Operator

Our first question comes from Brian Johnson with Barclays. Your line is opened.

Brian A. Johnson – Barclays Capital, Inc.

Yes, good afternoon. I know Elon you're back from China. Just want to get a sense of what the order book in China is looking for? How much of a contribution that's going to make to your especially second-half implied delivery targets? And then do you have to get beyond Beijing or Shanghai this year in order to grow in China – grow further in China?

Elon R. Musk

Well I really don't think we've got any kind of demand challenge in China, in fact I was blown away by my visit to China at the level of interest and enthusiasm for Tesla and the amount of goodwill that I encountered from people at all levels, from the government, from people in industry and sort of consumers in general. And I'm really optimistic for how things will go there.

We are trying to expand our service centers and Superchargers coverage as fast as possible in China, its not generate sales, its in order to be able to deal with the cost that we deliver in market. So we are really doing very few stores in China. Our focus is 90% plus on service centers and Superchargers. And then I think we'll actually have to limit the amount of cost we send to China; otherwise it would starve the rest of the world production.

So I mean that's really how we view things there. I did mentioned that we elected to do local vehicle production in China in three or four years, although I should mention the good will existed before I said that, goodwill wasn't a function of that, but that will be for vehicles delivered to the local market in China and perhaps to some surrounding countries.

Actually, just to be clear that wouldn't mean shifting any production from California that would be something that California is going to reach its max production and makes sense for us to start looking at local country factories. And I think we would be looking at one in Europe as well just to – I mean these really end up minimizing our logistics cost because shipping two tons of metal over long distances is not very efficient. So it's just a sensible thing to do is to try to satisfy local demand with local production over time.

Brian A. Johnson – Barclays Capital, Inc.

In any sense of quantification the orders or the. Deposits or the wait times in China?

Elon R. Musk

We're actually really trying to get the wait times down in China. That's I mean it's really quite a long wait time. In fact, the only source of unhappiness that I encountered in China was that some customers who are in some of the mid-sized cities are unhappy that we're delaying their deliveries, because it will take us a bit longer to get the service and Supercharger access, but service is a necessary requirement, you cannot have a service center be like by 500 miles away from subway sub-dealers. So that's our big – our biggest issue in China is like customer unhappiness they're not getting their cars soon enough. I think the wait time is quite long in some cases, like four months or five months or something like that.

Brian A. Johnson – Barclays Capital, Inc.

Thanks

Jeffrey B. Straubel

Thanks Brian.

Operator

Our next question comes from Andrew James with Dougherty & Co., your line is open.

Andrea Susan James – Dougherty & Co. LLC

Thanks for taking my questions. Your R&D expense is ramping pretty significantly sequentially in Q2, and I was wondering if you could talk about what components make up the R&D increase. Also, in line with that, how are the costs to bring the Model X to market kind of tracking against your earlier expectations?

Jeffrey B. Straubel

Yes hi James. Our R&D expenses went up exactly as planned in Q1. And it's primarily driven by all the engineering design and testing work that's going on, on our new product development. It's the Model X, as well as what we're doing to get the Model S ready for China and other markets.

Elon R. Musk

Yeah, for examples there is like right hand drive.

Jeffrey B. Straubel

Exactly.

Elon R. Musk

Japan localization or China localization, U.K.

Jeffrey B. Straubel

Right.

Elon R. Musk

I think Hong Honk that kind of thing.

Jeffrey B. Straubel

Right, it's more driven by those expenses rather than just headcount increases and so these are the technical expenses that you typically see before the launch of new products.

Elon R. Musk

Yes, I should said, some of that is also that's we wanted to do ongoing improvement to the Model S. That as times go by we've made hundreds of small improvements to the car and like all of these people wouldn't necessarily notice, but I think collectively they add up to an improved experience with the car. So we've made some improvement in the seat comfort for example and here and there in fit and finish, we're modifying the rear door. So it can open wider so rear ingress-egress is improved. There is a whole bunch of things

Jeffrey B. Straubel

Software improvement as we talk to you…

Elon R. Musk

Software (indiscernible) I think there are some very exciting software updates that are going to come out in the next few months that certainly will improve the experience of the whole suite of customers out there and if anyone ask me about that I'm looking to say what they are, so just broader information as it is, but I think customers can certainly look forward to some really awesome functionality improvements in their exiting car.

Jeffrey B. Straubel

We are doing lot more country testing before launching in new markets to make sure it's an outstanding customer experience, we've had in China and doing it in other countries too.

Elon R. Musk

Yes, exactly. I was mentioning it earlier, but I think there was a bit of unhappiness in China about some of the mid-size cities, delay in customers deliveries, but where we found is that its more important that we can service the cars really well, that charging is sorted out and to make sure that when customer do get their car, they have an excellent experience. And I think – we didn't do as good of job as we should have done in some of our prime market launches and want to make sure we recognize that mistake and correct it going forward.

Jeffrey B. Straubel

And I want to make sure mentioned Model X cars are also obviously driving the increased R&D expenses as we are looking Model X.

Elon R. Musk

Model X is like the biggest driver for R&D expense honestly. You know, with the X we're really trying to make an amazing car and very importantly to have a car that where the production version is better than the prototype, better than the show car. The one thing that drives me crazy about the car industry is like you will see up in these great show cars. And then when you actually get the production car it's some bizarre dumbed-down facsimile of the exciting prototype that was displayed, that's terrible.

So the base line expectation of Tesla is that whenever we have a prototype, the production car is better in everyway, so that's quite difficult to do, and requires some creative problem solving with Model X the biggest challenges is the buckling door making sure that there is truly a step change in utility for the car and not a gimmick. So it's got to work perfectly and the details have to be just right, and it's amazing how – its like sitting at little things become quite significant engineering challenges.

Such as for example getting the seals on the buckling door to work properly and not be too prominent so that you got seal against rain, winds and against road noise, but you've got something that's articulating across multiple hinges. You've got key junction joints and that kind of thing. So it's quite a difficult ceiling problem to really get it right and be consistent and remain good over many years. So we spend a lot of time on seal engineering.

Andrea Susan James – Dougherty & Co. LLC

Thank you for the thorough response. One more and then I'm done. Why haven't your Gigafactory partner or partners, why haven't they signed on the dotted line yet?

Elon R. Musk

That's actually that's great to be asked that question. So we actually do have a letter of intent signed with Panasonic. So we're happy to announce that – yes, we have a letter of intent signed. I mean, for us that's actually not that big of a deal, because our expectation has always been that Panasonic would be the partner with the Gigafactory. I believe that's been Panasonic's intent. And in fact just make sure we're both on the same page. J.B. spoke with Panasonic yesterday just to make sure we're on exactly the same page. So J. B. do you want to us to elaborate on that?

Jeffrey B. Straubel

Sure, well as Elon said we do have a signed letter of intent, and under that letter of intent, we've also created a joint working team between Panasonic and Tesla that's working, almost daily, certainly weekly exploring all the mutual topics and answering questions and making progress. We're actually quite comfortable that we're heading toward final agreements in the later part of this year. and it's something where as we said, it doesn't seem like a big step change. It's something that's been progressing smoothly for the last months and we feel confident in it.

Elon R. Musk

Yes and I think we are quite confident, highly confident at this point of achieving the 30% reduction in costs per kilowatt hour. Maybe moving towards – I would say course of the optimistic about exceeding that number. I don't want to make commitments, but I think we've got a decent chance of exceeding that number. As we explore the cost structure on the supply chain with Panasonic and with a number of other companies that make the pre-cost materials.

We've found that there's really a lot of opportunity for innovation and for cost reduction, and in fact, we've had a number of conversations that are really interesting with mining companies talking about some of the key constituents that go into the sale, such as the nickel and cobalt, the lithium, although lithium is sometimes thought of as a bigger thing than it really is for lithium ion cell.

It's like using maybe a couple percent of the cell mass, but the biggest cost constituent is nickel and so we are in conversations with some of the bug nickel mines in Canada in particularly, and we've been really I would say positively surprised, by the potential for cost reduction on producing the pre-customer trails. And its kind of funny it's like the – in talking to like the mining companies is like nobody ever calls them. We call them up and like hey we never get calls from companies like Tesla, its in other words like telling to them on the metal exchange or the big stainless steel companies, because nickel is a common alloy and constituent of steel and like cutlery for example, using involves quite a bit of nickel so your knife and fork is usually electroplated nickel silver its usually what they do.

So the mining guys were just like super happy to hear from us and have quite good ideas for how to optimize the cost of the materials or minimizing logistics and processing and just doing a fairly sensible things, a lot of its actually quite obvious to create a supply chain that can deliver a large volume of factory products with incrementally reduced cost and actually we are also trying to do our best to ensure that in the supply of the components or the sell that our suppliers are going to the mine level are companies that operate in a good and fair way and its like do they take reasonable care from an environmental standpoint, do they take care if people work in the mind that of kind of thing. As much as we can we want to make sure that our suppliers are good suppliers you know that's the – yeah.

Andrea Susan James – Dougherty & Co. LLC

Fantastic. Thank you so much.

Operator

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

Adam Jonas – Morgan Stanley & Co. LLC

First is a follow-up on the Gigafactory, is the formal announcements are kind of more than a letter of intent a pre request for breaking ground on the factory?

Elon R. Musk

No we actually expect to break ground on the first Gigafactory location, I want to precise about this because I don't want any of the states with which we are talking to sort of have the wrong impression. We are going to move forward with breaking grounds on multiple sites in order to minimize the risk of completion of the Gigafactory and we expect to break ground on the first

of those probably next month. So I think quite soon and then shortly thereafter maybe a month or two after that we'll break ground on the second one.

And sure to say that California is potentially back in the running so that's – I mean its still in these sort of improbable, but it is back in running and the governor and his staff have really, I think, tried to do everything they can to make California a significant candidate for the Gigafactory. The main thing with California is its – do it in centers or anything like that is the time to completion of the Gigafactory.

I don't think we did a good a job of explaining why California wasn't on the list of four states to begin with and it's just because this is a large Greenfield construction project; California has quite a complex and lengthy process for approval of Greenfield sights. So what we couldn't afford was waiting like a year or more for kind of to proceed, which would I think also make sure no environmental impact of any significance, but it would just take a long time for the California Regulatory Agencies to process information that they would need to for their obligations on the California Law. Whereas in other states it's much more streamlined approach.

The vehicles we build in Fremont in California, if we don't have the Gigafactory online when we have the vehicle capacity online, we will actually be in deep trouble, because we'll have all the equipment and tooling and people for making cars, but not be able to produce the battery packs. So that was the reason why California wasn't on the list. The Governor and Legislature are going to try to do something about that, but I think the question of timing is still a big one, and then we also need to make sure that the ongoing operational costs of the Gigafactory or not significant worse than other states. So I think like I said, I think California's still in the sort of improbable, but not of being impossible category at this point.

Adam Jonas – Morgan Stanley & Co. LLC

Okay, thanks Elon. Let me just add a follow-up. When you're thinking about the Gigafactory, is the idea to have just one dedicated full-cell supplier like a Panasonic, or is it possible that it could be Panasonic and some co-opetition with another battery component or cell supplier making another part of the sub-cell, the cathode, or anode. Is there mutual or pure exclusivity for a Panasonic, for example? Finally, on China, do you have – or the expansion of other manufacturing in China or Europe, is that within the scope of your current capitalization and financial resources, or is that something – or that of your expectation of your cash-flow generation, or is that another item on the list that might require new capital at some point? Thank you.

Elon R. Musk

Yes, so the way the Giga factory is set up right now is we – Panasonic would be the only company producing cells in the Giga factory. I mean one other thing in Giga factory is like sort of like an industrial park under one roof. Tesla's producing the modules – Tesla is sort of the overall I guess landlord. We're producing the modules and the battery pack. Then the cells are produced by Panasonic and then we would actually have a number of other companies producing the anode catheter, separators, electrolytes and so forth that have been feeding into Panasonic.

However, referring back to our original short presentation on the Giga factory, you'll see that cell capacity target is around 35 gigawatt-hours, but the pack capacity is 50 gigawatt-hours. So we expect to bringing cells from other cell factories in the world to make up for others who are roughly 15 gigawatt-hours, and those would be – I would expect a lot of those would be Panasonic cells, but to a degree that Panasonic isn't able to meet that demand, there would be other suppliers as well.

Adam Jonas – Morgan Stanley & Co. LLC

Okay.

Operator

Thank you. Our next question comes from Patrick Archambault with Goldman Sachs. Your line is open.

Patrick K. Archambault – Goldman Sachs & Co.

Good evening. Just a couple ones here. Just in terms of the cadence of some of the OpEx items, maybe R&D specifically, Deepak, you described how there's a sequential increase of 30%. Can you – I guess the first part of my question is, how do we think about it trending in the back half? And then sort of longer term, how do we see that as an expense as we sort of model out over the next couple of years? I think best-in-class vehicle producers probably have that in the mid-single digits as a percentage of sales, but just given your growth profile would probably be higher. Can you help us to dimension that as we think about our forward modeling?

Deepak Ahuja

Yes, in future quarters as we go towards the end of the year and potentially next year early as Model X development is behind us, I would expect some reduction in R&D spending, and then of course Gen III will pick up and other products that we start working, but broader point of percentage of revenue,

we clearly see that as revenue is going to pick up significantly, the percentage of revenue of R&D expenses it is going to be I expect in the single-digits – high-single-digits clearly. So, I think we won't to be too far away in that sense from some of the other, I would say more growth oriented companies, don't want to just bet it against automotive, because we will be doing more R&D in general.

Elon R. Musk

Absolutely.

Patrick K. Archambault – Goldman Sachs & Co.

Okay, great.

Elon R. Musk

In fact I think R&D is maybe more limited by the phase, which we can create (indiscernible) integrated to the companies rather than sometimes budget, yes.

Patrick K. Archambault – Goldman Sachs & Co.

Okay, that's helpful. Just as we think about the cadence of deliveries, which is obviously very back-half loaded, but you're obviously confident in the 35,000. Can we just get a little bit more clarity as to sort of what's driving sort of the back-half inflection? Is it cell capacity, is it that second, excuse me that second production line coming on? Is it just – it seems like it's more supply-driven than demand-driven, but just wanted to get a little more clarity on what's driving that sequential progression?

Elon R. Musk

Yes. The main thing in the first half of the of the year and that's something actually I mentioned I think late last year is that the – for the first of this year we're constrained by cell supply. We expect that to I mean, it is in the process of alleviating and we expect that to really start alleviating in the third quarter basically. And there's obviously a bit of a late because the cells coming from Japan. They've got it produced and port on the water and port over here and that kind of thing. Thus far from what we see that you have things on track to have cells not – be able to at least meet, but probably exceed by little bit the 35,000 in targeted deliveries. Our production number absolutely higher than that, because the Company's growing quite a bit of nickel that will be only to best countries.

And then, the benefit other constrainers, which is the vehicle production line. So, it actually will actually be taking the factory – the Fremont factory down for roughly days or so in July to convert inline, which enables a substantial increase in our production capacity on the vehicle side, as well as a labor house reduction. So it's just fundamentally more efficient process. Yeah, if it is worth highlighting the point. Very often, in the media, it seems like there's confusion between Tesla production and Tesla demand. For example, like we're sold of Q2 production, already. The term sales usually means demand, but in our case sales means deliveries. It's our measure of demand, it's a measure of how many cars we're actually able to get to customers. If we had been better at production and delivery would have little bit more cost.

Operator

Thank you.

Patrick K. Archambault – Goldman Sachs & Co.

Okay, thanks.

Elon R. Musk

Okay.

Patrick K. Archambault – Goldman Sachs & Co.

Thank you guys.

Operator

Our next question comes from Colin Rusch with Northland Capital Markets. Your line is open.

Colin W. Rusch – Northland Capital Markets

With the Model X, previously you talked about going into production before the end of 2014. Can I just understand exactly what you're saying with the prototypes being done by the end of the year versus production, and how we should think about that relative to the previous comments?

Elon R. Musk

Yes, there's no question we're delayed on the Model X, although that's I wouldn't say particularly new information. Relative to our earlier forecast, we had to spend a lot more time making sure we got the Model S right, and it took longer to get to some of the international markets and what not. So it just didn't make sense for us to be focusing on Model X if we didn't have our

Model S house in order. I think we're in pretty good shape on the S front, so our focus is very heavily on the X, and just making sure it's a phenomenal product. And, we expect to be varying production cars roughly Q2 next year.

We'll have the production design articles, I guess beta articles or production-release candidates around the end of this year, but we want to make sure we've got a decent period of validation with those release-candidate vehicles, because the production ramp for Model X will be much greater than for S, so much deeper. So with S we have quite a shallow production ramp, start off real slow and as we encountered issues we were able to correct them without having a large number of cars in production on the roads.

With X it's going to be sharp ramp, which means we really need to make sure that we've properly validated issues and made sure in all temperatures and climates and road types that the car is really solid before ramping up production. Otherwise, we would risk having a recall or a bad customer experience.

Colin W. Rusch – Northland Capital Markets

Okay. And then one quick technical question. As you look at the components and the materials inside of your cells, the quality of lithium, how much leverage do you think you can get as you start to see higher-quality lithium from the supply chain?

Elon R. Musk

The quality of lithium – you mean by purity or…

Colin W. Rusch – Northland Capital Markets

Just in terms of higher purity, I should say.

Elon R. Musk

That’s really not been an issue. That’s not a big trade-off or driver of performance. It's something that we're constantly looking at with the different the different suppliers and trading off different processing mechanisms and different feed stocks that can affect the pricing; the ultimate purity doesn’t really drive performance of the final cell.

Colin W. Rusch – Northland Capital Markets

Yes.

Elon R. Musk

There are some things that are sort of a tricky – or that matter, like for example the anode, the structure of the carbon in the anode is important. I mean we use a very high percentage of synthetic graphite, because that gets sort of a more precise microstructure. And, yes, so there is some potential trade-offs there as to how much work effort you put into creating the synthetic graphite. I think generally we want to probably aim for highly precise microstructures, which is a little trickier to do. You don't want to just have random microstructures, stuff that came out of the ground.

Colin W. Rusch – Northland Capital Markets

Great, thanks a lot guys.

Operator

Our next question comes from John Lovallo with Merrill Lynch. Your line is open.

John D. Lovallo – Merrill Lynch, Pierce, Fenner & Smith, Inc.

Hey guys. Thank you very much for taking my call. First question is, we've recently had conversations with several of your customers in China and Hong Kong who have placed firm orders, pretty high trim levels, and now are actually seeking refunds because what they've discovered is that the electric wiring at the residential level is so poor that charging equipment is not being permitted in their high-rise buildings. The question is I mean are these kind of one-off exceptions, or are you guys seeing a trend in this?

Elon R. Musk

No, we're not really seeing a lot of cancellation. Since I have heard. I mean one of the things we have required of customers who place the deposit is that we want to before they take delivery of their car, we want to make sure that they have wall connector installed, but usually like the wire configuration is like what max amperage the outlet can be. Some places may be able to handle an 80-amp outlet some maybe only 20 amps, but it's pretty unusual see this. Something we are doing in China, another possibility is we're putting Superchargers in cities, not just between cities. This is obviously important in places like, you know, Beijing, Shanghai, London, San Francisco, New York, where at times people may have a challenge with having a fixed parking space. The first part maybe the wiring thing it's more like some of those people don't have a definitive parking space, they might have street parking or something. London is particularly tricky one; where there's – it's got lot of high-end neighborhoods just have street parking.

Deepak Ahuja

If I might add, there's been a lot of questions about the supposed poor quality of the grid in China, but from what we've seen, installing hard-wired charging equipment and Superchargers, it's actually been somewhat the opposite, and been quite a robust, very new actually new equipment, new grid. So we have not seen very many problems.

Elon R. Musk

Yes, no exactly. In fact it's exactly as J. B. said. We've actually found – it's been a positive surprise for us in China, not a negative one.

John D. Lovallo – Merrill Lynch, Pierce, Fenner & Smith, Inc.

Okay. And then for my second question, I think in the release you mentioned that North American deliveries were up I think 10% sequentially. So this would still imply they were lower for the first quarter and the second quarter of 2013, and about in line with the third quarter. Is that a fair characterization?

Elon R. Musk

Jeff do you want to answer this one?

Jeffrey B. Straubel

Yes, John, just to clarify, we said the orders in North America were up 10%, not deliveries.

John D. Lovallo – Merrill Lynch, Pierce, Fenner & Smith, Inc.

Okay, but how were the deliveries in the quarter in North America?

Jeffrey B. Straubel

The deliveries were down. We were trying to reduce the lead time in Europe. We had a long lead time there, and we were shipping a lot of cars into Europe, so that we come to a more even lead time between North America and Europe.

Elon R. Musk

Yes, and I think this is getting back to that what is still not early, this – it’s a confuse deliveries with demand, deliveries and demand are not the same thing for Tesla. They are for other car companies but not Tesla.

John D. Lovallo – Merrill Lynch, Pierce, Fenner & Smith, Inc.

Okay. Thanks very much guys.

Elon R. Musk

I mean particularly we are seeing a steadily increasing demand in North America and so, yes.

John D. Lovallo – Merrill Lynch, Pierce, Fenner & Smith, Inc.

Okay. Thanks, guys

Operator

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

Rod A. Lache – Deutsche Bank Securities, Inc.

Hey, everybody. It seems like you're making a lot of progress in terms of purchased material and efficiency. Just looking at the numbers and what I'm looking at is it looks like your product's gross profit, you reported like $190 million last quarter, but there was a gain in there, so maybe it was $180 million in Q4 and then this quarter you did $180 million including a charge. It seems like your gross profit didn't move, even though your revenue was down. I'm just hoping that you can maybe give us a little bit of an update on where your incremental margins stand today, just given some of the progress that you've made. In a steady-state basis, these incremental units, what kind of conversion for incremental volume do you achieve to-date on the gross profit line?

Jeffrey B. Straubel

Rod I'm not exactly clear what your question is, but I think to broader point there is gross margin improvement that’s happening because of the cost improvements that we continue to achieve and this is the internal road map that we have on a variety of actions to achieve material cost reduction some internally, some at our suppliers, some through design and those actions will continue throughout the year and that’s why we feel comfortable that we will achieve 28% gross margin by Q4.

Elon R. Musk

Yes there is I think a couple of important points I would like to make here which is first of all, overall like we don’t do any cost down if it makes the product worse, so that doesn’t really gain us anything which is as quite tempting do that sometime and that drives me crazy when companies and other elsewhere in the car industry or other industries reduced cost by reducing values, that’s not a good think so our cost productions are really in

that like figuring out how to get the molecules in the right shape in a smarter way as I appose to trying to sort of strip value out, in fact in number of case we've actually added cost to the car, because there is something that needed to be improved, you know the under-body shield is an example of that.

And our gross margin in Q1 will be – we have a number of charges against – that negatively affected gross margin, would have been a little bit higher if it hadn't been for things like, for example, the under-body shield activity. I think we feel fairly comfortable of achieving the 28% gross margin by the end of the year on the Model S front.

Rod A. Lache – Deutsche Bank Securities, Inc.

Okay, thanks. And you indicated again, in your release $650 million to $850 million of CapEx this year. Can you give us some high-level thoughts on preliminarily what next year might look like as you're starting to ramp up the gigafactory, and also, I know that you made some reference to SG&A and R&D as a percentage of sales, but I guess for your stage of development, I'm not sure that that's really applicable. Can you give us an idea of how that might look on an absolute basis?

Jeffrey B. Straubel

Rod, it's a bit too early for us to give guidance, our thoughts on 2015 CapEx, clearly 2015 at a high level will be dominated by spending on the gigafactory as well as we start to prepare for Gen 3, I think much of Model S and Model X spending will be behind us, there will be some lagging Model X spending from a CapEx perspective, just before launch from a tooling and an equipment perspective.

So there will be a small change or there will be a change in the categorization of spending. And then beyond that, clearly we will continue to expand rapidly, globally with our store service centers and Superchargers, so that growth will continue, but I think we can provide you a bit more clarity on that, perhaps a couple of quarters from now.

Rod A. Lache – Deutsche Bank Securities, Inc.

Okay. And just last one on China. When you do actually expand to domestic production, do those requirements for 50-50 JV partners, do they apply to you, or are there any exceptions for new energy vehicles, or do you actually have any thoughts on that at this point?

Jeffrey B. Straubel

I think it’s too early to make a prediction on that front. Yes, so I think we can't say for sure what – how things will look at that time. I can’t say that we’re postponing any serious partnership discussions with big companies in China, because we’re still really a two-year stage. We’re not trying to sort of run this to ground, because we’ve got sort of really basic priorities of getting service and super-charging rolled out in China. Yes, we just don’t have anything to say on that front yet.

Rod A. Lache – Deutsche Bank Securities, Inc.

Okay, great, thank you.

Operator

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

Ben J. Kallo – Robert W. Baird & Co., Inc.

All right. Thanks for taking my question. Back to the battery factory, can you talk about the costs associated with running two sites in parallel, maybe three, and any optionality you have there? And then adding maybe two more on top of it, one is, how much work have you done as far as business development with stationary stores to get comfortable with that angle there, and then as far as additional investors, should we wait to see them after Panasonic comes to the table? I’ll stop there. Thanks guys.

Jeffrey B. Straubel

There is I mean – your first question was fundamentally are we spending too much money by working on three sites together. I think as Elon has said a few times, for us, it’s really critical that we have the first gigafactory ready on time to supply the sales for Gen 3. And that delay, every one month delay at that point is far more expensive for us than the incremental costs that we may incur up front to kick off two sites at one-time.

Elon R. Musk

Yes. Maybe, I can speak to the stationary business development part of the question. We have done a huge amount of effort there, work there, and we’ve talked to most major utilities and energy service companies at this point. it’s still early days in that effort, and I think maybe the thing to focus on is our long-term optimism looking at the price, versus cost of what we expect we could do. And the demand for – the long-term demand for stationary energy storage is quite extraordinary. When you look at the size of the grid and what needs to be done with renewable energy and buffering

the variability of that. So I think that's really where we keep our focus is on the long-term economics that could be enabled once the gigafactory is online.

Jeffrey B. Straubel

Yes. Right I would not try to build demand for stationary storage, because we have cell constrains, so kind of expense of vehicles. So what we're doing right now is more on the engineering side figuring out what would be a really cool stationary storage pack that could be produced at volume and that could be combined, so you could stack the whole bunch of them if you wanted.

I think particularly for the home solution, I mean sort of thing, we have in mind is, something that looks a bit like the battery pack from the Model S, there's something really flat just maybe takes – is coming five inches off the wall, like wall mounted in a nice in a beautiful cover, integrated bidirectional inverter and just a plug in play. That's something we have in mind for the stationary storage pack on the residential front, which could conceivably you could stack a bunch of them and have it looks commercially as well. But play, I mean I want to talk about that in detail end of the year, early next year, or something like that.

Elon R. Musk

Yes, I think the third part of your question was about other participants in the gigafactory. we are talking to various different people in parallel. I think that is important to understand that there's a lot of aspects of this that the Panasonic doesn't do. So it's not necessarily a competition, but it's complementary, different pieces of the production operation. those discussions are underway, but it's premature to talk about any specific.

Ben J. Kallo – Robert W. Baird & Co., Inc.

Great, thank you guys very much.

Operator

Next question comes from Craig Irwin with Wedbush Securities. Your line is open.

Craig E. Irwin – Wedbush Securities, Inc.

Good evening. Thank you for taking my question. Elon, when you look at the Chinese market, everybody knows that this is the largest luxury automotive market in the world. It's not a market that we have as much visibility as we

might like. How do you quantify the total opportunity for sales for Tesla, and what have you seen since you launched in China that surprised you, or maybe that you didn't expect? And how is this shaping the plans for your store – your store map over there, and the obvious service centers and other investments?

Elon R. Musk

I don't think, I think probably, most of as much as I do about the demand for our cars in China. So as far as it's an incredible crystal ball. as you mentioned, China is the biggest market for cars in the world, and actually the biggest market for premium sedans in the world. So to the degree that our sales track that of other manufacturers presumably China would over time become the biggest market for Tesla.

I mean that's probably the best guess that anyone could make at this point, or in the short-term is that we really don't have a demand issue in China like we've got a lot of demand. And so our focus then obviously is, just to make sure that demand of service and we'll try to roll out service centers and superchargers as fast as we can. And my instructions to the China team are to spend money as fast as they can spend it without wasting it. That's what is happening.

Craig E. Irwin – Wedbush Securities, Inc.

Makes sense.

Jeffrey B. Straubel

Thanks, Craig. Let's make this the last question, please.

Operator

Our last question comes from Colin Langdon with Colin Langan with UBS. Your line is open.

Rahul X. Chadha – UBS Securities LLC

Hi this is Rahul Chadha on behalf of Colin. Can you help us understand the difference in the variable cost structure for the Model S, compared to a comparable luxury sedan like maybe a BMW 7 Series. And other than battery, which are the key areas where you'll be able to cut costs as you go ahead and achieve scale?

Elon R. Musk

Well we don't really know what the gross margin as of individual product lines in other companies, so it's difficult for us to make an exact comparison there. I just don't know how to answer that question exactly. As far as cost reduction, the cost of our vehicle is not just in the battery pack, battery pack is one portion of the car, but it maybe a quarter to the value of the car, its not like – its not the overwhelming portion of the car. So cost reductions really come across the board.

Rahul X. Chadha – UBS Securities LLC

Are there any specific components which you see a bigger opportunity to cut cost and or the process?

Elon R. Musk

I think a single cost reduction with same Q4 this year would be related to labor and overhead, which I guess as mentioned earlier in the call we have a much more efficient production line that's going to come online in July, which has more automation and its just set up in a better way and that's making the car with greater labor efficiency is the biggest single improvement, but there are really hundreds of improvements across the board and really comes on to this you make you know from like a $5 to $100 improvement here, there and everywhere and it adds up to a significant number. I wish there was like one place where was one incredibly super expensive thing that if we fixed would suddenly make car cheap that is preference and not the case.

Rahul X. Chadha – UBS Securities LLC

Thank you, and then do you have any update on the dispute with dealer body?

Elon R. Musk

Well I think there was something that happened just today, I mean the stuff tends to be reported real time, so we are sort of like just I mean we know that, there is not public information, but I think the appeal in Massachusetts from the dealers was denied today. So there was – hearing there is a hearing.

Jeffrey B. Straubel

(Indiscernible)

Elon R. Musk

All right well then so no update on the (indiscernible).

Rahul X. Chadha – UBS Securities LLC

Okay. Thank you.

Operator

Thank you.

Jeffrey B. Straubel

All right. Hey Patrick I apologize I cut of Craig Irwin, if he is back in the question, we could take another question from him. Anything in the queue.

Operator

We have Craig Irwin in queue, Wedbush Securities. Your line is open.

Jeffrey B. Straubel

Go ahead Craig, I'm sorry about that.

Craig E. Irwin – Wedbush Securities, Inc.

Thank Jeff. No, not a problem, not a problem. So I really appreciated the comment in the shareholder letter about 10% sequential growth in orders in North America, we understand you are obviously capacity constrained and you have got great demand, but one of the points of controversy is the potential for declining shipments into North America. Can you maybe give us a commentary about your year-over-year order rates in North America, whether or not you expect to continue selling Model S vehicles, similar volumes, once you have started to satisfy some of the European and Asian demand?

Jeffrey B. Straubel

And we would rather not make any additional predictions about deliveries. I mean I see demand in North America, I mean I can tell you definitely what we see as we see a steadily increasing demand in North America, that's the information that we have. We don't have something that's more predictive than that.

Craig E. Irwin – Wedbush Securities, Inc.

Okay, that's helpful. Thank you.

Jeffrey B. Straubel

Thanks.

Operator

Thank you.

Jeffrey B. Straubel

All right. Thank you Patrick for getting Craig back on the line, I appreciate that. So this concludes our call. Thank you everyone for joining us this afternoon. We look forward to seeing many of you this month in New York. Next Monday, we'll be at the Deutsche Bank Cleantech Conference and on Tuesday we'll be at the Wedbush Transformational Technologies Conference and finally at the end of May we are presenting at the Friedman Billings Ramsey Energy Technology Summit. So we hope to see some of you at some of those conferences. Thank you everyone and have a great day. Bye, bye.