

Tesla Motors Inc Conference Call to Discuss its Acquisition of SolarCity Corp

Company Participants

- Elon Musk, Chairman, Product Architect & CEO
- JB Straubel, Chief Technical Officer
- Jason Wheeler, CFO
- Jeff Evanson, VP, Global IR
- Lyndon Rive, CEO
- Todd Maron, General Counsel

Other Participants

- Ben Kallo, Analyst, Robert W. Baird & Company
- Colin Rusch, Analyst, Oppenheimer & Co.
- Edwin Mok, Analyst, Needham & Company
- James Albertine, Analyst, Consumer Edge Research
- Joe Spak, Analyst, RBC Capital Markets
- John Murphy, Analyst, BofA Merrill Lynch
- Julien Dumoulin-Smith, Analyst, UBS
- Michael Morosi, Analyst, Avondale Partners
- Patrick Archambault, Analyst, Goldman Sachs
- Philip Shen, Analyst, ROTH Capital Partners
- Rod Lache, Analyst, Deutsche Bank
- Vishal Shah, Analyst, Deutsche Bank

Presentation

Operator

Good day, ladies and gentlemen. Welcome to the Tesla and SolarCity combination conference call. (Operator Instructions)

As a reminder, this conference call may be recorded. I would now like to introduce your host for today's conference, Mr. Jeff Evanson. Sir, you may begin.

Jeff Evanson {BIO 17513488 <GO>}

Thank you, Chanel. Good morning, everyone. Welcome to our call to discuss the combination of Tesla and SolarCity. From Tesla, I'm joined today by Elon Musk, JB

Straubel, Jason Wheeler. And Tesla General Counsel Todd Maron. From SolarCity, we have Lyndon Rive, CEO; Peter Rive, CTO; and Tanguy Serra, CFO.

Earlier this morning we issued a press release and a short investor presentation at the same web address as this webcast.

During our call we will discuss our business outlook and make forward-looking statements. These 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 SEC filings.

We're going to start today's call with some comments by Todd, our General Counsel, followed by comments from Elon, Lyndon. And then Jason. (technical difficulty) Q&A and during the Q&A time, please try to limit yourselves to one question and one follow-up so everyone gets fair time.

And also, let's please stick to the discussion of the combination this morning. We certainly can discuss other matters about Tesla Wednesday evening this week, when we report our financial results for Tesla's Second Quarter. (Operator Instructions)

With that, I'll turn it over to you, Todd. Please begin.

Todd Maron {BIO 18879554 <GO>}

Thanks, Jeff. Good morning, everyone. Just real briefly before passing it off to Elon, wanted to go over the quick overview of the transaction, which, if you have the investor presentation, is on slide 3.

Under the deal, Tesla will acquire SolarCity in an all-stock transaction. SolarCity shareholders will receive 0.110 shares of Tesla stock for each share of SolarCity stock and this corresponds to a per-share value of \$25.37. The pro forma ownership of the combined company would be approximately 93.5% Tesla and 6.5% SolarCity.

The expected close is in Q4 of 2016 after we go through the standard SEC review and regulatory process. There will be a special approval process for this deal where the transaction will be subject to the approval of the majority of disinterested shareholders of both companies voting at each shareholder meeting.

So with that I'm going to pass it over to Elon, who can speak more about the objectives of the deal.

Elon Musk {BIO 1954518 <GO>}

I think I've spoken quite a bit at length probably about the objectives. So I don't think there's anything new I have to add. It was described when we announced it and then again in my master plan update. But the entire deal is actually driven by a need to bring together the products on the factory and the solar side to create an

integrated product for the end-user. The end-user being all the way from the individual to the utility.

So the idea is that there's one sales process, one inflation process, one service contact, one phone app to monitor things. And then, on the hardware side, that we can integrate the power electronics and the energy management grid from DC from the solar panels, DC from the battery pack. And mixing and matching that to provide AC to homes, businesses, or, in the case of utilities, in those cases very high voltage DC.

So this is really all part of solving the sustainable energy problem, something that has been a goal from the beginning. In fact, for my sort of first tongue-in-cheek answer today I should say master plan 10 years ago. That's why we're all doing this is to try to accelerate the advent of a sustainable energy world and I think this is an important step in that direction. Thank you.

Lyndon Rive {BIO 15308288 <GO>}

I will add to that; this is Lyndon speaking. Many of the (technical difficulty) listening right now are very familiar with Tesla but may not be that familiar with SolarCity. Just to elaborate more on the importance of vertical integration, when SolarCity started we, at first, didn't do our own installation. Quickly we realized that in order to provide the best services and the best products, you need to do your own installation and can control that customer experience.

So we vertically integrated our installation services and our financing services and was able to provide a better experience for our customers and separate it from the competition. We became the biggest in the country. Now one out of every three systems installed in the country is installed by SolarCity. We are larger than the next 50 total companies combined.

In order to continue to maintain this differentiation, you've got to do more than just vertically integrating the services. You've got to vertically integrate the products as well. And so that's the next phase of the Company and Tesla creates some of the best products in the world. When you add their manufacturing expertise and the investment they are making into storage, as Elon mentioned, it's going to be very clear that this company of solar combined with storage will be able to provide energy at a lower cost than traditional forms of energy.

And that energy won't just be energy as we know it today; it will be energy plus grid-related services, where you can address all the grid needs when you add storage to the equation. So I'm very excited about this next phase and I think together we can really accelerate the adoption of clean energy.

Jason Wheeler {BIO 19481227 <GO>}

Cool. Thanks, Lyndon. This is Jason. I'm speaking to page 12 of the presentation we sent out first.

First and foremost, the headline here is we believe we can generate substantial cost efficiencies with the combination of the two companies. Right now we are targeting \$150 million within the first full year after closing.

If I drill down on that, some of the details: clearly there's going to be sales and marketing efficiencies. There are opportunities to rationalize our sales channels. We're talking about one brand in a complete solution for the customer. There's also opportunity to leverage our combined digital and retail capabilities.

We also think there's real opportunity just to improve the overall value proposition when combining the two companies.

On hardware costs, there will certainly be supply chain efficiencies. There are common components between the two companies. Inverters is a great example; rationalizing the software as well.

We believe there is substantial opportunity to reduce installation and service costs. Elon has talked about this already. But we are talking about one trip by one truck to install three products -- solar, storage. And home charging -- for our vehicles.

Improving manufacturing efficiency. We've talked a lot about the machine that makes the machine. To make this a little bit more real, I will give an example.

When Elon and I sat down and started reviewing our Model 3 CapEx plans, there were new buildings everywhere. And I think Elon has been very clear about talking about volumetric efficiency. As we rationalize these plans we've talked a lot about there's no need for new buildings; we can do this in the space that we have, for the most part.

So that is an example of where we think manufacturing efficiency will come into play and we believe that this is going to be applicable to SolarCity as well as they continue their journey down manufacturing.

There's obviously opportunities to reduce customer acquisition costs as well. This is a slide in the deck on page 11 which just talks about North America and I think there's a couple of key things that jump out there.

One, in the markets that SolarCity is currently operating in, Tesla has a footprint there as well so we've got nice concentration within those shared markets. Then, obviously, Tesla has got a global footprint as well, which in the future we can certainly leverage. Then we also believe there is opportunity to cut capital costs as well.

So moving on to the next page; I'm on page 13 now. I think the headline here is the Tesla SolarCity financing strategy is really underpinned by two key factors. One of those factors is the continued maturation of Tesla's production capabilities. We already announced this at the beginning of -- or at the end of Q2. Our production

capacity for vehicles grew 20% quarter over quarter and over 40% year over year, in spite of some of the challenges that we've talked about with ramping up Model X.

Number two, SolarCity has a formidable project financing acumen. I believe that this is a real asset and, as I've gotten to learn a lot more about it, I think we are really going to be able to take advantage of this great capability that the company has built across the enterprise.

If you look at the combination of these two factors, it gives us great confidence in our ability to continue to access capital markets when necessary. So that's the headline story around that. But let me drill into it a little bit.

There's five points on page. One, greater visibility into cash flow dynamics of the combined company. As stated, we are very encouraged by the observed improvements in S and X production, which is naturally going to lead to positive delivery momentum. In addition, we are quite impressed by the cash flow generation of SolarCity's large market-leading installed base.

Number two, Tesla's disciplined capital expenditures, applying that across the enterprise. We've demonstrated capital preservation capability at Tesla. In our Q1 earnings we talked about \$217 million in CapEx, which is significantly down from the run rate in 2015.

Also, the physics-based, first principles approach we're taking to Model 3. I've already mentioned volumetric efficiency. We're also displaying a healthy disregard for conventional wisdom. It's always been thought that increase in capacity require step-change increases in capital.

We're looking for different to optimize assets that are already in place and breaking through that. We believe that will be certainly to SolarCity in the future as well.

Number three, we've got great confidence in our initial capitalization and we've got a goal to delever the enterprise in the future. Number one, drilling down on this, we will govern the near-term debt growth at SolarCity concurrent with the development of a rationalized capital plan across the enterprise. And second point here, we will continue to build our credit profile to open up new sources of capital over time.

Next point, we've got revenue growth that is driven by new products that are already under development. Model 3 is the key example here. We'll generate gross profits from that vehicle and that will enhance our overall leverage profile as an enterprise. Also, the combined solar and storage offering is expected to fuel revenue growth and should help us self-fund future investments.

Last point on the page, realized synergies and cash flow. I covered a lot of that on the last page. But overall, just to circle back, we think each company has things that

they can provide which, as a combined entity, really increases the financial profile and gives us great confidence in the future.

Jeff Evanson {BIO 17513488 <GO>}

All right, Chanel. I think we're ready for questions now.

Questions And Answers

Operator

(Operator Instructions) Ben Kallo, Robert W. Baird.

Q - Ben Kallo {BIO 16897436 <GO>}

Thanks for taking my question. Could you talk a little bit about the 45-day go/stop provision? Is it just a formality? If something were, someone else were to come in and give a higher offer, how would that impact, Elon, your next step in your master plan?

A - Elon Musk {BIO 1954518 <GO>}

Well if someone were to come in and make a higher offer -- we (are presuming) more than like a \$0.01 higher offer -- then I guess the independent Board members would be compelled to accept that and we would have to find another path. I have committed to vote my shares in favor of whatever alternate offer comes through. So if an alternate offer comes through that is materially better for SolarCity shareholders, then I assume the independent shareholders would accept that.

I should point out I had no role in establishing this valuation for the offer that was made, nor do I with any of the mechanics of that. Went into this was -- I was fully recused from the matter. So I know about as much as you do about how this price was obtained.

Q - Ben Kallo {BIO 16897436 <GO>}

Great, thank you.

Operator

Julien Dumoulin-Smith, UBS.

Q - Julien Dumoulin-Smith {BIO 15955666 <GO>}

Good morning.

A - Jeff Evanson {BIO 17513488 <GO>}

Good morning, Julien. Elon, Julien is one of the SolarCity analysts.

Q - Julien Dumoulin-Smith {BIO 15955666 <GO>}

I wanted to follow up here just quickly on the \$150 million. Can you break down a little bit more specific numerically where that is exactly coming from? Also, again given a few months now, what are the specific targets you're thinking about in terms of storage and where geographically are you thinking it could take place?

A - Jeff Evanson {BIO 17513488 <GO>}

Julien, you broke up a bit there towards the end of your question. Could you repeat it please?

Q - Julien Dumoulin-Smith {BIO 15955666 <GO>}

Yes, I apologize. The \$150 million, can you break that down a little bit more quantitatively? Then with regard to the storage element, can you quantify what kind of projected deployment on the SolarCity side you would expect? And perhaps a little bit more comment by region.

A - Elon Musk {BIO 1954518 <GO>}

Sorry, before you start targeting such a -- again, I do want to remind everyone on the call that the deal isn't done. This is simply a recommendation from the independent Board committees. It must go through SEC review and it must then receive a vote of a majority of the independent shareholders of Tesla and a majority of the independent shareholders of SolarCity. Only at that point is this actually a deal.

So this is a prospective deal. But it would be probably at least a few months I'm guessing. We don't control the SEC timeline before it actually becomes a deal. So it's likely to close sometime in the Fourth Quarter. Just to preface all the questions.

Because I think some of the articles I'm seeing seem to assume that a deal has been done. But it's only done the SEC review and two sets of independent shareholders voting and that is at least a few months away. Sorry, go ahead.

A - Jeff Evanson {BIO 17513488 <GO>}

All right. Jason, do you want to take the financial question and we will go back to Elon for the storage penetration?

A - Jason Wheeler {BIO 19481227 <GO>}

Sure, yes, no problem. Julien, great question. Thank you for asking it.

Right now we're not assigning the \$150 million at any lower level of detail than that. But let me talk you through some of the things to think about. One of the things is obviously Tesla's retail footprint is a real example to drive down customer acquisition costs. We have more than 3 million people that come through Tesla, our Tesla retail locations, every year and there is a broad overlap in the types of products that these

customers are looking for, which we think plays right into SolarCity. So one, great opportunity for sales channel rationalization.

Another one we've talked about as well, we install home charging and usually we do this through third-party providers for our Tesla vehicle sales. Also, it would be a separate person coming out to your house to install a battery storage solution and a separate person coming out your house to install a solar solution. In the combined entity we can do all of this with one truck and one trip. So there's real opportunities for synergy on the installation and servicing side.

Then the other key one that we are looking at across the Company is manufacturing as well. We have been in the manufacturing business for many, many years now. We have developed a lot of experience in this area. SolarCity is still in the beginning of that journey. So there I think are a lot of key learnings that can be applied to SolarCity.

If I was going to kind of wrap that all up, I think really looking at customer acquisition costs is a key source of synergy. Looking at reducing installation and service costs is another key source and then also looking at the manufacturing capabilities of the combined entity is a third key source. Of course, we're going to look for more beyond that and we believe there are potential revenue synergies, large potential revenue synergies in the future as well. But just on the cost side there's a lot of meat on the bone.

A - Lyndon Rive {BIO 15308288 <GO>}

Then in terms of the storage adoption, the way I see it, the first product available for residential customers is primarily going to be focused on backup. But you'll see that there is policy changes that are occurring where the grid is looking for grid services and so when you combine solar with storage you can provide essentially most of the grid services that the grid needs.

New York came out with a joint agreement with the solar industry and the main utilities there describing a three; to five-year glide path of how solar and storage would work together. SolarCity just did a -- just announced a pilot with PG&E in Northern California of how solar and storage again provide grid services. So as that policy becomes more common across the different utilities, I see that almost all systems will be deployed with solar and storage combined, call it over the next three to five years.

Q - Julien Dumoulin-Smith {BIO 15955666 <GO>}

But no specific quantitative targets on storage deployment yet?

A - Lyndon Rive {BIO 15308288 <GO>}

Nothing that we will say.

Q - Julien Dumoulin-Smith {BIO 15955666 <GO>}

Okay, fair enough. Thank you.

A - Elon Musk {BIO 1954518 <GO>}

As the companies actually get integrated, remember the companies aren't integrating; the deal is not yet approved and of course there will be considerably high fidelity on that. But I would take the sort of \$150 million, \$200 million estimate, I think that's conservative. That's what my gut feeling here is. I think we will significantly see that even in the first year.

Operator

Patrick Archambault, Goldman Sachs.

Q - Patrick Archambault {BIO 4638109 <GO>}

Thanks. Good morning. I guess my first question is the three; to five-year time frame for when solar plus storage makes sense, is that in all jurisdictions of the United States or is that some?

Obviously, there's different rate levels and regulations as well. And there are places like Hawaii that make sense now. But other states where it's going to make sense in a longer time horizon. So that was my first clarification.

Then secondly, just related to that, the question got brought up last call. But it does beg the question of why now? If you've got sort of half a decade until this makes economic sense and the degree of difficulty of what you've got going on over the next 18 months is so high, why was the decision made to take this on right away? Why not wait until some of these more difficult operating hurdles were gone over I guess?

A - Lyndon Rive {BIO 15308288 <GO>}

I just want to add one clarity to my comment on the three to five years: that is with full mass deployment applying to essentially almost systems we are deploying. Naturally, the adoption will occur a lot earlier with many of our customers.

If you combine solar and storage and you can provide a backup offering at essentially roughly the same rate as what they are paying for energy today, in many of the spaces we operate we see high adoption will occur. My comment on the three to five years is essentially getting to a point where almost every single system that we deploy all has solar and storage. So I just wanted to clarify that. There will be a growth period from now until then as we integrate.

A - Elon Musk {BIO 1954518 <GO>}

This is really long-term thinking here. In order for the right scenario to transpire in three years, we need to take the action now. You can't take the action in three years and then have it instantly be the right move; it takes time to get there. So this is an action now which is anticipating several moves ahead.

Q - Patrick Archambault {BIO 4638109 <GO>}

Okay, if I can just ask a clarification, it's just that there are a number of studies from credible sources that have put the kind of --

A - Elon Musk {BIO 1954518 <GO>}

So they say.

Q - Patrick Archambault {BIO 4638109 <GO>}

-- lower cost of energy. Well I mean just people like the RMI that have done a lot of work on this. And I'm not saying it's 100% right. There is assumptions into every piece of research. But I was just wondering -- their view is that the levelized cost of energy as sort of equaling the grid cost is further out than what you guys would suggest.

And I was just curious -- maybe you haven't read their work, I don't know -- but where do you see yourselves being different? Is really -- is it just the manufacturing costs that you feel you can get it better than what some of those assumptions are? I'm just kind of curious on that point.

A - Elon Musk {BIO 1954518 <GO>}

Well it's important to bear in mind that the cost of energy varies quite dramatically around the United States and throughout the world and the pricing mechanism for that energy also varies considerably. In some countries there's quite a huge premium depending upon the time of day that you use energy.

But in the United States, for example, Hawaii has very expensive electricity. So we expect to see a lot of activity in Hawaii. Certainly well before, say, Texas, which has a very low cost of energy.

So one shouldn't look at this monolithically. But rather as the competitiveness of solar paired with battery improves, it starts to address more and more of the total market for electricity. Initially addressing only where electricity is very expensive, then where electricity is moderately expensive, then slightly expensive. And eventually reaching the point where it's competitive on -- relative to the average price of fossil fuel energy.

So that's a sort of steady march in that direction. It requires a lot of technology development, operational improvements. And economies of scale, all of which this is -- this merger is intended to achieve.

Q - Patrick Archambault {BIO 4638109 <GO>}

Got it, okay. Thanks for taking my questions.

A - JB Straubel {BIO 16619298 <GO>}

If I could just chime in on that too, this is JB. I think most of our projections (technical difficulty) off, especially for a well-integrated product, are more aggressive than what most of these different industry studies have been assuming.

And also, it's not just about levelized energy, as Lyndon was saying. There's a lot of other benefits that have specific value when you can have a very well-integrated product with storage. I think it's really key to take those benefits into account, whether it's just backup power or whether it's aggregated grid services that these distributed resources can be provided.

Q - Patrick Archambault {BIO 4638109 <GO>}

Got it, okay. Thanks, guys.

Operator

Rod Lache, Deutsche Bank.

Q - Rod Lache {BIO 1528384 <GO>}

Good morning, everybody. Was wondering if you can share -- maybe it's just a stab at what the revenue synergy opportunity might be or the extent to which customer acquisition costs for solar can decline. Also, just from a high level, from a Tesla shareholder perspective, can you just talk a little bit about the financial impact of the combination? What is the impact, just roughly, on the earnings and cash flow as you look out at the combination in 2017, 2018. And 2019 versus Tesla alone?

A - Jason Wheeler {BIO 19481227 <GO>}

Sure. This is Jason, Rod. Let me -- there's a lot of questions built into that; that was like a paragraph there.

First of all, on the revenue synergies, I think you look at the combined footprint of the two companies and I just think that there's some more efficient way just to drive revenue. If you look at the digital capabilities, from a marketing perspective, that SolarCity has, the physical retail capabilities that Tesla has, I think there's real opportunity there.

But I also think the story of the value proposition of combined solar and storage is not well understood and I think putting the two companies together makes that message quite clear. And we're going to really be able to help educate consumers on the value there. So I think that's also a huge source of potential synergy.

Now in terms of modeling out into the future, 2017, 2018, 2019, we are certainly taking a look at that. But this is the early days of integration and digging through that. So we're not going to provide a lot of detail on that at this time. But more to come.

Q - Rod Lache {BIO 1528384 <GO>}

Okay. Thanks. Just housekeeping, do you have an approximate record date for the vote?

A - Todd Maron {BIO 18879554 <GO>}

This is Todd. We don't have a record date right now. We need to go through the SEC review process. But we will give everyone plenty of notice before the record date is set.

Q - Rod Lache {BIO 1528384 <GO>}

Okay. Thank you.

Operator

Vishal Shah, Deutsche Bank.

Q - Vishal Shah {BIO 15826276 <GO>}

Thanks for taking my question. Lyndon, I just had a question on your cash flow breakeven targets. I think you had said previously that you will be breakeven, achieving breakeven by the end of this year. Do you still expect that to be the case given the new installation run rate?

Then, as you think about the combined company, what do you think about the split between leasing and direct sales? I think the majority of your business today is leasing. Is that going to be the case going forward or you expect more of direct sale approach?

A - Lyndon Rive {BIO 15308288 <GO>}

Yes. So in terms of our forecast for cash flow positive for Q4, we still feel good about that. We will be updating our investors and providing a more detailed cash flow forecast at our earnings call on August 9. But we are still well on track to achieve that goal.

Your second question on leases versus loans or cash sales, we've actually seen an increase in loan and cash sales and so over time I actually think loan and cash sales will become a larger portion of our business. Specifically, as we start differentiating more with products and I think customers would want R&D equipment, too.

Q - Vishal Shah {BIO 15826276 <GO>}

Thank you.

Operator

James Albertine, Consumer Edge.

Q - James Albertine {BIO 17420845 <GO>}

Great. Good morning. And thank you for taking my question. I wanted to ask, if possible -- and apologies, as we are again much more focused on Tesla and have never covered SolarCity in the past.

We wanted to understand a little bit about where SolarCity is in its product cycle from an investment standpoint. We know where Tesla Motors is with the Model 3 coming up and the cash needs there. But wanted to understand what the key cash components or needs were in the short term for SolarCity.

Then, as you think about that answer, are we going to be expecting an infusion as it relates to the combination? So it sounds like, I think I heard you say a minute ago the combined solar and storage proposition is not well known. What is entailed with that: higher advertising costs, consumer education? Really trying to get a sense and triangulate here where capital is needed and where capital is coming from in the short term. Thanks.

A - Lyndon Rive {BIO 15308288 <GO>}

Let me answer just the combined solar and storage. We actually think it's going to appeal to a different emotion to customers today. Today the primary emotion for going solar is it's environmentally a better strategy and you can save money.

Once you add storage to the equation, you have backup. So you go from saving money, environmental. And then reliability or safety. With many of the large climate events that are occurring, blackouts are quite common here on the East Coast. On the West Coast you have earthquakes and this type of insurance, this type of product will appeal to a large base of customers. So we actually think they'll actually help with acquisition costs and bring it down.

In terms of capital for SolarCity, as I said, our goal is to be cash flow positive in Q4. As we look at ramping up the manufacturing facility in next year, that's will assume additional capital. I think with Tesla's help we will be able to make it more efficient and I think that answers your questions.

Q - James Albertine {BIO 17420845 <GO>}

That's very helpful. Just as a follow-up, if I may. And I'll just ask it very (multiple speakers).

A - Elon Musk {BIO 1954518 <GO>}

Actually -- Elon here, if I could just add one thing, which is I do think we are -- again, the deal needs to conclude. We're still probably at least a few months from that being done. But I think we would expect a decrease in the marketing expenses and the sales expenses for SolarCity that's quite substantial.

And the focus would be, much like with Tesla, through our network of stores where we have a tremendous amount of foot traffic that I think is underutilized because we have just two cars right now to sell them and one prospective car. And selling them

storage plus solar I think or educating them about that I think could quite dramatically leverage the value of the stores and would allow us to reduce the advertising spend.

Ideally -- we are really not into advertising so --. We will be at some point in the future. But not now. And reduce the selling expenses substantially as well.

Q - James Albertine {BIO 17420845 <GO>}

Thank you. So much. I appreciate that additional color, Elon.

Operator

Philip Shen, ROTH Capital Partners.

Q - Philip Shen {BIO 15211204 <GO>}

Good morning, everyone. Thank you for the questions. Just to drill in a little bit deeper; I know this might be tough. But to what degree can you talk about or quantify the customer acquisition costs, integration cost reduction?

Then I think I just heard Lyndon mention that Tesla might support the manufacturing launch of the Silevo. Can you discuss that in any degree as well? Thank you.

A - Elon Musk {BIO 1954518 <GO>}

On the manufacturing side, as Jason was articulating, I think Tesla at this point is starting to become quite good at manufacturing and, in fact, I think with the Gigafactory and with Model 3 I think we will start -- obviously this is -- we need to show that we can do this.

But I'm starting to feel confident that it's possible to dramatically improve the state of the art of manufacturing by applying a physics-first principles approach to the manufacturing process and to be quite specific at really applying a couple of the key concepts behind the rocket equation to factories. One being the usefulness density of a factory which defines the capital expenditure associated with the factory and then the excess velocity of product from that factory.

Those are actually analogous to two elements of (our) equation and we found that by applying those principles to automotive manufacturing and to battery manufacturing, we have been able to come up with dramatic improvements that we, ultimately, think will lead to at least a half order of magnitude improvement of (our) next best auto factory in the world.

Now, of course, talk is cheap and we need to show that that's true. But the math suggests it is. So we will be applying those same principles to the production of store sales, panels. And modules as well as making those systems really custom-designed to a house or location, business, whatever the case may be. And making them beautiful. I think this is very important. There needs to be an asset to your

house. It needs to be so good that when it's done you call your neighbors over to show them how proud you are.

Q - Philip Shen {BIO 15211204 <GO>}

Great. And one more, if I may. In terms of the solar storage business, as you guys ramp, the focus of SolarCity historically has been residential. But 10% to 20% of the business in a quarter could be commercial. Is there a focus at all for that business to pursue the commercial opportunities that might be more economic near term, or is it focused solely on the residential side?

A - Lyndon Rive {BIO 15308288 <GO>}

Most of you actually don't know this. But we are actually the largest in the country as well when it comes to the commercial industry, behind the meat of commercial. And we have actually been selling a fair amount of storage already for behind-the-meter commercial.

With commercial the utilities separate demand cost from energy cost and so when you provide solar combined with storage, you can offer customers a higher level of savings plus they have backup. That division is growing really nicely inside the Company. Then just the utility scale business, we've done a fair amount of work there.

We've announced the large project in Hawaii where we can firm up energy when you combine solar and storage and can provide a large part of the island's energy needs at night. And with the benefit of storage, the ramp-up and ramp-down period is almost instant. So we definitely see that market growing and it has been growing.

A - Elon Musk {BIO 1954518 <GO>}

If I can add a little bit there, because I think, just to touch on what Lyndon was saying at the end there, it's common for SolarCity or (inaudible) my company to be cast as competitive with utilities or belligerent, in a belligerent situation. But actually I think -- I really see it as quite different from that. I see us as really working hand-in-hand with utilities to transition the power generation to a sustainable scenario long term.

And I think it's very important to bear in mind that as transport becomes electric and as a lot of heating, which is currently using fossil fuels, becomes electric, the demand for electricity is going to increase dramatically, probably by a factor of something in the order of at least 2, maybe 3. So that's actually going to present a huge challenge for utilities, where they are either going to have to build a huge number of new electricity plants and lots of new transmission wires all over people's neighborhoods and new substations all over people's neighborhoods, which people don't want and it's a big headache for the utilities to do.

Or you can combine centralized renewable energy generation with localized renewable energy generation on the rooftops. So I think there's a prosperous future here for both utilities and rooftop energy providers and everyone wins, because this is a growing pie, a rapidly-growing pie. When a pie is constant or it's shrinking, that

is obviously where you get kind of negative competition. But this is really a case where the pie is growing rapidly and I think there's plenty of room for utilities and for rooftop providers like SolarCity.

And I think that is what people want. I think we will want that. If you ask the average person do you want a ton of new power lines going through your neighborhood, do you want a ton of new substations in your back, nobody wants that. And it would take ages to do that and I think it would probably get stuck in permitting and it's just not a good way to go.

On the other hand, if you say do you want beautiful localized rooftop generation paired with transition to sustainable central generation? I think it's the obvious thing that we all want for the world and that's the solution we should all fight for.

Operator

Joe Spak, RBC Capital Markets.

Q - Joe Spak {BIO 17457170 <GO>}

Good morning, everyone. Elon and Jason, you both mentioned in terms of synergies one visit, one installation, one app (multiple speakers). I guess I wanted to get your thoughts on one bill, which presumably simplifies it as well. And whether you think you need to build something bigger internally from a financing perspective or potentially form a JV with someone to facilitate that.

A - Elon Musk {BIO 1954518 <GO>}

I don't know about a JV. I'm not the biggest fan. I just have a hard time with JVs just trying to think of any good examples that work. I'm in old fool writing -- having simple deals where parties understand each other and what not, like what we have with Panasonic.

A lot of people think we actually have a JV with Panasonic. But we don't. We just have a simple, real short, couple pages contract or something and just everyone understands the basic principles of what it means to work together. But you don't have all the governance issues of a JV, which usually leads to problems down the road.

But we will have, I think, as we combined companies, actually a stronger balance sheet. It sort of stands to reason, if you are going to maintain, say, cash reserves in one company and then cash reserves in another company, you can't take the probabilistic combination of what both companies need. It's actually less efficient to have cash reserves in one company or another and I think a stronger balance sheet means you can also raise refinancing a lot easier.

I'm not sure if anyone else would like to comment on that.

A - Jeff Evanson {BIO 17513488 <GO>}

I think we're good. Chanel, why don't we go to the -- actually, let me mention real quickly we are at the 45-minute mark. So we do want to try to wrap up within an hour here and get you all to your trading desks. But Chanel, let's go to the next caller, please.

Operator

Edwin Mok, Needham and Company.

Q - Edwin Mok {BIO 15222334 <GO>}

Thanks for taking my question. Elon, I have a question about your master plan. You mentioned that -- on the plan you actually said empowering individuals to be their only utility. So kind of conceptually do you see that the solar business should have more of your customer owning the solar system versus right now solar is mostly a leasing, which has been SolarCity's only system? So that's my first question.

A - Elon Musk {BIO 1954518 <GO>}

I think it's up to the customer. But I think we want to -- and SolarCity by the way, is already starting to do this. But really offer Tesla's -- as we do with cars -- three options: outright ownership; a loan, which you can get an extension of your house mortgage, which is actually a very low cost of capital way to do it.

Actually it's cheaper than what SolarCity can do. So I think it's sort of actually -- it involves a bit more paperwork with the bank usually. But it's actually the most economically efficient way to do it is an extension of the loan you have. Or have SolarCity do a lease. But SolarCity's cost of capital is higher than that of the individual in most cases. So the logical move is actually to either own it outright in a cash purchase, or to add it to your home mortgage. And I think we're going to push a lot more in that direction and also, of course, it decreases the dependency of our solar business on the capital markets.

Q - Edwin Mok {BIO 15222334 <GO>}

Great, that's very helpful. Then just a question on the technology development. I think in your prepared remarks you mentioned that some of the components, such as inverters, you can potentially develop your own or how some technology synergy there.

Maybe can you give us some more color in terms of which areas that you guys are working; have already started working on together or which areas that you guys plan to start work together on these kind of technologies, joint technology development?

A - Elon Musk {BIO 1954518 <GO>}

As separate companies, it's actually quite difficult for us to work together because it has to be a justification for why I say Tesla is favoring SolarCity or SolarCity is

favoring Tesla. If we're independent companies it has to be an arms-length transaction, where the same thing is offered to other companies. Everything has got to be run through the independent Board committees.

It's very unwieldy and, in fact, one of the things that really prompted the timing of the merger was just the difficulty of, for example, this big utility deal that we're doing in Hawaii, which my saying is we will be the largest combined solar battery dealer in the United States and perhaps the world. And how we had to spend months running it through independent Board committee of Tesla and SolarCity getting conflict waivers. And we were like, man, we are going to do dozens and then hundreds and maybe thousands of these deals. There's no way we can keep running -- we can have such an unwieldy process. It's just crazy. So we've got to combine the companies.

But obviously until we combine the companies, we are constrained by conflict of interest. The irony of a lot of the reporting around this merger is that they were reporting on, oh, there's all sorts of conflict of interest in the merger. I'm like, no, the conflicts of interest are if we don't merge. The point of the merger is to get rid of the conflict of interest.

So we can't really -- we can only talk prospectively what we might do. But we can't actually do anything. It's very limited what we can do until we have actually one company.

A - Jason Wheeler {BIO 19481227 <GO>}

Maybe just quickly on the inverter point, power electronics is something that is really quite core to Tesla and I think it is something we see as a really strong competency of ours. Most people don't realize it. But Tesla is one of the biggest manufacturers of power electronics in the world if you look at all the charging equipment in the cars, the inverter that runs the motors in the cars. So looking forward it's something that we see a lot of potential on and we see this interesting and lucrative opportunity if we can more aggressively innovate and integrate that with storage.

Q - Edwin Mok {BIO 15222334 <GO>}

Great, thank you.

Operator

Colin Rusch, Oppenheimer.

Q - Colin Rusch {BIO 15823117 <GO>}

Thanks so much. In the last call you talked about the potential for loaning SolarCity some money because of the length of the acquisition process. Can you give us an update on your expectations now that you've done a deeper dive -- SolarCity has updated its guidance and you are a little more familiar with their need to refinance assets -- on what your expectation for providing a loan from Tesla to SolarCity during this process?

A - Jason Wheeler {BIO 19481227 <GO>}

Sure, this is Jason. (multiple speakers)

A - Elon Musk {BIO 1954518 <GO>}

I was going to say it turned out that Tesla would not need to provide a loan to SolarCity.

A - Jason Wheeler {BIO 19481227 <GO>}

Yes. What he said.

Q - Colin Rusch {BIO 15823117 <GO>}

Then you just talked about your power electronics capabilities and certainly that's an area for innovation in terms of the integration of these assets. I would expect that you would probably apply some of Tesla's engineering expertise on that. How quickly do you think you could have a product that fully integrates the two without using that outside inverter to assist the integration?

A - Elon Musk {BIO 1954518 <GO>}

I think we don't want to jump the gun on future announcements. But we are internally betting on the come here. So if it doesn't go through it will be a bit awkward. We are betting on the come on on integrated, just some power electronics, which actually does get quite complex actually. It's not an easy technical problem to solve and solve well in terms of mass volume cost aesthetics, longevity of the electronics.

But as JB is saying, I think we're probably the best in the world on advanced inverter technologies and we're kind of working that direction kind of hoping that this all goes through. But again, with SolarCity still working at arms' length. So less than ideal. But we want to reserve the product announcements for the right timing as opposed to this is more of a financial call.

Q - Colin Rusch {BIO 15823117 <GO>}

All right. Thanks so much.

Operator

John Murphy, Bank of America.

Q - John Murphy {BIO 5762430 <GO>}

Good morning. Just a question on funding and maybe sort of a nontraditional angle to it, or maybe not so nontraditional. You guys have highlighted the potential to raise money in different forums. Would you ever consider bringing in a well-capitalized third-party into the equation if this deal goes through and you think you need more capital to really help with that?

A - Elon Musk {BIO 1954518 <GO>}

I'm not sure what that means. But I think we are going to do okay on the capital front. I did mention at one point that there may be some art in doing a small equity capital raise as a combined company just to delever and derisk the balance sheet. But small meaning kind of low to mid single-digit percentages. So --.

But I don't think we need more than that. Tesla's core business of Model S and X sales and Powerwall and Powerpack sales we'll be generating quite significant positive cash flow. SolarCity's business will also be generating a lot of core positive cash flow. So it's really mostly about scaling up to Model 3 and then scaling up the advanced solar cell and module manufacturing. If we weren't in such a crazy rapid growth mode, we would be producing significant positive free cash flow.

Q - John Murphy {BIO 5762430 <GO>}

I'm sorry, I was really kind of coming from the idea that there might be a third party that you would be talking to in some other way. But it sounds like nothing like that is going on.

A - Elon Musk {BIO 1954518 <GO>}

No. I mean I'm sure there's third parties we could talk to. But there just doesn't seem to be a need right now.

Q - John Murphy {BIO 5762430 <GO>}

Okay. Then just a second question and a follow-up to sort of the efficiencies you gain in manufacturing and I certainly applaud you for trying to be more efficient on manufacturing over time. It sounds like you are trying to really advance the ball more than other folks have.

Just curious what that means for employment in your plants. Sort of the dumb guys' view of the auto world, which is where I come from, is usually a 250,000 unit plant has about 3,000 workers in it and it sounds like you're going to have a much greater capacity with maybe a lot fewer workers. It does get into sort of this existential question of if there's less manufacturing and less employment, where does the demand ultimately come from?

Once again, I applaud you for trying to get more efficient. So I'm not making any judgment on that. I think that's actually the exact right thing to do. But just as you think about employment in general, it just seems like it could start hollowing out the demand side. And this is a broader question, not just so specifically for you. But it seems like you are going to make a lot of progress. How do you guys think about that?

A - Elon Musk {BIO 1954518 <GO>}

Well there's broad societal implications long term for automation of everything. If you have self-driving vehicles, then obviously what do people do who currently drive

vehicles? This is going to apply to many professions. It's not unique to automotive. I think we are going to have to rethink the whole social contract.

But we can spend a long time dealing with philosophical and existential questions. But in the specific case of Tesla's factories, I actually think we're going to have more people, not fewer people. But the volume in vertical integration will be a lot higher.

Q - John Murphy {BIO 5762430 <GO>}

But the ratio of worker (multiple speakers) the ratio of worker to output, I'm just curious where you think you could get that to.

A - Elon Musk {BIO 1954518 <GO>}

It's going to be substantially better than anything else out there. We will have a lot of work. But we will have -- I estimated, for example, that the Gigafactory will probably end up at triple its original expected output from 50 gigawatt hours to probably 150 gigawatt hours. And the headcount we had estimated about 5,000 or 6,000. I think it probably ends up more like 10,000. But that is tripling of output for a doubling of workforce.

So that's -- we actually will be with a higher training level. I think we're going to have to establish schools and training and everything because a lot of the work is going to be more sophisticated and involve maintenance and upgrading of machines and dealing with anomalies in the production process. So it's going to require a lot more training, as opposed to sort of basic repetitive actions, which really are better done by machine.

I think the quality of work will be more interesting and it's going to require us to engage in training and I think establish internal training -- high levels of internal training as well as work with educational institutions to make sure that the students are graduating with the level of training that's needed to deal with a very sophisticated machine that makes a machine. So I think it's more rewarding and interesting work. But one that requires more training.

A - Jason Wheeler {BIO 19481227 <GO>}

In Nevada, we are actually already partnered with several of the local colleges and universities and technical schools, setting up curriculum that really focuses on just those things. Basically working with automation, figuring out how to maintain it. It's been really interesting; there's huge interest from students and also the workforce in general.

Q - John Murphy {BIO 5762430 <GO>}

That's very good to hear, thank you.

Operator

Michael Morosi, Avondale Partners.

Q - Michael Morosi {BIO 22099627 <GO>}

Thanks for taking the question. Two questions here actually. First off, how can the combination of SolarCity and Tesla help derisk the Gigafactory as Model 3 production ramps? And specifically insuring that there's an outlet for the additional battery output into grid storage application.

A - JB Straubel {BIO 16619298 <GO>}

I can maybe take a shot at that one. A lot of the initial growth and scale up for the Gigafactory is focused very much on Model 3. So we don't really absolutely need some large storage market to justify or fill up the Gigafactory. It's actually ramping up as fast as we can possibly grow it.

That said, though, we do see, I think as we said a few times, incredibly strong growth in the storage products coming out of the Gigafactory and eventually those could make up a very large % of the output. I think if we are able to do a very well-integrated product and we can see the demand that Lyndon was talking about earlier ramping up to essentially all the solar installations, that could really help fill up that portion of the storage demand in the intermediate term.

Q - Michael Morosi {BIO 22099627 <GO>}

All right. Thanks for that. I guess maybe this one is for Elon. But a lot of people have made the comparison in saying that General Motors or Ford, it never made sense for them to acquire Exxon Mobil. So why should Tesla and SolarCity combine? I think that it's a bit of a false analogy and ignores the key difference between distributed renewable energy infrastructure and potential autonomous vehicle fleet owner long term.

Elon, I'd like to get your thoughts and a little bit more of the longer-term leverage between a fleet of autonomous vehicles and a distributed network of renewable energy infrastructure.

A - Elon Musk {BIO 1954518 <GO>}

Sure. It's always dangerous to apply kind of past historical analogies to a future that's very different, conceptually different. But I think it takes time for people to kind of adjust their templates and sort of re-appreciate the dimensions by which something should be viewed.

Because one could also have said, for example, with the advent of when there were just horses and carriages and going towards automotive companies, that's like clearly the horses -- the horse companies and carriage companies weren't combined. So why should car companies produce motors and vehicles? But when you have integrated things with a car it makes sense to have the motor and the car designed by the same company. So you can have a good integrated system that works together well.

That same paradigm didn't exist in horses and carriages. There wasn't a good rationale for the carriage companies also to own all the horses.

Now with solar, you really need to combine storage because obviously the sun doesn't shine at night and sometimes it gets cloudy and there's variance during the day for how much energy is produced. It's obviously lower in the morning, peaks in the middle of the day. And then is lower at dusk and then off at night. So naturally it would -- we need to offer that power because people want electricity 24 hours a day and so it naturally lends itself to being an integrated product.

Then you also want to factor in when does it make sense to charge the electric car? You want to charge electric car at the right time of day. You don't want to charge it and kind of deplete your home storage unit. If you know that dawn is about to break and you're going to be generating electricity -- you want the (inaudible), the battery in your car. And the solar power to all work together and provide you with a great solution for your home.

And so I think that there is natural product integration here where there isn't all gasoline and cars. You don't want a gas station at your house. It doesn't make any sense.

Operator

I'm showing no further questions at this time. I would now like to turn the call over to management for closing remarks.

A - Jeff Evanson {BIO 17513488 <GO>}

Thank you, Chanel. And thank you, everyone, for joining us today. I look forward to talking to you Wednesday after market close. Have a great day.

A - Elon Musk {BIO 1954518 <GO>}

Thanks, everyone.

Operator

Ladies and gentlemen, thank you for participating in today's conference. This concludes today's program. You may all disconnect.

Everyone have a great day.

This transcript may not be 100 percent accurate and may contain misspellings and other inaccuracies. This transcript is provided "as is", without express or implied warranties of any kind. Bloomberg retains all rights to this transcript and provides it solely for your personal, non-commercial use. Bloomberg, its suppliers and third-

party agents shall have no liability for errors in this transcript or for lost profits, losses, or direct, indirect, incidental, consequential, special or punitive damages in connection with the furnishing, performance or use of such transcript. Neither the information nor any opinion expressed in this transcript constitutes a solicitation of the purchase or sale of securities or commodities. Any opinion expressed in the transcript does not necessarily reflect the views of Bloomberg LP. © COPYRIGHT 2024, BLOOMBERG LP. All rights reserved. Any reproduction, redistribution or retransmission is expressly prohibited.