

# Q2 2019 Vicor Corporation Earnings Call

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TEXT version of Transcript

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## Corporate Participants

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\* James A. Simms

Vicor Corporation - CFO, Corporate VP, Treasurer, Corporate Secretary & Director

\* Patrizio Vinciarelli

Vicor Corporation - Founder, Chairman, CEO & President

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## Conference Call Participants

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\* Alan Hicks

\* Gus Richard, Northland Capital Markets

\* John Dillon

\* John Gruber

\* Jonathan E. Tanwanteng, CJS Securities, Inc.

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Operator

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Good day, and welcome everyone to the Vicor earnings results for the second quarter ended June 30, 2019 conference call hosted, by Dr. Patrizio Vinciarelli and James Simms. My name is Matt and I am your event manager. (Operator Instructions) I'd like to advise all parties that this conference is being recorded for replay purposes. And with that, I'd like to hand it over to James. Please go ahead, sir.

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James A. Simms, Vicor Corporation

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Thank you, Matt. Good afternoon and welcome to Vicor Corporation's earnings call for the second quarter ended June 30, 2019. I'm Jamie Simms, Chief Financial Officer, and with me here in Andover is Patrizio Vinciarelli, Chief Executive Officer.

After the market's close today, we issued a press release summarizing our financial results for the 3-month period ended June 30. This press release has been posted on the Investor Relations page of our website, vicorpower.com. We also filed a Form 8-K today relating to the issuance of this press release.

I remind listeners that this conference call is being recorded and is the copyrighted property of Vicor Corporation. I also remind you various remarks we make during this call may constitute forward-looking statements for the purposes of the safe harbor provisions under the Private Securities Litigation Reform Act of 1995.

Except for historical information contained in this call, the matters discussed on this call including any statements regarding current and planned products, current and potential customers, potential market opportunities, expected events and announcements, planned capacity expansion as well as forecast sales growth spending and profitability are forward-looking statements, involving risks and uncertainties.

In light of these risks and uncertainties, we can offer no assurance that any forward-looking statement will, in fact, prove to be correct. Actual results may differ materially from those explicitly set forth in or implied by any of our remarks today. The risks and uncertainties we face are discussed in Item 1A of our 2018 Form 10-K, which we filed with the SEC on February 28, 2019.

Please note, the information provided during this conference call is accurate only as of today, Thursday, July 25, 2019. Vicor undertakes no obligation to update any statements, including forward-looking statements, made during this call and you should not rely upon such statements after the conclusion of this call.

A replay of today's call will be available beginning at midnight tonight through August 9. The replay dial-in number is (888) 286-8010 followed by the passcode 91303034. In addition, a webcast replay of today's call will be available shortly on the Investor Relations page of our website. I'll start this afternoon's discussion with a review of our financial performance for the second quarter and Patrizio will follow with his remarks, after which we will take your questions.

In the interest of time and providing everyone who wants to ask a question an opportunity to do so, we ask that you limit yourselves to one question and a related follow-up. If you have more questions, you may return to the queue.

Beginning with consolidated results, as stated in today's press release, Vicor recorded total revenue for the second quarter of \$63.4 million, representing a 3.6% sequential decline

from our first quarter revenue of \$65.7 million and a 14.6% decline from the second quarter 2018 revenue of \$74.2 million.

Q2 '19 revenue was expected to have represented a sequentially improved quarter, but late in the period we had to reschedule over \$5 million of Advanced Products shipments to major contract manufacturers serving our OEM customers. Near-term visibility, whether for Advanced Products in the data center or Brick Products in China, remains clouded. Patrizio will comment on this further in his remarks.

Reflecting these circumstances, Advanced Products revenue for Q2 '19 declined 19.5% sequentially and was approximately 40% lower than the level recorded for the second quarter of 2018. In contrast, Q2 '19 Brick Product revenue increased 3% sequentially and was essentially unchanged in comparison with the total for the second quarter 2018. Turns volumes were not a meaningful contributor to quarterly revenue. For the second quarter, the Brick/Advanced revenue split was 76% Brick Products and 24% Advanced Products, in contrast to 70/30 for the first quarter.

International revenue declined 11.5% sequentially, reflecting the decline in Advanced Products shipped to offshore contract manufacturers and flat activity in Japan. International revenue fell to 51% of revenue for Q2 from 56% for Q1.

Consolidated gross margin as a percentage of revenue declined to 46% for Q2 from 47.3% for Q1. The Q2 decline largely reflects reduced absorption due to lower production and continued Section 301 tariff charges. We have retained consultants to assist us in establishing a duty draw-back program and we are expecting this program to be functioning shortly with some degree of tariff rebate occurring before year-end.

Quarterly operating expenses were flat sequentially and approximately 2% lower than Q2 2018 expenses, even though our annual merit increases for compensation were implemented during the quarter. Reflecting the decline in revenue and gross margin, quarterly operating income declined to \$2.4 million or 3.8% of revenue, in contrast to the prior quarter's \$4.5 million, representing an operating margin of 6.8%. In Q2 '18, operating income was \$8.3 million, representing an operating margin of 11.2%.

Our year-to-date effective tax rate stands at 7.3%, down from 9% through Q1. Net income attributable to Vicor totaled \$2.6 million for the second quarter, representing a diluted EPS of \$0.06. This is in contrast to Q1 2019 income of \$4.3 million, which represented diluted EPS of \$0.10. For Q2 '18, we recorded net income of \$7.9 million and diluted EPS of \$0.19. Our fully diluted share count for Q2 EPS calculation was 41,081,000 shares, which is the sum of both common share classes representing approximately 29.3 million registered common shares and diluted stock options and approximately 11.8 million Class B common shares, which are neither registered nor listed.

Turning to our balance sheet, cash and cash equivalents sequentially rose to \$71.5 million, largely due to a pause in capital expenditures, which totaled just \$2.5 million for the quarter. I will return to capital spending and capacity in a moment. Trade receivables, net of reserves, totaled \$38.3 million at quarter end, sequentially down 6% with a DSO steady at 46 days and all balances current.

Inventories net of reserves increased roughly 6% sequentially to \$54.6 million, reflecting higher finished goods inventories associated with the delayed shipments. Our raw materials balance actually declined another 4% sequentially and WIP declined 7%. Annualized inventory turns fell to just under three for the quarter, reflecting the increased total balance and lower volume. However, we have recognized in July a substantial portion of the revenue associated with the rescheduled customer deliveries from June, so our inventory metrics have improved from quarter-end.

Concluding my review of the second quarter, total employee headcount as of June 30 stood at 1,019, down from 1,022 for the prior quarter. Full-time headcount was 987 at the end of Q2, up from 985 for Q1, while part-time and temporary headcount declined five, reflecting slowed production activity.

I'll now speak to our capacity expansion. We have the approvals to proceed with an approximately 90,000 square foot addition to our Andover facility and have secured a 6-year tax abatement, which was a factor in deciding to expand our existing facility in Andover, before pursuing a larger expansion in capacity down the road. As stated in today's press release, we have committed to acquire land adjacent to our Andover facility and expect that purchase to close shortly. The purchase price is approximately \$1.5 million and the acquired land, some of it already paved for parking, will allow us to expedite meeting our parking needs for the building addition. We plan to take occupancy in 2020 and as stated before, anticipate internally funding both the construction and the planned two phases of equipment installation.

I also want to highlight, we have completed our transition to a one business segment structure, which will be reflected in our second quarter 10-Q, expected to be ready for filing next week. In recent years, we have consolidated and simplified our operations and organizational structure, transitioning to one integrated business with two product categories, Advanced Products and Brick Products. Over the last 12 months, we have merged our two operating subsidiaries, Picor and VI Chip, into the parent, consolidating numerous organizations and functions and integrating separate ERP and financial reporting activities into one. We believe this streamlining will improve efficiency.

As was the case with the Picor merger last year, with the VI Chip merger, which closed on June 28, 2019, Vicor assumed the VI Chip's subsidiary level stock option plan and all outstanding options thereunder. In the not too distant future, we expect to file a Form S-8 with the SEC, registering the approximately 1.5 million shares of Vicor common stock that will be available for issuance upon the exercise of options awarded under the assumed VI Chip plan. While just under half of the options to which these shares are available are fully vested, the terms of the assumed option plan call for the shares to be subject to multi-year transfer restrictions, limiting the volume of shares that can be sold in any single year.

Turning to the third quarter, we remain positive about our near-term prospects, but are cautious regarding the timing of the anticipated recovery in data center spending and the negative influence of tariffs and trade disputes on our business in China. We are forecasting revenue growth for Q3 with profitability improvement based on higher volumes. Operating cash flow should remain stable, but we do expect to start writing some sizeable checks for land and construction.

With that, I'll turn the call over to Patrizio.

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Patrizio Vinciarelli, Vicor Corporation

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Thank you, Jamie. As said in today's press release, we are winning every demanding artificial intelligence ASIC application with lateral or vertical Power-on-Package solutions. However, our visibility into datacenter spending remains clouded and our bookings and revenues have been affected by the trade dispute with China. We're working to mitigate these issues and remedy the impact of tariffs on growth and profitability.

Bookings for the second quarter totaled \$60.2 million, representing a 10% sequential decline. New orders from Chinese contract manufacturers declined significantly, primarily for datacenter and AI customers' programs, some of which are being relocated outside of China. Bookings from distributors were reasonably steady sequentially for both Advanced and Brick Products.

As Jamie mentioned, activity for Brick Products for applications across industrial, communications, health care, and defense electronics is steady, with gains in the U.S. partially offsetting declines in Asia and Europe.

As communicated at our stockholders' meeting last month, we're confident of our position in next-generation 48 volt servers, AI accelerators, and supercomputers, which will drive near and long-term growth opportunities. The remarkable early progress we're making in automotive electronics is, we believe, evidence of a very promising long-term opportunity there.

The cash generating Brick business provides stability in a volatile world, while the feverish pace of design-in activity with Advanced Products bodes well for our long-term outlook. We're not alone in facing headwinds from China, and we're taking steps to adapt to challenging conditions. We're pursuing strategies to serve the Chinese market and to regain momentum we have established there.

We have previously disclosed being approached by parties interested in licensing our proprietary technologies to expand the served addressable market for our products, while providing second-source capacity. To that end, we have recently hosted visits from Asian companies interested in licenses for our Power-in-Package technology. We're also discussing opportunities with global companies with an established presence in important vertical markets, such as automotive which will like to partner with Vicor in accelerating adoption of factorized power system solutions in those vertical markets.

To conclude my prepared remarks, despite recent challenges and near-term uncertainty, we are uniquely well-positioned in the emerging transition to 48 volt for datacenters, supercomputing and AI applications. We have unprecedented momentum with customers that look to us for the power system performance necessary to enable their products and their strategies. Our outlook for the second half reflects steady demand for Brick Products

and a resumption of demand for Advanced Products from an expanding list of AI applications for which there is no viable competitive alternative.

I refer you to Phil Davies' presentation at the recent annual shareholder meeting and the audio recording of the question-and-answer session, both of which are available on the Investor Relations page of our website, as they both provide descriptions of our market opportunity and our strategy.

Let's now open the call. As stated, we ask that you limit yourself to one question and a related follow-up question. Operator?

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Questions and Answers

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Operator

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(Operator Instructions) Your first question is coming from the line of John Gruber.

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John Gruber

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Good afternoon. My question is on the power supply on the chip, the new vertical power delivery. You addressed it in the call. When do we expect to close on some licensing agreements with -- you mentioned auto, but what about AMD, Intel? When do we expect to close on some agreements in this area?

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Patrizio Vinciarelli, Vicor Corporation

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So, there is no connection to AMD or Intel regarding the licensing opportunities. As mentioned in the prepared remarks, we're having discussions with two Asian companies that have an interest in providing an alternate source of our Power-in-Package solutions, because it provides an opportunity to achieve greater vertical integration in their capabilities. Customers for these solutions involve OEMs, who are themselves users of ASICs and CPUs and XPU's. That may include the likes of AMD or Intel, but in general include other types of devices.

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John Gruber

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And do you expect -- when could we get some of these licensing agreements you've been working on?

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Patrizio Vinciarelli, Vicor Corporation

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I would remiss to stick out my neck with respect to the timing. It's fair to say that we're holding discussions. These kinds of developments are inherently involved in many respects and they may take quite a bit of time. And that outcome is also uncertain. So I believe that sooner or later there is going to be at least one agreement, but I'm not going to predict the precise timing of that.

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John Gruber

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Thank you, now my follow-on would be, Monolithic Power has made a lot of noise in the two months about their 48 volt, they're beating you out in certain areas. Where do they fit into the equation in this whole 48 volt landscape?

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Patrizio Vinciarelli, Vicor Corporation

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Based on information available to us, they do not have a viable competitive alternative. And I'm choosing my words carefully with respect to that. For an alternative to be viable, it has to work. It has to have a level of performance that does not stand in the way of application requirements. And it's got to be free of any IP issues. And so, what I can say at this point is that there is no viable alternative. And the best reflection of that perhaps is the experience that some of us had just within the last 10 days on a trip to the West Coast. We visited with five customers. These are big names, the names you will think of. They're all relying on us for their next-generation ASIC solutions with current requirements all the way up to 1,000 amps. There is no viable competitive alternative. And all these solutions are going to 48 volt, because the alternatives are, again, not viable.

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John Gruber

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And one last point of clarification, did the \$5 million that you didn't ship to the customer and that shipped in early July? Is that what you said?

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Patrizio Vinciarelli, Vicor Corporation

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Yes, the contract manufacturer, we had shipped the product. The contract manufacturers did not take delivery before the end of the quarter. They took delivery a few days after the end of the second quarter, so those products are now received and effectively shipped from us.

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Operator

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The next question is coming from the line of Jon Tanwanteng.

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Jonathan E. Tanwanteng, CJS Securities

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Thank you for taking my questions. My first one, as you mentioned, you expect Q3 to be up. Did you mean that sequentially or year-over-year, and kind of what assumptions are you making about the Chinese trade relations with the U.S. for that to happen? Is it stable or does it need to improve?

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Patrizio Vinciarelli, Vicor Corporation

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We're not expecting it to improve in the very near term, certainly not in a way that would make a positive impact on third quarter performance. So with that as the working assumption for opportunity in China in the near term, which is at a very depressed level relative to this time last year. With that as the baseline for China, we're looking at a pretty appreciable revenue increase this quarter in low double-digits.



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James A. Simms, Vicor Corporation

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And to be clear, sequentially.

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Patrizio Vinciarelli, Vicor Corporation

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Sequentially, yes.

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Jonathan E. Tanwanteng, CJS Securities, Inc.

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Great, thank you, and then for my second question, what is -- well, you had some pretty optimistic, I guess, "bubbles" regarding GPUs and ASICs in data center and customer designs in your annual meeting slide, Page 18 if it's in front of you. Heading into 2020, which one of those can you confirm as confirmed design wins and which one are aspirational or still in discussions? Any color on that will be helpful.

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Patrizio Vinciarelli, Vicor Corporation

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So I'm not going to mention specific names. Again, I'll point to the example, the recent visit to the West Coast. And so without again naming names, I can say that one of those programs, actually remarkably the most advanced one, the one with the most demanding current requirements, will go in -- it's already in limited production with respect to a first-generation implementation, if you will. We're about to deliver a second-generation implementation, which doubles the current capability for that customer. And that may go into production as early as the first half of 2020. At the other end of the spectrum with respect to the customers we visited last week, in the FPGA field, we're looking at programs that are not going into production until the '21-22 time frame. So that's more of a longer-term opportunity, but a very substantial one. In the GPU space, with other AI ASICs, it's somewhere in between those time frames, some going into production early next year, other ones later in 2020 or early 2021. So there's a range of time lines, depending on the specifics of the application. But certainly I'm keeping my eye on that ball, and it's a big one. That's where the action is going to be.

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Jonathan E. Tanwanteng, CJS Securities, Inc.

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Okay, and if may just a quick clarification on the sequential improvement, if you didn't have that \$5 million pushout, would you have still expected Q3 to increase either sequentially or year-over-year?

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Patrizio Vinciarelli, Vicor Corporation

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So, I think without the \$5 million that did ship in Q2 and ended up in effect -- it actually physically shipped in Q2, but was not received by the customer till early Q3; without that, the increase in revenue in Q3 would be that much lower, but still there would be an appreciable increase. I'm just going to state the obvious. Bookings, as Jamie is fond of saying, and has said repeatedly in past conference calls, are the precursor to revenues. It's not a mystery that our book-to-bill has been disappointing over the last few quarters. I think what we can note is that in the second half of last year, leading up to that, bookings had been very strong. The book-to-bill had been very strong. We built up a very substantial backlog. We've been working down that backlog to some degree. We still have a very substantial backlog position. Bookings are expected to start stepping up again this quarter. And that will be a precursor to higher revenues and even higher bookings in the fourth quarter.

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Operator

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The next question is coming from the line of Gus Richard.

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Gus Richard, Northland Capital Markets

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Could you help characterize the revenue per socket that you get on a unit basis, for instance, in AI ASIC? You're powering at 500 amps. What sort of revenue per chip do you typically get? A range would be fine.

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Patrizio Vinciarelli, Vicor Corporation

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Yes, so for competitive reasons, I'm not going to quantify what we usually characterize as cents per amp. I will say that in the AI field, there is a broad range of requirements per system. At one end of the spectrum, there was in other ways referencing earlier, our value content just at the point of load in one of the systems is close to \$10,000 per system. At the other end of the spectrum, it could be a few hundred dollars. So there's a very wide range of opportunity in terms of revenue per chip or system, depending on the specifics of the system. Some of the systems are at the low end, so to speak, of the current requirement, which could be something like 400 amps for a primary output. At the other end of the spectrum, we have solutions that range to tens of thousands of amperes. And obviously those are the ones that command a bigger overall price tag.

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Gus Richard, Northland Capital Markets

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Thank you, that's very helpful. And then in terms of a licensing deal, can you just walk me through how you get paid? Is it just a straight licensing fee and royalty per sale, or how does the economics for you all work?

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Patrizio Vinciarelli, Vicor Corporation

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Well, it will be a function of the phase of the license. We are aiming to achieve an early capability, which may involve Vicor providing a part to the solution, the licensee providing the balance. And so the opportunity in phase one is different from the opportunity in follow-on phases. But generally speaking, we have a very substantial investment in the technology. As you know, we've invested at this point around \$400 million in the last 10-15 years in developing a patent portfolio of over 100 patents, and technology at this point is proven to be without equal in enabling technology that customers aiming to compete with each other in the AI space in particular, and in other fields, like autonomous driving and other areas need to have in order to realize their capabilities. And there is a big value associated with that and there is, I think, a big opportunity to expand the market and enjoy in partnership with a licensee or licensees, a growing and very significant market opportunity. We are not interested in entering into licensees that don't provide the right kind of opportunity for Vicor and for the licensee.

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Operator

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The next question is coming from the line of John Dillon.

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John Dillon

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Patrizio, you mentioned a couple, I think it was last quarter that you're targeting a \$100 million bookings number for the fourth quarter. So I'm wondering, is that still on or is that pushed out a quarter or two, and if you could give us a little bit of color on that?

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Patrizio Vinciarelli, Vicor Corporation

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Yes, so given what's transpired in the last several months, we've revised our target for the balance of the year down. We expect it to be in the low 80s for bookings in Q4. That's going to be obviously dependent on events. If they unfold, again in the short term, we're looking at the China situation as not improving or improving quickly enough to have an impact on the next couple of quarters, even though we could be pleasantly surprised on that front. There's also -- there's been a significant slowdown caused by a variety of factors, with some of our high-volume data center applications, like availability of CPUs meeting certain requirements and other factors that transition from one power generation to the next. So those factors will relieve themselves over the next quarter. And that's part of our outlook for improvement starting this quarter and into Q4. With respect to getting to the \$100 million milestone with respect to bookings, it's something that we expect is going to happen at this point in 2020 or in the first half of 2020. But we need to take a bit of a wait-and-see attitude with respect to that. Because obviously what has happened in the last several months has been, in a couple of different ways, with China and with some of the high-volume applications also, a surprise.

I mean part of this is obviously market conditions, particularly with respect to the cloud computing datacenter space. There's another part of it, which I referenced in the past, which has had to do with the lack of a statistical foundation to our Advanced Products business space, in other words dependency up to this point on a relatively small number of significant applications. With all the developments and the designing activity that is going on, that is going to change as we get into 2020 and beyond. And at that point in time, it's going to become much easier to, in effect, predict the bookings going forward, because we'll have, as we've had now for quite some time, a statistical business base, as we do with our Brick business. Obviously the Brick business at this point is past its peak and it's a very mature business. It's very level, very statistical. It doesn't offer growth opportunity. With

Advanced Products, there's tremendous growth opportunity, but the level of unpredictability we've had in recent quarters obviously needs to be dealt with. And the way we're going to deal with it is by having a lot more customers, a lot more applications. And the emerging field of AI, which is a great match-up for our unique technological capabilities, will give us the customer base. In the longer term, the automotive market will also give us a very significant base. We're making great strides on that front. We're far along with more than one customer, with specific programs, specific solutions, specific building blocks, like the NBM and some of our high-voltage front-end type of products. So I think we need to be a little patient with respect to building a statistic base of Advanced Products. But once that happens, we're going to get both a very much more predictable business with significant growth coming from Advanced Products.

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John Dillon

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Great, my follow-up question is you've mentioned before and you mentioned in this call how the revenue is going to follow the bookings and that sometimes can be two quarters. Well, if we take that out to the fourth quarter that would indicate a \$60-plus million revenue number for the fourth quarter. But I don't think that's what you're forecasting. Can you give us a little more color on what you're expecting for the fourth quarter? Are your demand in turns going to go up or are you going to be eating some of the backlog? And what is your target for the fourth quarter for the revenue?

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Patrizio Vinciarelli, Vicor Corporation

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So as you're suggesting and asked in an earlier question, we're expecting a step-up this quarter in the low-teens, slightly above 10%, 10-15%, in that ballpark. And we're expecting a further step-up in Q4. Part of it is the backlog position. We've had close to \$100 million, which historically is very high for us.

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John Dillon

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Thank you. That's good. So it's 10% to 15% for the next two quarters is what the expectations are?

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Patrizio Vinciarelli, Vicor Corporation

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I think for the present quarter that's our current forecast.

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Operator

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Your next question is coming from the line Alan Hicks.

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Alan Hicks

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I was wanting to know about your order flow for supercomputing applications.

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Patrizio Vinciarelli, Vicor Corporation

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It's very strong. And let me be more specific with respect to that. We've had some bookings and the imminent demand appears to be quite strong because the programs that have been in the works for quite some time and they're coming to fruition, including U.S. government type of programs and other initiatives. The supercomputing space is one of the areas where we have unique enabling technology and where customers look to us and us only, really, for supporting their demanding needs. I would rank, generally speaking, supercomputing behind AI, which is going to be a huge market for us, the datacenter space in general. Eventually automotive would be a very significant market. But we are very well aligned in terms of technical capabilities to the requirements of supercomputers.

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Alan Hicks

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Well, do you expect the order flow to pick up in the next, say, 12 to 18 months on supercomputing?

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Patrizio Vinciarelli, Vicor Corporation

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Yes, I think we have very significant programs with key customers whose names you recognize that are going into production late this year, early next year. So we expect to see bookings to begin to flow in earnest. We've had some bookings in Q1 with one of these programs, but relatively a small initial level. Larger increments will come later this year and in 2020.

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Operator

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The next question is coming from the line of John Dillon.

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John Dillon

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I wasn't expecting to get back on this quick. So, Patrizio, I wonder if you can talk about the NBMs. I'll get you off the speakerphone here. I wonder if you can talk about the NBMs and RFMs a little bit more. When will you start shipping and production on both those products?

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Patrizio Vinciarelli, Vicor Corporation

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We are shipping in production to a number of different applications. Going back to the automotive opportunities, we recently have started developing an opportunity that will use a large multiplicity of NBMs to convert 48 to 12 volt within next-generation automobiles. So that's a very exciting program with very large opportunities for the NBM in particular. With RFMs we have the power tablet, which you can see on our website. As I might have mentioned in the past, that's reflective of our 2G or second generation control system. We're actually now powering up a 4G, much more advanced, implementation that will turn the power tablet into something akin to a phone in terms of size, much smaller device, much lighter, more efficient, lower cost in terms of cents per watt, high efficiency, more scalable. We expect that the fourth generation control system, with PFC control chip and more advanced powertrain implementation, will open up huge opportunities for us in front ends, particularly 3-phase front ends for 48 volt systems again in the data center space, in super computing, and potentially in the automotive market as well.

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John Dillon

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On the RFMs on the iPhone-sized product, you've mentioned before that there might be one customer that could actually take basically all your capacity. I'm wondering if you visited this customer recently and if there's any update on that at all.

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Patrizio Vinciarelli, Vicor Corporation

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Yes, so I think we -- we're quoting the fact one of these customers we're quoting high volume for the power tablet, the existing RFM. We're also quoting the so-called 9270, which is 92 millimeter by 70 millimeter fourth generation device with five to six kilowatt capability. That's the iPhone size, so to speak. I think with respect to volume production of these RFM solutions, we're still quite a distance away. They require, in effect, some architectural adaptation to take full advantage of the capabilities. But we are making progress with smaller accounts in early implementations, particularly with the existing power tablet, again, relying on an older generation control system, but still very advanced relative to anything else in the marketplace in terms of achieving power density at several times more advanced than anything else out there. So those are the lower volume opportunities. Some relate to cryptocurrency type of opportunities, which I'm not sure we can take to the bank. But be that as it may, we see a lot of opportunities, generally speaking, for RFMs, particularly as we start sampling customers on the fourth generation devices that leverage more advanced control and powertrain implementation. And the advanced packaging that we have with our SM-Chip packages.

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John Dillon

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Well the follow-up on that, is with the new products, all the new products really; how many total new customers do you have? I mean we've talked a lot about the big customers. But what about the total number of new customers? Are you growing your customer base and are you getting your statistical base up in the customers in the \$10,000 to \$20,000 order type things?

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Patrizio Vinciarelli, Vicor Corporation

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So we frankly have more opportunities than we can support. So we're being selective. We've recently instituted a practice of requiring non-recurring engineering to support engagements with many of these customers, because of the fact that we want the customers to have skin in the game. And they're willing to do that, because of what our products and solutions can do for their system. And that's a way to, in effect, ensure that the solutions that we're investing in enabling have a good likelihood of turning into significant volumes. So we have no shortage of opportunities. To the contrary, we have far more opportunities than we can properly support with our current infrastructure. And making good progress in terms of leveraging scalability with the solutions we have, very focused on the issue of scalability in both application engineering, the architecting of the solution so that customers can before too long, do more of the application development on their own with our tools, without as much technical support, which is at the end of the day, not all that scalable in itself, right? So this will all focus on scaling up our capabilities by way of enabling customers to go very far in terms of implementing their own solutions using our modular building blocks.

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Operator

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The next question is coming from the line of John Gruber.

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John Gruber

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This is a very pedestrian question. But the old established company, Texas Instruments, huge company, a few days ago reports beats expectations for guidance. Same thing tonight, Intel beats expectations. Yet, Vicor doesn't. Why the disconnect? What do you see? They're subject to some of the same issues you are.

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Patrizio Vinciarelli, Vicor Corporation

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So, I think both of those companies have very large and statistical base of customers and applications. We don't. So, as suggested in an answer to an earlier question, when it comes to our Advanced Products, the growth of our customers' applications thus far has been relatively small. And if those customers have unique issues at any point in time -- and we've had that happen in the last six months -- that stand in the way of their scaling up the datacenters or at least doing it with CPUs that are available and meet their requirements, then we catch a cold with respect to that being a significant issue to us. So, whereas with Texas Instruments or Intel, there isn't the exposure because of the very statistical base of business. Now I imagine both Texas Instruments and Intel may have seen the effect of the

Chinese trade situation, but perhaps not to the extent or close to the extent that we've seen it.

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Operator

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The next question is coming from the line of Jon Tanwanteng.

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Jonathan E. Tanwanteng, CJS Securities, Inc.

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Just a quick follow-up on the orders that were pushed out into Q3, what would have earnings or margins looked like if that had made it into the quarter, number one? And then a couple of housekeeping questions after that.

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Patrizio Vinciarelli, Vicor Corporation

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So, if the \$5 million that shipped but was not received had been received and had been part of the Q2 revenue, obviously the revenue would have been higher by that amount and if you apply the margins with some increment associated with those incremental revenues, that margin would have largely dropped to the bottom line, pre-tax, given that the operating expense would have been the same. So the math is pretty simple.

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Jonathan E. Tanwanteng, CJS Securities, Inc.

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Okay, fair enough. And then just you mentioned you've been doing a lot work to consolidate the results and the operations. Can we still expect a breakout of Advanced operating metrics? In your Q's, will you be talking about that in future calls?

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Patrizio Vinciarelli, Vicor Corporation

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Yes, absolutely. Yes, because that's a fundamental, the (inaudible) line within our business strategy. Obviously the Bricks are a percent. The past Advanced Products are a percent, the future. And through many years of fundamental technological development, we had Picor and VI Chip as separate entities for good purpose, in terms of focus, the R&D in the respective core competencies, to contribute the broad IP portfolio and product capability that we developed. But within the last couple of years, it became evident that in terms of providing a path to liquidity for option holders in both Picor and VI Chip, and in terms of our operational efficiency as a company, it would make sense to consolidate, and that's what we've done. And starting with Picor, last year and within the last few months with VI Chip. So at this point, I think it's appropriate to say that we have all of our key employees aligned in their individual interests with the company's interest to deliver the goods, grow the revenues, grow the bottom line and make happy shareholders.

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Jonathan E. Tanwanteng, CJS Securities, Inc.

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Okay, great. And then just could you break out the depreciation and amortization in the quarter, so that we can calculate EBITDA?

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Patrizio Vinciarelli, Vicor Corporation

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So I'll turn that over to Jamie, who's busily looking through a stack of paper.

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James A. Simms, Vicor Corporation

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I had just closed my notebook. Depreciation was \$2.6 for the quarter.

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Jonathan E. Tanwanteng, CJS Securities, Inc.

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Great, thank you so much.

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Operator

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The next question is coming from the line of Gus Richard.

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Gus Richard, Northland Capital Markets

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Just quickly, when you ramp your new Advanced Products, like the vertical power, are there any impacts to gross margins in terms of early ramp? And then can you just talk about the role to margins of Brick versus Advanced products?

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Patrizio Vinciarelli, Vicor Corporation

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The impact of ramping new products is, generally speaking, is a first order impact, a positive impact, because we still have a model that in effect suffers from a substantial amount of fixed cost, particularly when it comes to infrastructure to support Advanced Products. Their scale is not yet large enough to come close to absorbing the fixed cost we have in supporting Advanced Products. So in general, scaling up Advanced Products will result in improved margins and improved bottom line. Having said that, as with all new products, yields do not immediately get to the high 90s. It takes usually a few months of volume production. So at the very beginning of the scale-up of a new product, there could be some inefficiencies. But that works itself out relatively quickly in our experience. And the dominant effect is utilizing a greater share of our total capacity is a good thing for the gross margins and for the bottom line.

If there is one more question before we close this call?

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Operator

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Yes, the last question is coming from the line of Alan Hicks.

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Alan Hicks

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Yes, could you talk a little bit about the satellite constellation business? Is that new for you? I know you're in military aerospace for a long time. But are these commercial applications brand new and do you expect to get a high percentage of that business?

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Patrizio Vinciarelli, Vicor Corporation

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Yes, so we're going to start shipping solutions into aerospace applications in the fourth quarter of this year. It's expected to be high margin business. We won an initial program. We are now looking for other opportunities in that general space. As your question suggests, the satellite market is undergoing some fundamental changes relating to scale-up of capabilities, with a much larger quantity of devices of different sizes and different orbits with different requirements going up in space in years to come, to support global internet and other capabilities. Our products, because of their attributes, particularly high power density, high efficiency, very low noise, are, once again, well-suited for the application requirements of satellite electronics, particularly where very low noise is a distinguishing attribute. And the scenario that we've made some significant investment in preparing for, in tooling, and we look over the next several years to having a significant contribution from. To be clear, the opportunity up there may be in the tens of millions of dollars per year over time, not on the scale of the datacenter space by far, AI by far, or the automotive space in particular by far. But it fits in the mix, because with our packaging technology, our engines, our control systems, we have an opportunity to share our capabilities and there is a way to pursue this satellite constellation opportunities with the resources required to properly support them without detracting from the much-higher volume opportunities in commercial markets. And they have some good distinguishing attributes in terms of, in particular, high margin. So it's part of the mix, not what will make Vicor the much larger company we aspire to be.

And with that, thank you, and we'll be talking to you in three months. Have a good day.

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Operator

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Ladies and gentlemen that concludes your conference call for today. You may now disconnect. Thank you for joining. Enjoy the rest of your day.