Annual Shareholder/Investor Meeting

Company Participants

- Elon R. Musk, Co
- Todd A. Maron, General Counsel

Other Participants

- Aeisha Mastagni, Designee, Connecticut Retirement Plans and Trust Funds
- Unidentified Participant, Analyst, Unknown

Presentation

Todd A. Maron {BIO 18879554 <GO>}

Hi, everyone. We're going to get started. Welcome to Tesla's 2017 Annual Meeting of Stockholders. My name is Todd Maron, I'm Tesla's General Counsel. Following the formal part of the meeting, we'll welcome Elon Musk up onto the stage. In addition, I'd like to introduce several other people who are here with us today. We have our whole Board of Directors up in front; along with our CFO, Deepak Ahuja; we have our VP of Investor Relations, Jeff Evanson.

There are 2 parts to today's meeting. First, the formal part of the meeting. We'll cover the 5 items that we've asked stockholders to vote on today. And after the voting, Elon will provide a presentation. At the end of his presentation, we will take the questions that we asked for on Twitter yesterday. We got thousands of questions and Elon will answer many of them.

Okay. I'm now going to call Tesla's Annual Stockholder Meeting to order. Please refer to the agenda and rules of the meeting that were provided to you today. The time is now -- something -- 2:40 p.m. And the polls are now open. We've already received, over the past few weeks, voting proxies from our stockholders, meaning that almost all of the votes have already been counted, although some of you also vote today and those will be counted as well.

As I mentioned previously, if you wish to pick up a ballot, there's a table over there and you can grab one and then you'll want to hand it to Lisa Brenten from Computershare.

Tesla's Board of Directors has appointed Lisa to serve as Inspector of Elections for this meeting. She has taken and signed an oath as Inspector of Election. Computershare has certified that, starting on April 20, 2017, the proxy materials or a

notice of Internet availability of the proxy materials were mailed or provided to all stockholders of record as of April 13, 2017.

We have a majority of the outstanding shares represented at the meeting. So there's a quorum present and we can proceed with the meeting. The items on the agenda are as follows: number one, the election of 3 Class I directors, Elon Musk, Robyn Denholm and Steve Jurvetson, to serve for a term of three years or until their respective successors are duly elected and qualified; number two, a nonbinding advisory vote on the approval of executive compensation; number three, a nonbinding advisory vote on the frequency of executive compensation votes; number four, to ratify the appointment of PricewaterhouseCoopers as Tesla's independent registered public accounting firm for the fiscal year ending December 31, 2017. Tesla's board has recommended that our stockholders vote for each of the director nominees, for the approval of executive compensation, three years as the frequency of executive compensation voting and for the ratification of the appointment of our accounting firm.

Finally, we've also received a stockholder proposal as described in our proxy statement. Our board has recommended that our stockholders vote against this proposal. The stockholder proposal is proposed by the Connecticut Retirement Plans and Trust Funds, whose designee, Aeisha Mastagni, is here to present the proposal. Ms. Mastagni, where are you? Here you are. You can come up and you'll have a few minutes to present your proposal.

Aeisha Mastagni {BIO 17575347 <GO>}

Thank you very much. Mr. Chairman, members of the board and fellow shareholders, thank you for the opportunity to speak with you today. My name is Aeisha Mastagni. And I'm a Portfolio Manager in the Corporate Governance Unit of the California State Teachers' Retirement System. I am presenting Proposal #5 on behalf of the Connecticut Retirement Plans and Trust Fund. And sponsor of the proposal; and Connecticut State Treasurer, Denise Nappier. The Connecticut pension plan holds approximately 34,537 shares of Tesla's stock.

I hereby move the proposal, which asks the board to take the necessary steps, excluding those steps that must be taken by shareholders, to eliminate the classification of Tesla's board and to require that all directors stand for election annually. Tesla's board is currently classified, which means that, each year, only a portion of directors are elected by shareholders. This year, shareholders have the opportunity to vote for 3 of Tesla's 7 directors. Classified boards hamper the ability of shareholders to hold directors accountable. In our view, annual accountability serves to keep directors closely focused on the performance of top executives and on increasing shareholder value. Moreover, academic studies have found that classified boards are associated with lower firm value, poor pay for performance. And greater likelihood of value-destroying acquisitions.

Classified boards are increasingly rare, especially among larger companies. Accordingly to the 2017 ISS Board Practices Study, over 65% of S&P 1500 companies

and almost 90% of S&P 500 companies elect all directors annually. Tesla's board has changed little since it went public. Founder Elon Musk's brother, Kimbal Musk, serves on the board, as do 3 directors with business ties to Elon Musk. Only 1 of those directors is standing for reelection at today's meeting, which means shareholders' ability to express their views about board composition and director relationships -- that may compromise independence.

Tesla claims in its statement in opposition that declassifying the board would impair Tesla's ability to undertake long-term initiatives and create shareholder value. Tesla cites no data in support of that assertion and the only data which we are aware to tell a different story. A 2009 study in the Financial Analysts Journal found that U.S. public companies with classified boards invested less in research and development and other company-specific capital assets than companies with declassified boards. Even for R&D-intensive companies and those in industries where technology played a key role, like semiconductors, aircraft and space vehicles, companies with declassified boards invested a significantly higher portion of assets in R&D and created 22% more value for shareholders than companies with classified boards. We urge shareholders to support this proposal.

Todd A. Maron {BIO 18879554 <GO>}

I'd like to remind our stockholders that Tesla's board has prepared a statement in opposition to the proposal and that appears in our proxy statement.

All right. Before we wrap up, are there any proxies remaining in the audience that have not been submitted? If so, now is the time to submit them in order for them to be counted. If you have one, please raise your hand and we'll have people come and grab them. Try to hold them up high. Thanks.

Okay, I don't see any more hands. One hand. One more hand. Can we get one person to come up in the front?

Okay. I declare that the polls are now closed. As I mentioned earlier, we did receive almost all of the votes before the meeting started. And based on the proxies that we received, I can announce that our shareholders have approved the recommendations of Tesla's board on all 5 of the agenda items. We will formally announce the results of the voting by filing a Form 8-K within 4 business days of today's meeting.

That concludes the official part of today's shareholder meeting, which is now adjourned. We can now move on to Elon's presentation, which I promise you, will be more interesting.

Elon R. Musk {BIO 1954518 <GO>}

Hi, everyone. Well welcome. I'm glad to see you, too. I always love these shareholder meetings. I mean, I tell people I like doing the shareholder meeting and it's like,

man, it always feels like a party and I love seeing you guys. And it's like -- and they're like, "Really? That's not like normal shareholder meetings."

So I want to go through the kind of a high-level overview. I think it's been a really great year for Tesla and I think there's even better years to come. And so I'm going to talk about that and then try to answer -- I think there's 20 questions that we have on the list that were submitted via Twitter. There's certainly some really interesting questions that were submitted and some interesting correlations that were drawn. We couldn't get to them all. But we'll try to get to, I think, the 20 that I think are most significant for the year ahead of us.

So really the -- one of the key things that happened this year is the beginning of the transition of Tesla to a fully integrated sustainable energy company, where you have solar creating energy, then the stationary battery pack, the Powerwall and Powerpack storing the energy. And then that energy being used in an electric vehicle.

Now the great thing about this is it answers all -- it's a fully contained energy solution that could scale for the whole world. I don't -- get into that for a moment. But it's something where you can imagine as far in the future, well beyond human civilization, which I hope lasts a really long time, that this is something that would last for really -- this is -- this works. And I think there are no unanswered questions. Even in the Gigafactory or the Gigafactories that make these products will be powered by sustainable energy.

So like, I really don't think there's any hole left in the argument. Because when we were making electric cars, people would say that, well, they're just really coal-powered. And there's like the long tailpipe -- there were tailpipes really over there by the power plant. And we're like, yes. But we're going to have sustainable energy generation too and then -- but then you cancel out gasoline cars. So you're going to have electric cars, sustainable energy production. And then you've got to store that energy because the sun don't shine at night. Real simple, 1, 2, 3. That's been amazingly difficult to explain this. I'm like, there's only 3 pictures there, man. I'm like, I mean, come on.

So with the solar roof, we really try to address, at the residential level, I think one of the fundamental inhibitions of adding solar, which is aesthetics. People love their homes. They want their homes to be beautiful. And if you've got a sloped-roof home, that means you have to have solar integrated into the roof itself. And so what we've created here, I think, is something that's going to be incredibly revolutionary, where it's beautiful. In fact, I think it looks better than a normal roof. In doing this, we were trying to find examples of roofs. And it's like, man, take a look at roofs next time you're driving down the road. You're like, whoa, they're not good.

So this is a roof that's going to be better-looking than a normal roof. It's going to last practically forever. Like, I wanted to have an infinite-year warranty. But then the finance department said, "Well that's difficult to account for." So I said, "Well okay. It's infinite or when your house falls down, whichever comes first." You'll get the best

request. [ph] But basically, it's going to last forever. You think of it like a cathedral with stained glass windows. Those stained-glass windows are about the only thing -- and the stone walls -- the only thing that's lasted over half a millennium.

So great-looking, durable, affordable when you consider the cost of a roof and the cost of electricity from the utility. And this is going to vary quite a lot by region. So it depends on what property taxes are, what the cost of financing is and what the cost of power from the utility is. But we're confident that this is going to be something that is -- either it actually makes you money or is close to breakeven for most of the country, which I think is really profound.

Now there's still a very important role for the traditional kind of flat-panel solar. And so that's still going to be a very important part of our business going forward, because whenever you've got a flat roof situation, which is most commercial installations are flat roofs. And -- or if you've got a residence that's got a flat roof and it's not visible from the street, then there's no need to go with the solar glass tiles because aesthetics are no longer a factor. You can't see it.

So let's -- I just want to emphasize that traditional solar is still going to be a very important part of the business going forward. Also, if somebody has got a brand-new roof, they probably don't want to replace the roof right away and it's still going to make sense to have retrofit solar.

And these are the -- where you're seeing cycling through are the kind of the first 4. We're starting off with 2, which is the kind of the black slate and the textured slate. Then, hopefully, by early next year, we'll be in production with the Spanish-style and the French slate versions. And there will be more over time.

But the overarching goal here is to have a set of products -- or a set of roof products where, if you were driving through a neighborhood and you looked at the roofs, you say, like, "Wow. I really like the way those roofs look." Roofs don't get a lot of attention. But we want something -- we want to create -- it's like, if you can imagine the future and what it looks like, that, that's something that you want.

And obviously, that needs to be paired with stationary storage, with a battery pack. The battery packs are important for a number of reasons and they -- because the solar power obviously peaks during the middle of the day and then it's low at dawn and dusk and it's not there at night. So it needs something that is load-leveling the power. So it's storing it when there's high power generation, releasing it when you have low power generation. And this is going to be important for grid stability as solar scales. So as there's more and more solar, it's more and more critically important that there be batteries to load-level the grid and enable a full transition to sustainable energy.

So the -- and then it has a great advantage, which, I think it's this kind of thing where only you really notice it when the power is out. Like, if there are frequent power outages because a substation went down or a bird flew into wires, or in many parts

of the world, power is intermittent and they have to have generators, which run on very expensive diesel fuel. But even here in California, we know we're due for the big one, that it's been saving up. So there's going to be earthquakes in California. There'll be hurricanes in the Southeast. There'll be ice storms in the Northeast. There's floods, there's all sorts of things that cause electricity interruption. And we're very dependent on electronic devices.

So people might say, "Well it's not a problem. I'll call 911." Well how are you going to do that if your phone is dead? Okay, that's real hard. And if all your devices are gone because of a power outage, we're so dependent on devices these days that it's actually a significant safety and security concern.

So the nice thing about having the Powerwall, particularly Powerwall 2, is that it's like having an uninterruptible power supply for your house. And like I say, it's like buying insurance. It's sort of like the kind of thing that when you need it, you really need it. And so I think that's an important advantage that is sometimes overlooked.

And we've got the Powerpack side. This is for big utility scale installations, as well as I should point out, a very important market, which is commercial and industrial. So we've done some of the biggest -- in fact, maybe I think the biggest -- still the biggest battery installation in the world in Southern California. And that took over from what was a natural gas peaker. And that's an operation that's doing well.

We've got a huge system in Hawaii, in Kauai, which is responsible for 20% of Kauai's peak power generation. Then we've got a system in American Samoa, which powers the whole island, that's totally off grid. And I think that's a great example of what the -- of the potential. Because in the limit, a continent is a big island, okay? There's this big island. But it's called a continent. If you can make -- if you take an island and have that completely run on solar and batteries, you can do that with a continent. So the potential there, I think, is incredibly exciting.

And now with the latest version of the phone app, integrated the Powerwall and solar with the Tesla app. So now you can see on your -- in Tesla's list of products, no longer is the list just vehicles. It says products. And now you can see the Powerwall is on there and solar. So you can see the status of your Powerwall. You can see whether your solar system is functioning well, how much energy you're producing. It will show you how much energy you're producing, how much is being stored, how much is being consumed and then how that relates to the car. And so you have a really well integrated system that combines solar storage and your vehicle. And I think there will be a few other things in the future that maybe people aren't expecting as well.

So you can see your energy usage during the day. So you can tell if maybe you should be turning off certain devices or reprogramming your air-conditioning system. And it gives you a good idea of, like, where you're using power that you may not even realize that you're using.

And if you are drawing energy from the grid, it'll tell you how much energy you drew from the grid and how much you powered yourself. So I think it's -- and this functionality is just going to get better and better. This is what's working today. So this is not speculative. This is the current app that does this.

From the standpoint of the customer experience, we're going to make a significant increase in the number of retail stores we have around the world. We think we've really barely touched the surface of what's possible on the retail side. If you just do a back of the envelope analysis and say, in the U.S., there's about 330 million people, how many stores per person should we have? Or how many people per store? It seems like, probably, over time, we'd want at least 1 store for every 0.5 million people. So that's 660 stores right there. In China, it would be thousands of stores. Or throughout the world, there would be several thousand stores. So that's -- our plan is to keep expanding the retail store footprint to be able to cover anyone who could want to buy our product.

Service has gotten better and better. So we now have fast lanes in service. So the wait times for service have gone down dramatically. It's obviously very important for the Model 3. And we're also adding a lot more service centers in anticipation of Model 3 production. And this year, we will double the number of Tesla Superchargers in the world. So double year-over-year. And I think, next year, probably, at least 50% increase, maybe double again next year.

This gives you just a sense for how many Superchargers there are in the world. It's worth noting, this is actually the only high-speed charging network in the world. There isn't even a second one. I asked our head of -- the head of our Supercharger program, "Okay. Well what's the second best high-speed charging network in the world?" And he said, "Well there's this one place in the Netherlands. But it's -- I think, it's only like 60 or 70 kilowatts. But there's only one of it. Okay. And like, well, it usually doesn't work." Okay. All right. All right.

Anyway, we're just going to keep growing it as fast as we can to make sure people can go wherever they want, whenever they want, with convenience. Keep upgrading the capability of the Supercharger system. So it can charge things faster. We're going to start adding amenities to the Supercharger stations. So the really big stations, we'll start adding amenities. And just make it so that you -- when you do a long-distance trip in a Tesla, you'll love the experience. That's the overarching goal.

Then Autopilot. It's definitely been a tough slog transitioning from the Mobileye vision chip to Tesla's internal vision system. But I think we're almost there in terms of exceeding the ability of the Hardware 1 cars.

So Hardware 2 cars have all of the hardware necessary for full autonomy. So 8 cameras, 12 of the most advanced ultrasonic sonar sensors, a radar, a very good GPS, an IMU. And everything necessary to go full autonomy. It's really about upgrading the software over time.

So I think with the next release of the software, which is maybe as soon as next week, we will finally exceed the experience of the Hardware 1 cars and then it's going to advance very rapidly from there. And our goal remains being able to drive autonomously from a parking lot in California to a parking lot in New York without touching a control at any point along the way.

So the Gigafactory is going quite well. That's I think the latest picture of the status. Obviously, the ultimate footprint will be quite a bit bigger than what you see even there. And it's -- we believe it will be, within a few years, have a capacity equal to all other lithium-ion battery factories in the world combined in one building. So if you add out of everything in the U.S., China, Europe and created everywhere else, this one factory will output more than all of them combined.

So it's really -- just the sheer scale of this is difficult to appreciate, unless you're there in person. It is just staggeringly enormous.

That allows us to achieve high economies of scale. So that with very high production rates. We're maximizing economies of scale, enabling us to get the lowest cost per kilowatt hour in the world. But at the same time, have the most advanced batteries.

So the combination of the best technology at the lowest cost, I think, is just a very -- obviously, a great position to be in. And I think it's a fundamental part of Tesla's strategy. There's just no one else who's attempting anything -- as far as we know, even attempting anything on this scale. And so I think that puts us in a very strong competitive position to sustain the growth of the company for several years to come. Then over time, there will be several Gigafactories. I think, eventually, 10 or 12, maybe 20. I don't know. A lot. So it's like a giant machine. So we'll keep refining this and productizing it and then building Gigafactories around the world.

An important thing that we're making progress on is factory safety. So far this year, Tesla is 32% below the automotive industry injury rate. And that trend is better and better with each passing month. So I think we're on track to be less than half the injury rate of the automotive industry and, by far, better than any other U.S. factory, which I think is something that is extremely important.

Then we've got some future products. So the semi truck, we're going to unveil at the end of September. And I think that's very exciting. A lot of people don't think you can do a heavy-duty, long-range truck that's electric. But we are confident that this can be done. So we'll be showing off a working prototype at not too long from now, in the end of September.

And we've shown it to a number of the organizations that buy heavy-duty trucking and they all love it. And they just want to know how many can they buy and how soon. It's like, cool.

And we're involving them in -- thank you. And we're getting them closely involved in the design process. So the biggest customers of the heavy-duty Tesla semi are

helping ensure that it is specified to their needs.

So it's not a mystery. They already know that it's going to meet their needs, because they helped decide what the -- they've told us what those needs are. So it's going to really just be a question of scaling of volume to make as many as we can.

Then Model Y. I'm really excited about Model Y. It's -- there's been some criticism, like we should sort of derive from the Model 3 platform. But I think, actually, we made a mistake in trying to derive the Model X from the Model S platform. It would have been better to just design an SUV the way an SUV should be designed, design a sedan the way a sedan should be designed. Otherwise, you're just trying to shoehorn something in that doesn't make sense.

Also, there are a number of, I think, really major manufacturing improvements that can be done that allow us to build the car in a way that a car has never been built before.

The capital expenditures, I think, would be substantially less. I'm confident that we could drop the CapEx by a factor of 2 between Model 3 and Model Y, which, I think, is a really big deal and accelerate its readiness despite the new technologies. So we're aiming for that to hit the roads in 2019, approximately. And probably the demand for the Model Y will exceed the demand for the Model 3.

So -- and there's a few other things I haven't mentioned here. I've got to...

Unidentified Participant

(inaudible)

Elon R. Musk {BIO 1954518 <GO>}

I'd just like really recommend showing up for the semi-truck unveiling. Maybe there's a little more than we're saying here.

Unidentified Participant

(inaudible)

Elon R. Musk {BIO 1954518 <GO>}

Maybe. Could be. Who knows?

Model 3 configurator. So we expect that configurator to go live towards the end of next month when we deliver the first production Model 3. So yes, we're definitely on track to deliver the first production Model 3 next month. That's going to be really exciting. Then we'll have the configurator go live right at that point.

Now I should say that the -- we've kept the initial configurations for Model 3 very simple. This is critical to achieving a rapid production ramp. Big mistake we made with the X, which primarily is my responsibility, way too much complexity right at the beginning. That was very foolish.

So we think of it like, going back to the launch of the Model S, Model S only had one configuration at the start of production. And now it had one configuration because that's all we could do, not because we were really clever. Then Model X, hubris extraordinaire. We actually -- we added -- I mean, it is like a FabergÃ© egg of cars. I think it's really an amazing product. But it has way too many cool things in it that should have really been rolled in with version 2, version 3. That would have been the sensible way to do it. We got overconfident and created something great that probably will never be made again and perhaps should not be. But it is an amazing car. And as we keep refining the software in the Model X, it's just going to get better and better.

So initially, the Model 3 configurators, it's kind of going to be like what color do you want and what size wheels do you want? That's basically going to be the configurator. Then we'll show what other configure -- what other versions are coming later as soon as we get configuration one right. But they -- and with a time line associated with each configuration.

For example, we were going to start off with Dual Motor. But that's like, wait a second, we just doubled the probability of something going wrong if we got 2 motors because they're 2 different motor architectures. One motor is optimized for highway travel. And one is optimized for stop and go traffic, which is great for maximizing your mileage in city and maximizing your highway -- your mileage on freeway and having incredible acceleration. But it's too much complexity right off the bat.

So we'll just be single motor to begin with. And then we'll have the Dual Motor config, if we're lucky, toward end of this year, more likely early next. So I wouldn't too much about the configurator because you only have to decide like what color do you want and what size wheels? That's basically it for initial production.

In terms of how many factories are in the works, we're really giving serious consideration to 3 factory locations right now. But we're going to try to hold our powder dry -- keep the powder dry until we're confident of the locations and the timing. But like I said, ultimately, probably there's at least 10 of these worldwide and maybe as much as 20.

How long of a wait will it be for customers wanting Model 3 who haven't placed a 1k deposit? This will be a long wait. There's a lot of people that have ordered the car. I'm guessing if you put a deposit down on Model 3 now, it's probably -- well, it's going to be over a year, end of next year before you get it, something like that.

On the other hand, we -- there are more and more deposits every week. So if you want it, then definitely, put down the deposit. The line isn't getting shorter.

We're doing our best to do this ramp -- we got to do the ramp right. We got to make sure the quality is good, the safety is good.

And it's crazy hard to make cars. I have to tell you. There's like 10,000 unique items and it will move as fast as the slowest item. Then even beyond the stuff that's internal to Tesla, you say like, okay, who's the least lucky supplier we have out there? Or what supplier cares the least or whatever the case may be? Then you look at our supply chain and it's like, wow, our supply chain is like covering Earth. So like what are the odds that there's going to be some force majeure events somewhere on Earth? Like pretty high.

So one of the things I want to do with Model Y is also just simplify the supply chain so that we're not inheriting force majeure risk from Earth, because Earth is big and if something bad happens on Earth at any given point in time. So we're going to stop inheriting force majeure risk from all of Earth. You can help -- you can solve this by buffering parts. But if parts aren't made to begin with, you can't buffer them. So yes.

Are there plans in place to offer battery upgrades? Yes. So we do offer that already. I wouldn't recommend doing a battery upgrade until the existing battery you have has a fair bit of life on it. And there are some limitations because there can be a pretty big weight difference between the lightest battery pack and the heaviest. So we can't go from lightest to heaviest.

But we definitely can upgrade battery packs really in every car. And we will offer that and make that easier with each passing year. For somebody who's got a new battery pack, it's not going to make financial sense to upgrade just the battery pack. Better to sell the car that you've got and then buy a different one, either new or used.

And I should mention, we're going to really give more prominence to used Teslas on our website. But we're not going to call them pre-owned. That is like a bogus name. So-called BS. It's used, okay? Everyone knows that. Who are we fooling here?

So the used Tesla section of the website is going to get a lot more attention. And particularly, if the car is four years old and it's got a lot of mileage, you could buy a Model S for as much as a Model 3. It's like, well, okay, maybe somebody wants to buy a Model S for $35,000, $40,000. And they can have that today. Then when the Model 3 comes in, they can switch out to the Model 3, if they want. Model S is still going to be the -- because it's a more expensive car, bigger, there's more room for bells and whistles, it's still going to be our premium car. But anyway. So used Tesla is going to get a lot more attention on our website. And yes.

And so what changes are being made to address safety? So this is something we're driving really hard on every week, being with the safety team every week to say, what can we do to make it better? And like I said, I think we're well on our way to having

an injury rate that is half that of the rest of the auto industry and way better than any other car company.

A key change that was actually already made late last year was having 3 shifts instead of 2. So the -- a lot of the injuries would happen when somebody whose -- had like a 10-, 11-hour day. They just get tired. And then that's when you tend to get injured. So having 3 shifts made a huge difference to injury rate.

Then redesigning a lot of the processes to be a lot more ergonomic and improving the fixtures and tooling. There's a lot of detailed work that needs to go into avoiding repetitive stress injuries. And -- but I'm really proud of what the safety team is doing. And I think we're making huge progress towards being the safest automotive company in the world.

I already talked about the semi. So I mean, timing-wise, I'm guessing that we will probably reach scale production on the semi in about two years. Maybe 18 months but probably about two years.

And I've already answered this. There will be continued improvements to the speed of supercharging. Yes.

Okay. Somewhat randomly, AAA of Southern California hugely increased Tesla insurance premiums. There is a simple solution. Change your insurance provider. From the study we did, the average rate for insuring a Model S or a Model X is about 5% lower than other premium vehicles. And if you actually pick the right insurance provider, it could be 20% or 30% lower.

It's just -- it's really hard to -- for there -- for death or serious injury in an S or an X, you really have -- it's like hard to do that, okay? We literally had one person go down, I don't know, like a 300-foot cliff/ravine and they walked out of the car. So the -- and then with automatic emergency braking, which is getting better and better as the software improves, that actually helps a great deal with pedestrians and cyclists.

Then because the Model S and the X have such a long crumple zone, that's 2 to 3x longer than a conventional automotive car that's got a big engine steel block in there, it means you actually are helping even -- like even the car that you hit, the combined crumple zone of both cars is substantially greater than if 2 gasoline cars hit.

So it's not just you're helping safety with -- the safety is not just good for people in the car. It actually helps if you do have a collision with another car.

Then we -- the hood is designed to be like a sort of trampoline. Now, it's not the funniest trampoline. But again, there's no big engine block that you're going to hit. So you can sort of -- if you do hit a pedestrian, the -- it's not a good time. But the -- essentially, the spring effect of having a hood that doesn't impact a big steel engine

block is -- really makes a big difference to the lives of a pedestrian if one is hit. So yes.

Will we offer a package deal? Well I guess effectively, when you consider the installation cost of the roof, the Powerwall and the home connector -- technically, it's not a charger, it's a connector. If that's done at the same time, then you could save $2,000 to $3,000 on installation costs of all things combined. So just by doing it at the same time, you automatically get a reduction in cost because it's fundamentally more efficient than if 1 team visits than if 3 teams visit. Then yes. But we haven't currently considered a package deal. But yes, maybe it's something to do in the future. So no decision on this. But like I said, it actually will cost less if you do it at the same time.

In terms of a new director. So we've been interviewing a number of independent directors to add to the Tesla board. And I think we're quite close to making a decision. And I think we will add at least 2 and maybe 3 new directors. And I think from a broad range of backgrounds and industries. So I expect we'll probably make that announcement in the next month or 2 at most. But I think there are really some amazing people that will be joining the board.

Audio system insight. Yes. Actually, I was just talking about that with the team today. I think there's quite a bit of room to improve the audio codec in the S, X and obviously the 3. Because it is a Tesla system. So we can just reprogram it to make it better with software. And I feel pretty confident that just with an over there -- update, we can actually make the audio system sound quite a bit better. But it's -- I think it's a good system. And yes, it's going to get better.

Yes. We're going to have a huge increase in the number of service centers around the world. And for any places that are not covered by a service center, we have our mobile repair expansion, the Tesla Rangers, will cover essentially anywhere on Earth.

For a Model 3 rollout in states that don't allow direct sales, this is maybe where we got a lot of pushback from the dealer groups. And I mean, they say that their mode of sales is superior. I'm like, okay, well, then why would you want a legal block if people love it so much? It's like it doesn't make sense.

So -- but the answer is actually, you can order a Tesla in any state in the country. So there's no limitation on ordering a car. And we can service anywhere in the country. So actually, all you need to do is go on the website, order the car and that's it. We can't do sales in stores in every state. But we actually sell in every state. And there are Teslas in every state in the United States. So all you need to do is just like order it like you're ordering something from Amazon or Apple or whatever. Just go on the website and order it and it shows up. It's like that. Then we'll take care of service.

Really? Some of these questions, by the way, I'm seeing as you are seeing them. What do I do for relaxing? Well it may not shock you but sports is not like a thing that I do a lot of. I do listen to music, particularly in the car. And in terms of the music

selection, I think there's going to be some exciting announcements in terms of how -- the music selection. I think it's very hard to find good playlists or good matching algorithms. We have something that works okay right now. But I think it could work really, really great, yes.

But there will be a few -- an announcement on that later this year. I think that's going to be -- this is going to be like the music you want to listen to. Yes. I think -- well, at least I want to listen to it more. One of you? [ph] We'll see.

I do watch movies. I do love movies and I used to watch a lot of them. Less these days because of work. I mean, I don't want to spend a ton of time on this question, because like, I don't know if it's super relevant to Tesla as a company.

But I went and saw the Wonder Woman movie with my kids this weekend. That was great. Usually, it's work more though. It's usually work more. So yes, I hang out with my kids, see friends, normal stuff. Sometimes go crazy on Twitter, yes. It's sort of there with a little red wine, vintage record player, some Ambien, magic happens.

Are you expecting a new plant to be built for the Model Y? Yes. We are. I think the existing Gigafactory will probably supply the -- in fact, will supply the battery pack and drivetrains and motor and power electronics for the Model Y. But the Model Y vehicle plant will be a new plant, essentially a new Gigafactory that we got to figure out the exact location of. But there's just no room at Fremont. We are bursting at the seams.

Obviously, like if I ask you like, what's their #1 complaint? It's parking. It's like, okay, we like practically had a riot the other day for parking. And I'm like, sorry, guys.

What happens, we had a bunch of contractors come on site to install equipment for the Model 3. And we hadn't counted on the fact that there would be 500 extra people that showed up to install massive amounts of equipment.

So then, okay, our parking was full. So therefore, it's like a conservation of mass here, or conservation of volume, because you -- 500 people who can't park. Anyway, it's crazy how much parking lot is a pain in the butt.

So we're bursting at the seams in Fremont. So there's just no way we could do Model Y at Fremont. So it's going to have to be somewhere else. And I think Fremont is just going to be really focused on obviously S and X and then ramping up Model 3. I think we'll even have to transfer some of the things we do at Fremont to the Gigafactory just to allow for Model 3 expansion.

So how do I allocate my time across several companies? Yes. So I think it's very important to appreciate that tweet frequency does not -- there's no correlation with what I actually do for a work basis. It's like I might tweet a lot about like The Boring Company, which is basically a hobby. It's like, I wouldn't even call that a real

company at this point. It's got like 3 people, some interns and some part-time people. We're making pretty good progress for all that. But like that's just kind of like a fun thing to do, where there's like no pressure. Everyone thinks it's going to fail. So it's like okay, can only go up from there. So it's like low expectations are great.

So -- but The Boring Company is maybe 2% of my time. Neuralink is 3% to 5% of my time. OpenAI is going to be a couple of %. Then 90% plus is divided between SpaceX and Tesla.

So depending upon -- and it's probably slightly more Tesla, because Tesla is like a drama magnet. So it's like. So I have to deal with Tesla drama.

So -- but on average, it's probably about half of my time is between SpaceX and Tesla. And there's a lot to be gained knowing how rockets are done and how cars are done. In rockets, you have to deal -- work on very advanced materials, make things superlight. And being able to translate some of that to automotive, I think, has been very, very helpful. So it does do some good there. But I just want to emphasize very clearly, 90% plus of my time is divided between SpaceX and Tesla. And the remaining less than 10% is everything else.

Like I said, I'm literally seeing these questions as you are seeing them. So like -- so in terms of, how we will have experts install solar roofs throughout the U.S.? We're -- that's actually where a huge amount of the value of the Solar City acquisition comes in because they've installed solar on roofs almost throughout the country. And there are thousands of different roof types. And every jurisdiction is different, every county, every city. It's a really thorny, complicated, unsexy problem.

But the Solar City installation team has solved that. And so we're going to be training the Solar City installation team to do the solar roofs, the solar glass tiles.

And the prices will come down as we are able to achieve economies of scale and optimize the installation process. I think it's very important that we be able to kit the entire roof before -- and then put that in a van and install on site very quickly. So that the amount of work that's required on site is minimal. It should be just like LEGO, like just -- it's kitted exactly and you go and you do like a crazy, efficient roofing installation. So -- but economies of scale and making that installation process efficient are key to having the prices come down.

Okay, okay. So most millennials living in apartments rather than homes, what can we do to make it easier to own and charge a Tesla without a garage? So we're establishing supercharging locations, a lot more in city supercharging locations. And they will be a little lower power. But in between a high-power Supercharger, which is optimized for long-distance trips. But more power than would typically be found in a home garage. So wherever their car is being parked, whether it's at the apartment or work or somewhere in between, we're going to make sure that there's a place to charge their car, even if you live in an apartment.

One of the key things for apartments is to manage the power. And so if you've got a lot of cars parked in your garage and you have to design the system to handle a hypothetical case, where all cars are drawing maximum power at the same time, then you need a crazy amount of power. So it's important to have a system that load levels the power so that they don't have to build a new substation just to supply the apartment building. And so that's one of the things that's in the process of being implemented. But no question, we need to solve this problem for apartments, not just homes.

From Jimmy Hoffa, is there an electric plane in Tesla's future? Well we got a lot of fish to fry. There are no plans right now to have an electric plane. We have a long way to go to handle terrestrial transport.

And it's not inconceivable I would do an electric plane. But I do think that we're not quite there in terms of the energy density of batteries for an electric plane. I think the kind of minimum that you'd want is about 400 watt hours per kilogram. And even that would require some pretty substantial innovation in the airframe and the way that you build an airplane in order to have decent range with a like 400 watt hours per kilogram. At 500, it starts to become quite compelling. But I don't know. I think we're maybe 4 or five years away from having 500 watt hours per kilogram, something like that, maybe half a decade, yes, in volume production.

Of course. No. I'm not saying we're going to add a nuclear fusion reactor. I'm just saying it fits.

So all right. Thanks, everyone, for coming. It's great to see you and I look forward to seeing you next year. Thank you.

Questions And Answers

Operator

There are no questions.