

I just wanted to note that we've made two fairly significant hires, the first which is Jason Wheeler. He will be our CFO starting next month. Deepak and Jason will be working closely together for the first few months to have a smooth transition. And, once again, I'd like to thank Deepak for his awesome contribution to Tesla.

### **Deepak Ahuja - Chief Financial Officer**

Thank you, Elon.

### **Elon Reeve Musk - Chairman & Chief Executive Officer**

So Jason comes to us from Google, where he was basically the number two finance guy at Google, responsible for their global finance function, and just thought he was a super smart guy and really understood what we were doing and was like a very cultural fit with the company. So I think that's going to be great.

And then, in addition, Jon McNeill has joined as Head of Global Sales and Service. And Jon is the former CEO of Enservio. He's been named sort of Most Admired CEO in the small and midsize company category. In fact, I believe this is the first time in maybe a decade or more that Jon actually has not been head of the company that he's working at. So – and before Enservio, he co-founded Sterling Collision, where he was able to reduce industry repair times by 90%, so the average repair time went from 18 days to less than 2 days while growing the business at 40% year. So, I think Jon's an awesome addition to the team as well. And he's actually – he's been doing great. He's been working now part-time at Tesla for a few months and just started full-time and has already done a lot of good.

So I'm pretty excited about those two people joining the team, and we expect to have some additional announcements in the months to come as we add bench strength to the Tesla management team.

### **Jeffrey K. Evanson - Vice President-Investor Relations**

Okay. Thank you, Elon. All right, Liz, why don't we go to the first caller, please?

### **Question-and-Answer Session**

#### **Operator**

Our first question comes from the line of Colin Langan with UBS. Your line is now open.

### **Colin Michael Langan - UBS Securities LLC**

Oh, great. Thanks for taking my question. In the press release you seemed to address this a little bit, but there has been a lot of chatter about cancellations for orders for the X, and I think the press release says (4:28) Signature Series. Is that across models, and how should we think about the different versions of the X rolling out over the next couple quarters?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Do you want to talk about that?

**Deepak Ahuja - Chief Financial Officer**

I don't think there's been anything fundamentally different. I mean so far on the Signature Series Model X, we've seen a much higher conversion rate than when we had seen on the (4:52) when we launched S. So overall, the demand for the X after the launch of the X has been higher. So we don't see any fundamental issues.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, I mean, we're – as we talked about before, really, the main thing with the X is just scaling up production. We're making steady progress with each passing week. Actually, seven days a week, every day, I get an update on manufacturing progress and what the issues are. And we see no fundamental issues on the production ramp. It's just a question of how quickly we can solve each issue. I mean they are really down to like the little things, like the placement of the seal on the door and whether that results in the bright trim alignment being correct, this is quite nuanced. So we feel very confident of being able to get to several hundred vehicles per week by the end of the year.

**Colin Michael Langan - UBS Securities LLC**

Okay. And can you give an update on stationary storage? Is that still trending to your targeted \$3 billion to \$5 billion (6:02) by 2017? And I think the release mentioned that there are some institutional orders. I mean are there any noteworthy orders that you'd want to call out on the storage side that we should kind of look at as being big drivers? And are you still confident in your sort of 15% gross margin for that?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Sorry, that was like a whole bunch of questions. The – with respect to stationary storage, I mean, that is again sort of a production-limited thing, so we're trying to scale our production as much as possible. I mean, we've, by almost any metric – if we imagine the most we could possibly make in

2016, we've already sold out of that, or at least if you were to take even a small fraction of the number of people that have placed orders, and I assume that those orders are valid, even if a small portion of those are valid, we would be sold out of all of 2016 production, I mean, well into 2017. So it's really mostly about predicting our production rate, and we expect very dramatic increases in the stationary storage production.

The reason I feel a bit cautious about giving exact estimates is that when you have an exponential increase, the exact calendar window over which the – that you place that – that exponential has quite a big impact on the numbers. So – and, in fact, in general, at Tesla, I want to be a little more cautious about giving quarterly numbers, particularly when we have very dramatic ramps. Like the example is with the Model X: you can imagine if you have strict calendar windows, and you place them over the beginning of an exponential or slightly to the right or slightly more to the right, the actual differences are quite dramatic. So, like you know where it's going to end up, but not what it looks like in that rapidly changing S-curve situation. Yeah, so.

**Colin Michael Langan - UBS Securities LLC**

And on the margin side, is it still on target? And thank you very much for taking my questions.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Sorry, on the – you're breaking up a little bit – on the margin side?

**Colin Michael Langan - UBS Securities LLC**

The gross margin, is it still at your – is it still trending to the 15% target I think you mentioned on the last call?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Oh, 15%, yeah. Yeah, I don't think it's going to be any problem meeting a 15% margin target. Obviously, the margin improves as the production ramps up, so, yeah.

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

Yeah, I don't know if we want to discuss the specific margin targets, but it should be in excess of 15%. That is our internal target.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, I mean – yeah. Once you get away from the very early stage of production, I think long-term margin, 15%, is no problem.

**Colin Michael Langan - UBS Securities LLC**

Okay. Thank you for taking my questions.

**Jeffrey K. Evanson - Vice President-Investor Relations**

Liz, next call, please.

**Operator**

Our next question comes from the line of James Albertine with Stifel. Your line is now open.

**Jamie Albertine - Stifel, Nicolaus & Co., Inc.**

Great. Thanks for taking my question, and good afternoon. Just a point of clarification. First, on the announcement of the 40,000 vehicles that you've rolled the Autopilot feature out to over the air. Can you just clarify, once it's rolled out over the air, is there then a point at which the consumer has to determine to spend, I think it's \$2,500, to activate it? And is there any detail you can provide us on those that are paying to activate the Autopilot feature at this time?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Most people who order the car actually order it with the Autopilot convenience features, so the Autopilot safety features are default on in all vehicles, this is automatic emergency braking, side collision avoidance, forward collision warning, that kind of thing. The convenience features like Autosteer, Autopark are \$2,500, but most people had actually already ordered that. So those that haven't ordered it, can actually turn it on for – it's actually slightly more if you get it after the fact – turn it on for \$3,000, and that's something that we'll be allowing people to do at some point in the coming months. Sort of like an in-app purchase, I guess. Yeah.

**Jamie Albertine - Stifel, Nicolaus & Co., Inc.**

Okay. Great. And then I wanted to ask a question as it relates to, now that we're past sort of, as I understood it, the peak spending period in advance of the Model X launch, how should we think about capital expenditures and our cash flow models for the fourth quarter? And maybe, it sounds like you've reiterated the positive free cash flow guide you had originally stated earlier this year, but just some thoughts as it relates to the cash flows in the fourth quarter would be great.

**Deepak Ahuja - Chief Financial Officer**

Yeah, I mean, Q4, we are still in the peak of our Model X investments. A lot of our equipment and tooling is being paid off in Q4 as a production are proving out their production – as our suppliers are proving out their production tooling, as well as the equipment is getting installed and getting signed off in our factory. So Q4 is going to be a peak for Model X. Clearly, 2016, our CapEx should be less than 2015. And then we'll provide you further guidance on that in the next earnings call.

**Jamie Albertine - Stifel, Nicolaus & Co., Inc.**

Much appreciated. And – oh sorry, go ahead.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Sorry, I was going to say, like, we do have like a very strong push towards free cash flow. I mean, that is – our aspiration is to be positive – I do emphasize, this is an aspiration, not a promise, but our aspiration is to be positive cash flow in Q1.

**Jamie Albertine - Stifel, Nicolaus & Co., Inc.**

Understood. And thank you for that color. Deepak, best of luck. And we look forward to meeting Jason when he's fully ramped and onboard.

**Deepak Ahuja - Chief Financial Officer**

Thank you, James.

**Jamie Albertine - Stifel, Nicolaus & Co., Inc.**

Take care.

**Operator**

Our next question comes from the line of Adam Jonas with Morgan Stanley. Your line is now open.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Thanks, everybody. Elon, just thinking longer term here, assuming Tesla establishes itself as a leader in autonomous transport, do you see a business case for selling autonomous cars to ride-sharing firms, or can Tesla cut out the middleman and offer on-demand electric mobility services directly from the company's own platform?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I think we'd have to say, no comment.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

I mean, Elon, it's kind of unusual for you to punt on strategic questions of a long-term nature. Is this a dumb question? Or a funny question?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Actually, I think it's quite a smart question, actually.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Why – all right.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

But still no comment.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Okay, I won't antagonize. Let's move on. I mean, it's just odd, because you normally are – I've never heard you punt like that. That's all. But any case –

**Elon Reeve Musk - Chairman & Chief Executive Officer**

You know...

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Is it because of a competitive sensitivity, or is it because the concept itself is just too... in flux?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I think there's a right time to make announcements. And this is not that time.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Fair play. All right, can I ask one on Autopilot?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

And nor – I mean, nor is our strategy fully baked here. So for us to state what it would be – it's not fully baked, so there's no – we'd prefer to announce something when we think we've got the full story understood.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

So to saying it's not fully baked implies there's something in the oven, but just...

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Okay, we kind of need to move on.

**Jeffrey K. Evanson - Vice President-Investor Relations**

(14:41) question.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Let's move on. JB – all right, let's go to JB real quick, then. Autopilot, can you share any early data you might have collected with us post the automated driving software update? How many miles have been driven with Autopilot engaged, how many accidents prevented, things like that would be really interesting,` and I think illuminating? Thanks, guys.

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

Well, I don't think we want to share any particular details on specifics around user feedback on that, but certainly people are using it in a variety of situations. This has gone out to the whole fleet of Autopilot enabled cars, and those are racking up miles extremely quickly. At this point, I don't have the exact number at the tip of my tongue, but it's, I believe, several hundred thousand miles of driving. So...

**Deepak Ahuja - Chief Financial Officer**

Several (15:29) million a day, I think.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

It's almost a million a day of cars that have Autopilot hardware. So, I mean, but the early data – this is early data I'll emphasize, is that it's very positive. So we're aware of many accidents that were prevented from Autopilot, and we're not aware of any that were caused by Autopilot. But this is still early, but it's a good indication. So it appears to be quite beneficial from a safety standpoint, and I believe some of our customers have posted videos to this fact.

**Adam Michael Jonas - Morgan Stanley & Co. LLC**

Excellent. Thanks, everybody.

**Operator**

Our next question comes from -

**Elon Reeve Musk - Chairman & Chief Executive Officer**

But I do want to emphasize, we discouraged – there's been some fairly crazy videos on YouTube, we are – this is not good. And we will be putting some additional constraints on when Autopilot can be activated to minimize the possibility of people doing crazy things with it.

**Operator**

Our next question comes from the line of Joseph Spak with RBC Capital Markets. Your line is now open.

**Joseph R. Spak - RBC Capital Markets LLC**

Thanks, good afternoon. I guess it's been awhile since we heard anything about this, but I just wanted to get a better sense of how you feel you're set up to deal with potential issues on the hardware side where fix can't be OTA'd (17:12) to the vehicle both – because when you look at the coverage at least in the U.S. the ratio of service centers to stores and galleries is still trailing a little bit. So how does that build outlook going forward and how would you potentially handle a hardware situation at this point?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I'm not sure I fully understand your question. So you mean – can you give me an example of...?

**Joseph R. Spak - RBC Capital Markets LLC**

If you had a hardware recall -

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Oh, Just like – you mean like – sure. I mean, we've handled recalls in the past with our service team. It's gone quite well. In general, we try to be proactive, so if we without – well before we've sort of forced to do a recall, we proactively try to fix things in the cars that we think might in the future be an issue. And the customer happiness is as measured by really the key question that I think people should be concerned about, which is will your next car be a Tesla, that's like the key question on Consumer Reports. 97% of respondents said that their next car would be a Tesla. Frankly, this is the only question people should care about.

**Joseph R. Spak - RBC Capital Markets LLC**



Okay. And then – thanks for that. One more, I guess, sort of hardware question. As it relates to Autopilot where this is clearly stage one and you could add sensors over time and maybe some new features as well, so how do you think about managing the brand and the vehicles when that happens? Because as the sensor suite changes, it can create two potentially different experiences when – and I guess it's a little bit more – the reason I think it's a little bit more of an issue for Tesla is just you don't have the strict sort of model year nomenclature. So I guess I just wondered how you think about that and maybe some thoughts on your current sensor suite and how you see that evolving as well.

### **Elon Reeve Musk - Chairman & Chief Executive Officer**

Okay, I think that's a pretty open-ended questions, but – we have a philosophy of just continuous improvements, so every week there are approximately 20 engineering changes made to the car. So it's not nearly as discrete as you're alluding to. With other manufacturers, they tend to sort of bundle everything together in a model year. In our case, it's a series of rolling changes. So model year doesn't mean as much. There are cases where that step change may be a little higher than normal as, for example, with having the Autopilot camera, radar, and ultrasonics. But we try to actually keep those step changes as small as possible. And so that – I mean, essentially like the common questions that I get is from friends, they say, "when should I buy a Model S?" and my answer's always "right now," because – and they say, "well, aren't you going to make a better one in six months?" I'm like, yeah, of course. But if their goal is to only buy a Model S when there aren't significant improvements happening, then they will never buy one.

### **Jeffrey K. Evanson - Vice President-Investor Relations**

Okay, Liz, why don't we go to the next caller?

### **Operator**

Our next question comes from the line of Patrick Archambault with Goldman Sachs. Your line is now open.

### **Patrick K. Archambault - Goldman Sachs & Co.**

Okay. Yeah, great. Thank you. Good evening. A couple questions. Just one on the battery side. I think a lot of us were surprised at the GM Analyst Day. They put a slide up which said that they were working on a battery that was \$145 a kilowatt hour. That probably didn't include the pack costs, but even adjusting for that, that seemed like a pretty low number. And I don't know, maybe JB, how did you guys react to that presentation? Is it realistic? I

mean, are you worried about the threat of a large form factor battery being the same cost as yours within kind of a one to two-year timeframe would be my first question.

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

Well, we definitely read the report. And we're not terribly concerned about it. I think, also, there was a lot of confusion in that particular report and some of the comments following about cell price versus pack cost. And in general, we're quite comfortable in our position with the type of cells and the form factors we're using, and we think that's going to be the best cost positioning and cost roadmap in the future.

**Patrick K. Archambault - Goldman Sachs & Co.**

And so -

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, probably high probability (22:13). I mean we're constantly agonizing about cell cost and pack cost, and we don't think anyone is on a path to be even close to us. If they are, I would be the first to congratulate them.

**Patrick K. Archambault - Goldman Sachs & Co.**

Got it. Well, that's very helpful and quite reassuring to know. My second question just was on in the press release you talked about orders having increased 50% year-on-year, and maybe just a little color on that. I mean, that's obviously impressive, given the model that's been out there for a few years. Just any additional color on regional breakdown or what that's being driven by?

**Deepak Ahuja - Chief Financial Officer**

We haven't provided that in the past. I think, maybe the way to put it is that Europe and APAC were really strong. And...

**Elon Reeve Musk - Chairman & Chief Executive Officer**

And so was North America.

**Deepak Ahuja - Chief Financial Officer**

And North America. North America has always been strong, and with Europe and APAC being strong, too, we were at 50% year-over-year.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Maybe, quite frankly, you can look at it the other way around, like, I think we were actually relatively weak in APAC and relatively weak in most countries in Europe...

**Deepak Ahuja - Chief Financial Officer**

Yeah.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

...and we're fixing those fundamental weaknesses...

**Deepak Ahuja - Chief Financial Officer**

Yeah.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

...by ensuring that we've got a good supercharger infrastructure, a good service center infrastructure, that any perceptions about the company are addressed. And in a lot of places, it takes time to build consumer confidence, they need to hear the – they need to hear about Tesla a lot before they're comfortable making a significant asset purchase. So -

**Deepak Ahuja - Chief Financial Officer**

Yeah, it's a matter of the execution by the team, brand awareness and our expansion of our global network.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah. So it's – but I wouldn't say, it's not like really – I mean, all regions have improved quite significantly.

**Deepak Ahuja - Chief Financial Officer**

Yeah.

**Patrick K. Archambault - Goldman Sachs & Co.**

Got it. Helpful. If I can squeeze one last one in really quickly, on the topic of Autopilot, there were some reports of the car like taking accidents (24:31) and stuff when it wasn't told to and things like that, and I don't – I just didn't know if there was much validity in any of that stuff. I mean, have you guys – are any of these things true? Because, I mean, you sound very confident about the technology, yet, initially, there were some reports of errors and things like that.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I don't think it should be a surprise that there were reports of errors. I mean, we described it as a (24:59) beta release and a one – and that the system will learn over time and get better. And that's exactly what it's doing. So I think it's exactly what we described is occurring. And the system is getting better with each passing week. So I would expect that – that learning to accelerate, and for it – we're – I think it will start to feel quite refined within a few months.

**Patrick K. Archambault - Goldman Sachs & Co.**

Got it. Understood. Okay, thanks a lot, guys.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Okay.

**Operator**

Our next question comes from the line of Rod Lache with Deutsche Bank. Your line is now open.

**Rod A. Lache - Deutsche Bank Securities, Inc.**

Hi, everybody. Had a couple questions. First, on Model X, I just wanted to confirm. Did you say you thought you could get a few hundred produced and delivered by year end? And just so that we understand what's been happening here, is it just the seat at this point, or are there other unique challenges that you think prospectively affect the ramp of the vehicle?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

No, to be precise, I said several hundred per week, that we expect to reach the production rate of several hundred per week next month.

**Rod A. Lache - Deutsche Bank Securities, Inc.**

Okay.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

And (26:28) predict the exact number that will be developed because what I was mentioning earlier, like, we're kind of on an exponential ramp. So exactly one week this way or that can actually make a significant number, a significant impact in the absolute number of vehicles delivered, we do feel

comfortable at this point of reaching the several hundred per week production rate before the end of the year, i.e., next month.

And the issues are a bunch of little things. Door seals, right now, is a challenge, for example. The monopost seat in the second row is still a challenge, but less of a challenge. It's not the gating factor. This is basically going through a series of constraints. Most constraints can change from one day to the next. But the important point is that we don't see any fundamental obstacle to achieving a production rate of several hundred per week sometime next month.

**Rod A. Lache - Deutsche Bank Securities, Inc.**

Okay. And it sounds like the target that you laid out, the 1,600 to 1,800 vehicles a week, it sounds like you might think that that's achievable in early 2016, and I wanted to confirm that. You didn't provide CapEx for next year, but also if you can just confirm, is that what you're sort of thinking you need to achieve that free cash flow break-even?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, I think it's likely that we could be in that 1,600 vehicles to 1,800 vehicles range, per week range, in Q1. I mean, I'm guessing we'll probably be towards the lower-end of that range, but then maybe exceed that, the high-end of that range, towards the end of next year if things go well. I mean, there are some caveats there, depends on what macroeconomic conditions are like around the world next year. But right now, we do see that 1,600 vehicles to 1,800 vehicles per week on average as occurring in Q1.

**Rod A. Lache - Deutsche Bank Securities, Inc.**

Great. And just lastly, if I can slip one last one in, you ramped up your CapEx, presumably in part to achieve some increased targets for Tesla Energy. Could you just give us some high-level thoughts on what you might be able to ramp up to for that business line, maybe in 2016?

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

Well, the CapEx requirements for Tesla Energy are not that significant as a percentage of the total for 2016 (29:18).

**Deepak Ahuja - Chief Financial Officer**

Yeah, and I think, just to sort of provide a broader perspective about the CapEx increase – so for – let's talk 2016. The CapEx in 2016 is primarily going to be for Model 3 and the Gigafactory as we're looking at 2016 and

beyond. It's not necessarily for much of the capacity required in 2016. Clearly, there is a little bit of CapEx there for Tesla Energy, but that's not the driving factor. Much of that CapEx has been put in place by end of this year for our needs next year.

**Rod A. Lache - Deutsche Bank Securities, Inc.**

Okay. Great. Thank you.

**Operator**

Our next question comes from the line of John Murphy with Bank of America. Your line is now open.

**John J. Murphy - Bank of America Merrill Lynch**

Good afternoon. Just a first question on in-sourcing, obviously, you guys are pulling the second row seats in-house for the Model X. And there's certainly been some acquisitions and work you've done on forging and casting. I'm just curious, as you look at production going forward for the Model X and even the Model 3, if there would be opportunity to in-source more parts to really kind of solve the issues you're facing with some of these suppliers. And as you think about that, how you make that decision around cost and capital intensity? And if you get that right and can in-source more, if you could potentially increase the cadence of your product introductions and the product launches themselves?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yes, I totally agree with that. That's exactly, that's the reason – we're only, actually, in the whole history of Tesla, only done one tiny acquisition. And that was for Riviera Tooling in Michigan. And we plan to use that as a hub to recruit top tool and die manufacturers, basically tool and die engineers, to Tesla Michigan. And with that exact goal, which is, how do we reduce our critical path to – our time to market for new products. Because we end up being constrained by, basically, tools and molds. And anything we can do to tighten that timeframe organically was an (31:33) acquisition is a good thing. I mean, the crazy thing is that that \$10 million or so that we spent acquiring Riviera was less than what we spent on expediting our stamping dies. So it's like a no-brainer. And we want to do that in general. We like looking at all of our critical path items and saying, "okay, how do we execute faster on, and reduce the critical path for, new product introductions, obviously with an eye towards Model 3 and making sure that Model 3 happens as soon as humanly possible?"

**John J. Murphy - Bank of America Merrill Lynch**

But is this significantly just around tool and die, or are there parts? Like I mean, where you could actually be doing all the seating internally or start doing – thinking about wiring harnesses or stuff that would be that intensive as far as in-sourcing?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

We actually are – we have substantially in-sourced the seats at this point. So Tesla is producing its own seats. Yeah. So that's actually something we've already done.

**John J. Murphy - Bank of America Merrill Lynch**

Okay. And then, just a second question on the fourth quarter. You're talking about 17,000 units to 19,000 units being delivered. Is sort of the low-end and the high-end of the range really dependent on the ramp on Model X, and you sort of see 17,000 units at the low-end as sort of your base with your Model S? Just trying to understand the range and sort of how we should think about mix in the fourth quarter.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, the big variables are exactly in which week are we able to really spool up Model X production? A few weeks' improvement (33:29), one or the other, has quite a big impact on Model X production. And then of course, we still have to get those cars delivered. So – and at the end of the year, there can often be logistical challenges, because it's like Christmas and New Year's. And all of the logistics channels are jammed and people are not home. And there can also be adverse weather events, like blizzards and things. So that's what – it's sort of logistical challenges at the end of quarter and when exactly does the – and what exactly does the Model X production ramp exponential look like, that's what introduces the uncertainty.

**John J. Murphy - Bank of America Merrill Lynch**

Okay. So we shouldn't think of the 17,000 units as a sort of base level for Model S. There's a lot of variables that are going in here in addition to the Model X ramp, right?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, end of quarter logistical challenges around Christmas always throws – is a bit of a wild card.

**John J. Murphy - Bank of America Merrill Lynch**

Got you. Okay. And then just lastly real quick, with everything that's going on with dieselgate, obviously your ZEV credits might be a lot more desired by a lot of folks out there. I know you guys are talking about no ZEV credits in the fourth quarter as far as the sales or, actually, at all, for sales or gross profit, but, over time, is there an opportunity to maybe sell them at a much higher price as they become available? I know it's not a big part of the business, but it does seem like an opportunity to maybe in a short run to make a lot of money on some increasing demand.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I mean, it really depends on what happens with zero emission vehicle regulations over time. You'd think given dieselgate and all that that there should be a tightening up of zero emission requirements, but we're not seeing that yet. Frankly, we do not think that the California Air Resources Board is being sufficiently stringent in this regard. I mean, if we can't sell ZEV credits, then it's obviously not – the regulations are not strong enough.

**John J. Murphy - Bank of America Merrill Lynch**

Okay. Great. Thank you very much.

**Operator**

Our next question comes from the line of Dan Galves with Credit Suisse. Your line is now open.

**Daniel V. Galves - Credit Suisse Securities ([USA](#)) LLC (Broker)**

Hey, thanks for taking my questions. You made a lot of changes to the plant in Q3. Do you have any metrics to share with us in terms of improved production and efficiency? And how does it make you feel about kind of the ability to hit production numbers and margin in 2016?

**Deepak Ahuja - Chief Financial Officer**

Dan, I'm not sure what changes are you referring to in Q3.

**Daniel V. Galves - Credit Suisse Securities ([USA](#)) LLC (Broker)**

Well, what you guys did during the shutdown to final assembly and the body shop.

**Deepak Ahuja - Chief Financial Officer**

Oh, well, that was essentially at that point to put in additional capacity for Model X and it sets us up for our production needs in 2016. Overall, clearly,



we'll provide fuller guidance in the next call, but our goal is to keep on working on manufacturing cost reductions on Model S and Model X. We see the opportunities and the team's going to be focused on that, while also working on Model 3. So we're truly a multi-product company and working on several directions.

**Daniel V. Galves - Credit Suisse Securities ([USA](#)) LLC (Broker)**

Okay. Great. And then just one question on Autopilot. I mean, a lot of automakers talk about mapping as a key constraint to getting to higher levels of vehicle automation. Does your – does the experience of miles being driven by Model S Autopilot help you guys in that regard at all? I mean, are you planning to come up with your own mapping?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I think this call's not the time for future product announcements in general. This is not meant to mean anything, so in general we're going to punt on making product announcements in earnings calls.

**Daniel V. Galves - Credit Suisse Securities ([USA](#)) LLC (Broker)**

Okay. Maybe just to squeeze in one more. The newer drive unit, how is kind of the quality level been on that versus I think you had kind of a bigger drive unit that you used initially for the first couple of years?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, right now, we're actually very happy with the quality of the drive units. I mean, internally, our goal – we changed the goal of the drive unit endurance from being approximately 200,000 miles to being 1 million miles. Just basically we want drive units that just never wear out. That's our goal. And I think we've made really good progress in that direction. So the drive units going out now and for the last several months have been excellent. So...

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

Yeah, we should probably note that, I mean, we've also made improvements to the large drive unit and those issues were really limited to early population large drive units. So today we hold the same standard on both units that are being built.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, exactly. There was like this one period of time where we had, I mean, it was like that was getting into the weeds, like we transitioned from

manual, just before we transitioned to automatic grease injection into the spline of the large drive unit, we had variation in how much grease was put into the spline. And if not enough grease was put into the spline, it would have premature wear. That's, like, one example. But other than that, the large drive units have been great.

### **Operator**

Our next question comes from the line of Andrea James with Dougherty & Co. Your line is now open.

### **Andrea Susan James - Dougherty & Co. LLC**

Thanks for taking my questions. A year ago, you guys had been targeting 28 to 30% gross margins by around this time, but clearly the world changed on you with currencies and so forth. So what's the right way to think about gross margin over the next 18 months?

### **Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, our goal is to steadily improve gross margin and hopefully exceed 30% on the Model S and Model X vehicles within 18 months, hopefully sooner than that. But it is – it does require quite an intense effort to – for every fractional point of gross margin. So – and that assumes current, there's not some radical shift in currencies that happens again. So the – so if – according to our plans, at least, we would exceed 30% gross margin within 18 months on the S and X line.

### **Andrea Susan James - Dougherty & Co. LLC**

Okay. And that would be without a – okay, go ahead.

### **Deepak Ahuja - Chief Financial Officer**

It's a combination of various initiative company from material cost reductions, manufacturing, production efficiencies, and labor hours per unit reduction, combined with economies of scale that, as our volume goes up, our cost allocation is more efficient, which brings our labor and overhead cost on a per unit basis down. So, clearly, as we act on all of those directions and add volume, we see a path that we can achieve that. And it's just a lot of hard work, and we need to do it.

### **Andrea Susan James - Dougherty & Co. LLC**

Okay. Maybe you'd prefer to streak up the model a little bit low and let you guys get there?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, absolutely.

**Andrea Susan James - Dougherty & Co. LLC**

Yeah.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

And we're describing – this is our – this is our goal, and we believe we've got a plan to get there. But we – it could be unexpected issues along the way that prevent us from getting there but, I mean, I think we'll certainly be better than where we are today.

**Deepak Ahuja - Chief Financial Officer**

Yeah.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I mean that's quite certain.

**Deepak Ahuja - Chief Financial Officer**

Assuming constant dollar and some of these external.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, yeah.

**Andrea Susan James - Dougherty & Co. LLC**

And just two more. When...

**Jeffrey K. Evanson - Vice President-Investor Relations**

Andrea, we've really got a lot of people that want to ask questions, yet, so maybe just one more.

**Andrea Susan James - Dougherty & Co. LLC**

Just one more? Okay. So I guess I'll just then take a step back. It seems like in the Silicon Valley centric worldview, Autopilot is where driving is going and all the cars are going to be driving themselves, but I'm – I just really want to know, is that Tesla's view, and how central is Autopilot to your long-term revenue profit and vehicle electrification goals?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, I'm actually on record saying that I think that all cars will go fully autonomous in long-term. I think it will be quite unusual to see cars that don't have full autonomy, let's say, in – before new car production in the 15-year to 20-year timeframe. And for Tesla, it will be a lot sooner than that. So I actually think at the point at which cars being made that have full autonomy – that any cars that are being made that don't have full autonomy, will have negative value. It will be like owning a horse or not – you're really owning it for sentimental reasons.

**Andrea Susan James - Dougherty & Co. LLC**

Thank you.

**Operator**

Our next question comes from the line of Emmanuel Rosner with CLSA. Your line is now open.

**Emmanuel Rosner - CLSA Americas LLC**

Hi. Good afternoon. I wanted to first ask, just put a finer point on the fourth quarter. So deliveries of 17,000 units to 19,000 units seems like not a huge contribution from Model X within this. How do you ramp up the Model S deliveries sequentially so fast? I mean, it doesn't look like in the – I guess, in the Model S history, we've seen sort of like such a sequential increase in the – in deliveries, like so what are you doing, I guess, better in this particular quarter?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, it's not as big a leap as it might seem from Q4, Q3, because there's a whole week missing from Q3. And we continue to ramp the rate all the way from the beginning of Q3 through end of year for Model S. So it's actually not too much of a stretch, or less than a stretch than it may seem. And something we've had much bigger sequential jumps before than this. This is – it's worth noting that it's 2015. In 2010, Tesla was delivering 500 cars per year. We now deliver 500 cars in just over two days.

**Emmanuel Rosner - CLSA Americas LLC**

Okay. That's helpful. And then just on, again, a finer point just on the Model X, for this particular quarter. It sounds like your – have you actually started production? It actually sounds like you're still working out some issues there, and what has essentially surprised you as you sort of like ramp this up, which is causing maybe the actual production in larger numbers to be maybe slightly later than it would have been?

## **Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah. I mean, the thing about a car is because there's several thousand unique components in a car, the production can only move as fast as the slowest component. So even though 99% of the Model X is ready for high production, less than 1% of the parts are not. But those are what drive the rate. So that's the thing that makes car – vehicle production really, really challenging and vehicle ramp really challenging. And you don't – you don't know in advance what those issues are going to be, or you would do something about it. So that's – yeah. And then, you can basically think of like the production will move as fast as the least lucky supplier that we have in our network. So, yeah the most – and there are sort of fires, floods, issues of various kinds around the world. And, yeah, so several thousand parts and, in fact, if you go down to Tier 2 and Tier 3, several thousand suppliers, it moves as fast as the thousandth worst supplier.

## **Operator**

Our next question comes from the line of Ryan Brinkman with JPMorgan. Your line is now open.

## **Ryan J. Brinkman - JPMorgan Securities LLC**

Hi. Good afternoon. Thanks for taking my question. Just maybe going back to the dieselgate issue again, but from a bigger picture perspective. I'm curious what impact you see to the electric vehicle market from these revelations at VW. Could it increase the demand for electric vehicles to your benefit? Does it maybe make non-electric vehicles more expensive to produce, to truly comply with emission regulations? Does that help the Model 3 be more cost competitive? I'm just curious what impact you see overall to the industry, and then to Tesla specifically.

## **Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, this has really shined a spotlight on the whole emissions testing process. And it's now obvious to consumers that gasoline – well, especially diesel, but also gasoline cars – have real world emissions that are substantially greater than what's experienced in the test – when they go through testing. And I think what one would naturally expect from this is that regulators will no longer turn a blind eye to these things. And so the cost of producing gasoline, diesel cars that actually meet the legal emissions requirements is going to be quite a bit higher. So I would expect the car companies to accelerate their plans for electric vehicles, which is great. And there might be some near-term benefit to Tesla, but thus far, we haven't actually seen it, but there might be one.

**Ryan J. Brinkman - JPMorgan Securities LLC**

Okay, great. And then just last question. I understand that deliveries for the Model X initially are, clearly, a function of how many you can build, given your large backlog of orders, but in trying to estimate what demand might look like more medium- to long-term, is there anything more that you can say now, or that can be shared, about the pricing of the vehicle beyond Signature Series?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, just what I mentioned publicly, which is that we expect similarly equipped Model X to be no more than \$5,000 greater than the price of Model S.

**Operator**

Our next question comes from the line of Colin Rusch with Oppenheimer. Your line is now open.

**Colin Rusch - Oppenheimer & Co., Inc. (Broker)**

Thanks so much. Can you talk a little bit about the acceleration in the ramp of the Gigafactory? What are you seeing at this point, in terms of your ability to fully accelerate in 2016, and when do you think we might see cells coming out of the factory and into cars?

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

Well, in particular, as we've mentioned, we've accelerated the production of Tesla Energy products at the Gigafactory, so that's what has started just recently there, and that was quite a bit ahead of plan. That's happening in a separate section of the factory from where the cells will be produced, but also, as we discussed, we do expect that cell production will start up the second half of next year, which is, again, a little bit ahead of plan. And some of those cells would initially be allocated toward Tesla Energy products. And we still are targeting around 2017 for the first cell production that would be going into vehicles and into the Model 3. So that remains on target.

**Colin Rusch - Oppenheimer & Co., Inc. (Broker)**

And then, just in terms of the dynamics around leasing, are you seeing any real meaningful changes in terms of overall lease take rates or a change in ownership kind of dynamics at this point?

**Deepak Ahuja - Chief Financial Officer**

We are seeing a slight increase in the lease take rate in North America. And, as we indicated in the letter, that increase has been fully consumed or taken up by our bank leasing partners rather than Tesla direct leasing. So, whether we do resale value guarantee or leasing, from our perspective, it's no different. And it's a consumer preference. So there's nothing deep or significant that we are seeing in that trend.

### **Operator**

Our next question comes from the line of Brian Johnson with Barclays. Your line is now open.

### **Brian Arthur Johnson - Barclays Capital, Inc.**

Yeah, kind of three quick questions, or two quick ones, one more philosophical. First, again on the 4Q, you talked about building up finished goods inventory. We don't have the final numbers yet, but for the last quarter, production outpaced deliveries and you're guiding to that for 4Q. So what's going to be different in terms of hitting that ramp up on deliveries for Model S in 4Q vis-à-vis drawing down that inventory?

### **Deepak Ahuja - Chief Financial Officer**

You're referring – so for Model S?

### **Brian Arthur Johnson - Barclays Capital, Inc.**

Yeah, for Model S.

### **Deepak Ahuja - Chief Financial Officer**

Yeah, as I indicated in the letter, we were carrying higher finish goods inventory that was in transit at the end of Q3 to support those higher deliveries in Q4. And it's the drawdown of that extra inventory that allows us to do that. Our ending inventory at Q4 is going to be no different than what we have had a few quarters back. So it's still a fairly good level to support all of our marketing and sales and service activities. So, overall, the increase is demand-based and it's fully doable.

### **Brian Arthur Johnson - Barclays Capital, Inc.**

And to...

### **Elon Reeve Musk - Chairman & Chief Executive Officer**

I think I might answer the question more fully (53:00).

**Deepak Ahuja - Chief Financial Officer**

Yeah, go ahead.

**Brian Arthur Johnson - Barclays Capital, Inc.**

Yeah, and to clarify, just the Model X pricing, is that based on range and features? Or is it just based on battery size, the \$5,000 difference?

**Deepak Ahuja - Chief Financial Officer**

For a comparably equipped car with regular features.

**Brian Arthur Johnson - Barclays Capital, Inc.**

Okay. And so, equipped would mean battery or range or -?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah. So with the same battery and the same number of seats and that kind of thing.

**Brian Arthur Johnson - Barclays Capital, Inc.**

Okay. Yeah, and final question, and maybe this is one for Jason, Deepak, Elon conversation, if autos are a very capital-intensive business, as much as you're pursuing a different model on the battery side, it looks like there's a lot of capital going into tooling and all these complicated mechanical things, not to mention service. As you kind of think forward three years, is that more or less the way you're going to spend capital, or is there anything you could do to kind of be more asset-light in the process?

**Deepak Ahuja - Chief Financial Officer**

I think stepping back maybe the better way to look at it is that, at Tesla, our CapEx spend for what we are achieving, in my mind, has been really efficient in the industry.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

And it's worth noting that Deepak spent a huge part of his career at Ford, so you have a good basis for comparison.

**Deepak Ahuja - Chief Financial Officer**

Right. And as we look at every year, and as we add incremental capacity in the CapEx related to that, we are continuing to increase on that efficiency in terms of CapEx dollars per unit of production. So fully agree this is an asset-



intensive business. And the key here in terms of return on investment is how efficient we are with that capital. And that's what we're focused on.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, absolutely. We certainly believe in capital efficiency and getting better with that over time. But we also believe that companies build value by doing hard things. Not outsourcing those hard things to other people, because then they deserve the value.

**Deepak Ahuja - Chief Financial Officer**

That's a key point.

**Operator**

Our next question comes from the line of Brad Erickson with Pacific Crest. Your line is now open.

**Brad Erickson - Pacific Crest Securities**

Great. Thanks for taking my questions. I guess, consistent with a lot of your commentary, recently you called out in the shareholder, just wanting to emphasize quality on the Model X and it sounds like it's warranting a little bit slower ramp here in the near-term. With what you've gone through over the past few years in bringing this car to market, does this change your thinking at all over the longer term when you think the pace at which you'll bring Model 3 to market relative to longer term targets that are out there?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, I think we're still aiming to have Model 3 in about two years. So – but, I think, the cadence of future products should improve as we have more resources to shorten the critical path on things like – as mentioned earlier, like stamping tools and molding dies and things that tend to drive our schedule. Because from the point at which the car is designed, it can take almost two years to get fully tooled up. That seems like a crazy amount of time to us, and we want to try to reduce that significantly.

**Brad Erickson - Pacific Crest Securities**

Got it. Thanks.

**Operator**

Our next question comes from the line of Ben Kallo with Robert W. Baird. Your line is now open.

**Ben J. Kallo - Robert W. Baird & Co., Inc. (Broker)**

Thanks. Elon, could you talk a little bit, as you guys have increased your sophistication around the market, what you think the addressable market is for the S going forward? And then could we talk a little bit about getting to 20% or above gross margin on the X, what kind of volumes we need? And then third, can we touch on the energy storage industry? One thing that I hear a lot in the marketplace is it's a commodity business. JB, could you touch on that and anything you're seeing there? And, Elon, last time on the call you threw out some pretty big numbers for energy storage.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

How many questions are we talking about here?

**Ben J. Kallo - Robert W. Baird & Co., Inc. (Broker)**

I don't think that people really gave you a lot of credit there, so could you just talk about what backs up those numbers?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

I mean, I think it's just basically if – as we mature in various markets around the world, there's always the question of how long does it take to mature in these markets, some markets a lot harder to solve than others, and there's also macroeconomic conditions, will there be a recession or not, will there be when or will (58:17) there be a recession, and these (58:22) will obviously make a difference. But, I mean, I think in the long-term, there's probably close to \$100,000 – sorry 100,000 vehicles a year of S demand, and maybe something comparable to – for X, holding economic conditions constant and assuming full market maturation, which can take, like, quite a long time in some markets.

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

And maybe to your energy storage question, I mean, obviously, energy is a commodity market, but I don't think that in any way really changes the opportunity there. In some ways that's sort of what creates it.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

It makes it bigger.

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

Exactly. It's what creates us the opportunity for us to ramp much faster. And we still see a lot of technical differentiation amongst these different

products, just because energy itself is a commodity doesn't mean that the ways that you create it are the same. And the storage technologies and how well they're integrated and how plug and play they are for customers to just use them to solve problems and do that very quickly is quite different amongst all the different people trying to address this.

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Yeah, I mean, if you can sell a dollar for – I mean, basically if you can provide a dollar's worth of value for \$0.80 compared to your competitors', in a commodity business, that's amazing. That's like you want to be in a commodity business.

**Ben J. Kallo - Robert W. Baird & Co., Inc. (Broker)**

Got it. And then on the margins on the X volume?

**Elon Reeve Musk - Chairman & Chief Executive Officer**

Well, I think they're going to be comparable to the Model S over time, but it is important to bear in mind that the S is a much more mature product, so we've been in production with the S for three years. I would expect the margins to be within a few points of one another over the long-term.