

# Tesla, Inc. NasdaqGS:TSLA

## FQ1 2017 Earnings Call Transcripts

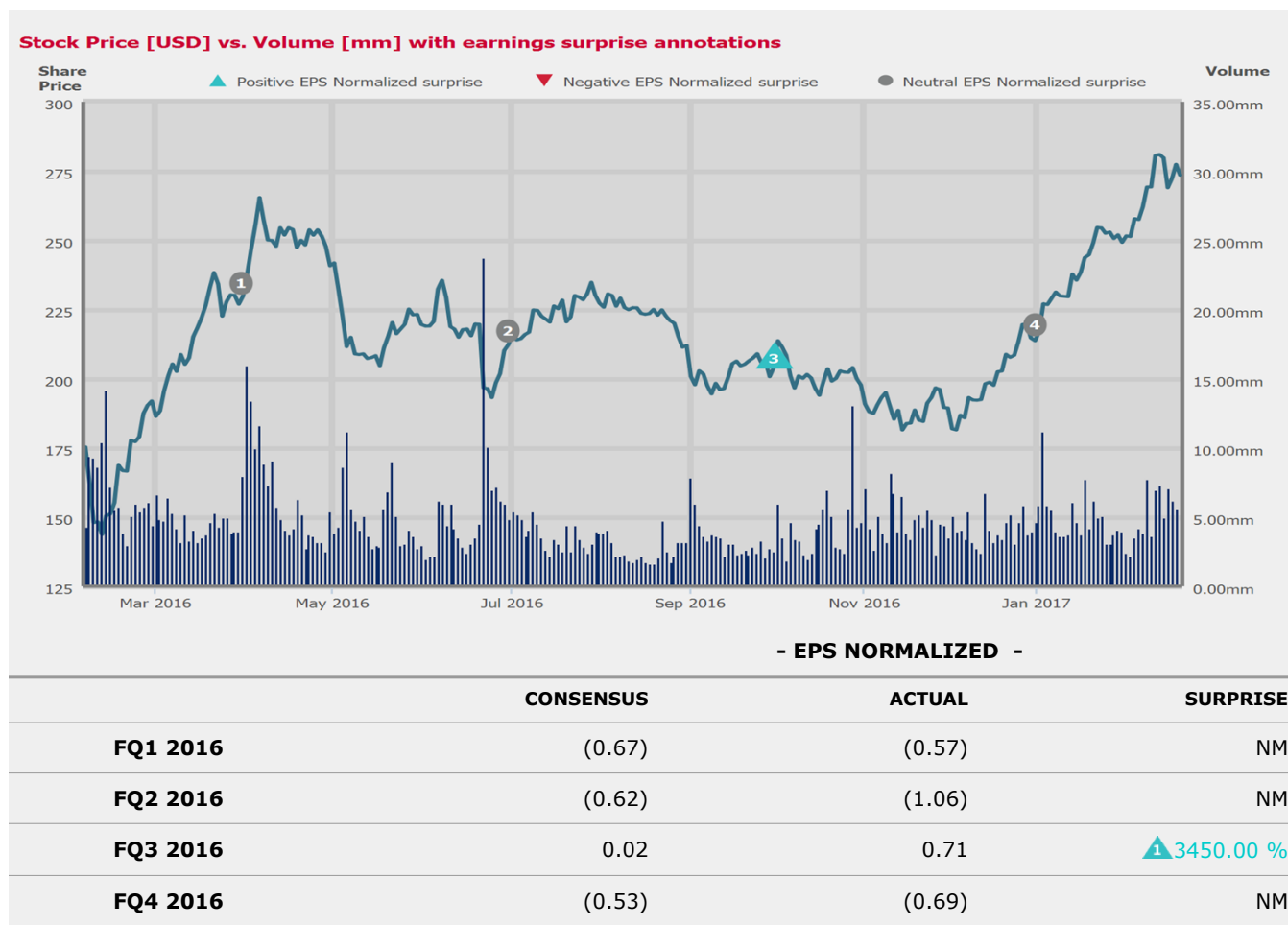
Wednesday, May 03, 2017 9:30 PM GMT

### S&P Capital IQ Estimates

	<b>-FQ1 2017-</b>			<b>-FQ2 2017-</b>	<b>-FY 2017-</b>	<b>-FY 2018-</b>
	<b>CONSENSUS</b>	<b>ACTUAL</b>	<b>SURPRISE</b>	<b>CONSENSUS</b>	<b>CONSENSUS</b>	<b>CONSENSUS</b>
<b>EPS Normalized</b>	(0.80)	(1.33)	NM	(0.65)	(2.85)	1.37
<b>Revenue (mm)</b>	2633.72	2696.27	▲ 2.38	2662.73	11611.82	19193.44

Currency: USD

Consensus as of May-02-2017 9:00 PM GMT



# Call Participants

## EXECUTIVES

### Deepak Ahuja

Chief Financial Officer

### Elon R. Musk

CEO, Product Architect, Chairman & Co-Founder

### Jeff Evanson

Vice President of Investor Relations

### Jeffrey B. Straubel

Chief Technology Officer

### Jonathan McNeill

President of Global Sales & Service

### Lyndon R. Rive

Co-Founder and Chief Executive Officer

## ANALYSTS

### A.M. Sacconaghi

Sanford C. Bernstein & Co., LLC., Research Division

### Adam Michael Jonas

Morgan Stanley, Research Division

### Alexander Eugene Potter

Piper Jaffray Companies, Research Division

### 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

### David J. Tamberrino

Goldman Sachs Group Inc., Research Division

### James Joseph Albertine

Consumer Edge Research, LLC

### Jeffrey David Osborne

Cowen and Company, LLC, Research Division

### John Joseph Murphy

BofA Merrill Lynch, Research Division

### Joseph Robert Spak

RBC Capital Markets, LLC, Research Division

### Martin Viecha

Redburn (Europe) Limited, Research Division

### Robert George Cihra

Guggenheim Securities, LLC, 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

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### Operator

Good day, ladies and gentlemen, and welcome to the Tesla First Quarter 2017 Financial Results Q&A Call. [Operator Instructions] As a reminder, this conference is being recorded. I would now like to turn the call over to your host, Mr. Jeff Evanson. Mr. Evanson, you may begin.

### Jeff Evanson

*Vice President of Investor Relations*

Thank you, Sherry, and good afternoon, everyone. I'm joined today by Elon Musk, J.B. Straubel, Deepak Ahuja, Jon McNeill and Lyndon Rive. And today on our webcast, we'll discuss our Q1 results that are announced in the update letter at the same link as this webcast. And during our call, we will discuss our business outlook, make some forward-looking statements. These are all 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 filings with the SEC.

We'll start today's call with some brief remarks from Elon, and then we'll jump right into Q&A. [Operator Instructions]

And with that, I'll turn it over to you, Elon.

### Elon R. Musk

*CEO, Product Architect, Chairman & Co-Founder*

Thanks. So yes, welcome to the call. And I'd like to welcome Deepak Ahuja back to Tesla as CFO. And yes, it's -- welcome back.

### Deepak Ahuja

*Chief Financial Officer*

Thank you, Elon. Appreciate that, and I'm really excited to be back.

### Elon R. Musk

*CEO, Product Architect, Chairman & Co-Founder*

Cool. All right. So yes, we'll just go right into Q&A. Overall, I'm very proud of Tesla for our accomplishments in the first quarter. And I think second quarter's going to be great, too. And yes, so overall, I think we're executing well, and I'm feeling quite optimistic about the future.

### Jeff Evanson

*Vice President of Investor Relations*

All right. Sherry, let's have the first question, please.

## Question and Answer

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### Operator

Our first question comes from Alex Potter with Piper Jaffray.

#### Alexander Eugene Potter

*Piper Jaffray Companies, Research Division*

There's been a fair amount of debate recently, both amongst investors, I think, but also within the supply chain about the segments within the transportation ecosystem that will sort of forever be off-limits to Tesla because of physical limitations of electric drivetrain, specifically as it relates to weight and energy density and things of that nature. Presumably, you'd disagree, but I'd be interested in hearing maybe why you disagree. Why you think Tesla can compete in those segments whereas other people think diesel or fuel cells or other options would be better?

#### Elon R. Musk

*CEO, Product Architect, Chairman & Co-Founder*

Are you thinking of things like heavy trucking?

#### Alexander Eugene Potter

*Piper Jaffray Companies, Research Division*

For instance, yes. That's -- I mean, I guess, different people draw the line in different areas, but as an example, yes.

#### Elon R. Musk

*CEO, Product Architect, Chairman & Co-Founder*

Yes. I mean I'm not sure -- I'm absolutely confident that the electric car trains will -- electric vehicles will occupy everything without exception. And I don't want to jump the gun on the Tesla semi-truck announcement we're unveiling later this year, but it's -- I think it's going to be a cool product and will defy people's expectations on what an electric truck can do. So I really do not see any segment of transport that will not be electric. In fact, I'm highly confident that all transport will go fully electric, with the ironic exception of rockets, yes. [ If you know your ] way around Newton's third law.

#### Alexander Eugene Potter

*Piper Jaffray Companies, Research Division*

Right. Okay. And then I guess maybe one Model 3 question here. I know it's maybe early days, is there in a way to gauge sort of what you think the trim and option uptake is going to look like on the Model 3 just to give folks an idea on what the pricing and margin profile might look like.

#### Elon R. Musk

*CEO, Product Architect, Chairman & Co-Founder*

I mean, it's really guesswork at this point. But if it were to be comparable to what we see with, say, Model S or with other vehicles in the market. It's something like a 20% to 30% increment over the [indiscernible] would be the typical average. Jon, do you have any...

#### Jonathan McNeill

*President of Global Sales & Service*

Yes, I think that's right. And that's -- we experience a little bit higher than that in Model S. And Model S in comparison to Model 3 has more range, has more power, has more cargo, et cetera. And we'll be introducing at the start of production, I think we'll be announcing our vehicle -- as we get closer to the start of production what these vehicle stacks will be, but I think 20% is a fair number to use.

#### Elon R. Musk

*CEO, Product Architect, Chairman & Co-Founder*

Yes, actually, just to reemphasize that, I might repeat this a few times on the call. We want to be super clear that Model 3 is not version 3 of our car. The Model 3 is essentially a smaller, more affordable version of the Model S with fewer features. But the Model S and the Model 3 will be at the same level of technology. And if you were to -- if you were to put a version on, say, what -- I would say probably on version 4 of Model S, and Model 3 will also be version 4. If you make it like the essentially a first -- when Model S first came out, it was rear-wheel drive. And then we had Dual Motor all-wheel drive, we had initial Hardware 1 Autopilot and then Hardware 2 Autopilot, and there was a facial refresh. There have been roughly 4 versions of Model S, and we're on the fourth version. Model 3 will also be version 4. It's a little confusing because one's a letter and the other's a number. And Model 3 was supposed to be called the Model E, but then Ford threatened to sue us. And then I thought we're being all clever by calling it the Model 3, but actually the joke's on me because it caused confusion in the marketplace. So we're doing our best to clear up that confusion so people do not think that Model 3 is somehow superior to Model S. Actually, Model S will be better than Model 3 as it should be because it's a more expensive car. We're going to be -- sound like a broken record on this front, and the messaging might get a little annoying, but we really have to be emphatic to clear up an error, which I think is my responsibility, in naming something that inherently would cause confusion with marketing.

### **Operator**

Our next question comes from Toni Sacconaghi with Bernstein.

### **A.M. Sacconaghi**

*Sanford C. Bernstein & Co., LLC., Research Division*

I was wondering if you could maybe give us an update qualitatively or quantitatively on how investors should think about battery costs. I think your last public statement was that Tesla's battery cost early last year was under \$190 per kilowatt hour. If we look at how Powerwall 2, there's been significant improvement in cost per kilowatt and in density. But I think if we try and do the math on Powerwall 2, we'd still come up with a number that's reasonably high. So maybe can help us -- I think in the past, Elon, you've said that you hope to get to \$100 per kilowatt hour by 2020. And I recognize that's aspirational. But maybe you can help us a little bit frame how we should think about battery cost today, what kind of improvement you're seeing from -- or expect to see with 2170 batteries in vehicles going forward.

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I mean, regarding numbers for cost [indiscernible] [are close how competitive] is the information except that we do expect to see significant improvements year-over-year as much as improving the core chemistry of the cell, reducing essentially the cell mass that is inactive and, of course, mass economies of scale and vertical integration at the Gigafactory. These will all take time to bear fruit, but there will be significant time. With the Powerwall, the -- there are a bunch of other costs in the Powerwall that are more than just the battery cost. So you've got the -- you have the cell cost, and you have -- and you get the cell into a module, you've got all the cooling systems, the control systems, the safety stuff that prevents a runaway, the enclosure, the modem to communicate to the Internet and then [indiscernible] would be the power electronics to take the power from the cells and eventually convert that to the AC or DC power of the house keys. J.B., is there something you'd like to add to that?

### **Jeffrey B. Straubel**

*Chief Technology Officer*

No. That's a great description. It's a fully integrated product. It's a system, not just a bunch of cells. So when you -- if you're maybe trying to calculate dollar per kilowatt or the cost of the Powerwall, I think you'd find it's extremely competitive against other home energy storage systems. We believe the best. But there is a lot of other hardware in there that's all included, all wrapped together in the Powerwall price, so you don't have to piecemeal the system in your house.

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Right. But we're quite confident that the Powerwall is the highest quality product and actually at the lowest cost of anything in the market. So that is a good product. And I feel good, feel pretty happy with it.

**Jeffrey B. Straubel**  
*Chief Technology Officer*

And some of the improvement trajectory that you saw from Powerwall 1 to Powerwall 2, part of that is made possible by the migration to 2170 cells made at Gigafactory, not all of it but a large part of it. So that is something we're pleased with and feel it's going well.

**A.M. Sacconaghi**  
*Sanford C. Bernstein & Co., LLC., Research Division*

Okay. I was wondering also your customer deposits, and I recognize there's a lot in that, declined for the second straight quarter. And at least by my math, it appears as though Tesla's new car inventory has increased substantially over the last couple of quarters, maybe 3,500 units or about 50%, even though sort of production and deliveries have been relatively constant. I'm wondering if you are seeing incremental demand pressure on Model X. And particularly Model S, Elon, you underscored that there was confusion in the marketplace. And are these the metrics that are suggesting to you that there's some confusion in the marketplace? Are you seeing cancellations? Because at least optically, it looks like the book-to-bill is less than 1 on S and X.

**Deepak Ahuja**  
*Chief Financial Officer*

Yes. Deepak here, a couple of questions that you had. Firstly, just to clarify, [indiscernible] weekly inventory [indiscernible] very slightly from end of Q4 to end of Q1. And the -- and we are using some of that in different ways, and Jon can explain that further. And also to your other question on customer deposits, what I'm seeing is that we had an artificial backlog in our customer deposits of Model Xs. And as our production of Model Xs has stabilized and as our mix of Model S has increased relative to X, we have cleared that. So it's nothing unusual from what I'm seeing there. And Jon, do you want to add on the...

**Jonathan McNeill**  
*President of Global Sales & Service*

That's right. The increase in inventories is about split in 2. One is we increased Model X test drive vehicles by about 1,000 over the past quarter. We had prioritized deliveries as we ramped up Model X production and prioritized getting cars to customers first and to our store second. Our stores have finally gotten their test drive fleets, and that's what you see in terms of the half of the unit volume increase. The second half is in our service loaners. So as our installed fleet has gone up, we need -- we wanted to make sure that our owners were getting a service loaner, and we'll continually increase that, and you'll see that over time. That's not a one-time event. You'll see as we continue to deliver this level of cars per quarter that we will increase the service loaner fleet proportionally so that we've got the ability to offer a Tesla to our customers.

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

Yes. And in fact, this'll take us a few months to fully deploy, but our policy for service loaners is that the service loaner fleet will be the very best version of a Tesla that is available. So if you have a Model X that comes in for service, the service loaner you will get will be the absolute fully loaded state-of-the-art P100D Ludicrous, best Model X that we have. The same for the Model S. So it will be the kind of thing where you hope that service takes a long time because you have the absolute top-of-the-line Tesla as a service loaner.

**A.M. Sacconaghi**  
*Sanford C. Bernstein & Co., LLC., Research Division*

So Elon, just to clarify, the confusion that you believe exists between potentially Model 3 and Model S, that's not being inferred from order patterns? That's being inferred more qualitatively from what you're learning in showrooms? Or how do you make that assessment of the problem?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

There are no -- we have seen some impact of Model S orders as a function of people being confused that Model 3 is the upgrade to Model S. Now we took action to correct that about a month ago, but that message has not filtered down to all of our customers. So there's still a lot of people who are under the impression that Model 3 is the upgrade from Model S. But in fact, the one upgrade is just by the latest Model S. That's the actual upgrade. Not -- like saying -- thinking that the upgrade path from an Audi A6 is an Audi A4. It's not. So yes, so it's just a question of correcting that misconception, which I'm confident we'll be able to do in the next several weeks.

**Operator**

Our next question comes from Colin Langan with UBS.

**Colin Langan**

*UBS Investment Bank, Research Division*

You've talked about in the past reinventing the machine that makes the machine. And now that we're getting a little bit closer to the Model 3 launch, any additional color on what steps in automation you're doing for the Model 3? And any rough order of magnitude of how much more automated the Model 3 would be versus the traditional production line?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes. So with Model 3, I think would be roughly comparable with the best high-volume vehicle production lines in the world, better in some respects, a little worse than others, but roughly comparable. And then with some further iteration, I think it will probably be a little bit better than the next-best automotive production line. Then where things will really be a step change I think beyond any other automated actually will be the Model Y factory. And this is both a function of designing the product to be easy to manufacture and easy to automate as well as designing the factory itself. So Model Y is where I think it really becomes a step change, but Model 3 is going to be at or probably slightly better than I think the next best automotive [indiscernible], that's pretty [indiscernible]. And then Model Y will be -- there'll be nothing close to it, I think.

**Jeffrey B. Straubel**

*Chief Technology Officer*

Maybe just to add as a relative benchmark, against the S and the X, the Model 3 is vastly more automated. And perhaps it's not the best benchmark for you looking forward, it's perhaps 3 to 4x more automated than an S or an X, and much more simpler to build.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Is that 1/5 of the hours per car?

**Jeffrey B. Straubel**

*Chief Technology Officer*

Yes.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

So. It's 5x the volume, but the same hours per car.



**Colin Langan***UBS Investment Bank, Research Division*

Got it. And as a follow-up, any color on -- you've announce the doubling of the Supercharger network and increasing your dealers. I mean, how should we think about that over the next few years? Is that doubling going to be enough? Or how do you see the network needing to expand going forward?

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

Well, it's exciting that Supercharger network substantially hit that number just recently, and you can see the growth plan on our website. That's going to continue to increase dramatically. Jon, do you want to speak to service?

**Jonathan McNeill***President of Global Sales & Service*

Yes. Service locations are what you see increasing in the shareholder letter. But you should probably think about service capacity in 2 ways now. One of the things we've discovered as we've deployed more advanced service techniques into our centers is that a super majority of the cars that we repair don't require a lift. That frees us from brick-and-mortar service. And we've added substantially now to our mobile service capability starting first experimenting in the Bay Area and in some of our major markets, and we'll be rolling that out throughout the year. And so we're creating service capacity in 2 ways -- mobile service and fixed service operations. But fixed service operations are becoming much, much more efficient.

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

Much higher throughput.

**Jonathan McNeill***President of Global Sales & Service*

Absolutely, much higher throughput per worker, more throughput per square foot across really every metric.

**Operator**

Our next question comes from Adam Jonas with Morgan Stanley.

**Adam Michael Jonas***Morgan Stanley, Research Division*

Elon, first question's is on CFIUS and Tencent. So after acquiring this 5% passive stake in the company, I'm thinking given the highly sensitive nature of your proprietary tech and computer vision, AI, robotics, et cetera, and all the related infrastructure, I would imagine that the Commission for Foreign Investment in the United States and the Pentagon might be concerned at the idea of a Chinese or a potentially Chinese state-backed company going any further than a small passive stake. Am I watching too many Cold War movies here? Or is there potential for some sensitivity on the grounds of national security?

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

Well, I think 5% is not that big of a deal. I mean they're not present at board meetings. They don't have any insight into Tesla that's not public.

**Deepak Ahuja***Chief Financial Officer*



Yes. As Elon said, this is a passive investment. And it doesn't require CFIUS clearance from that point of view. Again, they don't have any access to confidential information or board materials, so it's just a belief and the support of what they think Tesla can achieve.

**Adam Michael Jonas**

*Morgan Stanley, Research Division*

Okay. And just as a follow-up, Apple has enough net cash, I think, to buy Tesla like more than 3x over. Is there anything that Apple does or has, besides having more money than they know what to do with, that could be helpful in Tesla's mission to accelerate the transition to shared autonomy in sustainable transport? Could they be the type of firm you could partner with? And could you -- is this something you could talk to Tim about?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes. I don't think they want to have that conversation. I don't believe -- there's not been any indication that they do. But obviously, Apple's company makes some great product. And yes, I mean, I use their phone and their laptop, it's cool.

**Adam Michael Jonas**

*Morgan Stanley, Research Division*

I mean, do you think of them more a competitor than potential partner? Is that unfair?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I mean, I don't know what they're going to do on the car front. Yes, it's not clear.

**Operator**

Our next question comes from Tyler Frank with Robert Baird.

**Tyler Charles Frank**

*Robert W. Baird & Co. Incorporated, Research Division*

Can you walk me through what your capital needs are for the Model 3 just to get to production and then to ramp production throughout this year and next year? And then how confident are you that you might be able to hit that 100,000-unit production target for the Model 3 in this year? And then I have a follow-up after that.

**Deepak Ahuja**

*Chief Financial Officer*

I don't think we have indicated the -- we have just said in the letter, we'll achieve 5,000 per week at some point this year and 10,000 at some point next year. So we haven't clarified on that. So...

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes. The trick with the -- when you've got a whole new product and a whole new factory is I don't predict exactly what the -- what that initial S-curve look -- initial push in the S-curve looks like, it's extremely difficult. In every way, the production starts off slowly and then you gradually eliminate the constraints and eventually it starts taking off exponentially. But because of that sort of initial slow ramp that then goes exponentially -- it's more changed in where that lands in the quarter, it can have quite a big impact on total volume. It's a lot easier to predict where the upper flat portion of the S-curve is likely to be, but predicting the rapidly changing portion of the S-curve is just, I think, not within the ability of anyone to predict with accuracy.

**Tyler Charles Frank**

*Robert W. Baird & Co. Incorporated, Research Division*

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Got it. And then can you just run us through what the capital needs are sort of to hit that 10,000-unit per week goal as well as where the battery factory stands in terms of its current capacity versus its expected total capacity and what time line is to get to that total capacity mark?

**Deepak Ahuja**

*Chief Financial Officer*

Well, we feel pretty good overall about the capital needs and our ability to fund that to achieve that 10,000 per week capacity and...

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

With internal...

**Deepak Ahuja**

*Chief Financial Officer*

Yes, with internal -- right, exactly, with our own resources and the cash that we generate from our business as we ramp up Model 3 volumes. And overall, and J.B. can speak up more to that in terms of the cell capacity, that's all lined up to come in -- come online just ahead of our needs on the vehicle side as well as on the energy storage side.

**Jeffrey B. Straubel**

*Chief Technology Officer*

And we initially forecast about 35 gigawatt hours of cell capacity and 50 gigawatt hours of pack capacity, and we anticipate to surpass that cell capacity in 2018. So that's going well. And with the increasing improvements in the production density and speed at the Gigafactory, we actually ultimately believe, and I think we've said this before, that we can fit substantially more capacity than the 35 gigawatt hours at Gigafactory 1. So...

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes. And we've said publicly that we think cell capacity at Gigafactory 1 is likely to exceed 100 gigawatt hours over time.

**Jeffrey B. Straubel**

*Chief Technology Officer*

So the end stage of 35 is really sort of a passing point at this stage and will continue on from there.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes, yes.

**Tyler Charles Frank**

*Robert W. Baird & Co. Incorporated, Research Division*

Right. Okay. And then Elon, you had previously pulled out a target of 1 million cars per year by 2020. Do you still think that's achievable? And what needs to take place in order to get there?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes, I do. I think we need to come up with the Model Y sometime in 2020 or, aspirationally, late 2019. And then I think that 1 million units is quite likely -- combined, yes. Maybe more.

**Operator**

Our next question comes from David Tamberrino with Goldman Sachs.

**David J. Tamberrino***Goldman Sachs Group Inc., Research Division*

I wanted to first just ask about the order rate for the S and the X in the quarter and also get some color around your deliveries from a regional perspective. I believe there was an expiration of an electric vehicle tax credit in Hong Kong. I'm just wondering if that created any pull forward or incremental demand in the quarter and if there's any air pocket to orders and deliveries for the second quarter, seeing that you maintained your 47,000 to 50,000 1H delivery guidance.

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

Yes. I mean, there was some pull forward demand in Hong Kong, that's 1 city on earth. So the [indiscernible] impact our ability to achieve our delivery target for Q2.

**David J. Tamberrino***Goldman Sachs Group Inc., Research Division*

And the order rate growth for the quarter?

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

Well, the -- I think we feel pretty good about achieving the sort of the 100k, roughly 100k, total for the year for S and X, combined. That's where we kind of want to be. The manufacturing system at the supply chain is all sort of set up for that level. We continue to be surprised by how sort of, frankly, naive people are -- a lot of you are about production and supply chain. It's as though -- it sounds like an easy way to increase production, it's truly not. You can't -- at any given production system, you design it for optimal output and then you aim to improve efficiency, reliability, quality and so forth at that output. So the S and X system, as I said last year, was designed for 100,000 units. And initially to get to that rate, we have to use a lot of overtime, a lot of expediting, and that affected our gross margin on the car. And now we're sort of at steady-state with the kind of the top part of that S-curve that we're targeting. And so now our focus for S and X is improving production efficiency, continuing to improve quality and...

**Jeffrey B. Straubel***Chief Technology Officer*

Material cost.

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

Yes, material cost and so forth, to sort of -- and to get the right amount of gross margin for S and X to go to the 30% level that we've been aspiring to for a while.

**David J. Tamberrino***Goldman Sachs Group Inc., Research Division*

Understood, that's on the production side. My question was just on the what the order rates and demand was looking like from what you're seeing on your customer base. Historically, you've given or provided a very helpful color on what the year-over-year or quarter-over-quarter order growth rate has been on the S and the X, and I think it's a meaningful metric for what demand looks like for those vehicles and for your products. But that's okay, understood.

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

I don't think it's meaningful. We're going to produce 100,000 units approximately, so all that matters is there's demand. Is there going to be demand for 100,000 units? I believe there will be. And there is.

**Deepak Ahuja**

Chief Financial Officer

And there certainly sufficient demand for the guidance we've given for the first half.

**Elon R. Musk**

CEO, Product Architect, Chairman & Co-Founder

Yes.

**David J. Tamberrino**

Goldman Sachs Group Inc., Research Division

Understood. And just on the SolarCity side, it looked like a pretty good gross margin quarter. I wanted to understand how much of that was from the shift further into the cash loan versus the PPA lease? And how much was that? Or was it more associated with the ramping of the Gigafactory and production of the cells?

**Deepak Ahuja**

Chief Financial Officer

It was primarily seasonality. We had [indiscernible] production happen in the Northern Hemisphere in some of the PPA leases and how we recognize revenue. And also it was we had some \$14 million sale of energy credits that helped us. And the credit sale is a sale that happen every quarter, but we have the full quarter of it, which we didn't have in our half quarter of SolarCity sales -- financials in our Tesla income statement.

**Lyndon R. Rive**

Co-Founder and Chief Executive Officer

And plus, we've seen an increase in cash and earnings that improved the margin as well.

**Deepak Ahuja**

Chief Financial Officer

Yes, that does help the margin as well, yes.

**David J. Tamberrino**

Goldman Sachs Group Inc., Research Division

I'm sorry to ask one more but that was a bit inaudible. Could you repeat that, Lyndon?

**Lyndon R. Rive**

Co-Founder and Chief Executive Officer

Yes, we've actually seen an increase in the Tesla line business.

**Elon R. Musk**

CEO, Product Architect, Chairman & Co-Founder

We're going to get the majority of the cash and loan by the end of the year.

**Jeffrey B. Straubel**

Chief Technology Officer

Correct.

**Elon R. Musk**

CEO, Product Architect, Chairman & Co-Founder

So just to be clear, for [indiscernible] activity, we'd like it to get to the majority of the cash and loan by the end of the year.

**Deepak Ahuja**

Chief Financial Officer

And we expect the Solar margins to stay very healthy for the rest of the year and grow over time.

**Operator**

Our next question comes from Martin Viecha with Redburn.

**Martin Viecha**

*Redburn (Europe) Limited, Research Division*

This is Martin from Redburn. I wanted to ask about the pep talk that you had a few days ago, where you talked about level 5 maybe in the next 2 years. And I was wondering that it's probably going to change radically the design of the car inside and whether you foresee this in the next 2 years that the interior design would change quite dramatically.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I don't think the -- we're going to see a dramatic change in interior design. There may be an option where you have club seating instead of everyone facing forward, but I wouldn't call that radical, just turning seats around. And I'm not sure how much people obviously would want to do that. I mean, the sensor hardware and compute power required for at least to have a 4 to a level 5 autonomy has been in every Tesla producer since October of last year approximately. So it's a matter of upgrading the software and looking to level 5. And if it does turn out that we need to upgrade the compute power, it's designed to be easy to upgrade, basically access through the glove box and plug in a more powerful computer. So we don't think it will be but if it is, that's pretty easy to do. So the important thing to appreciate is that the sensor hardware and wiring harnesses necessary for autonomy which is essentially having the 8 cameras, the radar and ultrasonics, that's in place. So that with each passing release, the car's autonomy level will improve. We had a bit of a dip, obviously, because of the unexpectedly rapid transition away from Mobileye, where we'd expected to have the Mobileye chip on the board as we transitioned but Mobileye refused to allow that. So then we had to basically recreate all the Mobileye functionality in about 6 months which we did.

**Martin Viecha**

*Redburn (Europe) Limited, Research Division*

Okay. And then the other follow-up question that I had was on the Model Y. You mentioned that the Model 3 production line will be probably as fast or a bit faster than the fastest production line in the world, and Model Y will be the genuine step change. Does that mean that the Model Y will be made on a different platform than the Model 3?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

It will be, yes, different platform. Just one example, but the wiring harness on Model S is about 3 kilometers in length. The wiring harness on Model 3 is 1.5 kilometers in length. The wiring harness on Model Y will be 100 meters. And that's a redundant wiring harness. So really, wiring harness is basically a flex harness with a high bit rate bus, so you can put everything on a higher bit rate bus that doesn't -- a CAN bus where you -- your data rate isn't necessarily constrained. And we will also have make changes to the vestigial voltage, so that not everything is 12 volts, which is a pretty absurd number, really, it's wrong for everything.

**Operator**

Our next question comes from Brian Johnson with Barclays.

**Brian Arthur Johnson**

*Barclays PLC, Research Division*

Yes, I have a couple questions. A housekeeping one and then sort of kind of where are you kind of a question for Elon. On the housekeeping, your order delivery announcements at the end of the quarter, you

used to make delivery announcements -- you used to talk about deliveries to end customers. This quarter, it was just deliveries to customers. Is there any change in distribution channel, potentially using resellers in some markets that that's meant to communicate?

**Jeffrey B. Straubel**  
Chief Technology Officer

No. It is the same thing. It's consistent. We are delivering to individual customers.

**Brian Arthur Johnson**  
Barclays PLC, Research Division

Okay. Second, a couple of years ago, when the stock was at \$200, in an answer to one of my questions, Elon, you outlined a scenario where you could get to \$700 billion in market cap, that's about where Apple was at the time. We're 2 years later, you're obviously close to the Model 3 launch. How are you looking at that?

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

Well, now -- I mean I want to preface this by -- of course, I could be completely delusional but I think I see a clear path to that outcome.

**Brian Arthur Johnson**  
Barclays PLC, Research Division

Okay. And anything else in terms of other businesses or volume or still pretty much on that track?

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

The set of steps necessary to achieve that outcome seems pretty obvious and heavily involve Tesla getting incredibly good at the machine that builds the machine -- which involves, by the way, a tremendous amount of software. This is -- it's not just a bunch of robots sort of sitting there, it's the programming of the robots and how they interact. And it's far more complex than the software in the car. I mean, I think this is just going to be a very difficult thing for other manufacturers to copy. I probably wouldn't know what to do if I were in that position.

**Brian Arthur Johnson**  
Barclays PLC, Research Division

Okay. And just one quick question: Why pick-up trucks? Why semis before pick-up trucks?

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

Well, they're not going to be that widely separated in time. And part of it is we do want to show that electric transport can do even the most heavy-duty things in the world. So it's -- I think it's pretty obvious that we can do a pick-up truck. But it's not obvious to a lot of people that we can do a heavy-duty semi. And so just being able to kind of hit the corners of the box of capability. It's a helpful thing to do. Yes.

**Jeffrey B. Straubel**  
Chief Technology Officer

Maybe I'll add a point. But a disproportionate amount of petroleum is actually burned by a small number of trucks just because of the high utilization, the high miles per vehicle, and it really lends itself, I think, well to electrification.

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

Yes, exactly. Every semi -- I mean, there's probably 10x as much [ hydrocondensate ] for a semi as for a pickup truck.

### **Operator**

Our next question comes from Rod Lache with Deutsche Bank.

### **Rod Avraham Lache**

*Deutsche Bank AG, Research Division*

A couple remaining questions. Just one is, since the Model 3 is maybe 2 or 3 months away, could you just give us a sense of what some of the most critical outstanding items are that are going to gate the commercial launch timing? And now that there are actual physical test vehicles on the road, are there any significant changes happening?

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Well, actually it seems to be -- we're not really seeing any significant change that needs to occur with Model 3. So it's coming in as expected, as the design continuation has predicted, it's getting pretty close to the bull's-eye, and I'm not aware of anything that would affect our prior statements about volume target.

### **Rod Avraham Lache**

*Deutsche Bank AG, Research Division*

So there's nothing outstanding vis-à-vis tooling, deliveries or things like that, that you're still viewing as a critical item with some uncertainty?

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

There's plenty of things with uncertainty, but I don't know anything that would prevent us from starting firstly in July, and exceeding 5,000 units per week by the end of the year. There may be some cost up there, I just don't know of what that is today.

### **Rod Avraham Lache**

*Deutsche Bank AG, Research Division*

Got it. Just switching gears to China. Obviously, domestic production is presumably very important to your success in that region. China recently suggested that they may relax the rules for foreign ownership or that they intend to relax the rules for foreign ownership. And I was wondering if you could just update us on where you stand vis-à-vis the growth plans there? And are the rules for ownership, is that one of the gating factors?

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I don't think this is quite the right timing to make any announcements on that front. But I would expect us to define our plans more clearly by the middle of year with respect to China production. I would -- I think it's good timing that -- I mean the China rule changes are good timing.

### **Rod Avraham Lache**

*Deutsche Bank AG, Research Division*

Got it. And just lastly, unless there's a pretty huge Q2 for CapEx, it appears that you're tracking at less than that \$2 billion number that you had articulated of capital spending prelaunch of Model 3. Is that a function of savings, contractual timing or is that capacity issue? Just some thoughts on how we should be thinking about the capital spending relative to your prior targets.

### **Deepak Ahuja**

*Chief Financial Officer*

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Yes, it's not too far from it, Rod, and we are -- we have significant CapEx in Q2, and it's done in a big lump sum or a little big peak given how much equipment is being installed and then tested. Often, our CapEx payments happen -- and a big chunk of the funding payments happen after the equipment is installed, it's tested and then we have fairly good customer payment terms. In many cases, it's 90 days. And so it's just a matter of that process and timing and saying that we feel very comfortable in terms of how that is happening, the spend and the installation, and we're all getting this for Model 3.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I mean, if anyone comes on a tour of the factory, it's really insane how much equipment is arriving and getting installed and being brought online, it's really -- and I'm used to seeing a lot of intense equipment. It blows my mind. Like, wow. And I think you'd also get kind of a visual sense for the improvement in manufacturing technology between S and X and 3. So you just go, and look at it, it's like yup, that's obviously better.

**Operator**

Our next question comes from Colin Rusch with Oppenheimer.

**Colin William Rusch**

*Oppenheimer & Co. Inc., Research Division*

Can you give us an update on the volume of cathode and anode that's been produced and shipped from the Gigafactory at this point?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

[indiscernible] but it's a lot. I mean, it's -- yes, vast amount. Are you alluding to materials -- potential material supply constraints or I'm not sure what you're getting at.

**Colin William Rusch**

*Oppenheimer & Co. Inc., Research Division*

Yes, I'm just trying to get a sense of the ramp at this point on the cathode and the anode in -- at the Gigafactory.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I mean it's ramping very [indiscernible] we're not really seeing anything [indiscernible].

**Jeffrey B. Straubel**

*Chief Technology Officer*

Yes and I completely agree. And we're basically tracking slightly ahead of where we need to be on vehicles but that's sort of as was planned. We don't want to be too far ahead or else we'd have a pretty massive inventory issue showing up. So we run it in batches and we run at high rates and then pause and validate the throughput. But yes, it's where we expect it to be.

**Colin William Rusch**

*Oppenheimer & Co. Inc., Research Division*

Okay. That's super helpful. And then just shifting...

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Right. And I'd like to express a note of appreciation to [indiscernible] parts that are just working really well and they're doing great stuff.

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

Okay. And then shifting gears to the purchase accounting adjustments related to SolarCity. Can we just get a sense of the nature of that? It looked like you were going to go through a series of complex assessments over the course of the year with the SolarCity acquisition. Just wanted to understand what that \$100 million charge was. And how we should think about those decisions getting made going forward.

**Deepak Ahuja***Chief Financial Officer*

I'm not sure what the -- yes, the \$100 million is the change quarter-over-quarter that you're referring to. And in Q4 -- and this is arcane purchase accounting. Note, there was a gain on our purchase of SolarCity and that was not there in Q1 and there were some revaluation of assets at SolarCity that was linked to that purchase. And net of that was a \$100 million walk.

**Operator**

Our next question comes from Ryan Brinkman with JPMorgan.

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

What do you think are likely to prove the biggest challenges or bottlenecks in ramping production to 5,000 vehicles per week by some point in 2017? And how confident are you in your ability to overcome those challenges? And then the shareholder letter also mentions a run rate of I think 10,000 or approaching 10,000 per week in 2018, which would maybe seem to indicate some kind of an annual run rate of 500,000 or so Model 3s. And then given you're also tracking kind of 100,000 Ss and Xs. Do think that type of production can be handled out of the Fremont facility or does your plan assume production in another facility as well?

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

Yes. The -- yes, all of that production is intended to be out of the Gigafactory 1 and Fremont. So yes, we believe that can all be handled here. And far as specific constraints on Model 3, I just don't know of anything that really stands out. We've gone to great pains with the Model 3 to design it for manufacturing and to not have all sorts of bells and whistles and special features that, like, for example, like, with X. X became kind of like a technology bandwagon of every cool thing you can imagine all at once. It's like everything all at once. That was a terrible strategy. You really want to start off simple and add things over time. But that was some hubris and real overconfident there. So with Model 3 it's the opposite. We've designed it to be easy to make. We've got I think a much better supply chain in place where we've got the A team from the A suppliers. We didn't have that for the Model X or the S. And as far as we know, there are no issues. So that strategy appears to be paying off but there could be something that we've missed that we just don't know about right now.

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

Okay. And you mentioned production in the Gigafactory. I know you're doing some component assembly there for the Model 3. But given that it is on track to be the world's largest factory or maybe even the world's largest building, is it such a stretch to think that you might be able to produce vehicles in that facility?

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

Look, just in terms of making battery cells, modules, packs, motors and power-tronics, just on that basis -- and, of course, the Powerwall, the Powerpack. On that basis alone it is effectively the largest building in the world of any kind. I mean, you could fit 3 Pentagons, more than 3 Pentagons in the building.

4 Pentagons? I don't know, a lot. And just in the [ gear ] factory. It's really difficult to appreciate the magnitude of the structure unless you actually visit it. But [indiscernible].

### **Operator**

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

### **John Joseph Murphy**

*BofA Merrill Lynch, Research Division*

I just wanted to follow up on the CapEx topic. I mean, you guys did kind of fade down your expectation for CapEx ahead of -- or in conjunction with a Model 3 launch from \$2 billion to \$2.5 billion to \$2 billion and then the spend this quarter was relatively low, at least relative to what the run rate implied. I'm just curious, is there some level of capital efficiency that you're coming across? And I mean, and could you be possibly be significantly below this \$2 billion number ahead of the launch or into the launch?

### **Deepak Ahuja**

*Chief Financial Officer*

We're always trying to be capital efficient. That is the underlying theme of every step we take. And clearly, some of that is part of it. But I think overall would be -- again, because of this massive scale of payments, whether it's last week of June or first week of July, how many [indiscernible] we end up paying, it's hard to be precise. It's almost like an S-curve of capital spend that we're going through here. So I don't think it's any indication of anything else except timing at the highest level -- beyond the capital efficiency that we are continually working on.

### **John Joseph Murphy**

*BofA Merrill Lynch, Research Division*

Okay. And then a second question, I mean, residuals seem to keep performing better than you were expecting. Is there any opportunity to potentially lower monthly lease payments to drive higher unit volume demand going forward?

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Actually, I think one of the traps that the auto industry has gotten into, into the past is having unrealistic residuals and then finding that they're upside-down typically when a recession came along. We want to be very cautious about falling into that trap. So yes, we're -- yes, we don't want to do that. And sort of really, an advantage that our cars have that cars in the past have not had, no other car has, is that the software keeps getting better. So functionality, we keep adding more and more functionality to the car even though the hardware stayed the same. If the model S -- if you bought a Model S 4 years ago, it's way better than when you brought it and that really makes a difference for residuals.

### **Operator**

Our next question comes from James Albertain with Consumer Edge.

### **James Joseph Albertain**

*Consumer Edge Research, LLC*

On the semi trucks, just very quickly if I could ask, is the attractiveness of that sort of vertical that you could sell sort of in bulk to fewer customers, so more vehicles per customer? And given your partnerships in the past, would you envision partnering with a manufacturer on that side of the business? Or would this be more akin to your sort of go it alone strategy on the auto side?

### **Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

We'll manufacture that ourselves. And most of that semi is actually made out of Model 3 parts, by the way. It's Model 3 -- it's actually using a bunch of Model 3 motors. Probably revealing too much about

the future of it. But so we're able to use a very high volume vehicle and then combine several motors to have something that I think is actually going to have a very good gross margin, like it's -- that's just not something that any other -- it's like you can't do that with a traditional truck. So effectively it allows us to have a very compelling product that has a low unit cost.

**Jeffrey B. Straubel**  
Chief Technology Officer

Yes, the incremental complexity of building that is much less than it might seem.

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

Yes, exactly.

**Jeffrey B. Straubel**  
Chief Technology Officer

In terms of all the [indiscernible]

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

Yes, exactly.

**James Joseph Albertine**  
Consumer Edge Research, LLC

And are we right to think about that though, as a contractual sort of opportunity, right? I mean, you go to sort of a handful of fleet operators and you could sell sort of more vehicles per customer. Is that the right way to think about it?

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

That is how it would occur, yes. So it's essentially much more of a straightforward economic decision for the operators. They just look at it as a cost per ton per mile [ economy ]. And it's like if it's better, they'll just buy a huge number. And if it's worse, they won't buy hardly any. And we're confident it'll be better.

**James Joseph Albertine**  
Consumer Edge Research, LLC

Okay. Great. And then if I just may follow-up on the demand questions that were sort of asked earlier. Wondering as you're getting more used vehicles back into the pipeline, is there any data to support that you're using those vehicles to attract a potentially new customer to the brand? Or alternatively, is there data that would suggest that perhaps could be cannibalizing some of the newer vehicles? But sorry to dwell on demand, but I just wanted to see if there was anything, given now we're a few years on, and you're getting a lot of vehicles back off-lease presumably, if there's any indication there one way or the other.

**Jonathan McNeill**  
President of Global Sales & Service

I think it's still early days, they're still at relatively low numbers. But the indication is that we're introducing a new customer to Tesla at those lower price points.

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

Yes, exactly. The demand actually increases really exponentially as price drops. The -- at one point when we looked at it, I think we were looking at the right number, but the demand at the Model 3 price point appeared to be somewhere between 30x and 70x higher than at the Model S price point. Well, I mean,

you look at it like, so there's 100,000 premium sedans sold in the U.S. every year. I think we're about 1/3 of that. But there are 17 million vehicles in total sold, so premium sedans are like nothing. Less than 1% of the market. 0.5%.

**James Joseph Albertine**

*Consumer Edge Research, LLC*

So a 7 Series customer for -- your brand new and a 5 series customer for your sort of used, is maybe the right way to think about it? Is that fair?

**Jeffrey B. Straubel**

*Chief Technology Officer*

Or a 3 series customer for the used as well. Yes.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

But it is interesting to consider that the magnitude of -- this is really maybe underappreciated. Like consider 17 million cars and trucks sold in the U.S. per year. Of which only 100,000 are premium sedans. And we have a 1/3 market share. If we can replicate that in other segments, the results are obvious.

**Jeff Evanson**

*Vice President of Investor Relations*

Okay. Before we go on to the next question, I want to do just a time check here. We're at the hour mark. We have 5 more analysts that want to ask questions. Do you want to go on for a little bit longer, Elon?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes, we can go a little longer.

**Operator**

Our next question comes from Brad Erickson with Pacific Crest Securities.

**Bradley D. Erickson**

*Pacific Crest Securities, Inc., Research Division*

Elon, I think a couple years ago you'd said you could envision at some point stepping away from Tesla as CEO anyways towards the end of the decade as Model 3 kind of got up and running. As you were likely to be pursuing a lot of these adjacent opportunities, clearly a lot still there on the horizon. But now with some more of these opportunities being a part of Tesla's business, does that change your view of staying actively in place with Tesla longer into the future?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Well, maybe I wasn't clear. I intend to be actively involved with Tesla for the rest of my life. Hopefully, stopping before I get too old -- or too crazy, I don't know. But essentially for as long as I can positively contribute to Tesla, I intend to be -- to have a significant involvement with Tesla. But that doesn't mean I should be CEO forever. It's like -- I think my main -- so it's like the most valuable thing I can contribute is kind of product design and technology, but that's my forte. That's what I like doing. And that's what I would imagine doing in the sort of very long term.

**Operator**

Our next question comes from Jeff Osborne with Cowen and Company.

**Jeffrey David Osborne**

*Cowen and Company, LLC, Research Division*

Just 2 questions. One, Elon, at the TED Talks, and I think a couple tweets, you had talked about adding 3 Gigafactories, just following up to Tyler Frank's question on CapEx needs. Can you just talk about what your ultimate vision of Tesla over the next few years? Model Y factory, truck factories, truck service centers, 3 Gigafactories, China schedule, is all of that going to be funded with internal cash? Or do you see partnerships funding, despite the low margins that the battery industry has? I'm just trying to get a sense of what your ultimate vision will cost.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Right. Incremental dilution along the way. It's hard to say. I mean, I'm sure there will be some funding rounds that happen in the future. It's kind of a trade-off between how fast do we want to grow versus -- like, we can grow slower with no dilution, really. For sure, we could grow at a moderate pace with no dilution. We could grow at a fast pace with some dilution. Or we can grow at a very fast pace with a high level of dilution.

**Jeffrey David Osborne**

*Cowen and Company, LLC, Research Division*

10x growth in 3 years sounds pretty fast me but maybe not to you.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Well, yes, but you have to look and say going from -- when we went from the Roadster to the Model S, we went from making around 500 units a year to making 20,000 units a year. So that's a hell of a good growth, up by a factor of 40.

**Jeffrey David Osborne**

*Cowen and Company, LLC, Research Division*

Got it. Maybe just out of the interest of time, the second question I had is just on -- it would be helpful given that there's hundreds of thousands of people that have put a deposit on the Model 3, can you just update us on what the cumulative U.S. vehicles sold that you have relative to 200,000 number to get that \$7,500 tax credit? You mentioned elasticity of demand at certain price points, but certainly there's a large contingent of people that put a deposit that unfortunately won't get the benefit. So it would be nice just to be able to track that metric, so as the 3 launches in the coming months we can see which folks will get that. And what the impact of demand is for those that don't.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

I think most people are going to be able to get it that have put down a deposit. And it's just -- it's a physical problem. Yes. It's sort of the credit rolls off. It just -- it's not like a complete close. It rolls off over time. And we are prioritizing U.S. production, which also helps us with keeping things simple so there's -- we're not making many versions of the car for many different countries. Yes, and so I mean, I think provided somebody is -- I don't know. My guess is probably most people that have put down a deposit will be able to get the full tax credit.

**Jeffrey David Osborne**

*Cowen and Company, LLC, Research Division*

Is there a way you could just give us what the cumulative numbers so far in the U.S. quarter to date -- or sorry, inception to date?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

No. Here's the problem. If we do that, then people run off and make all sorts of conclusions based on that, that really have -- that are not predictive of the future. Because there are no -- you can't test drive a Model 3. If you come into our stores and you want to buy a Model 3, we try to get you to buy a Model S or



X instead. We anti-sell the Model 3. But I mean, that's -- reservations continue to climb week after week. No advertising, anti-selling, nothing to test drive, still grows every week.

**Deepak Ahuja**

*Chief Financial Officer*

And maybe we'll try clarifying that under the present regime, the income -- the tax credits on the car continue even after we hit the 200,000 limit, and they continue to sell in quarters but at a slightly lower depleting scale. So it's going to be beneficial for customers even beyond the 200,000 mark.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes, absolutely. And I should perhaps touch again on this whole notion of -- like, [ ODS ] has done all these sort of entertaining articles, like Tesla survived because of, like, government subsidies and tax credits, drives me crazy. Here's what those fools don't realize. If Tesla is not alone in the car industry that -- all those things would be material if we were the only car company in existence. We are not. There are many car companies. What matters is whether we have a relative advantage in the market. And in fact, the incentives give us a relative disadvantage. This is [indiscernible] in spite of the incentives, not because of them. And -- but these incentives have limited lifetime and they're limited scale -- like, for example, the federal tax credit. And then the -- that caps out at the 200k. The carb credits, which the carb rules are woefully weak. We can sell -- there are some quarters where we can't even sell carb credits. And when we can, it's maybe \$0.50 on the dollar, or something like that. Whereas the other car companies get to fully absorb the value of the carb credit. So, for example, gives GM roughly -- I count a \$7,000 to \$10,000 advantage over Tesla for the Chevy Volt. That's why like [indiscernible] well, GM appears to be losing \$10,000 a car on the Volt. No, they're not. They're making it up in carb credits. But they get the full retail value of the carb credit whereas we get the wholesale value when we're lucky. But the carb credits only -- are only effective at a production rate of about 20,000 to 30,000 vehicles a year. So that's why you'll see, mark my words, it's not going to be any higher than that for the Chevy Volt. That's the 25,000 -- on the order of 25,000 units a year or 1/10th of our initial production rate for the Model 3 or 1/20th of what the Model 3 will be next year. So Tesla's competitive advantage improves as the incentives go away. This is -- it continues to be something that is not well understood. And for that they don't -- I'll also mention that -- the Nevada tax credits, which for the Gigafactory, it makes it sound like we got a \$1.3 billion check from the state of Nevada. We did not. Those tax credits are made up -- the vast majority of it is just sales and use tax abatement on equipment in the Gigafactory. Taxes that otherwise wouldn't been there because there was just a bunch of rocks there before. And you don't get a lot of taxes from rocks. So that's why it is essentially a no-lose proposition for the state. And in order for us to actually earn \$1.3 billion in tax credits for the Gigafactory we have to generate, over the course of 20 years, about \$100 billion in output from the Gigafactory. So yes, it's worth about like 1%. And don't want to look a gift horse in the mouth and we appreciate it and that's nice. But this is obviously -- 1% is not the difference between success and failure for the factory. And -- but a lot of articles write it in the past tense, "Tesla received \$1.3 billion." No, we haven't. We did not receive that. It's only 1% of that, great, we'll take it. But I -- looking at the bank now, I just don't see it there. That's because it's just sales and use tax abatement over 20 years. But the key takeaway is that as Tesla's competitive advantage improves with scale, it doesn't get worse.

**Operator**

Our next question comes from Joseph Spak with RBC Capital Markets.

**Joseph Robert Spak**

*RBC Capital Markets, LLC, Research Division*

Just a quick one on service. By our math, if you look at the cumulative number of vehicles you've delivered and the amount of stores and service stations, it's a little bit over -- or something around 700 per I guess station. And I realize you're adding some more of these mobile units. But I just wanted to know bigger picture how you think about coverage in the more steady state or at least at 0.5 million unit rate. Like, what is the right level of coverage needed for the larger fleet?

**Jeffrey B. Straubel**

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*Chief Technology Officer*

I think, rather than thinking about store or service center locations, we think about it in terms of mobile units and lifts. And so we are building larger service centers over time that have more lifts. So our initial service centers, it might have had 2 or 3 lifts. And we're building now service centers with 40 to 60, sometimes 80 lifts. And so there's a density within the service centers. But the mobile capability expands that quite greatly. So I think a lot of people do incorrect analysis to take cars in service divided by locations, because the locations varies so widely. But that's essentially how we're thinking about capacity and planning capacity. And as Deepak mentioned earlier, our throughputs and efficiency are getting much better over time, and we'll continue to improve those. So it's our goal to stay ahead of the installed base capacity so we're providing great service. But really the Model 3 has been designed for high reliability. And as Elon has said many times, the best service is no service at all.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Exactly. We're -- our aspiration would be we make 0 service revenue because the car never needs -- never breaks.

**Jeffrey B. Straubel**

*Chief Technology Officer*

Absolutely. And our service centers are sort of like the old Maytag Repairman. Yes.

**Operator**

Our next question comes from Rob Cihra with Guggenheim Partners.

**Robert George Cihra**

*Guggenheim Securities, LLC, Research Division*

Two quick questions I guess if I could. One just on energy, your megawatt hours declined sequentially, which just seemed surprising thinking demand is well above supply still at this stage. So when we could expect any more meaningful ramp there? And then separately, on automotive, given that you seem to be in the mood to talk about future unveils, which is great, any chance I could push that by asking about the future urban transport bus? Not sure what you want to refer to it as. But the reason I ask is not -- is because that one seems a lot less about the product and more about just a completely different model for transportation and requiring full autonomy and that sort of thing. I mean, is that the kind of thing you're thinking 3 years now or 10 years now or anything in between?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Sure. With respect to the battery stuff, it's a little lumpy right now because you're at a big installation in fourth quarter with Southern California Edison. And then we had a bit of a gap between the Powerwall 1 to Powerwall 2. So we should start to see that correcting in Q2 and Q3 and then particularly towards the end of this year, I would expect quite a dramatic ramp in storage deployment, like really dramatic.

**Jeffrey B. Straubel**

*Chief Technology Officer*

Yes, and it's worth pointing out that we do still have a significant backlog in Powerwall demand and then we're building capacity to address that and ramping it. We had a few challenges in parts of the supply chain as we've been ramping that throughout the quarter, the first quarter. But those are freeing up. And we're seeing the production rates improve week-on-week. But it's a -- yes, it's not indicative of demand. It's really our challenges of ramping the new products.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Yes. Like I say I feel really good about quite dramatic quarter-over-quarter increases. I think with -- well, for every quarter I can imagine the future, it's going to be really dramatic increases in stationary storage output. It will grow faster than the car volume, and the car volume is growing pretty fast.

**Robert George Cihra**

*Guggenheim Securities, LLC, Research Division*

Okay, and the bus?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

On the bus, yes. Having given a bit more thought to it, I don't know if the bus thing -- if that's actually going to be something that makes sense in the shared, fully autonomous environment. Because it may -- if you have a share -- if it costs like very little, like it costs less than a bus ticket to have -- make use of a shared autonomy fleet to go wherever you want to point to point. Well, why wouldn't you just use that? So I don't know. I don't know if the bus thing -- it does help with density to some degree. But then you -- I mean you could basically have something like a higher density Model X or something like that, that's got 10 or 12 seats in it. But would you want more than that? I don't know. And then when you factor tunnels in -- big round tunnels anyway -- yes, then the density -- urban density in traffic, and it can be fully alleviated with tunnels. Yes, it's more like the tunnel thing that we talked about that at TED and basically like the commentary afterwards was -- it was like the critics -- the most critical commentary was there's a group that thinks that the whole sort of automated tunnel with electric [ scraping ] -- like, well basically, like the tunnel thing, this group that says it's obvious, and there's a group that says it's impossible. And I would like those 2 groups to meet. It's been like sort of like there's a group that's like the flat earth society and the hollow globe society, I think they should meet too. Have a debate.

**Operator**

Our final question comes from Charlie Anderson with Dougherty & Co.

**Charles Lowell Anderson**

*Dougherty & Company LLC, Research Division*

I wonder, you mentioned the anti-selling before of the Model 3. Is there a level of production where you flip from anti-selling to selling?

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

Well, I don't know, maybe later this year. Probably not for the next 6 to 9 months.

**Jeff Evanson**

*Vice President of Investor Relations*

All right. Thank you, everyone for joining us today. Have a great day.

**Elon R. Musk**

*CEO, Product Architect, Chairman & Co-Founder*

All right. Thanks.

**Operator**

Ladies and gentlemen, this concludes today's conference. Thank you for your participation. You may all disconnect and have a wonderful day.

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