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TEXT version of Transcript

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Presentation

Operator [1]

Good afternoon. Thank you for standing by, and welcome to the Wolfspeed Inc. Second Quarter Fiscal Year 2023 Earnings Call. [Operator Instructions] Please note today's call is being recorded. I would now like to hand the conference over to our first speaker today, Tyler Gronbach, Vice President of Investor Relations. Please go ahead.

Tyler D. Gronbach, Wolfspeed, Inc. - Vice President of Investor Relations [2]

Thank you, and good afternoon, everyone. Welcome to Wolfspeed's Second Quarter Fiscal 2023 Conference Call. Today, Wolfspeed's CEO, Gregg Lowe; and Wolfspeed's CFO, Neill Reynolds, will report on the results for the second quarter of fiscal year 2023.

Please note that we will be presenting non-GAAP financial results during today's call, which is consistent with how management measures Wolfspeed's results internally. Non-GAAP results are not in accordance with GAAP and may not be comparable to non-GAAP information provided by other companies. Non-GAAP information should be considered a supplement to and not a substitute for financial statements prepared in accordance with GAAP. A reconciliation to the most directly comparable GAAP measures is in our press release and posted in the Investor Relations section of our website, along with a historical summary of other key metrics.

Today's discussion includes forward-looking statements about our business outlook, and we may make other forward-looking statements during the call. Such forward-looking statements are subject to numerous risks and uncertainties. Our press release today and the SEC filings noted in the release mention important factors that could cause actual results to differ materially, including risks related to the impact of the COVID-19 pandemic.

[Operator Instructions] And now I'd like to turn the call over to Gregg.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [3]

Thanks, Tyler, and good afternoon, everyone. Before we get into the results of the quarter, I'd like to take a moment to remember our late founder and CTO, John Palmour. We had a celebration of life last weekend, during which we announced that we would dedicate our Siler City manufacturing facility in his memory, naming it The John Palmour Manufacturing Center for silicon carbide.

All of us knew John, through his nickname JP, and so the nickname for our facility will be The JP. He worked for over 35 years to advance and promote silicon carbide and largely as a result of his efforts, the world is recognizing its potential.

We believe that silicon carbide is on the cusp of mass adoption and that our long-term outlook remains on track. First, electric vehicles were the bright spot in the auto market in 2022 despite many headlines that auto sales have slowed. Global EV sales grew more than 65% year-over-year and represented 10% of all vehicles sold in the calendar year. We've seen this overwhelming demand play out at Wolfspeed as our recent partnerships with industry leaders such as Jaguar Land Rover and Mercedes-Benz point to the strength in the demand for EVs and our ability to take share in this space. We remain confident in the industry's strong long-term fundamentals and believe Wolfspeed is best positioned to capitalize on the rapidly growing demand.

Second, our $1.5 billion of design-ins in the quarter point to continued robust demand for our power devices. To date, 46% of our design-ins have converted to design-wins, representing more than 1,800 projects. We are coming off multiple quarters of record design-ins with a total of more than $16 billion of design-ins over the last 3 years. Now of course, there will be some variability in our design-in numbers from quarter-to-quarter based on timing of new agreements and decisions by customers. We anticipate that as our manufacturing capacities expand with new facilities, we will continue winning in the device marketplace.

Third, we continue our market leadership position in the materials business, the aspect of our business with the highest barriers to entry. We recently announced an expanded agreement with another leading supplier of silicon carbide materials, which illustrates the intense demand for silicon carbide. From where we sit, the industry remains supply constraint, and this will continue to be the case for the foreseeable future.

It is clear to us that the opportunity in silicon carbide technology is generational given the pace of adoption we've experienced over the last few quarters. At our Investor Day, I remarked that I have not seen growth like this in my 30 years in semis, and that view has not changed.

While customer interest remains strong across both materials and power devices, as we discussed previously, silicon carbide production and manufacturing can present challenges along the way. Our Durham crystal growth operation, which is the world's largest silicon carbide materials factory, currently supplies our entire device business and a significant share of the merchant market. However, that is still not enough to support the massive accelerating demand for silicon carbide. With the intense growth in demand for both captive and merchant wafers comes to challenges of growing our materials output as well.

We've continued to refine our crystal growth operations and had a recent breakthrough in our ability to grow taller bulls. The initial challenges in managing these taller bulls in our back-end processing have been resolved, resulting in significantly higher yields. It will take a few months before we return to normal production schedule for these materials as the improved product makes its way through the WIP, but we are encouraged by the results that we've been able to achieve with these taller bulls.

Long term, The John Palmour Manufacturing Center for Silicon Carbide is critical to addressing the supply-demand disconnect that will support our expanding device footprint at both Mohawk Valley and a soon-to-be announced fab as well as the ever-growing demand for merchant wafers. Construction of The JP is progressing well since groundbreaking in September, and things remain on track as we updated during our last Investor Day.

Regarding the progress at Mohawk Valley, we previously said that we anticipate revenue flowing through the fab in the second half of fiscal 2023. We remain on a trajectory to meet that target, and that will largely depend on our ability to complete qualifications and ramp the supply of 200-millimeter wafers, which we believe we will achieve.

We continue to successfully run test lots through Mohawk Valley, which gives us confidence that we're ready to begin scaling production and recognizing revenue from Mohawk Valley in the fourth quarter of this fiscal year. As a reminder, Mohawk Valley is a first-of-its-kind fab, purpose built to produce next-generation silicon carbide power devices. We're in the final stages prior to scaling production in Mohawk Valley and one of my top priorities over the next few quarters is to ensure that we execute on that plan.

We have a strong team and clear strategy in place and are confident in our ability to deliver strong results for our shareholders. While there may be some variability in our short-term results as we qualify and scale the world's first 200-millimeter silicon carbide device fab while also scaling the first production of 200-millimeter silicon carbide wafers, we are well positioned to capitalize on the explosive growth that we see through the end of this decade.

Now I'd like to turn the call over to Neill to discuss our quarterly results. Neill?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [4]

Thank you, Gregg, and good afternoon, everyone. During the fiscal second quarter of 2023, we generated revenue of $216 million at the low end of our guidance range, which represents a 10% sequential decline when compared to the $241.3 million in the fiscal first quarter of 2023 and growth of approximately 25% year-over-year.

As Gregg mentioned, we continue to see strong demand for our silicon carbide solutions. However, the supply chain issues we discussed last quarter caused variability in our quarterly revenue in the second quarter with equipment spare part shortages limiting our Durham fab output, while at the same time, we continue to work through the ramp of our taller 150-millimeter bulls. I am pleased to report that we have made significant progress on both issues and they are currently processing these improvements through our production cycle.

In terms of our power devices, which grew approximately 48% in the quarter versus last year, we saw strong performance ahead of our expectations, mostly resolving the Durham spare parts supply chain issue we discussed last quarter. From a power device supply perspective, we now believe that we have achieved full capacity in our Durham wafer fab and virtually all future top line growth for power devices will come directly from the Mohawk Valley fab.

From a materials perspective, we made very significant progress in improving yields on our taller 150-millimeter bulls. These yields are now comparable to our historical yields on shorter bulls. However, back-end wafer processing cycle times recovered later in the quarter than anticipated, resulting in lower-than-expected Q2 revenues for our materials products. We believe this past quarter represents the bottom of the revenue trough related to this issue as we exited the quarter at yields, cycle times and shipping rates that will all support future materials revenue growth.

During the quarter, we also saw weaker demand for RF products due to secular headwinds with recession-related pullback in 5G demand. This resulted in lower-than-expected revenue for RF devices, which we expect to remain weaker in the second half of this fiscal year.

Non-GAAP gross margin in the second quarter was 33.6% compared to 35.6% last quarter, and 35.4% in the prior year period, representing a 180 basis point decline year-over-year.

Gross margin was negatively impacted by the previously mentioned lower yields on the taller 150-millimeter bulls and lower output of the Durham fab due to the supply chain challenges. While we made significant progress on both issues in the quarter and expect to see improvement moving forward, they both represented a drag on gross margin during the second quarter.

In addition, RF devices continue to be dilutive to our consolidated gross margin. As we discussed, because of the immense demand for our power devices, we have not been able to optimize the RF manufacturing footprint as we had previously planned. We expect our RF product line will negatively impact our consolidated gross margin by approximately [Audio Gap] basis points for the next few years.

As a result of these items, we generated adjusted earnings per share of negative $0.11 in the fiscal second quarter compared to negative $0.04 a quarter ago and negative $0.16 in the same period last year. Notably, adjusted EPS this quarter was favorably impacted by approximately $0.05 of non-repeatable events in other income and tax. Excluding these nonrepeatable items from our earnings, we would have been at an approximately $0.16 loss per share during the quarter.

Before I discuss our guidance, I'll provide a quick overview of our balance sheet position. We ended the quarter with approximately $2.5 billion of cash and liquidity on our balance sheet to support our growth plans. DSO was 62 days, while inventory days on hand was 161 days, which is 26 days higher than Q1.

Free cash flow during the quarter was negative $171 million, comprised of negative $67 million of operating cash flow and $104 million of net capital expenditures.

During the quarter, we incurred start-up costs primarily related to the Mohawk Valley fab ramp, totaling approximately $38 million. Moving forward, we expect overall start-up and underutilization charges for Mohawk Valley to wind down as we ramp the fab included a non-GAAP adjustment for these start-up costs in the reconciliation table in our earnings release.

In terms of our capital needs, since we last spoke, we have made great progress in securing funding for our greenfield facility construction and long-term capacity expansion plan. In November, we announced a successful convertible note offering anchored by one of our largest strategic partners, BorgWarner. We were extremely encouraged by the demand we see in the marketplace and believe it sets us up well to secure further funding.

Additionally, we are still evaluating other avenues of additional funding, including government funding in the United States and Europe as well as upfront customer payments or investments, the capital markets and debt. As we stated previously, cost of capital and potential dilution is top of mind for us when we are pursuing additional capital.

Now moving on to our fiscal third quarter outlook. We are targeting revenue in the range of $210 million to $230 million. Our revenue guidance reflects continued strong demand as well as supply execution improvement in both our power device and materials product lines, partially offset by continued softness in RF demand.

Our Q3 non-GAAP gross margin is expected to be in the range of 32% to 34% as we expect to see some improvement in both power device and materials products, offset by RF weakness due to the lower volumes. We expect non-GAAP operating expenses of approximately $98 million to $100 million for the third quarter of fiscal 2023. We expect Q3 non-GAAP operating loss to be between $22 million and $30 million and nonoperating net loss to be approximately $3 million.

We believe that we will realize approximately $5 million to $7 million of non-GAAP tax benefits as a result and expect Q3 non-GAAP net loss to be between $15 million and $20 million or a loss of $0.12 to $0.16 per diluted share.

Our non-GAAP EPS target excludes acquired intangibles amortization, non-cash stock-based compensation, project transformation and transaction costs, factory start-up and underutilization costs and other items as outlined in our press release today. As always, our Q3 targets are based on several factors that could vary greatly, including supply chain dynamics, overall demand, product mix, factory productivity and the competitive environment.

With that, let me pass it back to Gregg for his closing remarks.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [5]

Thanks, Neill. Despite some macroeconomic pressures on the silicon semiconductor market, we are confident in our long-term outlook and the strong secular trend for the demand for silicon carbide. Our design-in number continues to be robust, and the opportunity pipeline remains at a staggering $40 billion.

We have a strong pipeline of design-ins across a wide range of applications, including automotive, industrial and energy. We are increasingly well positioned to capture a significant share of this opportunity and are committed to investing in the necessary infrastructure to support our growth.

As far as our infrastructure goes, our focus on ramping Mohawk Valley will allow us to better scale our power device production, while our 200-millimeter materials capacity also scales. The learnings from Mohawk Valley have given us a blueprint on how we'll approach the construction and ramp of our next fab. We should have an update for you on those plans very soon.

The immense demand for both merchant and captive materials gives us further confidence in our decision to expand the Durham materials footprint and build The JP, dramatically expanding our materials capacity. This factory will be a game changer for our business and will allow us to increase supply at unprecedented levels compared to what is currently in the marketplace.

We were encouraged by our convertible note offering in November, and we are focused on effectively deploying this capital to further our capacity expansion plans and generate returns for our shareholders. Now there will be challenges as we ramp our new facilities but we will [tap] them quickly and use our 35 years of experience to resolve them and keep progressing forward.

And now I'd like to turn it over to the operator for questions.

Question And Answer

Operator [1]

[Operator Instructions] Our first question is from Harsh Kumar with Piper Sandler.

Harsh V. Kumar, Piper Sandler & Co., Research Division - MD & Senior Research Analyst [2]

Gregg, I wanted to ask about the revenue levels that came into the December quarter relative to perhaps what we were thinking. You talked about a couple of things. You talked about some bull-related issues. There were some equipment issues with your older fab in Durham. And then you also talked about back-end issues in the materials business. I was curious if you could help us think about maybe what -- I'm not asking for exact splits, but what the contribution was, the revenue mesh from maybe each of these factors or if there was one that was materially bigger than the other?

And also, I noticed that the cadence of guidance going forward is a lot smaller than what you typically give. Your midpoint is only $4 million, $5 million higher. Is that because you are being conservative? Or you want to get a bigger better handle on these issues before you go back to guiding sort of bigger increases? And then I have a follow-up.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [3]

Harsh, this is Neill. Let me take a shot here to start. There's a -- like you said, there's a lot of moving pieces here. Let me just unpack that a little bit and then maybe think a little bit about where we're headed moving forward just based on some of the comments you made there.

So first of all, let me just say, overall, we're continuing to see very, very strong demand across both power devices and materials. And as we previously discussed, for both of those areas, that's going to be much more of a supply situation rather than it being a demand situation. So bringing on supply is really the critical focus there.

But what we did see in the quarter was a weakening in RF. RF markets were weaker. We did see some orders pushed out in the quarter. I mean if you look back just to -- back to Q1 versus what our outlook is this quarter, it's approximately a 25% decrease. So as you look into Q3 and Q4 and even in the back half of the year, it's about a $15 million decrease in revenue versus what our prior kind of expectations are. So weakening from a demand perspective and RF is a piece of this.

Now you pointed out a couple of other areas. We had 2 issues last quarter we talked about. One was the lower yield than the 150-millimeter bulls and the taller bulls on 150-millimeter. As we said in the prepared remarks, those issues have been resolved from a yield perspective. It took a little bit longer in the quarter to get to the cycle times and throughput. So we built a bit of inventory. So the shipping rates at the end of the quarter were a little bit slower. We saw that in increased inventory. But essentially, we are at the bottom of that issue, and we are on our way back up.

The last one there was just on the Durham fab. So from a Durham fab perspective, we had some supply chain issues. This actually came in better than we anticipated. But for all intent and purpose now, the Durham fab is capped. We talked at Investor Day about a $400 million annual revenue coming out of Durham fab for power devices. That's about $100 million a quarter, and we're going to be capped on that until we start ramping up Mohawk Valley. So I would think about future significant builds in revenue from a power device perspective are going to be coming from ramping up Mohawk Valley.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [4]

And Harsh, I would just add to that. We're at an inflection point right now where we are running material through Mohawk Valley. We are planning for revenue coming out of that factory in the fourth quarter as we -- fourth quarter of this fiscal year as we qualify the product. The yields that we're seeing on the preproduction runs right now give us substantial confidence in being able to do that. And in fact, they're running higher than we would have anticipated at this point. So we're really, really happy with that.

And I think as we ramp this facility, which, again, recall just 3 years ago was a field of mud, we're going to see a substantial increase in capacity coming online, which obviously will help us satisfy that substantial demand that's out there.

Harsh V. Kumar, Piper Sandler & Co., Research Division - MD & Senior Research Analyst [5]

Very helpful guys. And for my follow-up, actually, it's a good segue into the Mohawk Valley schedule. So very pleased to hear fourth quarter, which is June quarter for revenue ramp. I've been already getting some questions from investors on how we should think about the revenue scaling to happen there. You've got a lot of pent-up demand, Gregg, and I think the industry relies on basically 2 or 3 guys for much of the production of the vertical production, 2 guys actually, you're one of them. And so help us think about, if possible, how the scaling will happen for that fab as the rest of the calendar year goes on?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [6]

Well, I'll kick it off and then Neill can talk a little bit more detail. So we're anticipating revenue from that fab kind of think of it in the single-digit millions of dollars in that June quarter in the fourth quarter. And then we would be ramping up beyond that. We're ramping up the supply of the 200-millimeter wafers for that at the same time. There's probably going to be some puts and takes, and we'll also ramp it up and I would describe it as a methodical process. So it's not just sort of turn on everything at once. But we're very, very pleased with what's happening with the yields, as I mentioned. Both the device yield and the process yields are looking really, really good right now. We expected that to eventually be the case. It's actually happening earlier than we anticipated.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [7]

Yes. And just to kind of frame up the revenue, as Gregg said, we thought we'd probably have around single-digit kind of millions of revenue, maybe even in Q3 and more substantial growth in Q4, we start to ramp up the fab. But we'll see that push out about a quarter at this point. But it's going to be a lot of moving pieces. Look, we're bringing up the first, as Gregg mentioned, the first 200-millimeter substrates, we're bringing up the Mohawk Valley fab for the first time. We're in the middle of qualification lots. We're matching that up with customer schedules in terms of qualification. So a lot of moving pieces, so that will probably create some variability here as we move forward.

But from where we sit today, we really are on the cusp of bringing this project we've been working on for multiple years and bringing it to reality.

Operator [8]

Our next question comes from Brian Lee with Goldman Sachs.

Brian K. Lee, Goldman Sachs Group, Inc., Research Division - VP & Senior Clean Energy Analyst [9]

Maybe just a follow up on Harsh's question because there's been a lot of intense focus around the exact timing of Mohawk Valley ramp. Neill, you said there's a bit of a push out here. As you alluded to, I think people are expecting some minimal revenue in the March quarter and then ramping through the back half of fiscal '23. Now it's June, so it's a quarter behind. Is this a bull back-end processing issue? Is it customer calls taking longer? I guess just a sense of maybe pinpointing what the issues are. I know there's moving pieces, but it almost sounds like as you're navigating this, maybe frame for us kind of how you feel about the June quarter, these issues not repeating and maybe having even further push outs? And then I have a follow-up.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [10]

Yes. Thanks a lot, Brian. I would say that we're ramping this in kind of a conservative type way. We are bringing together, first off, the world's first 200-millimeter silicon carbide wafer fab on the world's first 200-millimeter silicon carbide wafers. So there's a lot of variability in here. We're very, very pleased with what's the results out of the fab right now. But the last thing we want to do after 3 years of hard work has sort of dropped the ball right as we go into the end zone.

So we're going to ramp it up in a very methodical way. We've got material running through the factory right now. As I mentioned, it's looking really good. We anticipate qualifying it and then shipping this first few millions of dollars of revenue in the June quarter. We've got customers lined up for that, and then we'll be ramping in the following quarters as well. So I think we feel pretty confident at this point that we'll be able to do that. There's going to be some puts and takes. We still have to qualify. But based on all the data we see today, we feel pretty confident in that.

Brian K. Lee, Goldman Sachs Group, Inc., Research Division - VP & Senior Clean Energy Analyst [11]

Okay. Fair enough. And then a follow-up for you, Gregg. I think you mentioned the design-ins, I call it a 46% kind of conversion number. I think you were talking about in terms of projects. So I'm taking that to assume its units. Is there somewhat of a kind of similar conversion metric you can provide in terms of design-ins to revenue, just whether that's in the quarter or something you've seen cumulatively, and if that's sort of the right framework to think about success on the design-in pipeline going forward?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [12]

Sure, Brian. So when we talk about that 46% number, that's the 46% of the design-ins that we have, have transitioned from design-in to design win, which means we're starting to ship initial production volume. So it's a percentage of the projects, it's not a percentage of the total dollars, it's a percentage of the project. So think of it as 46% of the projects that we've won, where customers have given us a design-in have now transitioned into that initial phase of production ramp, which is, it really remains an astounding percentage to me. It's a lot faster than I would have anticipated. Most of those are going to be more industrial-type projects because they typically have a shorter ramp profile compared to automotive. But we're seeing good traction on the automotive ones as well. So that's how to think about that.

Brian K. Lee, Goldman Sachs Group, Inc., Research Division - VP & Senior Clean Energy Analyst [13]

Okay. But presumably, unless the project values, the project scope were to change, the projects converting at 46% or so would also translate pretty similarly on a dollar basis?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [14]

Yes. And what we do from a forecasting perspective is we start with, obviously, our overall opportunity pipeline and then we have design-ins. And when we look at going from design-ins to revenue, we put a pretty conservative filter on that, assuming some projects aren't going to make it all the way through. Some customers are going to not go into production with the project. A lot of things can happen in between now and then. So we have put a pretty conservative factor on there in terms of kind of framing the revenue compared to what the design-ins are. And that 46% number gives us a lot of confidence in the amount of conservatism we've had on that.

Operator [15]

Our next question comes from Samik Chatterjee with JPMorgan.

Samik Chatterjee, JPMorgan Chase & Co, Research Division - Analyst [16]

I guess for the first one in near term, and then maybe a longer-term question on the second one. I know last quarter there was the guidance about sort of exiting fiscal 2Q or the December quarter at roughly $1 billion run rate of revenue. And based on sort of your commentary today, it seems more you're saying the scaling to that $1 billion sort of revenue run rate even when we think about fiscal 4Q, if you sort of put Mohawk aside, is maybe a bit difficult because RF demand has moderated and essentially, your turnover is a bit more gap in terms of power devices. Am I getting that right? In terms of even moving sequentially from higher from March to June, it sounds like you're saying it's a bit more limited in terms of getting to that $1 billion run rate? Or is that unchanged? And then I have a follow-up.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [17]

Yes. I think that's mostly correct. So let me just maybe just frame it up a bit just to make sure we're all kind of on the same page here. I think as we looked at this back in October and we were looking at this quarter, given the tolerable yield issues, the supply chain challenges and the Durham fab, our anticipation was to be maybe meeting that kind of $1 billion run rate, kind of $0.25 billion revenue number run rate sometime during Q3. As you can think about that as [2.25 -- between 2.25 and 2.50] sometime in Q3.

Now RF has been a drag on that with the demand about $15 million a quarter. And we did anticipate having some revenue from Mohawk Valley, some smaller amounts potentially in the quarter, and that has now pushed out. So as you start to think about revenue timing going forward, with Durham now, I would say, essentially capped in what we had here, we see the RF numbers kind of staying lower. We're going to get a little bit of benefit off of the better yields and shipping rates in materials. So what we'll see here is it's really going to be a function of when and how we ramp Mohawk Valley.

So essentially, our revenue and even our margins for that matter, will really be a function of the timing of Mohawk Valley. So it will be somewhat limited in the amount of revenue we can drive in the back half of this year outside of RF until we start bringing on more supply from Mohawk Valley, and that timing is -- I think all roads are going to lead to Mohawk Valley in that sense.

Samik Chatterjee, JPMorgan Chase & Co, Research Division - Analyst [18]

And for my follow-up, I saw in your press release, you announced the partnership that you have with ZF and their press reports out there indicating you have agreement in terms of a new plant in Germany. Sort of maybe sort of a 2 part, one, sort of, it seems like what you're indicating is you haven't really confirmed I made a decision yet on the new fab in Germany. And secondly, sort of, tilting more towards Tier 1 suppliers like ZF and BorgWarner with some of your capacity announcements, is that a change versus how you wanted to go to market with more sort of direct approach to the OEMs in the past? Just curious, sort of, given that more recently, you've been more sort of announcing engagement with the Tier 1s.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [19]

Yes. Thanks for the question. And recently, in fact, in early January, we made an announcement together with Mercedes. So we've had a consistent sort of theme of both Tier 1s and the OEMs in terms of announcements. OEMs that have been announced have been General Motors, Jaguar Land Rover, Mercedes, Tier 1s, of course, ZF, BorgWarner, number of others as well. So there's no change in that. I think we've been pretty consistent that we've been winning long-term agreements with both the OEMs and the Tier 1s. And as this transition from internal combustion engine to EV has such a dramatic change for the automotive makers, I think you're going to see a lot of engagement in both of those.

In terms of our next fab, we mentioned at our Investor Day that the demand for our products is so strong that we need to have a new fab in place kind of ramping up in the 2027 time frame. If you subtract then from that the amount of time it would take us to build and ramp that factory. It says that we need to be starting to put that thing in place in 2023. And so what I would say is just kind of stay tuned for that. We've got a lot of work going on there. And as we make announcements on that, we'll be able to comment on it.

Operator [20]

Our next question is from Gary Mobley with Wells Fargo.

Gary Wade Mobley, Wells Fargo Securities, LLC, Research Division - Senior Analyst [21]

I had a follow-up on the potential for new silicon carbide wafer processing facility since you brought it up in your prepared remarks, Gregg, I'll probe a little bit deeper. The potential for that with a joint venture. Would that mean the joint venture partner would take the bulk of the output of that facility, if not all of it, not too dissimilar from BorgWarner and Mohawk Valley? And how would such a build impact fiscal year '24 CapEx relative to prior communication?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [22]

Yes. So what I would say is we really can't get into a lot of details on that. I would say just kind of stay tuned on that, and then we can be very, very clear.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [23]

And I'll add there, Gary, just from a CapEx perspective, when we laid out the plan again of October as it relates to CapEx, I mean, as I've mentioned before, that really includes everything. We knew at that point we would need a second fab and a materials facility and what we've laid out from a capital planning perspective includes all of those things. And right now, we don't see that any differently.

Gary Wade Mobley, Wells Fargo Securities, LLC, Research Division - Senior Analyst [24]

Got it. Got it. For my follow-up, when you announced Siler City, I believe the communication was that all that 200-millimeter output would be consumed internally. Has that view changed at all? Or will you be supporting some of these merchant LTSA wafer supply agreements with some of that output. And then maybe if you can just give us a sense of the trajectory of your wafer-related shipments based on some of these new LTSAs?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [25]

Yes. So basically, we're at the early phase of really ramping up 200 millimeter, and we're doing all we can to ramp it up and feed the Mohawk Valley fab. And we're also doing all we can to drive the cost and the commercialization of that product to a point where we can decide at that point what makes sense from a long-term agreement perspective.

At this point, it's looking like the vast majority of what we'll do at The JP now will be 200-millimeter. We do have the ability if we wanted to, to run 150-millimeter there. So if there was continued need and demand for 150-millimeter, we could do that at The JP facility. But yes, the vast majority of what we're going to be doing in The JP is going to be the 200-millimeter.

Operator [26]

Our next question comes from Colin Rusch with Oppenheimer.

Colin William Rusch, Oppenheimer & Co. Inc., Research Division - MD & Senior Analyst [27]

Folks are getting a little bit more mature in the auto industry around their platforms. Can you talk a little bit about the cycle times that you're seeing in terms of some of the design-ins as they look at scaling some of these platforms into multiple vehicles and moving into multiple geographies?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [28]

I would say we're seeing a couple of different things. First off, the cycle from when a customer begins thinking about implementing a new platform to when it goes into production, is still in that kind of that 4- to 5-year range, I would say. Some of the more startup-type companies can be a little bit faster, but that's kind of the range. What I would say is happening, though, is customers are taking the platform that they're going to use for vehicle X, and they're reusing it for vehicle Y. And so obviously, the cycle time for that is dramatically shorter to be able to just kind of rinse and repeat and reapply the same platform for another vehicle. And we've seen that numerous times across just about, I don't know, about all of our design wins, but many of our design wins, we've seen where we were in 1 platform and now we're in 2 and now it's 4. And I think that kind of is driving some of the steeper ramp that we're seeing in the demand for the product.

Colin William Rusch, Oppenheimer & Co. Inc., Research Division - MD & Senior Analyst [29]

All right. That's super helpful. And then in terms of some of the industrial applications, are you seeing anything new on the horizon that are real accelerants in terms of demand for you guys? Are there areas outside of automotive that are real highlights that we could think about as demand overs for fiscal '24 and '25?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [30]

We're seeing a lot of different applications. They tend to all be small individually and collectively, they can be large. That's anything that's basically converting energy at a high-power or a high-voltage range is, is really making a move towards silicon carbide. We're seeing that in solar systems. Wind systems are doing the same thing in terms of green energy server farms. We've got design-ins into non-vehicle but other transportation applications like vertical takeoff and landing equipment. And personal watercraft is another example where people are -- customers are designing it in.

So yes, we're seeing it across a large number of different kinds of industrial applications. And in this regard, it's really the exposure we have to that is really led by Arrow. That's done a really terrific job of getting us access to their footprint to be able to engage with customers.

From a sales perspective, we have a relatively limited footprint in Arrow, that's the largest sales footprint in the world. And so they're able to go after customers across all different geographies and sizes to be able to penetrate that market and evangelize silicon carbide.

Operator [31]

Our next question is from Jed Dorsheimer with William Blair.

Jonathan Dorsheimer, William Blair & Company L.L.C., Research Division - Group Head of New Energy and Sustainability Vertical & Equity Research Analyst [32]

Gregg, first one to you, if you would, and I don't want to trivialize how difficult it is in terms of what you're doing with 200-millimeter. But as you've sort of -- as we've gone through this process over the past 3 years and kind of forging this path, are there any lessons that you can share in terms of areas that things have kind of gone better in areas that maybe have gone a little bit worse that kind of gets you to the end result? And I'm asking this question kind of on the eve of -- or in the -- when you do announce that second fab, how to sort of gauge time line relative to this first fab? And then I have a follow-up question.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [33]

I would say a couple of things. First off, we built this fab during a crisis, and we weren't expecting that. And nevertheless, 3 years from when it was a field of mud to today, we're beginning production. It's actually quite astounding, I think, what the team has accomplished. So -- and I think they did that through really a good plan but probably more importantly, a good adjustment when we were thrown curve balls and so forth. And you guys remember all those curve balls were.

The second thing that I would say is from a super positive side of things, the decision to go fully 200-millimeter and to go fully automated was really solid. Originally, we were saying, well, maybe we'll start it at 150-millimeter and then convert it to 200-millimeter, I think that would have been such a distraction. We had to get to a point where we were confident in 200-millimeter, but we did get to that point, oh, gosh, it was maybe 2 years ago, I think. And I think kind of thank goodness, we did that because I think it would have been really difficult to convert a 150-millimeter fab to 200-millimeter. And I think the automation has been just stunningly awesome for us. I was talking to the team about process yield expectations and so forth. And the fact that we don't have humans interacting with these wafers that can be pretty brutal has been really positive.

So I would say that's all -- I think those are some of the positive things. I think we've had obviously a number of different challenges, but I think the experience of the team has allowed us to kind of clear those challenges quickly as well.

Jonathan Dorsheimer, William Blair & Company L.L.C., Research Division - Group Head of New Energy and Sustainability Vertical & Equity Research Analyst [34]

Got it. That's helpful. And [Technical Difficulty] for maybe you and/or Neill. But as we think about the ramp, there's -- and it sounds like your strategy -- some strategies are to build high buffer inventory and sort of ramp higher or harder, and it sounds like you're still taking a very methodical approach just by the [Technical Difficulty] in terms of the ramp-up. But I'm wondering if you could help us understand, if ramping on lower volume, you're going to be taking on the fixed cost and depreciation on a unit number, so -- or a unit basis, which I would think will have kind of a near-term headwind from a margin but how should we think about the crossover of those vectors because at 200 millimeters you're going to have a fundamentally lower cost basis. So is that sort of a 40% load or utilization or 60%? Or where do you see that crossover where what might be a little bit of a headwind all else equal, kind of becomes that tailwind to really accelerate things.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [35]

Yes, I'll kick it off and then kick it over. I'll start it and then kick it over to Neill. We're definitely taking a more methodical approach. And as I mentioned before, we're in really good shape right now. We've got yields that are looking really nice right now. And the last thing we want to do is just turn the accelerator too hard and kind of mess it up at the end here. So I think we're in the mode of let's do this in a methodical way, let's take it step by step. We're really pleased, I said, with the yields that we're seeing out of this, we'll be qualifying the product in the fourth quarter and shipping to customers, and then we'll turn on the fab kind of step by step.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [36]

Yes, that's from just the overall cost and I think fixed cost absorption, I think it's kind of where your question is going, Jed, in terms of bringing on factory for the first time. First of all, I think -- I don't know the exact number, but I think if you recall from the Investor Day, we said Mohawk Valley kind of breaks even, at least from a cash perspective, from kind of that 30% to 40% kind of utilization level, which I think is probably still valid. Everything we're seeing now from wafer cost yields to the overall cost structure of the fab all looks pretty good.

As we move forward, I think I've talked about this before, what we'll do to manage through this kind of early stage ramp is we currently have a start-up cost that we back out that we give an update on every quarter. We'll also think about an underutilization adjustment going forward to get to get the fab being marked to about 70% utilization. And then we'll start to wind that down as we build inventory in the fab. So right now, I think what you see is kind of the peak start-up and underutilization number that will just start winding down over time. And that should give people a really good view of what the fab capability is from a cost perspective, even at a relatively low level of utilization.

And what you see there is when we talk about the fab having die cost, it's 50% lower than our current cost in Durham, that's really based on the kind of lower utilization numbers. So we'll be able to kind of manage through that. We'll give an update on it every quarter, but we think we -- but I think everything I'm seeing from a cost perspective thus far, there's a lot of confidence in the margins that we'll see as we ramp up the fab.

Operator [37]

Our next question is from Vivek Arya with Bank of America.

Blake Edward Friedman, BofA Securities, Research Division - Research Analyst [38]

This is Blake Friedman on for Vivek. So just touching on the 5G weakness that was mentioned earlier. Just curious if it's related to any specific geography and with weakness to continue in the second half, is there any way you can quantify how much you expect second half RF sales to be coming in relative to the first half?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [39]

Yes. From an RF perspective, I'd say, overall, we're seeing a lot of choppiness across the customer base. So it probably depends on which customer each of the suppliers is dealing with. So I don't see -- but I do see some -- we do see flattening or even market weakness across a lot of different vectors as we look across the industry. I said earlier is we see that about a $15 million drag per quarter versus what we had previously expected from a revenue standpoint. And I think we'll continue to see that as we work through the back half of the year.

Blake Edward Friedman, BofA Securities, Research Division - Research Analyst [40]

Got it. And then just kind of quickly to just touching on the CHIPS Act and your CapEx cadence moving forward. Is there any benefits there specifically that you can size or just even high-level comments would be useful.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [41]

On the CHIPS Act, we're very pleased with how things have progressed. We're waiting on final regulations to come out, but clearly, [not only the] CHIPS Act, but we're -- I think we'll get, like I said, the final regulations will come out, but the investment tax credit that came along with that was very positive as well. And we've already started making some of those benefits into our numbers, and it's all in line with what we kind of anticipated when we laid out the plan last October. So no real changes there, and we'll continue to work with the government on the regulations as it relates to applying for additional funds.

Operator [42]

Our next question is from Matt Ramsay with Cowen.

Matthew D. Ramsay, Cowen and Company, LLC, Research Division - MD & Senior Research Analyst [43]

For my first question, I wanted to ask a bit on the RF business. There was going to be this 100-to 150-millimeter transition and you guys talked about on the last call and then at the Analyst Day, the margin headwinds that were going to come from maybe not making that transition, and that was pretty clear. But as I understood it, the reason for not making that transition was things were so tight in that facilities that you couldn't sort of shut things down to make the transition. And if now we're seeing cyclical demand weakness in RF devices. Is there an opportunity to make that transition now? And maybe you can just help me square that circle a bit.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [44]

Yes. Just recall that, that facility also produces our power products as well. And so there's really not -- although there's a little bit softer demand on RF, there's really still not that opportunity to make that transition.

Matthew D. Ramsay, Cowen and Company, LLC, Research Division - MD & Senior Research Analyst [45]

Got it. Okay. So it's a shared facility then, Gregg, that you're leaning into any flex for the silicon carbide device side rather than making any transition. Is that kind of the way to read it?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [46]

That's right. And changing out an RF line in a shared facility, it creates a lot of disturbance for everything, and we just -- we can't afford to do that for our power device customers.

Matthew D. Ramsay, Cowen and Company, LLC, Research Division - MD & Senior Research Analyst [47]

Got it. Got it. That makes sense. I guess as my follow-up, I wanted to -- there were some -- we've had a lot of discussion here on the call about the timing of ramping Mohawk Valley and the variables to get there. I just wanted to double-click on the 200-millimeter materials side. How are you guys thinking about the steps needed to really scale there to sort of feed the beast or I'm just trying to get an understanding of checking off the boxes to really scale Mohawk, are the things on your priority list, Gregg, on the material side on 200-millimeter? Or do you -- or are they still in the Mohawk Valley devices side and sort of where the variables are to the ramp?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [48]

It's definitely both. And so we've got -- we're working, obviously, the fab itself and I've given you inputs on that, that that's going pretty well, a 1 quarter delay on revenue, notwithstanding, we feel real good about what's been going on there. We are expanding capacity on our Durham campus as we speak and turning on additional capacity this week for more to be able to feed more product into Mohawk Valley where that expansion kind of took over -- I think it was a basketball court and some other facilities and turned it into a 200-millimeter silicon carbide crystal growth operation in what we call Building 10.

And then, of course, the big dramatic increase in that is going to come with the construction of the John Palmour manufacturing center for silicon carbide or The JP. That expansion we're estimating is going to increase our capacity by more than 10x. So it's a giant capacity expansion, and we're super happy that we made the decision back in September to kick that thing off.

And to put things kind of in perspective, we made that announcement on a Friday at The Governor's Mansion here in North Carolina. And we had earthmoving equipment on site the following Monday. And we knew we needed to go from decision to get stuff going very, very quickly.

Operator [49]

Our next question is from Katya Evstratyeva with Canaccord Genuity.

Katya Evstratyeva [50]

I'm filling in for George. Gregg and Tyler and Neill, maybe if you could stick to the demand that is coming from all your design wins and if you are to contrast and compare what's happening in Europe versus what's happening in the U.S? Where do you see most demand coming from, especially given the tailwinds of your recent announcement with Mercedes?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [51]

I don't have the exact numbers in front of me. I can say we're winning very well in both the U.S. and in Europe. We've made announcements with GM and BorgWarner, U.S.-based companies or North American-based companies. We've talked with -- we talked about Jaguar Land Rover, Mercedes, ZF, European-based company. Some of those Tier 1s have business across the globe. So we're winning in Asian markets as well. But I don't have the exact breakout, but I would say kind of globally, we're winning pretty nicely.

Katya Evstratyeva [52]

And if we are to look at the $1.5 billion in design-ins, is there -- could you assess how much of it has come in the U.S. versus Europe in terms of automotive wins?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [53]

I don't have that breakout right now. But what I would say is if it follows the pattern that we've seen over the last couple of quarters, it's going to be pretty heavily automotive related, kind of think of it as 70%, 75% automotive-related and then 25% would be either industrial-type applications, RF applications and so forth. I'm sorry, I don't have the regional breakout right handy.

Operator [54]

Our next question is with Edward Snyder with Charter Equity Research.

Edward Francis Snyder, Charter Equity Research - Managing Director and Principal Analyst [55]

I think it's fantastic, you name the facility after John. I think it's really, really great, guys. A couple of things. First of all, Neill, housekeeping, can we give us a general breakdown of materials versus devices on this in terms of the revenue? Or you were not 50-50 yet, but can I get a general idea of where that is?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [56]

Well, like I said, let me just point out a couple of things, Ed. So the Durham facility is now capped. I said about $400 million a year, and that only provides power devices in that number. So about $100 million a quarter were kind of capped on power device revenue until we start seeing more revenue out of Mohawk Valley. Then from an RF device perspective, we're down about 25% from our peak, which back in Q1. So that represents about $15 million a quarter. So I think that should give you the pieces there.

Edward Francis Snyder, Charter Equity Research - Managing Director and Principal Analyst [57]

Down $15 million a quarter? Or it is $15 million a quarter?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [58]

$15 million less than our previous expectations. That's roughly, I think, approximately $15 million lower than where we were back in Q1.

Edward Francis Snyder, Charter Equity Research - Managing Director and Principal Analyst [59]

Yes. Okay. And so given that it's capped, given that your RF is all the way down, can you move some of the capacity? I imagine you can't. The RF line can't be converted and RTP cannot be converted to device. So you can't stop up the extra capacity, maybe freeing up an RF with devices and expand your RTP. You said Durham has capped at $100 million, but that didn't include RTP, right? So you've got some revenue coming out of RTP for devices, too, right?

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [60]

Yes. We've actually -- Ed, we do have some power products going through the RTP facility. We've been working that for a little while to do as much as we can, utilizing some of the machines out of there. But basically, there's just no room at the end right now.

Edward Francis Snyder, Charter Equity Research - Managing Director and Principal Analyst [61]

Yes, I could imagine. And so if you capped at $100 million there, plus what we get out of RTP, then the real growth is just going to come out of materials, which I understand now that you've got the bull issue corrected could ramp, but until you get Siler City based on, I would expect, and correct me if I'm wrong, you're going to see rather limited ramp in revenue on materials, even though demand far exceed supply at this point. So that probably means -- I'm not looking for guidance, but just -- I just want to go a reality check on our kind of big picture view here that with single-digit millions out of Mohawk Valley in June, we're going to be kind of flattish, slightly up revenue for most of the fiscal year. And then it's all going to turn as you guess, I guess you said, Neill, on the ramp of Mohawk Valley for any real revenue growth in '23. Is that a fair assessment?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [62]

I think that's right, Ed. I think we're going to see some -- we'll see some modest pickup in materials as we get better performance off the longer bull. In reality, with the size of what we're talking about here, as Durham is capped, the capability of Mohawk Valley is just going to be tremendous. I think it's something like 15% Mohawk Valley utilization already could double our power device revenue capabilities. Kind of a digital thing here. Mohawk Valley turns on, I think we'll start seeing the revenue growth pick up very quickly. And if it doesn't, then we'll kind of stay in this kind of maybe flattish to modestly up until we start to see that revenue get turned on. But when it does, we're going to see the first $1 million of revenue for a facility that can be north of $2 billion a year. So it's got tremendous capability. I just got -- I think, like I said earlier, all roads are leading to -- we got to get Mohawk Valley off the ground, and we're just on the cusp of doing that.

Edward Francis Snyder, Charter Equity Research - Managing Director and Principal Analyst [63]

It's clear that's the -- like you pointed out, the digital, the [1.0] function here. Margins will probably decline then because as you turn it on, you're not going to have anywhere close to 30% or 50% utilization, so you're going to unutilization. So I appreciate you breaking that out. So I'm just trying to get a concept because consensus was way off and it continues to be off here. And so I want to get you calibrated for the rest of this year.

And then to the point of Mohawk, have you provided customers with product that they are now qualifying? Or is that to come? And is that the revenue that you recognize when you hand that over to them to qualify the pay for it? So I'm just trying to get idea where we are on customer qualification for the material out of Mohawk Valley.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [64]

We would give customers qualification material after we qualify. And what we've done is we've talked to them about doing kind of parallel qualifications and kind of risk orders out of Mohawk Valley. There's a tremendous amount of demand for the product. So we've got many customers that have kind of signed up for -- they'd like to be first, and they would have sort of a very rapid qualification process.

Typically, that second qualification is one where you're pushing pretty hard the customer to do things. We're seeing the opposite impact right now where customers are raising up their hands saying, can they please be first. And so we anticipate that, that would go through relatively quickly.

Operator [65]

Our next question is from Matthew Prisco with Evercore.

Matthew Patrick Prisco, Evercore ISI Institutional Equities, Research Division - Associate [66]

Just wanted to drill on gross margins a little bit here. I'm surprised with the guide down in March now that the kind of pool issue is behind and revenues kind of guided up modestly. So can you kind of talk about the levers you have for gross margins in the March and into the June quarter? And just to understand when you said before, when you rent Mohawk Valley, will that be immediately accretive to your non-GAAP gross margins or dilutive?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [67]

Yes. So just a quick one on the transition in the margins. We did have an improvement in the yield, as Gregg mentioned before, in the taller bulls. We had to get the cycle times to match that. We've subsequently been able to do that as well. But we did have a bit of an overhang there. So we'll have some WIP we've got to work through on some of the inventory from last quarter that just got to work through the cycle. So that's going to kind of be a bit of a drag.

But the underlying performance, I'd say, both for the materials, taller bulls, as well as the Durham facility, where we had some issues last quarter. So these have worked itself through over the next couple of months, and I think underlying performance then will start to improve. So I'd say a bit of an overhang there from those things. But I think, overall, the underlying performance we should see improving.

And then as it relates to Mohawk Valley, as we ramp the fab, we'll see -- that will be accretive to non-GAAP gross margins, and we'll make an adjustment for underutilization there just to make -- just to ensure we can get kind of an apples-to-apples view of what their fab will look like from a [smaller] perspective and then we will continue to give updates every quarter as to what that number is.

Matthew Patrick Prisco, Evercore ISI Institutional Equities, Research Division - Associate [68]

Got it. That's helpful. And then as a follow-up, maybe CapEx for the year, given you're spending now in the first half, are you guys still targeting $1 billion net for the year. And so where is that spending going in the second half? Can you help us think through what fabs or equipment for shell and all that good stuff?

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [69]

Yes. So yes, $1 billion for the year, that's correct. We should see a pickup in the back half of that. We've talked about that before. There's some expansions that are going on in Durham right now. Gregg talked about turning on portions of the 200-millimeter. We'll continue to expand the 200-millimeter substrate capacity on the Durham campus in and around Durham. That's a big piece of what's going on now. And in addition to that, we'll be working on bringing Siler City to the next phase and getting that facility completed. So I think those would be the bigger pieces.

On top of that, we continue to invest in tools in Mohawk Valley, and we'll continue to tool that out as quickly as we can. So I think those would be kind of the big pieces of what we're going to be spending in the back half of the year.

Operator [70]

Our next question is from David O'Connor with BNP Paribas.

David O'Connor, BNP Paribas Exane, Research Division - Analyst of IT Hardware and Semiconductors [71]

Great. Maybe first just on the Mohawk Valley ramp-up. Just trying to understand that if the yields are ahead of your expectations, why the language now is more cautious on the ramp up? Just trying to understand where exactly is the remaining risk and uncertainty? Where does that lie with the Mohawk Valley ramp up given that the finishing line is in size here?

And kind of related to that as well. So we have a couple of million in the June quarter. How many quarters will it take to kind of hit that $150 million a quarter run rate to kind of get to help meet the like FY '24 guide? And I have a follow-up on depreciation.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [72]

Thanks a lot for the question, David. So we are exactly taking a conservative approach on this because we're so happy with the results that we see right now. It's a -- if we try to jam too much in too quickly, it might cause an issue that is unexpected right now. So we just want to be methodical on that. We're not going to be lazy on it. I mean we're going to be pushing it as hard as it makes sense. But what we don't want to do is over stress it and cause an unexpected issue. We're real pleased with the results right now. Let's just take it step by step, and I think we'll be well served by that.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [73]

Yes. And I think from a timing perspective, like I said, it depends on how many -- how much wafers -- how many wafer starts we can get into the fab and kind of ramp it up at volume. And once we do that, you should see a pretty nice ramp-up in revenue. I think we've got the pieces together. It's really just a matter of putting it all -- putting all these puzzle pieces together, ramped the 200-millimeter substrate driving starts into the fab, driving the power device back-end performance for test and inspect and all those types of things. So -- and on top of that, we've got to match up with customer schedules in terms of what -- when they're going to accept material. We're watching all those variables up.

So I think from an execution perspective, I think it kind of goes relatively quickly but there are a lot of variables. We just want to be very cautious there in terms of, look, there's a lot of pieces to get -- that we need to pull together to get off the ground. We're working through that right now. But if we can get the fab up and running, I think if you look at the economics of what we're seeing and the technical capability of what we're seeing, that all looks on track.

David O'Connor, BNP Paribas Exane, Research Division - Analyst of IT Hardware and Semiconductors [74]

Okay. That's helpful. And my follow-up on the -- just, Neill, on depreciation as you turn on the line in Mohawk Valley now. How should we be modeling on the depreciation side of things? And also just your comment earlier on the underutilization charge. I mean would we be still excluding that from non-GAAP? Is there a certain utilization level where some of these costs move more into COGS and reflected in the non-GAAP? Just if you could talk around that, that would be helpful.

Neill P. Reynolds, Wolfspeed, Inc. - Executive VP & CFO [75]

Yes, David. We'll make a fixed cost adjustment for the depreciation and some of the other fixed costs for about a 70% fab utilization number and then adjust that every quarter. So right now, what we had last quarter was a $38 million start-up number. So you can think about that as the run rate cost of running the fab. And as we bring up the fab, that number will start to decline over time, and we'll take more and more of that into inventory. And that will just start to bleed off as we get to higher levels of utilization. Now any other performance cycle time yields, all these other things, I think everyone's interested, that will kind of fall through. So we'll have pretty good visibility as to what the performance is of the fab, just excluding some of the fixed costs related to the utilization.

Operator [76]

There are no further questions. I'll pass the call back over to the management team for closing remarks.

Gregg A. Lowe, Wolfspeed, Inc. - President, CEO & Director [77]

Well, thank you for joining us today. I'd like to welcome Stacy Smith to our Board. Stacy is a great addition. He's got career that spans many, many years in the semiconductor industry and spans many different functions, including finance roles and operations roles, sales and marketing roles. So he's going to bring a wealth of experience to our team and really look forward to locking arms with them as we move forward here.

We're at an inflection point and very near the ramp in production of the world's first and the world's largest 200-millimeter wafer fab. We're excited about what it's doing right now and look forward to continue driving that inflection point forward.

Thank you very much for taking the time with us and look forward to chatting with you next quarter. Thank you.

Operator [78]

That concludes the conference call. Thank you for your participation. You may now disconnect your lines.