe customers will take the equipment to either replenish their own jet or have inventories or areas where [ph] there we had to borrow it (00:28:07) from places to just meet their own demand today.

**Krish Sankar***Analyst, Cowen & Co. LLC*

Got it. Very helpful. Thanks a lot, Paul. Appreciate it.

Q

**Paul R. Oldham***Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

Yeah.

A

**Operator:** Our next question comes from Amanda Scarnati with Citi. Please proceed.

**Amanda M. Scarnati***Analyst, Citigroup Global Markets, Inc.*

Hi. I just have a quick clarification question. In terms of the impact of the new designs and the restructuring of some of the components versus sort of general supply easing, where did you see sort of the biggest benefit in the quarter in terms of outperformance?

Q

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Yeah. Amanda, I would say that there is probably the biggest benefit in the semiconductor area. That's where we saw the biggest hit. As far as the ability to turn more revenue due to these [indiscernible] (00:29:00) the more redesigns was in semiconductor.

A

**Amanda M. Scarnati***Analyst, Citigroup Global Markets, Inc.*

Okay. And then just in terms of your CapEx plans going forward, I know there's plans to sort of shrink some of the capacity in Asia. But with the chip stocks passing and including equipment suppliers, does that change how you look at capacity in the US or through your general capacity footprint? Or are you still more concerned about just sort of rightsizing the business at this point?

Q

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Yeah. So, we're going to expand capacity, Amanda. There's going to be puts and takes, where we closed some factories and opened new ones because we're modernizing our operations. But I think you'll see us significantly expand capacity in the coming years, particularly in Asia. Regards to the CHIPS Act, we don't see any direct benefit. We don't expect to get any grant money or investment tax credits as a result of that bill. However, we believe that our customers will benefit significantly from that. So, that anything's good for our customers, is good for Advanced Energy.

A

**Amanda M. Scarnati***Analyst, Citigroup Global Markets, Inc.*

Thank you.

Q

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

You're welcome.

A

**Operator:** Our next question comes from Quinn Bolton with Needham. Please proceed.

**Quinn Bolton**

*Analyst, Needham & Co. LLC*

Q

Hey, guys. Congratulations on the results and the outlook. I guess I've got a question about the broker channel. As I've heard more about it, it sounds like in order to win business in that channel, you often have to commit to not only the higher prices they're asking, but also minimum commitments, which, might fulfill your needs for multiple orders. And so, as you guys look at the supply constraints, can you just sort of talk to us about, when you go into the broker channel, are you sort of committed to buy at these higher prices for several quarters, which will keep that premium cost or that drag on gross margin, high through early next year? And if that's the case, do you also see sort of just a – kind of game of Whac-A-Mole where, the component shortage is, one quarter, it's MOSFETs; next quarter, it's PLDs; next quarter, it's something else. And so, even though you might have these supplies from a per channel, one quarter, a critical need comes up the next quarter and you've got to go back for a different type of component?

**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Yeah. It's a good question, Quinn. I'd say, first, the nature of our buys from the broker channel tend to be driven by immediate needs, not trying to fill material slots for multiple quarters. And frankly, you can't get that many parts from these channels. It's much more of an opportunistic buy than [indiscernible] (00:31:50) usually might tie us over from, anywhere from a month to a handful of months. So, I don't think there's a long risk that we buy parts that we'll be consuming for a long period of time. It tend to be consumed pretty quickly as they kind of come in the door and right out because of the critical parts that we're looking for.

But your second comment is right. It is a little bit of a game of Whack-A-Mole. And there's certainly some components where supply has gotten better or we've been able to get longer visibility of supply. And other parts that show up there haven't been a problem, but now are a problem because there was a yield issue or there was some other issue in the supply chain and that we're not able to get parts. So, I do think that the nature of these broker buys being sort of both necessary and opportunistic is that this activity will abate as the general supply chain improves. We haven't seen that yet. And I think in our comments, we talked about we expect that it could persist into the third quarter. But we don't see this being a long-term pattern over time. It will improve as the supply chain normalizes.

**Quinn Bolton**

*Analyst, Needham & Co. LLC*

Q

Sort of related to my second question, do you expect the broker or the premium buys to have that same relative 160 basis point impact in the third quarter as it did in sort of Q1 and Q2? And then a second question, I think you've mentioned you're keeping a Shenzhen facility open for longer to maintain that surge capacity. Can you give us any update on your thoughts about when you may be shutting down that line as things get back to more normal conditions? Thanks.

**Paul R. Oldham**

*Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

A

Yeah. In general, as we said, we're seeing the higher material costs persist in the Q3. So, while we didn't say specifically on the broker buys, which can vary a little bit. But broadly speaking, I'd say in the same range, probably make sense. It's obviously something that's dynamic and could increase or we can see it improved

depending on how the broader economy environment goes. With respect to Shenzhen, we do expect to close out by the end of the year and we'll keep that capacity. And as Steve said, we are adding capacity and part of that rebalance is to ensure that we've got adequate capacity across our sites as that – as Shenzhen closes to [indiscernible] (00:34:13) ability to only maintain, but grow our semiconductor revenue.

**Quinn Bolton***Analyst, Needham & Co. LLC*

Q

And Paul said about a 50 basis point drag for Shenzhen. Is that the right ballpark?

**Paul R. Oldham***Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

A

Yeah. I think that's the right – that's in the right range.

**Quinn Bolton***Analyst, Needham & Co. LLC*

Q

Great. Thank you.

**Paul R. Oldham***Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

A

Yeah.

**Operator:** Our next question comes from Steve Barger with KeyBanc. Please proceed.

**Steve Barger***Analyst, KeyBanc Capital Markets, Inc.*

Q

Hey. Good morning or good afternoon. Sorry. Sounds like you're expecting continued strong growth. When you think about what you're seeing in end markets and just the mix that you have in backlog, do you expect Semi Equipment continues to show higher organic growth rates than Industrial and Medical as you go into next year or do tougher semi-comps make that flip?

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Yeah. Steve, we do expect to see semi tend to be strong through 2023. But we think I&M has actually got more potential because I&M has been really restrained by lack of parts. And it tends to be more of a high – higher mix of volume business for us. So, I think as we are able to get more parts for the Industrial and Medical business, you're going to see quite an uptick in Industrial and Medical space.

**Steve Barger***Analyst, KeyBanc Capital Markets, Inc.*

Q

That's great. And really good to see your confidence and more than \$6 of run rate earnings in 4Q. Given that strong demand environment and your comments on backlog, is that \$150 per quarter plus kind of a minimum base case going into next year as you think about the first half, assuming you can get all the parts you need to ship?

**Paul R. Oldham***Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

A

Yeah. I think assuming we can get the parts to ship, there's upside to that number. So, it all comes down to the constraints in supply environment. And as we commented, we've seen demand remain strong. And given the proprietary or sole source nature of the backlog, we still continue to operate in a supply-constrained environment even if we saw demand soften a little bit. Ironically, some softening in macro demand might actually help the parts situation which would benefit us as we go into next year. So, we're keeping a close eye on it, but we do believe that the combination of strong markets and our backlog profile give us continued upside, all based on where we're at from a parts perspective.

**Steve Barger***Analyst, KeyBanc Capital Markets, Inc.*

Q

And if I could just ask one kind of related question to your comment about if things were to slow, you mentioned that you're pushing to accelerate the cadence of new product introduction. Is that a function of increasing R&D spend, or is there some internal processes you're streamlining to get things to market faster?

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

It's a combination. We are certainly spending more money in R&D to accelerate our technology development. But from a product standpoint, it's really how we're going to market. So, we've organized into business units which are highly focused on our target markets, on Semiconductor, Industrial and Medical. And I think between the two, that's what's causing us to get our new product outlook up. And it's very important for us to continue that improved cadence as we go into 2023.

**Steve Barger***Analyst, KeyBanc Capital Markets, Inc.*

Q

Thanks.

**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

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Thank you, Steve.

**Operator:** Our next question comes from Hans Chung with D.A. Davidson. Please proceed.

**Hans Chung***Analyst, D. A. Davidson & Co.*

Q

All right. Thank you for taking my question. Congratulations on the strong result. So, first, can you, kind of, give me some color around the Industrial and Medical segment during the second quarter? I know there are contributions from the SL Power, but we also see very strong organic growth. And just kind of curious about what this driver and any color around that?

**Paul R. Oldham***Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

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Yeah. So, a couple of comments. I noted in my remarks, sort of the organic and inorganic growth. So, we did have a strong quarter in Industrial and Medical, and that's driven by strength across a number of verticals. Steve

mentioned several of those in his commentary around lighting, indoor farming and more broadly. In general, Industrial and Medical, the demand has been strong and it's all about the part. So, that we grew backlog again in Industrial and Medical products and it's across multiple areas. We did SL Power this quarter. As I mentioned, it added just under \$30 million of revenue and was clearly accretive for us for the quarter. And we do think the combination of the SL Power products and the people that joined us as part of that acquisition, as well as the breadth expansion of channel, combined with our existing footprint, medical does give us a significant opportunity to grow in the medical market.

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**Hans Chung**

*Analyst, D. A. Davidson & Co.*

Q

Got it. And then, regarding the target for a \$6 EPS run rate by end of this year. And so, will that mainly contribute from let's say for 4Q, I assume we may see the sequential growth in top line and also probably, you will see some gross margin benefit from maybe more moderate, the cost premium from [indiscernible] (00:40:01), the IC. And so, my question is, what would be a major driver for you to achieve the \$6 plus run rate EPS in the first quarter? Would that be more driven by top line or gross margin or kind of equally come to office style?

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**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Yeah. I think earlier in the year, we felt that the supply chain would be improving and we would see some of these cost premiums abate and we would get some uplift from gross margin by the end of the year, which would contribute to our gain in the \$6 annualized earnings per share. So, I think a couple of points as we come current in that is first of all, I think we've done a pretty good job of getting parts because our focus has been on getting product to customers. That's come at a higher cost, but we've been able to get revenue, get revenue out. And so, if you look where we are today, and in Q2, we're actually nearing the end of that \$1.50 per share and the gross margins are sort of in the 37% range. So, I guess, our comments today try to indicate that as we get parts and are able to ship more, we'll see the volume that will support that. And also, we'll see some improvements in gross margin. But I think we're tempering our view a little bit on gross margin improvement by the end of the year based on how persistent the higher part of cost is going to be. So we believe we can get to the \$1.50 without a significant uptick in gross margin and then add that increase in gross margin comes as the supply environment improves. That will just be additional tailwind to our financial performance.

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**Hans Chung**

*Analyst, D. A. Davidson & Co.*

Q

Got it. And then maybe last one quick. So, can you elaborate on the new design wins in the Data Center segment, I think it's coming on that? And just curious what's – any color around the geography or the product line? And any color and then how long it could take to convert to kind of volume order? I know is that potentially net something last year, is first half or second half? And any color would be helpful. Yeah.

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**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Yeah. Thank you for the question. We've been going through a transition in the data center market for the past year-and-a-half. So, what we've been doing is focusing on a more higher value-added designs. So, where we can either be sole source or the lead source in a two source situation. And that's actually progressing quite nicely. I can't give you a lot of color just to [indiscernible] (00:42:46), where we're playing and who we're playing with. But I can tell you that I'm pleased with the progress.

At the same time, given the dynamics in the hyperscale g to market, which is supply constrained, we're also doing a bit better there because we're able to pass on some of the increased parts cost to the hyperscale customers. So, I'm seeing improvement in the hyperscale business, both with our current business, the gross margin performance, as well as the future business that we're winning today. So I'm happy with it.

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**Hans Chung***Analyst, D. A. Davidson & Co.*

Thank you.

Q

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**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

You're welcome.

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**Operator:** Our next question comes from Patrick Ho with Stifel. Please proceed.

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**Patrick J Ho***Analyst, Stifel, Nicolaus & Co., Inc.*

Thank you very much and congrats on the nice quarter. Steve, maybe first off, you've obviously shown that the production levels have increased with the last few quarters. You've talked about your Malaysia facility ramp in the past. Can you give us an update on some of the efficiencies and the optimizations that are occurring there that are allowing more output to come from it, which is obviously helping your financial results?

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**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Yeah. Great question. So, what we've been doing there for the past nine months is basically growing our output. We're also expanding our floor space. So, that's a three-floor factory. And we are going to finish building up the third floor here in the next couple of months. So, what we've seen is a steady increase in output other than the Malaysian factory. We brought a new Chief Operating Officer in September who's made a big impact on our operations there. We also brought a new plant manager in. And so, I think one thing that I've noted is our attrition rate has come down to below the average in Malaysia. And, a year ago, it was much higher than average. So, when you have that situation, we can have a constant pool of employees. Your quality goes up and your output goes up. And we've seen that Malaysia factory.

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**Patrick J Ho***Analyst, Stifel, Nicolaus & Co., Inc.*

Right. And maybe as my follow-up question, I know, Steve, you've been in this industry a long time. Whenever costs go up, they don't tend to go down over time. But this is obviously a very different environment. How are you passing along some of the cost increases that could be permanent on your end towards your customers because obviously everyone is trying to figure that aspect out across the ecosystem?

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**Stephen Douglas Kelley***President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Yeah. So, we actually had a major price increase that happened last fall. And those actions are never easy, right? Because nobody wants to pay more. But the way we approach that is we basically catalog all of the increases that we were seeing across the board, not just ICs, but almost everything we buy is going up in price. And so, we basically laid it out to our customers, and this is what we're experiencing. We need some help absorbing these

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increased costs. And that's how we sold it. And that's basically how we'll continue to play it very transparently with our customers. We are not adding margin to the increased costs, we're just saying, hey, we need, we need to become say if the increased prices we're paying particular brokers and dealers, as well as to the manufacturers. So, it's a heavy lift, it was a heavy lift last fall, but I think the team has gotten better at it. And if we need to raise prices again this year, we know how to do it.

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**Paul R. Oldham**

*Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

Hey, Patrick...

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**Patrick J Ho**

*Analyst, Stifel, Nicolaus & Co., Inc.*

All right. Thank you. Yeah, yeah. Go ahead.

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**Paul R. Oldham**

*Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

[indiscernible] (00:46:32) when we think about cost and passing them on to the customer, there's really two categories of those. One of these broker dealer costs that we think are transitory, they're very transactional. In those cases, oftentimes we'll talk to our customers before we buy the parts about whether they're willing to help support that. And again, on those, we're just passing the cost along and reimbursing this. And we've had a pretty good track record. We don't recover everything, but we've recovered a lot of it, that's the premium buys. That will go away in our view. It's transitory. The more structural increases in price where we're seeing actually our OEMs and our suppliers raise prices, our goal is to largely either recover those through price increases of our own or through efficiencies and other things that we can do over time. So, as we think about inflation as something that's more structural, we believe that we will be able to cover that over time because it's a – it's in our entire ecosystem. [indiscernible] (00:47:31) we'll be able to pass those costs along or make improvements to offset them.

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**Patrick J Ho**

*Analyst, Stifel, Nicolaus & Co., Inc.*

Right. Thank you very much, guys.

Q

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**Paul R. Oldham**

*Chief Financial Officer & Executive Vice President, Advanced Energy Industries, Inc.*

You're welcome.

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**Operator:** Our next question comes from Paretosh Misra with Berenberg. Please proceed.

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**Paretosh Misra**

*Analyst, Berenberg Capital Markets LLC*

Thank you. In your Semiconductor business, is there a way to think about your exposure to memory versus logic as to which of these you have a higher exposure?

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**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A



Yeah, Paretosh. In general, I would say we have higher exposure to logic. So, the memory ups and downs affect us a little bit less than some others. If you take a look at the total WFE, just a few years ago, that memory was about roughly two-thirds of the market. Today, it's more like 40%. And so, while it's significant, I think the logic market is bigger for leading edge and even trailing edge. And so, we're participating in all those spaces. But we have more of our revenue weighted towards the boundary space than we do to the memory space.

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**Paretosh Misra**

*Analyst, Berenberg Capital Markets LLC*

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Got it. That's useful. And then with regard to your operations in China, are they now running normally? It's still impacted by any COVID-related lockdowns? And I guess quantify the impact of it in Q2 that normalize in Q3.

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**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

A

Yeah. We were very fortunate that we had no lockdowns in Q2 at our Chinese factories. We had – the only shutdown, we've had this year was in March. We shut down for a week in Shenzhen, but we've recovered very quickly. But Q2, remarkably, no shutdowns.

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**Paretosh Misra**

*Analyst, Berenberg Capital Markets LLC*

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Great to hear, guys. Thank you.

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**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

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Thank you.

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**Operator:** There are no further questions in queue at this time. I would like to turn the call back over to Steve Kelly for closing comments.

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**Stephen Douglas Kelley**

*President, Chief Executive Officer & Director, Advanced Energy Industries, Inc.*

Thank you much for joining the call today. Really appreciate your interest. Just some takeaways. I think Q2 was – it was a good quarter. We were able to find more parts than we expected and turn those parts into revenue quickly. We're working hard behind the scenes, designing new products and bringing new technologies to market. And finally, we have great confidence in our ability to deliver superior, profitable growth over the long-term. So again, thank you for joining the call today. Bye-bye.

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**Operator:** This concludes today's teleconference. You may disconnect your lines at this time, and thank you for your participation and have a great day.

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