S&P Capital IQ

CONTENTS

Tesla, Inc. NasdaqGS:TSLA

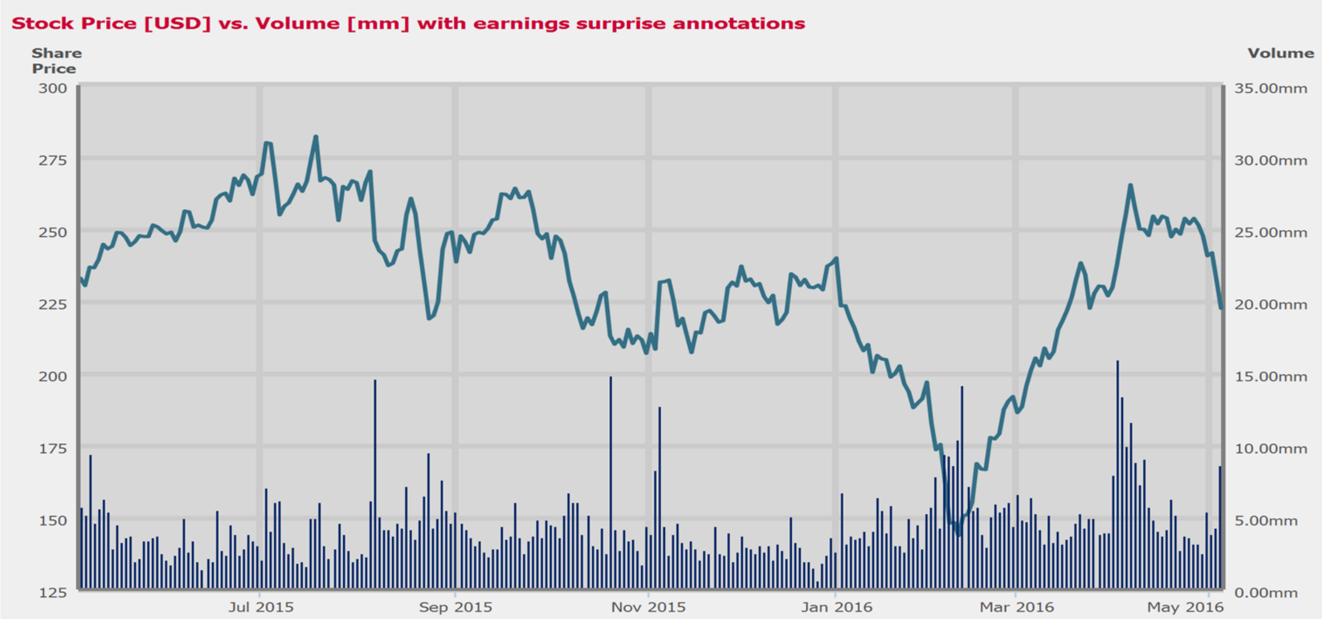
FQ2 2016 Earnings Call Transcripts

Wednesday, August 03, 2016 9:30 PM GMT

S&P Capital IQ Estimates

	-FQ2 2016-			-FQ3 2016-	-FY 2016-	-FY 2017-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	CONSENSUS
EPS Normalized	(0.62)	(1.06)	NM	0.38	0.28	2.80
Revenue (mm)	1649.08	1600.00	(2.98 %)	2330.11	8389.50	11496.08

Currency: USD
Consensus as of Aug-02-2016 9:00 PM GMT



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ2 2015	(0.62)	(0.48)	NM
FQ3 2015	(0.59)	(0.58)	NM
FQ4 2015	0.11	(0.87)	NM
FQ1 2016	(0.67)	(0.57)	NM

Call Participants

EXECUTIVES

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Jason S. Wheeler
Former Chief Financial Officer

Jeff Evanson
Vice President of Investor Relations

Jeffrey B. Straubel
Chief Technology Officer

Jonathan McNeill
President of Global Sales & Service

ANALYSTS

Bradley D. Erickson
Pacific Crest Securities, Inc., Research Division

Brian Arthur Johnson
Barclays PLC, Research Division

Charles Lowell Anderson
Dougherty & Company LLC, Research Division

Colin Langan
UBS Investment Bank, Research Division

Colin William Rusch
Oppenheimer & Co. Inc., Research Division

Emmanuel Rosner
CLSA Limited, Research Division

James Joseph Albertine
Consumer Edge Research, LLC

John Joseph Murphy
BofA Merrill Lynch, Research Division

Joseph Robert Spak
RBC Capital Markets, LLC, Research Division

Neel Mehta
Morgan Stanley, Research Division

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

Rod Avraham Lache
Deutsche Bank AG, Research Division

Ryan J. Brinkman
JP Morgan Chase & Co, Research Division

Tyler Charles Frank
Robert W. Baird & Co. Incorporated, Research Division

Presentation

Operator

Good day, ladies and gentlemen, and thank you for your patience. You've joined the Tesla Motors second quarter 2016 financial result Q&A. [Operator Instructions] As a reminder, this conference may be recorded.

I would now like to turn the call over to your host, Mr. Jeff Evanson. Sir, you may begin.

Jeff Evanson
Vice President of Investor Relations

Thank you, Latif, and good afternoon, everyone. Welcome to Tesla's second quarter 2016 Q&A webcast. I'm joined today by Elon Musk; J.B. Straubel; Jason Wheeler; and Jon McNeill.

Our Q2 results are in the updated -- or in the update letter at the same link as this webcast. And today, during our call, we'll discuss our business outlook and make forward-looking statements. These are based on our predictions and expectations as of today. Actual events or results could differ materially due to a number of risks and uncertainties, including those mentioned in our most recent SEC filings.

We're going to kick it off today with Jason making some quick comments followed by Q&A. [Operator Instructions]

So Jason, over to you.

Jason S. Wheeler
Former Chief Financial Officer

Sure. Thanks, Jeff, and thanks, everybody for joining. I just want to make a few brief comments to add a little bit more color to the shareholder later.

We're clearly disappointed with our delivery numbers but there's some underlying stories that we feel really good about, and I want to walk you through those. Automotive gross margin expanded this quarter. Automotive gross margin, excluding ZEV credits grew from 20.1% in Q1 to 21.2% in Q2. A couple of different factors here. One was the Model S refresh. There was a modest price increase on the refresh but more importantly, we had baked the number of cost-downs into that vehicle before the launch. And then the second big factor is obviously X production. We've talked a lot about how we have come through the struggles on that and how we've managed to climb that production ramp, so that's looking great.

On a go-forward basis, the way we're thinking about margins is we certainly see opportunities for continued cost-downs, both on the engineering front, also on the commercial front as well. We've got a supplier base that is very excited about the Model 3, and it's giving us the ability to leverage that, included for cost-downs and also continue manufacturing efficiencies. As we mentioned in the shareholder letter, labor hours per car is trending quite positively right now and we're laser focused on continued improvement in that key metric.

Next, talk about the cash position for a second. Here's one way to think about it. We ended up with $3.25 billion on the balance sheet at the end of the quarter. We started off the year, in December 31, 2015, we had $1.2 billion. We raised $1.7 billion in our secondary offering and we collected on our Model 3 reservations. Therefore, we are in a very healthy position from a cash perspective.

A couple of different factors here to talk about. One, we've got $678 million drawn on our asset-backed line. This is something that we've talked about in the past. That is definitely backed up by our operations. Two things there. One, approximately 5,000 cars in transit to customers at quarter end. We're financing our FGI. And we're monetizing our direct lease portfolio.

Second factor on the cash position that we'd like to highlight is our continued CapEx discipline. As we talked about in Q1, we had $217 million of CapEx in that quarter. In this quarter, $295 million of CapEx.

We compare that to averaging nearly $400 million a quarter throughout 2015. We're actually very pleased with these results and we're comfortable that we aren't doing anything to adversely impact our future. On a go-forward basis, thinking about CapEx efficiency, you've heard Elon talk a lot about that machine that makes the machine. A big part of that is focusing on volumetric efficiency. In our call on Monday, I talked about how when we started to review a lot of the Model 3 CapEx plans across the company, there were a bunch of new buildings everywhere. And the reaction to that was: wait a second, we've actually got a nice facilities footprint already, and how can we just amplify those facilities and not have to invest further in this area? And we're starting to see a lot of that take hold now.

Second, I think we're making an attempt to crush the conventional wisdom that capacity increases only happen in step-change increments and the capital that follows that in step-change increments as well. And to put a little bit more color on that, there are many ways to optimize our current operations. The way to think about this is we can just drive greater throughput through the same investments. So that's our cash position.

Finally, I'd just like to talk for a minute about expense management. In addition to our efforts on CapEx efficiency, we're also very focused on OpEx discipline. This quarter, SG&A would have been flat quarter-over-quarter in spite of our continued expansion in service and sales, were it not for the payroll taxes we paid on our CEO's options exercises. SG&A was up $19 million quarter-over-quarter on a non-GAAP basis. $17 million of that was the payroll expense associated with those option exercises.

R&D now does continue to increase as we continue to march towards the Model 3 launch and continue to invest in our future. This is as predicted and as we've signaled in the past.

So to wrap it all up, we're very happy with the gross margin expansion in the quarter and we have increased our emphasis on OpEx discipline and CapEx efficiency. We believe our Q2 results reflect that and we're not backing down as we move forward.

Jeff Evanson
Vice President of Investor Relations
Great. Thank you, Jason. All right, Latif, let's go to the first question, please.

Question and Answer

Operator

Our first question comes from Adam Jonas, Morgan Stanley.

Neel Mehta
Morgan Stanley, Research Division

I'm going to ask this question on behalf of Adam Jonas. He had to drop off the call. This is Neel Mehta. This is coming directly from him. You have explained -- Elon, you've explained the strategic rationale for having SolarCity and Tesla Motors join in a combined company. When we think of SpaceX, is there any conceivable strategic rationale for Tesla Motors and Tesla Energy or Tesla Solar to work closely with the efforts of space exploration? And when we're thinking about this, we're thinking proprietary lower at the orbit satellite network to enhance the connected autonomous car ecosystem. And so yes, I just want to get your thoughts on that, first of all, and I have a follow-up as well.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes. I don't think there's a strong park rationale to combine SpaceX and Tesla, whereas there is for Tesla and SolarCity. It's really quite tenuous for SpaceX and Tesla. So there's a little cooperation that happens between the companies but it's not enough that would justify merging them into 1 entity.

Neel Mehta
Morgan Stanley, Research Division

Got it. And can you also give us update us on your -- on Tesla's proprietary mapping initiatives?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

No, I think we would -- we should -- we prefer it be confidential in that regard. What we've said thus far is just that we're -- there's a need to have much higher-definition maps than currently existing around the world in order to have full autonomy. And we're in the process of building those and I think making good progress.

Operator

Our next question comes from the line of Brian Johnson of Barclays.

Brian Arthur Johnson
Barclays PLC, Research Division

A couple of questions very much tied to cash flow and the borrowing capacity. First is just around customer deposits which were a source of cash in the quarter but looked to be about $288 million. As of May, you had 373-ish (sic) [373,000-ish] Model S -- Model 3 preorders which would imply about a $375 million inflow [indiscernible]. Could you maybe walk us between that number and what the actual change in deposits were? And in particular, where did Model 3 preorders end the quarter at?

Jason S. Wheeler
Former Chief Financial Officer

Sure. So in terms of thinking about the cash flow, yes, you're doing your math correctly, but we also release deposits when we deliver cars, so there's an inflow and there is an outflow there. And we had -- the deposits on the early Model X cars were larger than the later Model X cars as well, so that's one of the impacts there as well. In terms of the Model 3 reservations, the 373,000 number that you reference is what we talked about when we did our secondary offering, and we're sticking to that number in terms of disclosure.

Brian Arthur Johnson
Barclays PLC, Research Division

Okay. Second question around the shift from increased on-balance sheet captive lending. My quick calculations, if you go up 8% in the back half off of your 50k guide, that seems to be, at 100k, about a $350 million cash need. And merely you're paying [ph] -- actually would be less with the cost of goods sold, call, $250 million, $280 million. Are you going to finance that out of your ABL? How quickly can you get another lease partner? And what do the amendments to the credit agreement for SolarCity kind of do to your ability to borrow against that for this captive financing?

Jason S. Wheeler
Former Chief Financial Officer

Sure. So in terms of -- the ABL is definitely available for some of that for sure. And then the overall liquidity position gives us confidence that we'll be able to do this. At the same time, we do have a lot -- many active discussions going on with other lease partners and we're looking at other ways to do this as well. And I don't want to talk a lot about SolarCity on this call. That's not what it is, but they've got some pretty advanced capability in thinking through how to walk through this as well.

Operator

Our next question comes from the line of Charlie Anderson of Dougherty & Company.

Charles Lowell Anderson
Dougherty & Company LLC, Research Division

My first question is around the sharing of vehicles described in the updated master plan. So if we're moving from 5% to 10% utilization of the vehicle to some larger number, I wonder what you think the ramifications of that might be on the number of cars that need to be produced every year. And then maybe, the ramifications as it relates to the supercharger of the cars or the supercharger network, if the cars are always driving around? And then I have a follow-up.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well, I think that the demand for autonomous cars will pass that way to the production capability. So I mean just want to bear in mind that the global fleets of vehicles is about 2.5 billion roughly and total new vehicle production ever year is only about 100 million. So the fleet's base would be turning over every roughly 20, 25 years. So if we -- we would have to make some truly enormous number of autonomous vehicles for there to be any demand saturation because it'll basically be the only car anyone wants to buy.

Charles Lowell Anderson
Dougherty & Company LLC, Research Division

And then for my second question, I wonder if you could clarify comments made on the last call about inverter technology. You mentioned having some of the best in the world for power electronics. So I wonder if you could just comment if that's the case that you will be making your own inverter. And if so, what will be the benefit to the overall system with your inverter technology versus what's used today?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes. I think there's no question Tesla's going to do integrated inverter. Logically too, I think we've got the most advanced inverter engineering team in the world. And so it makes sense to just as we do the inverters on vehicles to do it with solar as well and have it in a very tight package at a cents per watt level that is, I think, probably twice as good as anyone else, I think maybe better than that. So that's like the obvious move there. And as part of what I was referring to is kind of an integrated product. I mean, if you're -- if you put yourself in the consumer's shoes, you just want it to work. You don't want to know how it works, what you -- you don't care about the details. It's just got to work reliably, look good, not take up a ton of space. The buying process has got to be easy, there's a -- you can check up on it with the app on your phones. There's only 1 phone app. You want it to be easy. You want it to just work and you want it to be affordable and you want it to look good. So that's what we're going to do.

Jason S. Wheeler
Former Chief Financial Officer

Yes. And I think just add to that, I mean, when power electronics work well, you really don't even notice them. I mean, no one thinks about the...

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Exactly.

Jason S. Wheeler
Former Chief Financial Officer

Inverter for your electric power. They don't even know it has one.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Most people don't even know what an inverter is. What is an -- they've never heard of this thing.

Jason S. Wheeler
Former Chief Financial Officer

So yes, I mean, our goal...

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

And they still don't know what -- yes, yes. Sure, go ahead.

Jason S. Wheeler
Former Chief Financial Officer

Yes, our goal is to be basically make them seamless and make it, as Elon said, easy for people to use. They don't have to worry about what an inverter is, how it works. It's just all integrated into one simple system just like it is in the car.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Most people don't even know what AC or DC is. If you ask them what's DC current or what's direct current, what's alternating current, they would not be able tell you. A lot of people don't even know the difference between power and energy, like one's in kilowatts, another one's in kilowatt hours, so -- and they don't need to know. Like there's not a good reason for them to know. Stuff should just work and take care of itself.

Operator

Our next question comes from the line of Colin Langan of UBS.

Colin Langan
UBS Investment Bank, Research Division

Can you just give an update of the Model S demand? In the press release, you indicated S and X orders were up about 65% year-over-year, but if we look at deliveries and production of the S, it hasn't changed that much since Q4 and you're rolling out the lower-priced 60 version. So if demand is up so much, why offer a lower-priced model and why hasn't production really been up that much more?

Jonathan McNeill

President of Global Sales & Service

Sure. It's Jon, I'll give you a little bit of color on the demand which has been healthy for Model S in the second quarter and into the third quarter as well. As we mentioned in the shareholder letter, we didn't have cars in the European market with the new refresh until the last month of the quarter. But despite that, we had year-over-year growth in Model S demand and we also -- we had some very healthy growth in the markets where we had cars in stores. So we had double-digit growth in both North America and China, really healthy growth in both of those markets. That growth has continued into the third quarter. But one of the things that -- one of the reasons we introduced the 60 was we saw more Model 3 demand than we anticipated, we talked about that last quarter. And a number of those reservation holders said to us we'd love to be in a Tesla today if you could provide a more affordable version of the Model S. Our battery technology allows us to do that. And so we introduced the 60, and that's generated demand out of a new market segment. It is reaching down into that Model 3 reservation holder territory and portends really good things for future Model 3 demand, but it's opened up a very nice segment for us for Model S.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes. So whereas that -- like the -- people are not buying the base model, they're like -- they buy the 60 and then they option it up quite a bit, so it ends up having like an average sale price and like over $80,000. And then since actually all the 60s actually have the 75 capacity, it's just software limited, there's potential for them to upgrade over time and certainly, for the resell value of the car to be enhanced when it's returned to Tesla by unlocking the additional 15 kilowatt hours of that battery capability. But, I mean, I think in sort of a nutshell, the way to think about Tesla right now is that we're right around 2,000 cars a week, and we try to balance the mix to be about roughly half X and S. There are some variations depending upon regionality. Some parts of the world prefer more SUVs; some prefer more sedans. And we do tend to batch up our cars, so this is why occasionally you see nonsensical articles about Tesla's demand suddenly rising in some country or suddenly falling. It's got nothing to do with that; it's just happened to be when the ship arrived. But high-level overview is just we see demand being fairly strong at an average of 2,000 cars a week, and we are able to maintain production at that level, notwithstanding occasional supplier hiccups. And then hopefully, we can grow that a little bit towards the end of the quarter and then a little more in Q4. And our aspiration, this unvarnished here [ph], this is just what we're aiming to do internally, is to do a little better than 2,000 a week in sales and deliveries in Q4, combined S and X. I feel fairly optimistic about achieving that goal. Yes, I think our core business is actually doing quite well right now.

Colin Langan
UBS Investment Bank, Research Division

Just as a follow-up, any update on stationary storage? I think your original target for 400 million to 500 million for this year and 2 million to 5 million for next year. Any just color on how that's trending.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Heavily enduring production constraints. There were -- we've got some next-generation technology and we've got to school [ph] up that production line. So it's going to be heavily concentrated in Q4 and probably even heavily in November and December, but it's -- I think it's going to be really exciting when people see it. So that's why I expect kind of exponential growth from there. I think it's really going to go ballistic.

Jason S. Wheeler
Former Chief Financial Officer

Yes, and we have been making quite a few background investments in the markets where we're growing, setting up the teams and setting up to get ready for expanded product installation and distribution, especially in places like Australia and in Germany. So some of that takes a bit of time but it's laying the infrastructure for faster growth.

Operator

Our next question comes from the line of Colin Rusch of Oppenheimer.

Colin William Rusch
Oppenheimer & Co. Inc., Research Division

As you look forward and without the residual value guarantee, can you talk about what's going to happen with the warranty expense on the vehicles?

Jason S. Wheeler
Former Chief Financial Officer

Sure. So I think the way to think about warranty, and we put this in the shareholder letter, ongoing reserves is roughly consistent with what it's been, with what it was last quarter. And the RVG really doesn't have an impact on warranty expense. Really, warranty expense is all about reliability and reliability is something that we are constantly monitoring. And as we see positive things happen or things that go in the other direction with reliability, that's how we then think about the ongoing reserves for warranty. So I don't think the...

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes. I mean I could -- I feel like, I mean, the quality, I think, has improved quite dramatically, particularly with respect to X. We had a lot of challenges in the production ramp. That's always the most difficult time when you're going from 0 to 1,000 cars a week. The -- it's just you got to pull at this huge baggage train of suppliers along with you and you've got to solve a lot of issues internally. So that production ramp is a lot of hurt. But now, we're pretty stable at the 2,000 cars a week level and the -- every time we've rolled the car at this point, it's getting better. So with each passing week, it's better and better. And so I actually feel -- I feel pretty good about warranty reserves actually declining over time as a result of that.

Colin William Rusch
Oppenheimer & Co. Inc., Research Division

Okay, great. And then my follow up is around Mobileye and the ending of that partnership and how you guys are going to approach that functionality going forward with the driver assist and the autonomous driving push going forward?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

I think we'll have a more significant announcement on that later. So it's not really -- the earnings call is not the right time for that, except that it will be a Tesla solution, internal solution.

Operator

Our next question comes from the line of Ryan Brinkman of JPMorgan.

Ryan J. Brinkman
JP Morgan Chase & Co, Research Division

Thanks for taking my question which, I guess, is really for Elon. As Tesla grows very quickly and becomes increasingly diversified, going from just the Model S to recently include the X and now, the 3 soon and you've added Tesla Energy to the mix now, SolarCity. So I'm really curious how you think about management focus and attention and what you and your team are going to be doing to ensure strong execution and focus as you head into the very important and, by your own admission, very challenging launch of the Model 3?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well, I mean, the Model 3 is overwhelmingly our focus. Things are -- things feel really quite stable with S and X. We're kind of in the mode of continuous improvement, but no fundamental issues, so it's -- I feel like the machine that's making X and S is actually functioning quite well right now and we're just -- I definitely burnt out a few neurons and a lot of other people solving the production ramp earlier this year. I feel we're in a good place at this point. So the focus really is on Model 3, followed by full autonomy as probably the top 2 priorities.

Ryan J. Brinkman
JP Morgan Chase & Co, Research Division

Okay. And then the follow-up is as you're starting here in 3Q to ramp up the spending on both the Gigafactory and the Model 3 development capacity, et cetera, are you seeing that one or the other, the Model 3 or the retrofit of Fremont, is providing more or less potential bottlenecks than the other in terms of getting to that July 1 Model 3 launch?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

I don't actually know of any -- there's not any one standout issue for July 1. Now, I do want to -- I did say this on the last earnings call, and I think it's probably better just reiterating because it's -- I mean, I think it makes sense to think about it, but it does require a bit of thinking about it. I don't expect us to be at full production on July 1, but I have to drive all suppliers and internal efforts to that date, knowing that some will fall short. And if some fall -- and those that fall short, the suppliers that still fall short will be cut out of the picture. And if there are teams internally that failed to execute effectively, we will reorganize those teams. But if several thousand parts are not driven to a particular date, there is no chance of making any point even past that date. So now, in an ideal world, this would be a confidential internal -- dry run [ph] would be a confidential internal target. Given the amount of attention that Tesla receives and the fact that there are several -- or if you count 2 or 3 -- 3 and 4 suppliers, there's several thousand companies involved. It's obviously impossible to keep that confidential, it's not -- you can't. So then, in order to have a consistent message internally, knowing that, that message will also leak externally, that's where the July 1 date comes from. There isn't any other way to do it. And if anybody's got better suggestions, I'd like to hear what they are. So I expect production to occur some point after July 1, and I don't -- but I don't know what today would cause us to slip past that date. And if I did, I would take action to address it.

Operator

Our next question comes from John Murphy of Bank of America.

John Joseph Murphy
BofA Merrill Lynch, Research Division

Just the first question is as we think about the 60 kilowatt hour versions of the S and X, I'm just curious if you could talk about the profitability of those right now versus the other models or sort of the corporate average as you see it.

Jason S. Wheeler
Former Chief Financial Officer

Yes, sure, so -- go ahead, Elon.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes. So I was going to say, because people are optioning up the 60, it actually ends up being decent. I mean, it's not -- I mean, maybe it's sort of like 15% to 20% gross margin, whereas say, something like if somebody orders the performance dual motor, that might actually be more like a 30%, 35% gross margin. But there's just a small number of people that want high-performance cars and are willing to pay triple digits or 6 more -- 6 digits, I should say, so -- but there also remains to be seen how many who order the 60 then choose to do the upgrade to the 75 kilowatt hour rate. So there's going to be some number, it's too early to tell, of people who buy it at 60, realize they want the extra range, and then they can just order a kind of like an in-app purchase on the car's screen and unlock it. I suspect we'll see a pretty decent number of people do that but we don't -- it's still very early. So it's hard to say what number that would be. And if they do, do that, then it will push gross margins up into the 20s, like in the mid-20s or something.

John Joseph Murphy
BofA Merrill Lynch, Research Division

Okay, that's helpful. And then just, Jason, maybe just 2 quick sort of housekeeping questions. CapEx, the $2.25 billion, you're running a run rate that's less than half that for the first half of the year. So just curious how realistic that number is for the full year because you guys have committed to it in the shareholder letter again. And then also, the auto gross margin going up 200 to 300 basis points off of what base? I'm just -- it's not clear what base that's coming off of. I'm just trying to understand the exit gross margin for the year you're expecting.

Jason S. Wheeler
Former Chief Financial Officer

Yes, sure. No problem. So, I mean, I want to add just a little bit of color onto the 60 gross margin numbers, too. We're aspirational on those but the way to think about this is very important. Those cars are gross margin positive, and they're producing cash. So if you think about from an overall operating leverage perspective, even if the gross margin profile on those is less than our other variants, it's still producing contribution margin to pay for the fixed cost of the business. So -- and it's the right economic thing to do. And even more importantly, it's right for the customer to continue to broaden the market that way. On your 2 housekeeping questions, your questions on the CapEx front. As you heard in my opening comments, we are deadly focused on CapEx efficiency. So I think we can beat the $2.25 billion number, but we didn't see any need to update that guidance at this time. And then your question about gross margin on the basis, I was just looking at the quarter-over-quarter. In Q1, automotive gross margin excluding ZEV credits was 20.1% and we expanded that to 21.9% in Q2 and it's expansion on both the X and the S variants.

John Joseph Murphy
BofA Merrill Lynch, Research Division

But the 2 to 3 points of expansion in Q3 and Q4 is off the 21.9% basic second quarter?

Jason S. Wheeler
Former Chief Financial Officer

Oh I see, you're asking about the forward-looking.

John Joseph Murphy
BofA Merrill Lynch, Research Division

Yes.

Jason S. Wheeler
Former Chief Financial Officer

Yes. So we expect where we're at today, we'll see another 2 to 3 points of expansion between now and the end of the year.

Operator

Our next question comes from the line of Joseph Spak of RBC Capital Markets.

Joseph Robert Spak
RBC Capital Markets, LLC, Research Division

Jason, just first question to follow up on that last one. So even 2 or 3 points on gross margin sequentially, that seems below the prior guidance which you then called for 30% to exit the year on the Model S and

25% on the Model X. So is it related to the updated mix view on the 60? Was there something else going on? Or what's the source of the change?

Jason S. Wheeler
Former Chief Financial Officer

Yes. No, a couple of things there. And our previous guidance had been approaching 25% on X and approaching 30% on S. So I think we're maybe a quarter or 2 off on that, but you're pointing to the right things. One is just the mix shift that we're seeing with more Xs being produced. Those margins are healthy and heading in the right direction, but they're obviously less than S. And now that we're halfway through the year too, we've talked a lot about just the production issues we've had overall. And those certainly had an impact on the first half of the year and it's just difficult to make up for all of that in the next 6 months. And then the impact, you talk about the 60s. The 60s may have some -- one other impact on gross margin.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

It's pretty small though.

Jason S. Wheeler
Former Chief Financial Officer

Pretty small, yes.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

It's pretty small. I mean, I'm cautiously optimistic that we'll actually meet those numbers by the end of the year. Maybe not for Q4 as a whole but exiting Q4, I -- my best guess is we're just under 30% for S and around 25% for X by the end of this year. And that's what it looks like to me.

Joseph Robert Spak
RBC Capital Markets, LLC, Research Division

Okay. And then, Elon, just as a philosophical question. I mean, as you transition to an in-house autopilot or autonomous solution, would you consider, in order to help build public support and confidence, about releasing regular reports similar to like Google does on what the technology is doing and open the data?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well, unfortunately and fortunately, I mean, Tesla can't sneeze without there being a national headline. So I think you don't have to worry too much about whether we'll report it because the media will and then inflate it in size by 1,000. You know what I mean? Like last year, there were 35,000 automotive deaths in the U.S. How many did you read about?

Joseph Robert Spak
RBC Capital Markets, LLC, Research Division

Right. I guess, maybe instead of public support, what about regulator support? I mean, what are the views on sharing the data in that respect?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

I mean, actually, with the regulators, we share the data well in advance of -- as soon as we know it. I mean, we shared the data regarding the state of Florida's fatality like a month, I don't know, so many weeks before it's an actually open investigation. In fact, I mean, we're not totally clear on why they open an investigation because they actually had all the information before they made a formal investigation.

Like so it's a little puzzling as to why they -- there was no -- there -- we would have already given them all the information. So there isn't really anything more to learn.

Operator

Our next question comes from James Albertine of Consumer Edge Research.

James Joseph Albertine
Consumer Edge Research, LLC

Real quick, a housekeeping item. I've heard and we saw obviously in the second quarter, there was some lumpiness in the production and you ended up I think, with 50, 100-or-so vehicles in transit at the end of the quarter. And I've heard Elon or Jason say stable or stabilization here a few times in the call. Just want to get a sense for how we should be thinking about the back half deliveries and back half expenses. Should it be relatively linear from here as we work toward, for example, your 30% year-over-year expense guidance?

Jason S. Wheeler
Former Chief Financial Officer

Yes, sure.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes, I mean -- sorry, so I'll just start, say a few words and then Jason can address them. I mean basically, we were in production hell for the first 6 months of this year. I mean, mean, it was hell. And then we just managed to sort of climb out of hell or -- in like basically part way through June and now we're -- the production line is humming. And our suppliers mostly have their sh*t together. There's a few that don't. One of them, I know you're visiting on Saturday personally to figure out what the hell is going on there, but we'll solve it. But I mean just like -- the thing that's crazy hard about cars is that there's several thousand unique items and you move as fast as the slowest item in the whole car. So yes, but that said, like production is like -- it feels like we're -- I'm not losing sleep at night literally because of the production issues right now. 2,000 feels like a good number. That was like a slow steady increase in that number. And then continue the cost efficiencies which help with gross margin. Some features that are going to come out, that will also help on the revenue side. And so I feel like actually really good about S and X right now. But I get some -- a whole lot of mental scar tissue from the first 6 months this year. Jason?

Jason S. Wheeler
Former Chief Financial Officer

Yes. I think, Elon, you covered it well. In terms of the modeling question, yes, I think it's kind of extrapolating from where we're at now. We're stable. We'll continue to get better on production throughout the course of the year. We've got a couple more holiday weeks in Q4. You might want to think about that when you're doing your modeling. But yes, I think Elon covered it well.

James Joseph Albertine
Consumer Edge Research, LLC

Great, and if I may…

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Sorry, just almost every week, we've see an improvement in labor hours per car which is great from a cost standpoint. Also, the Tesla production team has been working super hard and we don't burn people out. So it's good to see the hours per car come down almost every week as a sign of improved efficiency.

James Joseph Albertine
Consumer Edge Research, LLC

Very good. I appreciate the additional color. If I may just sneak in a quick follow up on the autonomy topic. Elon, I mean, as we think about the stages of autonomy, I believe NHTSA's sort of outlined sort of 5 stages or 0 to 5. And we've seen some competitors of yours outline, with some detail, 2017 to 2020 to 2022 type targets. How should we think about sort of your target? Or can you help us sort of dimension a little bit more your targets in the past to level, I guess, 5? Let's assume for the moment that nothing's changed, and given the accident in May. And if it has incrementally, that would be helpful but I just wanted to understand, I mean, in more detail, I think, how you plan to get to fully autonomous?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well. Again, major product announcements are not -- it's not -- you -- one shouldn't do those on an earnings call, obviously. So -- I mean all I would say is that full autonomy is going to come a hell a lot faster than anyone thinks it will. And I think what we've got under development is going to blow people's minds. It blows my mind too and I get it all the time.

Operator

Our next question comes from the line of Rod Lache of Deutsche Bank.

Rod Avraham Lache
Deutsche Bank AG, Research Division

I had a couple things. One is just following up on Tesla Energy. Can you talk a little bit about the business pipeline, what's the mix of customers you're selling the product to? And is there a significant contingent of solar? And I wasn't clear on -- there was an earlier question on whether the business is still tracking to around 500 million this year. Could you just elaborate on that business line?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes. It's heavily dependent on the production ramp in the last few months of the year. So the -- like, there's definitely nothing even remotely close to demand constraints on the Tesla Energy side. It's entirely getting the insuring done and getting it validated, getting your all [ph] certification, scaling up all elements of the supply chain, and being able to produce in volume. So the reason it's tricky to predict is because the volume ramp looks an exponential. And so if you move the dates around even a little bit, it can quite significantly change what occurs in a quarter just because the production ramp is an exponential and shifts up a couple of weeks. It can make the quarter look low but actually, it's in vertical climb mode, so the following quarter will look amazing. So what I'm highly confident of is that the next-generation of stationary storage is head and shoulders above anything else that I've even heard announced as future plans from other companies. So it's not -- and so we just got to build those damn things.

Rod Avraham Lache
Deutsche Bank AG, Research Division

Yes. The customers that you're anticipating, are there significant kind of renewables in there? Is it commercial, residential? What are you sort of seeing or affects the above?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes, it's -- we just got to -- we got to scale up production. And production is a hard thing, it's real hard, particularly when it's new technology. If it's some standard technology that's been made for a long time, it's fine. It's cutting-edge technology, it's really hard to scale up reduction. Because you got to design the machine that makes the machine, not just the machine itself and -- but the results can be amazing. This is -- like I said, it's going to be head and shoulders above anything else that's -- it's better than anything I've heard anyone even announce that they will do in the future, and we will do it in the present.

Rod Avraham Lache
Deutsche Bank AG, Research Division

And on the topic of production, you've said some really interesting things about step-function changes in automotive manufacturing and improving the volumetric efficiency.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes, absolutely.

Rod Avraham Lache
Deutsche Bank AG, Research Division

Typically, as I'm sure you know, the bottlenecks in auto manufacturing are really not in the automated functions like the body shop. They're in things like final trim and assembly that are more labor-intensive, and you've got people crawling in and out of vehicles. Do you see a significant step-function improvement there like inside-out manufacturing or something like that? And is that something that we're going to see on the Model 3?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

The Model 3, I mean, the internal name for the designing machine that makes the machine is the -- what we call the alien dreadnought. At the point at which the factory looks like an alien dreadnought, then you know you've won. It's like what the hell is that? So we've got alien dreadnought version 0.5 is -- will be Model 3. It'll take us another year to get the version 1 and probably, a major version every 2 years thereafter. By version 3, it won't look like anything else. It might look like a giant chip picking place machine or a super high-speed bottling or canning plant. And you really can't have people in the production line itself. Otherwise, you automatically drop to people speed. There's still a lot of people at the factory but what they're doing is maintaining the machines, upgrading them, dealing with anomalies. But there's -- but in the production process itself, there essentially would be no people. But not -- with version 1, not version 0.5, so -- but I don't feel or think oh, it's just Tesla's going to have a factory without people. There's going to be a huge number of people, but they will be maintaining the machines and upgrading the machines and dealing with anomalies, and the output per person will be extraordinarily high.

Rod Avraham Lache
Deutsche Bank AG, Research Division

Sounds like a lot of innovation there. One last just housekeeping thing for Elon or Jason. You had previously talked about the objectives of profitability in the fourth quarter but I know a lot is changing with the mix and also with the direct leasing. So is that also something that we should think is being pushed out a quarter?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well, if you exclude Model 3 CapEx ramp, then -- well, in fact, really for Q3 and for Q4, Tesla would be profitable, excluding the Model 3 CapEx ramp.

Operator

Our next question comes from Pat Archambault of Goldman Sachs.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

Terrific. I guess, just an accounting question maybe for Jason. With the residual value guarantee going away, what happens to the accounting for revenues? Do you kind of get to something more close to what we see in other OEM financials and maybe just have the portion that's direct lease be accounted for as leases? And what would be the timing of changes assuming they do have them?

Jason S. Wheeler
Former Chief Financial Officer

Yes. No, absolutely, and the answer to timing, it changes right away. So a car that is sold without in -- so with an RVG, that drops us into lease accounting. And what we've done historically and we'll continue to do for RVGs is we recognize the full revenue on a non-GAAP basis. What changes when there's not an RVG in the equation is you get full revenue recognition on a GAAP basis as well as a non-GAAP basis. So good things happen on the accounting side.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

Okay. And then this is something that, I mean, within the next quarter or something, you'll -- we'll already see a significant reduction in that adjustment, obviously.

Jason S. Wheeler
Former Chief Financial Officer

You'll see that but the other thing I want to point you to is what we've already talked about and probably an uptake in direct leasing. When we have used a partner in the past for leasing, that gives us non-GAAP revenue recognition on that. Our non-GAAP revenue recognition is very simple, we follow the cash. If somebody pays us for -- pays us cash for a car, we recognize it in non-GAAP revenue. When we do direct leasing, then that drops us in to pure lease accounting so there, it will be that way on a GAAP and a non-GAAP basis.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

And I mean, is the 8 to 15, is that just kind of a temporary measure while you're setting up these new partner relationships? Or do you actually expect to stay at 15 for some time?

Jason S. Wheeler
Former Chief Financial Officer

So 15 is what we're talking about for Q3 and I think I mentioned earlier, we've got a bunch of active conversations with new partners. There's another factor too which is I think, important to point out. We've introduced some pretty compelling loan programs, particularly in North America in the last 90 days. And we're starting to see some shift from leasing towards loans. And to bring the answer to your question full circle, loan is full GAAP and full non-GAAP revenue recognition.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

Got it, that's helpful, and I think it will be helpful for just the users of financial statements as well. The ZEV credits, you mentioned that they weren't material. I feel like it's been written that there was kind of a glut of supply on those. And I don't know, is that just the lumpiness of it or is that sort of a revenue process that's going nowhere?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well actually, if I could say something and I really want to emphasize this quite strongly and I hope it does get picked up in the media, is that the California Air Resources Board is being incredibly weak in its application of ZEV credits. The standards are pathetically low. They need to be increased. There's massive lobbying by the big car companies to prevent CARB from increasing the ZEV credits mandate which they absolutely damn well should; it's a crying shame that they haven't. And as a result, you can barely sell a ZEV credits for pennies on the dollar.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

Got it. Okay so...

Elon R. Musk

CEO, Product Architect, Chairman & Co-Founder

CARB should damn well be ashamed of themselves.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

All right. Well, I think that answers my question pretty directly then. The last one, just one housekeeping one. And chance -- and sorry if I missed it. X production for the quarter, are you able to share that?

Jason S. Wheeler
Former Chief Financial Officer

[indiscernible]

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well we have in broad terms, yes.

Patrick Kenehan Archambault
Goldman Sachs Group Inc., Research Division

Okay. I think that was a no, but fair enough.

Operator

Our next question comes from the line of Brad Erickson of Pacific Crest Securities.

Bradley D. Erickson
Pacific Crest Securities, Inc., Research Division

Just had a quick follow-up, I guess, on something that's been asked a couple of times, take another run at it. I guess, given that you're obviously no longer working with this key supplier around full autonomy, what are the major hurdles that you see for Tesla here to overcome to get to full autonomy? It's just a case of software development, lots more miles driven and basically getting the right people in place? Any color on sort of some of the key challenges you're facing and where you're particularly focused for delivering full autonomy at some point?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Well, full autonomy is it's really a software limitation. The hardware is -- I mean, the hardware exists to create full autonomy, so it's really about developing advanced narrow AI for the car to operate on. And I want to emphasize narrow AI; it's like not going to take over the world but needs to be really good at driving a car. So increasingly sophisticated neuro maps that can operate in reasonably sized computers in the car; that's our focus. I'm very, very optimistic about this. It's exciting, it's really going to -- it blows me away, the progress we're making. So I think if I'm this close to it and it's blowing me away, it's clearly going to blow other people away when they see it for the first time.

Operator

Our next question comes from the line of Ben Kallo of Robert W. Baird.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

All right. I think we'll just take a few more questions. So let's maybe do this and 1 or 2 more and call it a day.

Operator

Okay, our next question comes from the line of Emmanuel Rosner of CLSA.

Emmanuel Rosner
CLSA Limited, Research Division

I wanted to ask just a couple of questions on the update to the master plan. The first one is on the sharing piece. So definitely, a very exciting goal. At the same time, I feel like a lot of automakers as well as municipalities are all working sort of like on their version of sort of ride sharing through autonomous, I guess, driverless cars. And to the extent that a lot of sort of what buyers are looking at in Tesla now is the driving experience and that it really doesn't matter as much when you're being driven, what do you view as sort of your future competitive advantage in a sort of like ride-sharing type of environment?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

I think the quality of the ride is always going to matter. And yes, nobody wants to drive if you're sitting and stuck in traffic, that's boring. But if you're driving on a beautiful country road or along the seaside, then I think it feels wonderful to drive, and you want to do that. So it's -- I don't think cars are going to just become some boring utility.

Emmanuel Rosner
CLSA Limited, Research Division

Got it. And I guess on the piece about expanding the product line out to other major segments. What do you view as your target timing for that? I know there was a mention of some of these cars being sort of like -- I guess, at least sort of like available sort of like to be unveiled next year. So does that mean that we're looking at sort of like the following year, or is that into the next decade? And what sort of, I guess, capital needs that we're looking at for that?

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

I think we want to postpone anything that's a heavy capital impact until after the Model 3 production is ramped. We don't want to stack Model 3 CapEx on top of other program CapEx, so -- but there's a lot we can do. Because the development of a vehicle, there's a long sort of tail at the beginning of the development of a vehicle which involves a lot of time but doesn't involve a lot of cost. And it's only when you begin tooling up full production that the cost really ramps dramatically. So there's a lot we can do before that -- before we have to sort of dive into ramp CapEx. And we won't do that for any products until after Model 3 is in high production, yes. But I think there's going to be some pretty exciting unveils for the Tesla semi and the Tesla minibus or bus. We have actually -- we don't actually have a name for it yet. That's just off of the Model X platform. So it doesn't involve a lot of CapEx actually. But we expect to probably unveil those, I think, for the middle of next year, maybe in the next 6 to 9 months type of thing. And then have a better -- a more fleshed out plan for when those would enter production. But it's not -- they would enter production within like, low single-digit years, not like -- I mean, I consider like anything past 5 years is infinity. Yes, and so I'd say, I mean, also to be clear. Like, the priority vehicle development after the Model 3 would be the Model Y, I guess, the compact SUV because that's also a car that where we expect to see demand in the 500,000 to 1 million units per year level. So it's the obvious priority after the Model 3.

Operator

The final question comes from the line of Tyler Frank of Robert Baird.

Tyler Charles Frank
Robert W. Baird & Co. Incorporated, Research Division

I guess, 2 short questions. One, can you discuss when you expect to be profitable on a non-GAAP basis? And then #2, you had mentioned on the last call that the Gigafactory may actually have the ability to produce about 3 times of your original estimate? Will that entail significant CapEx in the future or are you preparing that foundation right now to reach over 100 gigawatt hours?

Jason S. Wheeler

Former Chief Financial Officer

Yes, sure. On the profitability question, just reiterate what Elon said earlier. If we can execute on our production and our delivery goals in the second half of the year, we've got a great chance to be non-GAAP profitable.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Yes, clearly Model 3 CapEx. The real question on profitability is where do we set the dial on growth? And obviously, if you set the dial on growth to be super high, then you'd face dilution because of that increased capital. If you set it too low, there's less dilution but then you grow slower. So you want to set it at kind of the right level where you're the right mix of dilution and growth. I mean, as it is, it's just important to bear in mind like, as a manufacturing company, our percentage growth, I think it's unprecedented in the modern era. It's really nutty. I mean, in 2010, we were making 600 cars a year, and Lotus was doing most of the -- was doing the chassis -- body and chassis. And then 5 years later, we were making 50,000. And it was a much more sophisticated car to Model X, and we were doing the whole car without any partner. So when you have like, in same percentage growth like that in a manufacturing company, it's not like you're shipping copies of software here. It's a real tricky, strategic business to where do you set things from a dilution versus growth standpoint. So I mean, the right way to look at the product line, the companies -- look at say the product lines and say -- and value them as that -- sort of do an NPV of the product lines. And then, for any given product line, you can say, okay, this is what that is likely to be worth, the S, the X, the 3. And then you can parse it out relative to the CapEx on new vehicles. And to the degree that the past predicts the future, then you can pretty much count on, like, the new vehicle program also being incredibly valuable. And something where it would be mad not to spend the money to do it. But it can be -- when all of that's kind of lumped together, it can be confusing. And then people will think Tesla is a money-losing company. Like, well not really. Not if you're growing at like 100% a year or in the case of next year, I mean, our unit volume, we'll probably exit next year at unit volumes that's 200% or 300% what our current volume is, maybe 400%. So it's just real important to parse things out and to understand what the real health of the business is. Right now, I mean, in a nutshell, we're like we're shipping $10 billion a year of product on an annualized basis at somewhere around a 23% to 25% gross margin.

Jeffrey B. Straubel
Chief Technology Officer

And just quickly to your Gigafactory question, this is J.B. A lot of the improvements that we've made are actually increasing the density of the Gigafactory and the density of how much equipment and [indiscernible] in the existing footprint. So in that case, there's a lot of investments we've already made preparing the site, some of the infrastructure for the site that we would get to continue leveraging as we grow capacity even higher than our original plan. There would be some other investments, of course, and equipments and things like that, that would be incremental, tied to that much higher volume, but those would also be enabling vehicle volumes and energy product volumes way beyond what we'd initially predicted.

Jeff Evanson
Vice President of Investor Relations

All right, guys. We're at the hour mark. Shall we call it a day? Yes. Let's do it. All right. Thanks a lot, everybody, for joining us and we look forward to talking to you next quarter. Bye-bye.

Elon R. Musk
CEO, Product Architect, Chairman & Co-Founder

Thanks a lot. Bye.

Operator
That does conclude your program. Thank you for your participation and have a wonderful day. You may disconnect your lines at this time.