Q4 2019 Tesla Inc Earnings Call Transcript

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Operator

Ladies and gentlemen, thank you for standing by. And welcome to Tesla's Q4 2019 Financial Results and Q&A Webcast.

(Operator Instructions) Please be advised that today's conference is being recorded. (Operator Instructions)

I would now like to hand the conference over to your speaker, Mr. Martin Viecha, Senior Director of Investor Relations. Please go ahead, sir.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you, Sherry, and good afternoon, everyone, and welcome to Tesla's Fourth Quarter 2019 Q&A Webcast. I'm joined today by Elon Musk, Zachary Kirkhorn and a number of other executives.

Our Q4 results were announced at about 1:00 p.m. Pacific Time in the update deck we published at the same link as this webcast.

During the call, we will discuss our business outlook and make forward-looking statements. These comments are based on our predictions and expectations as of today. Actual events or results could differ materially due to a number of risks and uncertainties, including those mentioned in our most recent filings with the SEC.

(Operator Instructions) But before we jump into Q&A, Elon has some opening remarks. Elon?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Thanks, Martin. So Q4 was another strong quarter for the company. Deliveries reached over 112,000 vehicles in a single quarter. It's hard to think of a similar product with such strong demand that it can generate more than $20 billion in revenue with 0 advertising spend. I think that's -- where we do say that from time to time, I think it's often overlooked, but to have the highest-demand electric vehicle in the world with no advertising spend is, I think, quite remarkable and speaks to the nature of the product and the fact that the product itself is compelling enough to generate that demand without a bunch of advertising.

At our Fremont factory, we're producing at a rate roughly the same as the NUMMI factory did in its record year of 2006. And obviously, we expect to exceed that significantly this year. This rate of production was [cheap] before we even started to produce the Model Y out of Fremont. So there's a lot of potential to go beyond that number.

For the Shanghai factory, I'd like to say congratulations again to the team in Shanghai on launching Model 3 last quarter and achieving the first deliveries earlier this year. I'm really excited and

optimistic about the potential for the Shanghai factory. I think it's going to be an incredible asset to the company. And we also broke ground on the Model Y factory in Shanghai. So a lot of good progress there.

Regarding Model Y, it was only 10 months ago that we revealed a Model Y prototype. And now in January this year, we started producing Model Y in limited volumes already. Now this is thanks to a great effort from our engineering team. And we managed to achieve, by far, the highest energy efficiency of any electric SUV ever produced at 4.1 miles per kilowatt hour, which means Model Y all-wheel drive got an EPA rating of 315 miles. This improvement is reflected on the configurator as of today. This is above what we've previously stated by a pretty significant margin. And then just with great acceleration, top speed, it's really just incredible specs all around.

For the Cybertruck, a few months ago, we revealed the -- obviously, remember, we revealed the Cybertruck, that was -- that went viral. And we tried to build a product that -- a product that is superior in every way without any preconceptions of how such a product should look. So it really just -- from the standpoint of what's the most badass, futuristic, armored personnel carrier that kicks the ass of any other pickup truck, basically that's the goal. And we wanted it to look like something that just kind of came out of a sci-fi movie set from the future. And the demand has been incredible. We've never seen actually such a level of demand at this -- we've never seen anything like it, basically. I think we will make as -- about as many as we can sell for many years. So as many -- we will sell as many as we can make. It's going to be pretty nuts. So -- and I think, actually, the product is better than people realize even. They don't even have enough information to realize just the awesomeness of it. It's just great.

So -- and then stepping back in 2018, from a financial standpoint, we were -- free cash flow rate was breakeven. But in 2019, we managed to generate more than $1 billion of free cash flow while building a factory in Shanghai in record time and while building parts of Model Y in production. So I think for us to have this level of free cash flow while making massive investments in capacity while developing new products, while improving the core engineering, is a testament to the, I think, incredible performance of the Tesla team. And I'm just so proud to work with such a great team.

I'd like to thank the whole Tesla team for their ongoing work on cost control. That's what has allowed us to get to these compelling financial numbers, while at the same time, growing company at an incredible pace.

And in conclusion, when I think of what we have in front of us in the next couple of years, we've got Model Y, we've got Giga Berlin, Tesla Semi, Solarglass Roof, Cybertruck, some very exciting improvements in battery technology, we've got Full Self-Driving, the next-gen Roadster and probably a bunch of other products we'll come up with, too. It's hard to think of another company that has more exciting product and technology road map.

So super fired up about where Tesla will be in the next 10 years. If you look back 10 years from today to 2010, we will produce approximately 1,000x more cars in 2020 than we produced in 2010. One thousand. And we have also Solarglass and solar retrofit and Powerwall, Powerpack, all those other things, too. So where will we be in 10 years? Very excited to consider the prospect.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you very much, Elon. And Zach has some opening remarks as well.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes. Thanks, Martin. This past year was truly transformational for Tesla, and I want to thank everyone who's been a part of making this happen.

On 2019, a few key points I'd like to highlight. On demand, while we've mentioned this a few times, it's worth highlighting once again. Over the course of the year, we've transitioned entirely from generating Model 3 orders from a reservation backlog to generating new and organic demand. We've also seen a stabilization of Model 3 ASPs, even increasing slightly in Q4. And we've seen an increase in ASPs of S and X after the launch of the longer-range versions in Q2.

With respect to capacity expansion, we've greatly learned from the development and launch of Model 3 in Fremont and Reno. As a result, we've been able to bring new production capacity on board faster and with less cost. This is evidenced by the launch of Model 3 in Shanghai as well as Model Y in Fremont, programs that were both launched in under one year.

Financially, we have demonstrated multiple quarters of strong cash generation, enabled through higher volumes, improvements to capital efficiency, progress on working capital management and continued improvement in our product and operational costs. And we are able to achieve positive GAAP net income in both Q3 and Q4 for many of the same reasons that enabled strong cash generation. We've also made progress on recurring software-based revenue with the implementation of premium connectivity and the beginning of upgrades available for purchase via the Tesla mobile app.

Finally, on stock-based compensation, it increased sequentially by $82 million, driven almost entirely by an expense related to the next tranche of the CEO grant. This is a result of our improved expected financial performance of the company, which the CEO stock grant is tied to.

As we look ahead to 2020, this, again, will be an important year for the company. Our task ahead is to execute on the next phase of growth while managing cash flows to support that growth. On Model Y, we expect first deliveries in limited quantities later this quarter and will ramp over subsequent quarters. As mentioned previously, we are forecasting higher gross margins on Model Y compared to the Model 3.

This year, for the Shanghai-built Model 3, we expect to achieve run rate production and delivery rates. In addition, we expect to have completed the majority of planned supply chain localization at the factory or in the region. This is one of the most important components to achieve lower production costs for the site. We are also seeing strong order rates for the locally built Model 3 and remain focused on continuing the production ramp and managing costs. We also anticipate significant progress on factory construction of Shanghai- and Berlin-built Model Y, which will result in continued increases in capital spending.

On operating expenses, I expect an increase over the course of the year to support our growing product pipeline and international footprint. However, OpEx growth should increase at a lower rate than top line revenue.

Overall, we believe this will set us up for our strongest annual financial performance yet, with sufficient forecasted cash flows to support investments related to our growth and further strengthening of our balance sheet.

For Q1, please keep in mind that the industry is always impacted by seasonality. Additionally, we are in the process of ramping 2 major products, Model 3 in Shanghai and Model Y in Fremont, which I expect will temporarily weigh on our margins. We are also in the early stages of understanding if and to what extent we may be temporarily impacted by the coronavirus. At this point, we're expecting a 1- to 1.5-week delay in the ramp of Shanghai-built Model 3 due to a government-required factory shutdown. This may slightly impact profitability for the quarter but is limited as the profit contribution from Model 3 Shanghai remains in the early stages.

We are also closely monitoring whether there'll be interruptions in the supply chain for cars built in Fremont. So far, we're not aware of anything material, but it's important to caveat that this is an evolving story. However, we have more than sufficient cash to continue our expansion plans while further strengthening the balance sheet.

Thank you, again, for your support, and we will turn to questions.

Questions and Answers:

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you. We are going to take the first questions from retail investors compiled by Say Technologies.

So the first retail investor question is, "since solar is required for all new home constructions in California, do you have any substantial orders for Solarglass Roofs from any of the large California homebuilders that you can share? What's the 2020 target for the number of Solarglass Roof installations in California?"

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, I think we do -- we are seeing, mostly from a small base, exponential growth in demand and output for solar -- for the Solarglass Roof. So it's difficult to predict what the demand will be this year, except that the demand is very strong. And we are working also not just through Tesla Solar Roof but also through new homebuilders and through just the roofing industry in general, whether it's in North America, on the order of 4 million new roofs per year. So we see a lot of interest.

And so it's just a question of refining the installation process, getting lots of crews trained to do the installation. But over time, I would expect a significant percentage of new roofs to be something to use Solarglass in one form or another. It's really going to be a choice of do you want a roof that is alive with power or dead without. And I think people will want a live roof that generates power and looks good and lasts a long time, and it's the future we want.

So it will be a significant product, but because it is a new and quite revolutionary product and there's a lot of challenges to overcome, but they will be overcome, and this will be a major product line of Tesla. And the Buffalo factory is doing great. So, yes.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you. And the second question from retail shareholders is, "will you release the Tesla ride-hailing network app before full autonomy and change the terms of Tesla Insurance to allow owners to be drivers on the network? If so, when will this happen? Might want to target California airports first. Also a good place to add Superchargers."

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Sorry, it sounds like more question than one.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Yes, it's a bit of a bundle. Yes.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, I think it's -- it probably will make sense to have the -- to enable car sharing in advance of the kind of sort of driving robotaxi fleet because the car sharing can be done before Full Self-Driving is approved by regulators. So it's probably something that we would enable before the full sort of robotaxi fleet is enabled. And it sounds like there were some other questions bundled in there.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Superchargers at airports.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Sure. Yes. Yes, probably, we'll have Superchargers in airports. We'll have Superchargers wherever we see that there is a need for Superchargers.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

And then on the insurance part of the question, it is our intent to allow people to put their cars into ride-sharing or the FSD network using Tesla Insurance. That's not currently the case, but by the time that this is available, it's our intent to get that ready.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Yes, thank you. Next question from retail investors is, "how many California owners are currently insured with Tesla Insurance? What's the target for Tesla Insurance in 2020? When will you start to significantly leverage the data you have from the fleet to lower the cost of your coverage? Will we get premium discount of certain percent?"

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. I mean, go ahead, Zach.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes. So Tesla Insurance is currently available in California. A couple of things that we're working on, on this front. The first is to expand it to other locations. And we're preparing the regulatory processes -- preparing our processes to go through the regulatory processes in those locations. We're also working on the processes to continue to adjust our rates in California, which also have to go through regulatory processes as insurance is quite heavily regulated. And that's where we're spending our time focusing on Tesla Insurance right now. There's a significant amount of innovation, as we've discussed before in this space, exactly getting to the intent of what the question here is, using our technology to reduce rates. And this will be rolled in over time.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

The last part of the question was, will there be a discount for using Autopilot with our cars?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Oh, yes. Yes. Yes, there will be.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

The rate card for California, Tesla Insurance already considers the safety features associated with

Autopilot.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Right. But I think it would make sense for us to close loop on higher use of Autopilot for it reduces the insurance cost as well as the probability of injury. So I think insurance is going to be, I think, quite a major product of Tesla over time. The amount of money that people spend on car insurance is like a remarkably big percentage of the cost of a car. You can lease a Model 3 right now for $400 a month, but a typical owner in California will be paying sort of between $100 and $200 a month in insurance.

So we're talking about something which is maybe 1/4 to 1/2 of the cost of the lease of the car is insurance. And a lot of that insurance cost is just because the insurance companies don't have good information about the drivers. And there's no good way to provide feedback, where it's a very poor feedback mechanism in terms of the insurance rates versus the actual way that the car is being driven, whereas we can do that in real time. It's a fundamental information advantage that insurance companies don't have.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you. The next question is, "you set expectations that you would be feature-complete on FSD by the end of 2019. Can you please provide an update on when will we see this with end users? Where are you in retrofitting the FSD computer to older models?"

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, I mean to be precise, I said I was hoping it would be feature-complete with most FSD by the end of last year. We got pretty close. It's looking like we might be feature-complete in a few months. Feature-complete means just like it has some chance of going from your home to work, let's say, with no interventions. So that's -- it doesn't mean the features are working well, but it means it has above 0 chance. So I think that's looking like maybe it's going to be a couple of months from now.

And -- but what isn't obvious regarding Autopilot and Full Self-Driving is just how much work has been going into improving the foundational elements of autonomy. The core Autopilot software and AI team is just, I think, very, very strong and making great progress. And we're really only beginning to take full advantage of the Autopilot hardware, the FSD hardware. So I think it's -- the apparent progress, as seen by consumers, will seem to be extremely rapid. But actually, what's really going on, it seems like that is just having the foundational software be very strong, have really strong foundation.

And then a really fundamental thing is moving to video training. So in terms of labeling, labeling with video and all 8 cameras simultaneously. This is a really -- I mean, in terms of labeling efficiency, arguably like a 3 order of magnitude improvement in labeling efficiency. For those who know about this, it's extremely fundamental. So that's really great progress on that.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you. And the last retail investor question comes from Kendall. "Since most retail investors seem to understand Tesla better than analysts and are risking a larger part of their own personal wealth on Tesla, doesn't it make sense to take mostly questions on these earnings calls from us, via Say? Do you even have to take questions -- answer questions from analysts?"

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, I guess we don't have to. I do think that a lot of retail investors actually have a deeper and more accurate insights than many of the big institutional investors and certainly a better insight than many of the analysts. It seems like if people really looked at some of the smart retail investors, analysts and -- what some of the smart -- smaller retail investors predicted about the future of Tesla, that would -- you'd probably get the highest accuracy and remarkable insight from some of those predictions.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. So now let's switch to institutional shareholder questions. The #1 question is, you have spoken previously about Shanghai Giga being 65% lower CapEx per unit of capacity. Have you learned to do anything better or different from an OpEx perspective? And if yes, what kind of impact might we expect on the long-term gross margin?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Sure. Go ahead, Zach.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes. The Shanghai factory has been a quite remarkable cost experience across all line items of COGS for the Model 3 there. We have talked a lot about the CapEx per unit of capacity being lower. But -- and you can basically run down an entire list of COGS between labor cost, material cost due to localization. So it's opening up suppliers that would not have made economic sense from the States. Localizing the supply chain flows into inbound logistics and outbound logistics costs as well. So we're not shipping cars from California over to China. And then that has a corresponding savings on our lower import-related costs.

And there's a slide in the shareholder letter that shows the layout comparison between our Fremont facility here in California and also the Model 3 factory in China. And the simplification in terms of the flow is pretty evident from that layout, and that cascades itself into all sorts of savings for the operations of the facility.

And so if you add all of this up, our internal estimates are a pretty significant reduction in the cost of Model 3 in China relative to Fremont. But I think it's also important to keep in mind that the cost of the Standard Plus that we're selling out of Shanghai is also lower than that of the similar car coming out of Fremont, from price perspective. And so -- and I've said this on previous earnings calls, I think it's fair to expect the margin coming out of the Shanghai facility to match the same margin for the vehicle in Fremont.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. I think there's a pretty big fundamental efficiency gain that Tesla has by just making cars, especially affordable cars than 3 and Y, at least on the continent where the customers are. It kind of makes sense. But what we're doing -- or have been doing in the past was really pretty silly, making cars in California and then shipping them halfway around the world to Asia and Europe. And this created a lot of cost because you've got to ship those cars. So you've got a lot of finished goods sitting on order or waiting at the port or going through customs. You got tariffs, transport.

And then the factory complexity in California is very high because you've got different regulatory requirements in China, North America and Europe. So there are 3 different types of cars that are being built. It's very complex. And just having a factory in China or a factory in California or a factory in North America and a factory in Europe, just that alone, is a massive improvement in our

fundamental operating efficiency. That, I think, is -- may not be fully appreciated.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

And also on working capital.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes, absolutely.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Or reducing OpEx here, too, [to ultimately change].

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. The next question from institutional investors is, "given the recent run in the share price, why not raise capital now and substantially accelerate the growth in production, i.e., build the Gigafactories, investment in Supercharger and customer service?"

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, we're actually spending money as quickly as we can spend it sensibly. So if there's any sensible way to spend money, we are spending it. There is no artificial holdback on expenditures. Anything that I see that is -- looks like it's got good value for money, the answer is yes, immediately. So we're spending money, I think, efficiently and we're not artificially limiting our progress. And then despite all that, we are still generating positive cash. So in light of that, it doesn't make sense to raise money because we expect to generate cash despite this growth level.

Zach, I don't know if you want to...

Zachary Kirkhorn - *Tesla, Inc. - CFO*

No. I completely agree with that. I think some of our learnings during the Model 3 launch period were we grew too quickly and with too much complexity, and it held back our ability to continue to scale. And part of the journey that we've been on in 2019 is to unwind a series of unintentional bad processes that kind of accumulated in the company over time. And so that's kind of what contributes to the reduction in OpEx over the year as we get smarter about that.

And now we've laid a good foundation, I think. And I agree with you on that, we're not holding back on the growth. I mean we have 2 products -- 2 vehicle products launching right now. And that will consume much of the bandwidth of the company to stabilize those over the course of the year. And then looking into next year, we have even more products launching, more factories. And so we want to be smart about how we spend money and grow in a way that's sustainable, so we don't fall victim to the mistakes, I think, we made 1.5 years or so ago.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes, absolutely.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. The next question we've already answered regarding Autopilot time lines. So the following question would be, "can we please talk about cost control and OpEx sustainability in terms of

growth versus gross profit growth? How did we achieve the recent OpEx trends? And how should we think about OpEx needs as we grow both vehicles and geographic workloads?"

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes. I commented briefly on this in my opening remarks. We did see an increase in operating expenses from Q3 to Q4, even excluding the portion of that attributed to stock-based compensation. And when you double click into that growth, it's supporting the Model Y program and also Shanghai program as well.

And so I think we, as a company, are now at the point where we've learned a lot on cost efficiency, as I've just mentioned. And we've unwound a number of the processes that were not in the right place, including automating with things that need to be automated. And we'll continue on that journey. But I think we're at a point now where OpEx will start to tick up, at least if you look annually from 2019 to 2020, to support our international footprint and then the growth of the company. Our job is to grow that significantly slower than the pace of growth of revenue to improve the operating leverage, which we're very, very focused on.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. And the last question from investors is, "the sales of model S and X have stayed flat for several quarters. The main reason is that they still use 18650 batteries. When will S and X use 2170 batteries? Manufacturing capacity of 18650 may be used for battery storage systems instead."

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Sure. Well, actually, the core chemistry inside the 18650 cell has improved many times over the years. So it's really just a form factor as opposed to a core technology. So it's -- I think we're pretty happy with where the -- with the energy content of the cell and the improvements in efficiency of the vehicle. We're rapidly approaching a 400-mile range for Model S, for example. So this is -- it won't be long before Model S is 400 -- has 400-mile range.

Drew, is there anything you want to add to that?

Andrew D. Baglino - *Tesla, Inc. - CTO*

No. Other than to say that the 18650 lines have been running smoothly for a really long time in a world where cell supply is fueling growth like we're part of the fuel of growth. I don't see a reason to turn that cell supply off.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. And actually, the Model S and X actually have more range than we are just currently stating on the website. We just haven't gotten around to updating, the, I guess, the EPA certified number. But the actual range of the Model S and X are above what the website says there are.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

The existing cars.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes, the existing cars that are being made.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

It's actually been that way for some time.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. Yes. I think we're -- yes, it must be somewhere in the 380s or something like that for us, yes.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you very much. And Sherry, let's go to the Q&A on the phone.

Operator

(Operator Instructions)

Our first question comes from Adam Jonas with Morgan Stanley.

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

I actually agree. I think the retail questions were excellent, actually. So Elon, do you see potential for Tesla vehicles to be fitted with user terminals that are compatible with the Starlink constellation in the near- or medium-term future?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, it's certainly something that could be happening in the coming years. There's no plans for it this year. The focus of Starlink is really for high-bandwidth, low-latency connectivity for homes and businesses, and I guess, aircraft and boats and that kind of thing. But the antenna for that high-bandwidth, low-latency thing is sort of about the size of medium pizza, which you could put on a car, but I think it's more bandwidth than you would really need. Technically, you could buy one and just stick it on the car. Yes, it will work. Space range.

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

And maybe just as a follow-up for my follow-up. How would -- assuming that we get the antenna form factor and cost down to a point where that could be integrated to the roof of a car, for example, cost effectively and aerodynamically, et cetera, how would compatibility with the Starlink architecture theoretically improve the Tesla customer experience or the capability of the network?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, I think it actually most possible that we'll just use the cellular connectivity, just use 5G. It would be the recommendation, certainly, in like any cities or something like that. But if you're out in the countryside and there's not good cell connectivity, then maybe you could connect with a Starlink antenna. And you don't need to like have like gigabit level or level of connectivity. You can -- probably like 20, 30 megabits is probably fine. And you can have much lower antenna.

So yes, I guess it could be good for making sure there's connectivity and -- outside of major cities and that kind of thing. But I mean that's -- yes, I'm sort of, I'd say, relatively obtuse. It's not -- we're not thinking about it very much, to be honest.

Operator

Our next question comes from Dan Galves with Wolfe Research.

Daniel V. Galves - *Wolfe Research, LLC - Director of Equity Research & Senior Analyst*

So hoping you could give us some guidance on what CapEx is going to be this year. And kind of as I look to model out the business long term, is there a rule of thumb that we can use for capital expenditures per unit of production capacity or some sort of rule of thumb like that?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

I don't know if we wanted to tell you -- I don't think we want to say what our CapEx is going to be this year, necessarily. We -- except to say that like as I said earlier, we're spending money as fast as we can spend money in sensible ways. So it's definitely not artificially limited, and we will spend -- well, a lot of money is here, for sure. The challenge comes in like finding efficient ways to actually deploy the capital. That's the harder part than sort of deciding on a CapEx number really.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes. We...

Kunal Girotra - *Tesla, Inc. - Senior Director of Energy Operations*

And I think we always find ways to become more CapEx efficient per unit of capacity. And we challenge the teams to always become more efficient. And so we see a reduction per CapEx -- per unit in terms of Capex.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Absolutely.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

[Just on the right] metric.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes, it's a good -- yes. I think there's so much at Tesla where the core technology is improving radically that maybe you wouldn't necessarily notice as an end customer. Or some of them, you'd notice; some of them, you wouldn't. But it's just -- there are these things that have a big effect on the efficiency of the company, like our internal applications team that kind of builds the Tesla internal operating system and improves the sort of core automation of the company. That makes a big difference to our productivity. But you wouldn't necessarily -- you would see it effectively in healthier financials, but you wouldn't necessarily notice it as an end customer.

Daniel V. Galves - *Wolfe Research, LLC - Director of Equity Research & Senior Analyst*

Okay. Got it. Maybe I could follow up. I mean your kind of operating cash flow, EBITDA is annualizing at $4.5 billion right now. As I look out to the future, I'm kind of guessing that, that could fund somewhere around 200,000 to 250,000 units of capacity a year, which would be maybe a 30% CAGR over 5 years. I mean is that something that's feasible for you guys to execute on, on a consistent basis, a level of capacity building that large?

Zachary Kirkhorn - *Tesla, Inc. - CFO*

I mean, I think...

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

We're heading for more than 30%, yes.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes, I think the math -- I'm not sure of the math that you've done, but I think our internal plans are faster. And just back on your first question, we will have additional detail on CapEx in the 10-K. But back to the growth rate, I mean, one thing to keep in mind is that the Shanghai facility, we do have a loan facility in place to support that growth. So that helps. And then as our production volumes increase, that generates more cash flow in the business as well that allows us to continue to fund additional factory. So I wouldn't necessarily view it as limited as you described it.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. I think a few years ago, I said I -- yes, I think -- I don't know when it was, but a few years ago, I said my estimate for us is that Tesla would grow at an average compound annual rate -- average rate of in excess of 50%. I still hold that belief.

Operator

Our next question from Gene Munster with Loup Ventures.

Charles Eugene Munster - *Loup Ventures, LLC - Managing Partner, Co-Founder & Head of Research*

Congratulations on the progress. First question related to Cybertruck. You mentioned you'll sell as many as you can make. Can you remind me how many you think you can make? And any thoughts on the cost of production for making those Cybertrucks?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

I think we don't comment on those detailed numbers, except the demand is just far more than we could reasonably make in the space of, I don't know, 3 or 4 years or something like that. So the thing we're going to be really focused on is increasing battery production capacity because that's very fundamental because if you don't improve battery production capacity, then you end up just shifting unit volume from one product to another, and you haven't actually produced more electric vehicles.

So that's part of the reason why we have not, for example, really accelerated production of the Tesla Semi because it does use a lot of cells. And unless we've got a lot of battery cells available, then say like accelerated production of the Tesla Semi would then necessarily mean making fewer Model 3 or Model Y cars. So we've got to really make sure we get a very steep ramp in battery production and continue to improve the cost per kilowatt hour of the batteries. This is very fundamental and extremely difficult.

So I said we're going to do like kind of Battery Day just to kind of explain more about this and what our plans are. I think probably it's going to make sense to do that after the end of this quarter because I think it's going to be kind of an intense end of quarter as it was last quarter. So tentatively, sort of in the April time frame, we'll do a Battery Day and kind of go through what the challenges are, how do you get from here to, I don't know, a couple of thousand gigawatt hours a year or something.

Charles Eugene Munster - *Loup Ventures, LLC - Managing Partner, Co-Founder & Head of Research*

Great. I look forward to that Battery Day. You also mentioned in your prepared comments about other products that may come up, and the only vehicle not announced for master plan part 2 is a high passenger density vehicle. Any light that you can give us regarding that project?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. Going back to what I just said, the -- we've got to improve the total battery capacity. Otherwise, we add complexity, but we do not improve the number of vehicles on the road. So while we do some sort of high-capacity vehicle at some point probably, but we need to make sure we got the batteries to make cars that we've already got already on our plate. And it's just generally true.

And I've seen some, I think, sort of sensible comments by ARK Invest where they're pointing out that really people do prefer to drive in their cars mostly by themselves. And like the average -- I mean the average number of occupants in a car, I think, is like 1.2. And maybe with autonomy, maybe they'll go to 1.4, maybe. But I'm not sure if it even goes there.

So yes, will it make sense for us to do sort of a minivan or sort of Sprinter-like van at some point? Probably. But like I said, we've got to solve this battery -- we've got to scale battery production to crazy levels that people cannot even fathom today. That's the real problem.

Operator

Our next question comes from [John Sager] with Evercore ISI.

Unidentified Analyst -

I want to talk about the differences between the Model 3 and the Model Y beyond the sort of 10% rule of thumb just around cargo and size. Are there other features that are going to differentiate the 2 models? And then as a follow-on to that, you've talked in the past about how Model S sales grew with the introduction of Model X. So are you planning on setting up your production facilities to align with that thesis that essentially Model 3 sales will expand alongside the introduction of Model Y?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

We're not quite sure what's going to happen, but it is true that Model X -- the introduction of Model X actually increased Model S sales because people would come in and look at the Model X and they like said, "okay, I prefer the sedan." And we're worried that X sales would cause S sales to drop but it actually caused it to increase. So from -- like I said, we're not too worried about demand. We're worried about production, make sure we get that production ramp going and reach volume production as soon as possible with Model Y.

And it's hard to -- it's always hard to predict what that S -- the exponential part of the S-curve of production. Our production pretty much always follows this S-curve, or it's kind of like a herky jerky S-curve. And you can -- it's easy to predict what it's going to be like in beginning because it's low, and it's easy to predict what it's going to be like at the end, but that intermediate portion of the S-curve is very difficult to predict. So that's -- and it involves a massive amount of hard work and just reacting fast to issues that arise.

So yes, I think we'll just go as fast as we can with Model Y and make sure it's a great product. I

think there are some things that will differentiate it but not -- it's not something we want to talk about on this call. And I think when they do -- when people do a teardown of the Model Y, I think they'll be impressed about some of the things they see.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

And just to add to that, I think it's important to keep the Model Y launch in context of the next 18 to 24 months. What we're working on here between Berlin and Shanghai and Fremont is to have 3 and Y locally produced in all locations. And so Model 3 is expanding as Model Y is expanding. There may be ups and downs in various factories as we get to the journey of having these products on the major continents.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Also, the rule of thumb of 10%, I think you need to see it. When you see the car, you'll realize that it's not just a 10% different car. It's not just -- there's more change happening, like to the customer's perspective as well.

Operator

Our next question comes from Colin Rusch with Oppenheimer.

Colin William Rusch - *Oppenheimer & Co. Inc., Research Division - MD and Senior Analyst*

Can you speak to the pricing strategy in light of the China price reductions as well as the mission to increase EV adoption? Is there a target for gross profit or operating profit on a per vehicle basis that we should be thinking about? Or how should we really frame that for ourselves?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. I mean we were trying to make the cars as affordable as possible and as fast as possible while maintaining reasonable -- while still being at least a little bit profitable and grow the company like crazy and having good free cash flow and accumulating our cash balance.

Zach, anything you want to add?

Zachary Kirkhorn - *Tesla, Inc. - CFO*

No, I think that's fair. Our order rate supports the pricing that we have right now. We're working very hard to reduce costs and expand production because, I mean, we feel from the data, it's pretty clear that there's a lot of interest in our products. And so what we're working on is to increase production, increase availability of the products with time. And the price reduction in China, kind of the first step towards this global localization, more accessible price. And we'll continue to work on cost reductions in China as we do in Fremont and grow production.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. I mean the thing that's really going to, I think, probably just have a profound effect on our financials is like -- is high volume and high margin, obviously. And that high margin part comes from autonomy. So do people buy the Full Self-Driving package or not and do they buy it worldwide or only in certain places? For example, our autonomy is not as good in China as it is in the U.S. So fewer people -- a very small percentage of people buy the FSD package in China.

But as we fix that, then we will see a much higher people -- percentage of people buying. And as we

are close to Full Self-Driving, that's just going to become more and more compelling. So that's -- from a financial standpoint, that's the real mind-blowing situation, is high volume, high margin because of autonomy.

Colin William Rusch - *Oppenheimer & Co. Inc., Research Division - MD and Senior Analyst*

Okay. And then just shorter term, there's significant discussion in the industry around moving to higher voltage on the powertrain and then some challenges around the supply chain's preparedness to support that. Separate from the battery pack, since we'll talk about that in a couple of months, can you speak to the areas of focus on powertrain technology-driven cost reduction over the next 12 to 24 months that we should be thinking about?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, our powertrain is pretty damn good. I mean it's way better than anything else out there by a country mile. It's worth noting, for example, that the Model S has like a 100 kilowatt hour pack, but Taycan has 100 -- like 95 kilowatt hour pack. The Model S is steadily approaching 400 miles range, but Taycan has 200 miles range. So we must be using that energy pretty efficiently and the powertrain is a big part of that.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

I would just say the focus is on cost on the powertrain. When we're thinking about technology innovations, it's how do we how do we continue to drive the cost down. And that's through -- voltage is maybe one angle, but there are certainly others that just enable more power density and lower cost.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Powertrain is like mind-blowing, I think. Yes. Coming out later this year, end of the year, probably. It's our goal. Get the powertrain out by the end of the year. And then it's going to be like -- this is like alien technology. It's insane.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

It's all about...

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

I didn't even think we could do -- yes, I mean honestly, I thought there was no way. I guess we got the engineering team. Tesla is about hardcore engineering.

Operator

Our next question comes from Emmanuel Rosner with Deutsche Bank.

Emmanuel Rosner - *Deutsche Bank AG, Research Division - Director & Research Analyst*

So in your slide deck, you had the comment around average selling price being stable or thereabout in 2020. Can you maybe walk through some of the puts and takes, how you see sort of like that metric evolves? Obviously, you have the Model Y, which probably would have initial higher pricing, and then the China Model 3 is at a lower price. So I guess what are the puts and takes for what you see as sort of like stable ASP in 2020?

Kunal Girotra - *Tesla, Inc. - Senior Director of Energy Operations*

I think the product is better and better. That will increase the value.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. We don't want to really comment on prices and such. I think we'll adjust according to what the demand looks like. I mean, like right now, it's pretty good. Maybe that will change. Who knows? Yes.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

But I think the way you described it is fair. So I mean relative to the current Model 3, China Model 3 pricing is slightly lower. And our Model Y pricing is public on the website, so you can see that it's clearly slightly higher than the Model 3 that's out of Fremont. How the mix of those 3 products, and that's out over the course of the year, we'll see. But I think it's probably fair at the moment to assume the mix of those is fairly stable in terms of ASP when you average them together.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes. I mean the affordability of our car in China improved radically because of very -- tariffs mostly gone away, purchase tax exemption, local product supply, not having to spend a bunch of money to transport it over the ocean. So the affordability is night and day for our car in China.

Operator

Our next question comes from Dan Levy with CrÃ©dit Suisse.

Dan Meir Levy - *CrÃ©**dit Suisse AG** - Research Division - Director & Senior Equity Research Analyst*

Just want to follow-up on the question on capital raise. So given the cheaper cost of capital, and this is a real competitive advantage for others, why wouldn't it make sense to raise capital to either pay down debt or to pursue acquisitions, especially bolt-ons that could help you accelerate capabilities in autonomous or battery technology?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

I mean, if you know of any acquisitions, we'd love to hear about them. Yes, sure. It sounds great. Who should we acquire?

Dan Meir Levy - *CrÃ©**dit Suisse AG** - Research Division - Director & Senior Equity Research Analyst*

Well, given the importance of autonomous, I imagine that this is an area that you would want to accelerate if you view it as a crucial competitive advantage.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

We're not aware of any one that we'd want to acquire.

Dan Meir Levy - *CrÃ©**dit Suisse AG** - Research Division - Director & Senior Equity Research Analyst*

And debt paydown?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Diluting the company to pay down debt doesn't sound like a wise move.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

I think the broader -- there's been a couple of versions of this question over the course of the call. I think what we're saying more broadly is that as we look forward on the cash generation from the business relative to what our plans are, we are not constrained.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes, we're going to pay down the debt, just as time goes by. We've paid down $0.5 billion worth of debt last quarter. So we'll just keep steadily paying it down. And yes -- so yes. Yes. I don't think we have anything more to say on that front really.

Operator

Our next question comes from Pierre Ferragu with New Street Research.

Pierre C. Ferragu - *New Street Research LLP - Global Team Head of Technology Infrastructure*

Elon, I wanted to come back on batteries. And if I look at the end of this year, you should have 800,000 units in production capacity forecast. So that's -- if you add to that Model S and Model X and then the energy storage business, it means you've been following north of 60 gigawatt hour of battery production capacity. So where do you stand now? And how do you get there? And then it looks like your competitors, others who would like to compete with you, seem to be struggling to grow battery capacity. So if you can just take us through what you're doing differently, why you're confident you can do that and it looks like nobody has done.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, I guess a lot of people sort of made fun of us for not like being able to build cars and build capacity. And it's like now it turns out, actually, even the pros have trouble with it. It's pretty hard. But the fact is, we've already demonstrated massive growth in cell production capacity at our Gigafactory in Nevada. And you have to go from the cells to the modules to the pack. So it's not just cell capacity but also module and pack capacity. So we've just gotten pretty good at that.

And we've worked well with key partners, like Panasonic. The Panasonic relationship has been excellent. They've been a great partner with us for many years. We've added some additional partners at a smaller scale with LG and CATL.

And yes, we'll have more to talk about this in detail on Battery Day. Like I said, probably April. We've got a very compelling strategy. I mean we are super deep on cell, super deep, cell through battery, so cell module battery.

And Drew, is there anything you want add to that?

Andrew D. Baglino - *Tesla, Inc. - CTO*

I think you said it all.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

We are super deep.

Andrew D. Baglino - *Tesla, Inc. - CTO*

Yes, it's a (inaudible).

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Rabbit hole goes down pretty far.

Andrew D. Baglino - *Tesla, Inc. - CTO*

Seven days a week.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Seven days a week battery production. Man, do we know a lot about batteries. Geez.

Andrew D. Baglino - *Tesla, Inc. - CTO*

I think I can see that. The only thing I would add is we do have a decade-plus of experience of not just like what a cell should be but how to integrate it into the product, and that's really helped us.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Yes, absolutely. And how to manage the cell and the module and the battery and through different weather conditions and different terminal and different charge regimes. And wow, we really know a lot about batteries. Next level.

Pierre C. Ferragu - *New Street Research LLP - Global Team Head of Technology Infrastructure*

Okay. And Zach, maybe a quick mundane follow-up for you, if that's all right. Can you give us a sense of the impact of the ramp of Shanghai on your cars in Q4?

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Yes. We were negative gross margin on the products that we built in Q4. But the team in China, I think, did a great job managing costs during the launch. And so there was a slight drag associated with it, but not terribly significant.

Operator

Our last question will come from Joseph Osha with JMP Securities.

Joseph Amil Osha - *JMP Securities LLC, Research Division - MD & Senior Research Analyst*

Further to the conversation around cell technology, just wondering if you can comment on what the plans are for the Maxwell technology that you acquired here as a capacitor or dry cell or what have you.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Well, like I said, we're going to talk about this in Battery Day, which is probably April. And then a lot of these questions will be answered. I think it's going to be a very compelling story that we have to present. I think it's going to actually blow people's minds. It blows my mind, and I know it. So I think it's going to be pretty cool.

Joseph Amil Osha - *JMP Securities LLC, Research Division - MD & Senior Research Analyst*

Maxwell's -- that ultracap technology is kind of part of the plan?

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

It's an important piece of the puzzle, yes. I think like some of the sort of retail investors have managed to put together several pieces of the puzzle, they seem to have the most insight.

Joseph Amil Osha - *JMP Securities LLC, Research Division - MD & Senior Research Analyst*

I shall have to read the blogs more.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you very much for -- everyone, for all of your good questions, and we will speak to you in another 3 months. Thank you.

Elon R. Musk - *Tesla, Inc. - Founder, CEO & Director*

Thank you.

Zachary Kirkhorn - *Tesla, Inc. - CFO*

Thank you.

Operator

Ladies and gentlemen, this concludes today's conference call. Thank you for your participation, you may now disconnect.

Call participants:

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Elon R. Musk, Tesla, Inc. - Founder, CEO & Director
Kunal Girotra, Tesla, Inc. - Senior Director of Energy Operations
Martin Viecha, Tesla, Inc. - Senior Director for IR
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