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Tesla's Failure in China a Stark Contrast to Its Position in the U.S., Europe

Companies: BOM:500570, DDAIF, EPA:RNO, ETR:BMW, ETR:NSU, FIATY, GM, HKG:1211, HKG:1958, POAHY, SHA:600104, STO:VOLV-B, TSLA, TYO:6752, TYO:7201, TYO:7203, TYO:8058, VLKAY

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Research Question:

Will Model D sales compensate for Tesla's issues with China and lower gas prices?

Summary of Findings

- Tesla Motors Inc. (TSLA) continues its contrasting global growth patterns into 2015, according to 26 EV industry sources worldwide.
- U.S. and European sources reported consistent to strong demand and sales growth for Tesla's Model S sedan, while sources in China predict major struggles for the company in the foreseeable future.
- Although the all-wheel-drive version of the Model S and the upcoming Model X SUV will further boost U.S. and European demand this year, these and the improved Model S backseat will provide no relief for Tesla's considerable issues in China.
- All eight Chinese sources expect any sales growth achieved by Tesla this year to be minimal, even though 2014 came in much lower than Tesla had forecast. Growth will be impeded by Tesla's high prices, inadequate parts and insurance services, the lack of government cooperation, insignificant local management, and an inadequate supercharger infrastructure.
- An auto industry specialist in Japan said the country is more committed to hydrogen fuel-cell cars because of the high cost of generating electricity as well as the Model S' large size and high price. Toyota Motor Corp. (TYO:7203) controls Japan's electric vehicle (EV) market with its hybrid Prius, and should benefit in the fuel-cell market with its new Mirai.
- Tesla's 2015 growth potential in Europe is strong, thanks to word of mouth. Ten of 11 European sources said the AWD Model S will spur Tesla's sales but will not cannibalize the basic version. Seven said Tesla's only deterrent to growth is its own supply, whether in overall constraint or in country-by-country allocations.
- In the United States, three Tesla suppliers and three industry specialists forecast a year of growth for Tesla, aided by the AWD Model S and the anticipated Model X release. Five of the six also believe supply is Tesla's only issue for 2015 sales. Fluctuations in fuel prices and currency are not meaningful to the company.

Silo Summaries

1 Auto Industry Specialists in China

These eight sources all expect Tesla's Model S to have a challenging time in 2015 and for the company overall to see little growth compared with 2014. Model S sales are expected to be flat for three sources, to fall for three others and to grow slightly for the remaining two sources year to year. Tesla's struggles in China are due to its vehicles' high prices, inadequate parts and insurance services, insignificant local Chinese management, the lack of cooperation with the government, and an insufficient supercharger network.

2) Auto Industry Specialists in Europe

These 11 sources from various countries in Europe said Tesla's Model S is set for sales growth in 2015 though often off of a low base from 2014. Misconceptions about charging persist, but the largest impediment to sales is Tesla's constrained supply, according to seven sources. This may be an actual supply issue or a result of the company's allocations to different countries. **All 10 sources who commented on the AWD version of the Model S expect it to add to sales,** even if slightly at the expense of the basic Model S. Sources foresee no equivalent competition for the Model S this year, but several said some major manufacturers plan to enter the EV space within a few years.

3) Auto Industry Specialists in Japan

This source said Tesla's sales potential in Japan is severely inhibited by the government's strong commitment to hydrogen-fueled cars. Also, electricity is very expensive in Japan. Toyota has succeeded with its Prius hybrid and premium Lexus brand, and its Mirai hydrogen-powered vehicle is generating considerable interest. Tesla's Model S and upcoming Model X are too big for driving in Japan. Panasonic's presence in manufacturing lithium batteries has no effect in this country.

4) Auto Industry Specialists in the United States

These three sources said the AWD Model S has been a plus for Tesla. It has drawn in new customers who appreciate the high performance, and also has led to trade-ins from Model S owners. The Model X will not affect demand for the Model S. Tesla lacks direct competition. Its unit sales this year could be affected by supply constraints but not by lower oil and gas prices.

5) Auto Supply Chain Sources

Two of these three sources said their Tesla business is growing, while the third cited economic concerns and a preference for hybrid cars in his area. **All three said the AWD Model S represents added value for Tesla through superior performance and greater function in colder weather. Two believe supply will be the only constraint to Tesla's sales potential in 2015.** One source said Tesla's resale value of 90% is far superior to industry norm of 50% to 55%.

Tesla Motors Inc.

	Current Model S Demand	2015 Demand for Tesla	Charging Infrastructure Progress
Auto Industry Specialists in China	↓	↓	↓
Auto Industry Specialists in Europe	↑	↑	→
Auto Industry Specialists in Japan	↓	↓	↓
Auto Industry Specialists in the U.S.	↑	↑	→
Auto Supply Chain Sources	↑	↑	→

Background

News on Tesla impresses one week and then disappoints the next. Recently, a typically very bullish Morgan Stanley analyst Adam Jonas cut Tesla 2020 sales projection by 40%, from 500,000 to 300,000. The driving factor was the belief that Tesla would price its upcoming Model 3 closer to $60,000 rather than $35,000 in order to maintain margins.

Tesla's performance in China and its original guidance are being questioned. EV adoption in the country appears to be falling well short of forecasts, with most blame being assigned to the lack of charging stations. Also, Tesla's China president Veronica Wu resigned. Some speculate Wu created a false sense of Chinese demand when pushing bulk dealer orders, which has led to a glut of Model S units on lots. During an interview, Wu claimed Tesla did not have the correct luxury feel for the Chinese buyer and had an inoperable navigation system in China.

A falling euro and Norwegian krone (Norway is Tesla's largest European market) may repress short-term Model S sales. The Model X has been delayed by two years; 2105 sales forecasts for the SUV have fallen and buyers are becoming impatient. Also, economic thinkers claim that a major incentive for buying Teslas has disappeared as long as oil prices remain low.

Meanwhile, Tesla's Model D sedans hit the road in early November; so far the response has been intensely positive. Many videos are circulating showing the Model D racing Ferraris and demonstrating the Tesla car's rip-roaring G forces. Tesla CEO Elon Musk said demand for the car is "off the charts" and now expects this more expensive version of the Model S to account for 70% of the company's sedan sales. Other good news for Tesla: The Model S outsold Nissan Motor Co. Ltd.'s (TYO:7201) Leaf for the first time. Also, Tesla remains committed to reaching 50,000 vehicle sales in 2015, not including potential Model X sales.

Blueshift Research's Oct. 29 Tesla report found that the company's sales expectations in China would not be met and that its European sales were strong but off a low baseline. Chinese sources were skeptical of Tesla's goal of selling 8,000 Model S in the country. European sources noted strong sales in countries with EV tax incentives, but even countries lacking incentives showed solid growth. Sources from all silos said Teslas still were being purchased by very affluent early adopters; only a few U.S. sources said the Model S was moving beyond this crowd.

Current Research

In this next study, Blueshift Research assessed whether Tesla's challenges in China were offsetting strengths in other parts of the world. We employed our pattern mining approach to establish six independent silos, comprising 26 primary sources (including 21 repeat sources) and 10 relevant secondary sources focused on Tesla's growth in China, its Model S, Elon Musk's past claims and predictions, and the company's future:

1) Auto industry specialists in China (8)
2) Auto industry specialists in Europe (11)
3) Auto industry specialists in Japan (1)
4) Auto industry specialists in the United States (3)
5) Auto supply chain sources (3)
6) Secondary sources (10)

Next Steps

Blueshift Research will continue to track demand and sales trends for Tesla worldwide. We also will monitor production progress and near-term sales potential of the Model X SUV, and keep an eye on gigafactory and battery progress as well.

Silos

1) Auto Industry Specialists in China

These eight sources all expect Tesla's Model S to have a challenging time in 2015 and for the company overall to see little growth compared with 2014. Model S sales are expected to be flat for three sources, to fall for three others and to grow slightly for the remaining two sources year to year. Tesla's struggles in China are due to its vehicles' high prices, inadequate parts and insurance services, insignificant local Chinese management, the lack of cooperation with the government, and an insufficient supercharger network. Recent changes to the Model S, featuring all-wheel drive and an improved backseat, will do nothing to improve Tesla's demand and sales in China. Two sources said the company needs localized manufacturing, while one source mentioned hearing a rumor of a Tesla venture involving production of charging poles.

Key Silo Findings

Trends

- All 8 sources agree Tesla will struggle to grow its Model S sales in China during 2015.
- 2015 Model S sales will be flat for 3 sources, lower for 3, and up slightly for 2 year to year.
- Issues include price, lack of adequate service/insurance process, the company's insufficient local management, the lack of government cooperation, and the lack of a charging infrastructure.

Competition

- Sources cited a lack of competition for Tesla in China, primarily because of EVs' high price points and consumers' disinterest in such vehicles.
- Several mentioned upcoming EV models from major manufacturers, particularly BMW AG (ETR:BMW) and its i8.

Buyer Profile

- The Model S has failed to sell beyond very wealthy early adopters.

Battery and Other Developments

- All 8 said recent improvements to the Model S will not help its sales in China.
- 2 mentioned the need for localized manufacturing.
- 1 mentioned a rumor of Tesla being in a joint venture to produce charging poles in China.

1) Director of testing automobile software and new products; repeat source

The Model S' moment in China already has passed, so the source expects unit sales to be similar to last year's 4,000 to 5,000 units. The Model S still is not listed as an EV car in most Chinese regions. Also, Tesla lacks supercharging stations in the country; and its customers are having difficulty getting insurance. All-wheel drive and an improved backseat will not really help Model S demand in China, but may help U.S. sales. The BMW i8 will be the direct competitor to Model S. The profile of the Model S buyers in China has not changed since the car was first released. The lack of a built-out charging network holds the EV industry back in China, but Tesla's situation is even worse because its charging standard is different from the Chinese national standard.

Oct. 29, 2014, report: This source noted demand that could last two more years, after which Tesla would need to drop prices. The source said insurance claim problems had hindered Tesla sales.

> **Although electric cars sold very well in the fourth quarter, the Model S sales were not good. This trend is continuing now.**
>
> *Director of Testing Automobile Software & New Products*

Trends
- "The hot period of Model S in China has already gone. Although electric cars sold very well in the fourth quarter, the Model S sales were not good. This trend is continuing now. As a racing car, Model S' price is not high, but as a pure electric car, its prices are kind of expensive."
- "I remembered I told you I was often by myself in the charging station in June, and then there were three to four cars charging there in October. The station still only has three to four cars every time when I go there. That tells me Tesla hasn't sold too many cars since October."
- "Model S sales in 2015 will not exceed 2014's in China. The total unit sales will be similar as in 2014, which probably will be around 4,000 to 5,000 units."
- "There are a few difficulties for Model S to face in China: 1) It is still difficult for Model S owners to get the license plate in most areas in China. If it could be listed as a new energy car in the government's incentives list, its sales would improve. … 2) It is difficult to find supercharging stations. Most charging poles are slower charging equipment compared to what Tesla has built, which is not helpful. 3) It is difficult to get insurance companies' approval to change parts."
- "It is difficult to judge if the company has been successful at getting Chinese citizens to want to own a Tesla or not. Tesla is successful at promoting itself as a high-end auto brand, especially in the electric car category. However, the number of high-end customers is limited."
- "Tesla's recent changes, such as all-wheel drive and an improved backseat, will not really help Model S demand and sales because Chinese customers, especially Tesla's, are not really paying attention to these factors. They buy the Tesla Model S more for showing off."
- "I don't know what the company should do in order to maximize its marketing potential with Chinese drivers. There are too many problems now for Tesla China. As a foreign vendor, it can't get too much support from the Chinese government."
- "I believe the Model X will attract a group of customers. Chinese customers like SUV and MPV cars, so the Model X will be more attractive than Model S in design. I think it will grab some share from the Model S. However, I still can't predict if it will be more or less successful than the Model S."
- "I find that there are no advertisements or marketing efforts to introduce the Model X in China. I bet more than 90% of customers who know something about Tesla don't know anything about the Model X."
- "As I told you last time, I don't think that Tesla's production has run into capacity constraints for the Model S or Model X. It is just a marking strategy."

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> *Director of Testing Automobile Software & New Products*

Competition
- "Tesla is the electric car market leader not only in China but also in the world. They could accept more advanced and new technologies than traditional car vendors."
- "Its brand orientation is the major factor that will most likely affect demand and sales in China going forward. The Tesla Model S is considered a supercar, so it will not sell big number. However, it also wants to be considered a normal high-end car, like a BMW, but its prices are too high."
- "The BMW i8 will be the direct competitor to Model S. If customers buy the BMW i8, they definitely will not buy Tesla's Model S. BMW i3's price ratio with functionalities and designs is not good enough to compete directly with the Model S."

Buyer Profile
- "The profile of Model S buyers in China hasn't changed since the car was first released. Most customers are still wealthy. … Ordinary people can't find a place to charge the car because most communities don't have enough parking spots."

- "I have adjusted my opinion since our last conversation. I think the Model S hasn't seen significant demand from customers outside of early adopters. Three months ago I expected its demand to remain strong in the next two years, but now I feel Tesla's fresh feeling among customers is gone. Model S' time has passed."
- "I have good expectations for Tesla's low-end Model 3 due to its cheaper price."
- "Thirty percent of Model X customers plan to buy a Model S and then will switch to the Model X. Another 30% to 40% of Model X customers will be totally new customers. There will be only a very small percentage of customers who have a Model S and then will buy a Model X."
- "To wait to buy Tesla car until a charging network is built is at least a consideration, but it is not core factor. The core reason for customers waiting for buying a Tesla car is still price."

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Director of Testing Automobile Software & New Products

Battery and Other Developments

- "I believe Tesla's battery prices will decline. This is the industry trend. Meanwhile, durability will improve. This is all the battery company's effort, direction and goal."
- "The new U.S. factory will guarantee battery production and then the order time. Hence, it will have positive impact for Tesla. However, I would guess that Tesla has no such big demand to support large battery production."
- "For other Chinese domestic electric car or hybrid car vendors, battery supply is an issue that holds back sales, but I am not sure Tesla's production also is limited by battery supply because I don't see a large demand for Tesla."
- "Tesla will build a Chinese factory for the Model 3 because it is impractical to ship them to China considering the high import tax."
- "There are not enough charging stations to help spur greater EV sales. Instead, the lack of a built-out network does hold the industry back. This problem is even more obvious for Tesla because its charging pole standard is different from the national standard, so it can't share the charging station built by the government."
- "I find that all EV customers have charging worries. Although Tesla disclosed that they have built a large number of charging poles in big cities in China, they are all slow-charging equipment, which can't help too much. A few hours charging only supports short mileage. Tesla lacks fast-charging stations in China."

2) CRM manager for a major global auto manufacturer in China; repeat source

Demand for Tesla's Model S has declined since three months ago because of the brand's lack of marketing and fewer EV policy benefits compared with other vendors. Tesla's sales will not exceed 8,000 units in 2015. Improvements to the Model S will not help demand in China but may stimulate sales in Europe. The Model X will not be successful in China given the lack of media coverage. Tesla has no electric car competitor in its price range, but some potential competitors are expected to release electric/hybrid cars soon. Tesla needs to solve three problems: a lack of cooperation with the government, its marketing strategy, and the lack of models in China. The inadequate charging system also curtails sales. The source has heard that Tesla has a joint venture in Chongqing to produce charging poles. When the Model S was first released, most buyers were newly wealthy, but now more high-end executives are starting to buy the car.

Oct. 29, 2014, report: This source noted that demand for Model S was lagging, and that Tesla needed to build out its infrastructure to spur meaningful growth, which will happen after 2016. Battery and charging limitations were holding sales back.

Trends

- "Demand for Tesla's Model S has been worse than three months ago. It lacked marketing activities during October through December. In China, if one auto brand does not have enough media exposure, it will lose customers. Also, Tesla still doesn't enjoy the same EV policies as other manufacturers in most Chinese cities. … Tesla is treated as a traditional car. That's why Tesla sold 4,000 Model S in China, but only 1,600 got a license."

- "If Tesla doesn't change its sales strategy, I expect that Model S sales will not be better than in 2014. Also, Tesla's charging standard is different from the Chinese national standard. … If Tesla could match its charging standard with the national standard, its sales might see a breakthrough in 2015."
- "The company has been successful at getting Chinese citizens to want to own a Tesla. At least, it attracts a group of rich people and so-called environmentalists. It has already built its brand image as high-end. … However, it has trouble keeping its customers because there are too many after-sales problems for electric cars."
- "There will be no special effect on Model S demand and sales in China from the recent all-wheel drive and improved backseat changes."
- "In order to maximize its marketing potential with Chinese drivers, Tesla should do more public partnering with the Chinese government, especially the local government. In China, if you want to do good business, you have to understand government policies first. As I said earlier, Tesla is considered an electric car in China, which then qualifies for a free license plate, but it is treated as a traditional car in Beijing. That means Tesla doesn't have a good relationship with Beijing's local government. Also, Tesla needs do more marketing activities to let customers know its strengths compared with other electric cars."
- "There are nearly no media reports about Model X, so I don't think Model X will be successful. If its price is similar to the Model S, it is difficult to determine its position."
- "Tesla's production might run into capacity constraints for the Model S or Model X along with supply chain. … However, I would guess Tesla doesn't have too many suppliers given to its small production. If one supplier runs into capacity constraints, Tesla's production will be impacted. Big car vendors can solve these problems by transferring production to other suppliers when in trouble."

> **In China, if one auto brand does not have enough media exposure, it will lose customers. … I heard that Tesla is creating a joint venture in Chongqing, China, to produce charging poles.**
>
> *CRM Manager*
> *Major Global Auto Manufacturer, China*

Competition

- "Based on its prices, there is no competitor for Tesla's Model S in China because all other electric cars are much cheaper. In its price level, the Model S is the only player. It has some potential competitors, such as BMW which will release the i8 soon. Lexus is using Toyota's EV and hybrid technology, which is very mature. I also heard that [Volkswagen AG's/VLKAY] Bentley, Audi [AG/ETR:NSU, majority owned by Volkswagen] and Volkswagen will release hybrid cars. I believe they will be more competitive with Tesla."
- "I don't think Tesla leads the electric car market in China. … Many professionals think Toyota leads [China's] electric car market."
- "There are a few factors that will affect Tesla demand and sales in China going forward: first, policy, or we could say cooperating with the government. Tesla has to understand China's system and then set up its own strategy matching our environment. For example, it needs to change its charging system to China's national standard. … Second, Tesla needs to clear up its marketing strategy and direction. We feel that Tesla has no idea about its strategy. That's why they change CEOs in China so frequently. Third, it needs to release more models. The SUV is more popular now."

Buyer Profile

- "There has been a little change to the profile of Model S buyers in China. When the car was first released, most buyers were newly wealthy, but now more high-level executives are buying this car. For example, many senior executives in Shanghai buy a Tesla because of the free license."
- "Although current demand for Model S is bigger than it was when first released, demand still can't be called significant. 2015 will be the beginning of the electric car/hybrid car growth spurt. If Tesla can't match its charging standard with China's national standard, it will miss a good opportunity."
- "It is hard to give a clear profile of the initial Model X buyer. I believe the customers will be wealthy and will like uniqueness. In Shanghai, some customers will buy the Model X because of the free license plate."
- "Most customers will not buy a Tesla before a charging network is built. Also, we find that Chinese customers don't like to wait. … They will look for a similar car from other vendors."

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Battery and Other Developments

- "Its battery will be changeable. It will be easier to assemble and disassemble. Also, Tesla's battery capacity will be bigger than other electric cars'."
- "Tesla's new U.S. battery factory will help it to improve its cars' producing speed. I believe it will also do better R&D in battery technologies."
- "The battery supply definitely will be an issue that holds back sales."
- "There are not enough charging stations to help spur greater EV sales. Instead, the lack of a built-out network holds the industry back. Most charging stations are built along the highway. I think most tier 1 and 2 cities will be covered in 2016."
- "If customers have charging equipment at home, I believe they are very comfortable with it. However, the problems in China now are where they install charging equipment at home."
- "I heard that Tesla is creating a joint venture in Chongqing, China, to produce charging poles."

3) Chief engineer for a Chinese vehicle manufacturer; repeat source

Demand and sales for Tesla Model S have declined now that Tesla's "eyeball economy" is gone. Model S sales will reach 5,000 to 6,000 units, similar to last year. Recent changes like AWD and an improved backseat will not help Model S sales in China but may provide a slight bump elsewhere. A lower price would maximize the company's potential with Chinese consumers. Tesla also must address the major shortages and differences in China's charging stations. The Model X will not be wildly more successful than the Model S, and their customers may slightly overlap. BMW, Daimler AG's (DDAIF) Mercedes-Benz and Audi likely will present the most formidable competition for the Model S.

Oct. 29, 2014, report: This source cited high pricing and difficulty in getting license plates as impediments to Tesla's growth. The source did not believe the company's claim of capacity constraints on production volume.

Trends

- "The demand and sales for Tesla's Model S are even worse recently. Tesla's eyeball economy is gone. Its bad sales are the norm. There are already early adopters selling their Model S in the market. It is a bad advertisement for Tesla that the customers want to give up this car in less than six months."
- "Model S sales will be similar in 2015 compared with 2014. But because the Model S delivered the first car in China in April 2014, and 2015 has one more quarter to sell, overall unit sales will be slightly better and may reach 5,000 to 6,000 units."
- "I don't think the company has been successful in getting Chinese citizens to want to own its cars. … After all, the price of ¥700,000 [$112,283] is not small. Even wealthy consumers want to do more comparisons, especially after hearing that other traditional, well-known vendors are releasing or will release electric or hybrid cars."

> **There are already early adopters selling their Model S in the market. It is a bad advertisement for Tesla that the customers want to give up this car in less than six months.**
>
> *Chief Engineer*
> *Chinese Vehicle Manufacturer*

- "Model S' recent changes, such as all-wheel drive and an improved backseat, will not help demand and sales in China. The main Model S buyers are not real auto fans who know the car well. They buy the Model S to show off."
- "To decrease the price is the only way the company can maximize its marketing potential with Chinese drivers. … It should be at least 50% off from current price, and then it will gain a lot of customers."
- "The pending Model X release will not affect Model S demand and sales in China. First, Chinese customers are not familiar with it given the lack of media reports. Even those paying attention to the brand will be careful because of license plate problems in big cities in China."
- "Tesla's supply chain has some problems. Tesla's orders are less than expected, so it couldn't give its suppliers enough orders."

Competition

- "Tesla Model S has no direct competitors in China now, but BMW, Mercedes-Benz and Audi will be the most formidable competition for Tesla's Model S because they are releasing or will release EV or hybrid cars. Due to their good reputation and large customer base, they will easily gain Tesla's small high-end EV market share."

- "There are few people who think Tesla leads the electric car market in China now. Maybe only media people and IT people have this kind of thought."
- "Price will most likely affect Tesla demand and sales in China. Its technology is still not mature. For example, Tesla's mileage decreases to around 200 km in the winter, which is much worse than its introduced rate of over 400 km."

Buyer Profile

- "I did some research in the past a few months, and we found among Tesla's overall Model S sales, about 100 to 200 units were bought by auto-related companies as a benchmark for R&D. About 100 units were bought by real estate companies for marketing purposes."
- "I haven't seen significant demand for the Model S from customers outside of the early adopters this year. If Tesla doesn't cut prices significantly, I'm not optimistic for its 2016 demand."
- "Model X customers will slightly overlap with Model S'. IT elite will gradually quit its customer group. To be honest, it is difficult to forecast which group of customers will be the initial Model X buyers. I feel that the customers who really want to buy a SUV will not buy a Model X because it is not easy to charge outside the city and highway."
- "If the charging network is not built, definitely not many customers will buy a Tesla, but if there are not enough customers, how and why should they build the charging network? … Tesla should build the charging network first, at the same time matching its charging standard with the national standard."

> **BMW, Mercedes-Benz and Audi will be the most formidable competition for Tesla's Model S because they are releasing or will release EV or hybrid cars. Due to their good reputation and large customer base, they will easily gain Tesla's small high-end EV market share.**
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> *Chief Engineer*
> *Chinese Vehicle Manufacturer*

Battery and Other Developments

- "Tesla's battery will not change too much because overall battery technologies in the world have had no breakthrough development. However, prices will continue to decrease."
- "The new U.S. battery factory will bring some positive impact to Tesla. At least, it will help Tesla to improve its capacity."
- "I don't think battery supply will be an issue that holds back sales, but battery prices definitely will. I expect battery prices won't be really down until 2020."
- "There are not enough charging stations to help spur greater EV sales in China. We even can say that we have big shortages of charging stations in China. As you know, the electric car's issue is long charging time."
- "Chinese drivers who have bought a Tesla are definitely comfortable with the idea of charging at home. Most early Tesla buyers have garages or parking spots. … Some customers could afford to buy Tesla car, but they don't buy or they hesitate because they don't have a place to charge at home."

4) Executive of a state-level automobile organization; repeat source

Tesla sales in 2015 will decrease year to year. Recent changes, such as all-wheel drive and an improved backseat, will not drive Model S sales in China or in other regions in the world. Tesla must solve its battery endurance problems and improve its marketing. The EV market is not big in China. Most sold Model S units are in distributors' and dealers' hands.

<u>Oct. 29, 2014, report:</u> This source said demand for Tesla's Model S was not strong, with most buyers purchasing the EV for R&D or parts. Battery endurance and price were cited as issues.

Trends

- "I still have no exact sales numbers for the Tesla Model S, but I feel its demand is still not strong in China. EV is still a concept car in China, just in the initial stage. China's auto market is huge, but starts much later than Western countries. Most families are just now buying their first car. Tesla could be a family's second or even third car."
- "I forecast Model S sales will decrease in 2015. It is not easy to maintain 2014 sales because its user environment will not improve this year. Meanwhile, the entire auto market in 2015 will be worse than in 2014. Political reform and corruption strikes will impact the luxury car sales in 2015."

> **The only thing that will drive the sales will be real technology improvement, such as battery life or charging time.**
>
> *Executive*
> *State-level Automobile Organization*

- "The company definitely hasn't been successful at getting Chinese citizens to want to own a Tesla. It has had a greater effect on the auto industry than on ordinary customers. It is still the concept car for fashionable customers but not a functional car for ordinary customers."
- "The recent changes, such as all-wheel drive and an improved backseat, have no effect on Model S demand and sales in China. Only car fans will pay attention to these changes. I think Model S' high-profile is not in line with the Chinese user environment."
- "The only thing that will drive the sales will be real technology improvement, such as battery life or charging time. Also … we don't think the Model S is really an environmentally friendly car because most of China's electricity is generated by coal."
- "It is difficult for Tesla to do more to maximize its marketing potential among Chinese drivers. The key issue is to solve battery endurance problems. However, the whole industry can't solve this problem now. The second issue is price—not only for cars but also to replace batteries. The third: how to improve its technology and make it as functional as traditional car are key to attract Chinese customers."
- "I am a professional automobile person, and I don't have too much information about the Model X. How can ordinary customers know it or look forward to buying it?"
- "The production needs be supported by demand. However, Model S is not in big demand, so how does it run into capacity constraints? I feel it is still a marketing problem, not a production problem."

Competition

- "There is not strong competition between electric car vendors because EV demand in China is low."
- "Tesla doesn't lead the electric car market in China. It did very well in marketing at the beginning of its release, and pretends that it is leading the electric car market in China. … It is far away from being honored as a market leader."
- "Battery technology and endurance will most likely affect Tesla demand and sales in China going forward. It is not just for Tesla but for the whole EV industry."

The production needs be supported by demand. However, Model S is not in big demand, so how does it run into capacity constraints? I feel it is still a marketing problem, not a production problem.

Executive
State-level Automobile Organization

Buyer Profile

- "There are no changes in the profile of the Model S buyer in China since the car was first released. Most cars are in distributors' and dealers' hand. There are not too many personal consumers buying the Model S."
- "We can say that the Model S has had some demand [but] the major issue is that its driving radius is limited."
- "The charging network can't be built up in short time, especially in China, which has a high population density. It is even difficult to build parking lots in big cities."

Battery and Other Developments

- "The overall battery industry has had no breakthrough in technology, from weight to durability."
- "The improvement of the battery is not related to a vendor building a battery factory."
- "Battery supply is not holding back sales—battery technology is holding back sales."
- "However many charging stations are built, it is still not as convenient as a traditional car. Customers will always feel the lack of charging stations."
- "I have no idea if Chinese drivers are more comfortable with the idea of charging their Tesla at home because none of my friends has bought a Tesla."

5) Director of a multinational auto parts company; repeat source

The source expects overall Model S sales to reach 3,000 to 4,000 units this year. Tesla should be more localized and decrease prices to maximize its marketing potential with Chinese drivers. It also should build a factory in China. All-wheel drive and backseat improvements will not affect demand and sales for Tesla's Model S in China. The Model X's demand and sales will be similar to the Model S'. The BMW i8, General Motors Co.'s (GM) Cadillac, Toyota's Lexus and Tata Motors Ltd.'s (BOM:500570) Land Rover PHEV are Tesla's major competitors. Charging technology and safety factor, followed by price, will most likely affect future Tesla demand and sales in China. Tesla's primary customers still are wealthy and fashionable people. Initial Model X buyers will be relatives or friends to Model S owners but not totally new EV customers. The source believes the new U.S. factory will improve Tesla's battery production and capacity.

Oct. 29, 2014, report: This source noted that demand was improving but the Model S was still priced at least 30% too high. The source said battery supply issues might hold back sales, but charging issues would not.

Trends
- "How to judge Tesla's Model S sales depends on the expectation. For me, I think its sales are pretty good. I heard it has been sold more than 3,000 units in China, which is better than my expectations."
- "Demand for Tesla's Model S has been trending pretty well in China recently. I predict its Model S sales will reach 3,000 to 4,000 units in 2015."
- "The company has been successful at getting Chinese citizens to want to own a Tesla, but it should be more localized and decrease the prices more in order to maximize its marketing potential with Chinese drivers."
- "I don't have much information about its all-wheel drive and improved backseat changes, but I think it will not affect demand and sales for Tesla's Model S in China. ... I don't know how Tesla thinks. An improved backseat has no meaning. The customers who buy the Model S see it as a race car for fun."
- "The Model X will not be more successful than the Model S. The key reason is service. Tesla's service is not good in China, and both models are in the same situation."
- "I expect Tesla's production to run into capacity constraints for the Model S in both full vehicle production and along the supply chain."

Competition
- "My opinion about competition for Tesla's Model S in China is similar as last time. BMW i8, Cadillac, Lexus ... and Land Rover are the most formidable competition for Tesla's Model S in China."
- "I don't know if Tesla lead the electric car market in China, but it released the high-end EV earlier than other traditional auto companies that occupy this market. Tesla leads the electric car market in China from that angle."
- "Charging technology and safety factors will most likely affect Tesla demand and sales in China going forward. Price will also affect its sales."

Buyer Profile
- "The profile of the Model S buyer in China hasn't changed since the car was first released. It is still that group of people who are wealthy and like to chase the fashionable trend."
- "We haven't seen significant demand of Model S from customers outside of early adopters. If Tesla can build the factory in China, that would bring a new point. Or if Model S prices can be decreased by 30%, then demand will become strong."
- "[In October] I thought initial Model X buyers would be new to the EV space entirely, but I have changed my thoughts a little bit. It is most likely that initial Model X buyers will be people whose relatives or friends bought a Model S."
- "In the past, I thought the charging network would not be a major issue for customers who wanted a Tesla, but now I believe the customers are waiting at least for a charging network to be planned out before buying a Tesla."

"The company has been successful at getting Chinese citizens to want to own a Tesla, but it should be more localized and decrease the prices more in order to maximize its marketing potential with Chinese drivers.

Director
Multinational Auto Parts Company

Battery and Other Developments
- "The new U.S. factory will improve Tesla's battery production and capacity significantly."
- "Battery supply will be an issue that holds back sales. It depends on the battery factory's capacity, quality and stability. To build the battery factory is a good solution for EV vendors."
- "Not enough charging stations is a big problem in China now. It definitely will hold the industry back."
- "Chinese drivers who have the garage should feel very comfortable with the idea of charging their Tesla at home. Most of the first group of Model S buyers have a garage."

6) Vice president for a company selling lead-acid automotive and advanced batteries for hybrid and EVs; repeat source

Model S demand and sales are both disappointing, and the source expects similar sales in 2015 because of Tesla's unclear marketing strategy. Overall, he thinks Tesla entered China without a clear plan. Functional changes will not affect demand and sales for Tesla's Model S in China. Tesla should focus on the high-end market or speed up its low-end model release. The Model X will not be more successful than the Model S in China, and its delay will reduce buyers' enthusiasm and trust. The profile of Model S buyers in China has not changed much and will be similar for the Model X. Customers who have bought a Model S will not buy or recommend the X to their families, relatives or friends based on poor driving and service experiences. Tesla customers do not really care about the charging network. Tesla's new U.S. factory will help it to control battery costs and production ability. The company's does not lead China's EV market. Competition is expected from SAIC Motor Corp. Ltd. (SHA:600104), BAIC Motor Corp. Ltd. (HKG:1958) and BMW.

April 22, 2014, report: This source projected Tesla's Model S would miss its 2014 sales projection by a wide margin in China, due to its failure to motivate Chinese drivers to want to own a Tesla.

Trends

- "Overall demand and sales are inadequate in China. I think the major reason is from Tesla's unclear targeting of customers. Most Tesla owners bought the car not for concern for the environmental, but just for fun or for their luxury car collection. Hence, even if Tesla sets its prices at ¥200,000 to ¥500,000 [$47,944 to $79,906] more than current levels, its target customers still would accept it because they don't care about the money. But now this group of wealthy consumers feels that Tesla can't bring the fame they want."
- "I forecast Model S sales will not change too much over the course of 2015 if its marketing orientation is still as same as in 2014. Its sales growth will really rely on its next CEO in China."
- "I haven't seen obvious success for Tesla in getting Chinese citizens to want to own a Tesla. Tesla entered China a little bit too rashly. Its company policies and strategy are uncertain. Tesla itself even doesn't know what kind of customers they want to attract in China."
- "All function changes, whatever all-wheel drive or improved backseat, will not affect demand and sales for Tesla's Model S in China. If BMW or Mercedes-Benz were to do these improvements, they would help their sales because they have a very good reputation and a stable and huge customer network in China. … Tesla is still in reputation-building mode."
- "There are two ways that the company could maximize its marketing potential with Chinese drivers. They can speed up the low-end model's R&D. If the low-end prices could be around ¥200,000 to ¥300,000 [$31,963 to $47,944], then it would sell very well. … It definitely would occupy big market share. The second way is that Tesla should just focus on high-end models. Over time it would reach a stable market share in China."

> **Its sales growth will really rely on its next CEO in China. … Tesla is still in reputation-building mode.**
>
> *Vice President*
> *Hybrid & Evs Battery Retailer*

- "The Model X will not be more successful than the Model S in China. It may attract a small group of people, but the overall market situation will be still difficult."
- "The pending Model X release will not affect Model S demand and sales too much in China, but the delay will reduce the enthusiasm of buyers and also make them suspicious of the vehicle's technology. Also, new energy cars are being released frequently now. Well-known brands like BMW and Mercedes-Benz are all releasing EV/hybrid cars."
- "I don't know if Model S production has run into capacity constraints, but if it has, I believe it could be anywhere along the supply chain."

Competition

- "The major competition in China will be from SAIC, BAIC and BMW."
- "Tesla doesn't lead the electric car market in China. In the high-end market, BMW is leading. In the midrange market, SAIC and BAIC are leading. In the low-end market, BYD [Co. Ltd./HKG:1211] is leading."
- "I used to think that demand, safety and competition would most likely affect Tesla sales, but I have changed my mind. I think market orientation will most likely affect Tesla demand and sales in China. Drivers' experience with service is also important. Customers buy the Model S to show off."

Buyer Profile

- "The profile of Model S buyers in China hasn't changed too much since the car was first released. Most customers still are wealthy and like to show off. However, more and more companies … like to buy a Tesla in order to show that they accept new technology or are at the front of the technology."
- "The Model S hasn't seen significant demand from customers outside of early adopters. As I said earlier, Tesla's marketing orientation is unclear."
- "I expect most buyers of the Model X to be wealthy … the second generation of government officials and … the second generation of the recently rich. … Customers who have bought a Model S will not buy or recommend the X to their families, relatives and friends because their driving and service experiences with Tesla have not been positive."

- "I don't think that the customers are waiting until a charging network is built or planned out before buying a Tesla. To be honest, I think current Tesla customers do not really care about charging network."

> Customers who have bought a Model S will not buy or recommend the X to their families, relatives and friends because their driving and service experiences with Tesla have not been positive.
>
> *Vice President*
> *Hybrid & Evs Battery Retailer*

Battery and Other Developments

- "Tesla's new U.S. factory will help it to control the battery costs. Also, it will help its battery production ability."
- "Battery supply will be an issue that holds back sales. I have no exact timeframe when the battery will not be an issue. Maybe we need five to 10 years to solve this issue."
- "The charging station market is a mess now. There is no industry standard. The auto enterprises can't afford to build a large charging network, and the government also has no direction about it. This situation will not hold the industry back because electric car buyers are still a small group."
- "Most Model S customers live in single-family houses or in gated communities with parking spots that allow them to install charging systems at home."
- "If Tesla wants to expand its sales significantly in China, it has to think about how to attract customers who won't be able to charge at home. Most Chinese people live in condos or apartment buildings with limited parking."

7) Manager, Chevrolet 4S store, Shanghai; repeat source

The source does not have high expectations for Tesla's 2015 demand. Unit sales likely will be around 2,000 that include license plates. Recent improvements to the Model S will not stimulate sales in China, but may help in Western markets. As with the Model S, most Chinese consumers will not be able to afford the Model X. Demand will build once Tesla releases its low-end vehicle. GM's Chevrolet Volt, Nissan's Leaf and BMW i8 are the most formidable competition for Tesla's Model S in China. BYD already has claimed significant share in the midrange to low-end EV/hybrid market. Price, charging, demand and reputation most likely will affect Tesla going forward. Model S demand is not big outside of the early adopters. The lack of a built-out network holds the industry back, and Tesla must seek out government support.

Oct. 29, 2014, report: This source noted that Tesla had not been successful at motivating Chinese citizens to own a Model S EV, due to hits high price, and the lack of service and charging infrastructure.

Trends

- "Demand for Tesla's Model S is just OK. Chinese customers are not really paying attention to environmental protection. This concept is still too advanced in China."

> Both its prices and concept are not attractive to Chinese customers. They are too advanced to be embraced.
>
> *Manager, Chevrolet 4S store, Shanghai*

- "I didn't have good expectations for Model S sales for 2014 or for this year. I expect its sales to be only around 2,000 units in 2015. I mean the cars that get license plates."
- "The company has not been successful at getting Chinese citizens to want to own a Tesla. Both its prices and concept are not attractive to Chinese customers. They are too advanced to be embraced."
- "The recent changes, such as all-wheel drive and an improved backseat, will not stimulate sales because of high prices. Whatever changes Tesla does, customers will still not accept them as they do for some big brands … that have longstanding reputations."
- "Tesla needs do something to attract the middle class' attention. It needs to build a brand image that will cause the middle class to think about it as their first choice when they want an EV. Tesla has already built some charging systems in some big public parking places although still not enough or convenient enough."
- "The Model X will not succeed in China. Its situation will be similar to the Model S' because most auto buyers can't afford it. I heard it will use gull-wing doors. It looks cool but is not practical."
- "The Model X release will not affect Model S demand and sales too much. I look forward to seeing [Tesla's] low-end release."
- "Tesla's production could run into capacity constraints for the Model S or Model X anywhere along the supply chain."

Competition

- "Chevrolet's Volt, Nissan's Leaf and BMW i8 are the most formidable competition for Tesla's Model S in China. In addition, BYD has already occupied a big market share in the mid to low-end EV/hybrid market."
- "I count Tesla as EV market leader in China. The Model S has very advanced battery management system, and also has a racing car's great function. Its design is fashionable as well."
- "If I rank the factors that will most likely affect Tesla demand and sales in China, it would be from price down to charging, and then demand. The last is reputation or fame."

Buyer Profile

- "Most original buyers were *tuhao*. Now, more young or second-generation wealthy consumers who have some environmental concerns are joining the group."
- "Model S' demand is not big outside of the early adopters due to bad services. If one model is presented as a rich people's car, there should be high-end services to match. Chinese customers expect this, but Tesla does very poorly compared with other traditional high-end car vendors."
- "Tesla's significant demand will start once it release the low-end version. In that time, I believe EVs also will be much more popular than today."
- "Customers who are new to the EV space or some current hybrid customers who are curious will be the initial Model X buyers. It probably will not be Model S customers because they have already experienced a Tesla car and know all about Tesla's technology shortages."
- "Customers are definitely waiting until a charging network is built before buying a Tesla. Of course, price is also important. If prices are attractive enough, customers will ignore the charging network problem."

> **If one model is presented as a rich people's car, there should be high-end services to match. Chinese customers expect this, but Tesla does very poorly compared with other traditional high-end car vendors.**
>
> *Manager, Chevrolet 4S store, Shanghai*

Battery and Other Developments

- "Customers are caring more about durability, a long life of the battery and the services center. I have heard that Model S battery duration is even worse in the winter than in the summer and that it needs time to preheat. I believe Tesla will do something to improve these factors."
- "The battery supply is an issue that holds back sales, but the effect is not as big as people think. The key issue is that EVs are still not popular in China. If EVs were already popular, then battery would be a major issue."
- "There is no doubt that there are not enough charging stations in China to help spur greater EV sales. This is not a problem that Tesla can solve on its own; it needs big support from the government."
- "I suggest cooperating with gas stations and high-end car washes to build more supercharging systems."

8) Director of a large auto company in China

Tesla's management problem is the key reason for bad demand and sales of the Model S. Bad communication between China and U.S. headquarters and the lack of local management affect Tesla's sales and development. Government policy is the most important factor because Tesla customers in China face challenges in getting their license plates. The source expects Model S sales to be even worse than in 2014, and for only 2,000 to 3,000 units to be sold. Tesla's recent feature improvements will not help Model S sales. The Model 3 release could attract a large number of customers in China if its price is set around $30,000. The Model X will not be more successful than the Model S. BMW i3 is Tesla's "most deadly blow." GM's Volt is also a competitor. The profile of the Model S buyer in China has not changed since the car was first released, and the Model X will not expand the customer range. The whole industry is trying hard to improve mileage endurance, decrease costs and cut down the size and weight of the battery. Tesla's new U.S. battery factory will assist the company in its efforts. The lack of charging stations in China hinders EV sales, but hybrid cars are selling very well in China because of government subsidies and a free license plate.

> **Any company who can't deeply merge with the Chinese culture and management style definitely will not succeed.**
>
> *Director, Large Auto Company, China*

Trends

- "Demand for Tesla's Model S is not good in China. There are a few reasons: 1) The management team in China and the American headquarters are not communicating well. 2) The American team manages the Chinese business too much. … Any company who can't deeply merge with the Chinese culture and management style definitely will not succeed. 3) Demand for electric cars still is not large in China."

- "I forecast Model S sales will be even worse than its sales in 2014. I guess they maybe will sell 2,000 to 3,000 units in 2015. If the Model X could be released in the Chinese market this year, it might bring a small sales tide and drive Tesla's overall sales in the country. However, I heard it will be released in 2016."
- "We can say that the company has been successful at getting Chinese citizens' attention because it does things that the traditional auto industry hasn't done before. However, it is not successful at getting them to want to own a Tesla. From attention to demand to real sales, it still has a long distance to go."
- "Tesla's recent changes, such as all-wheel drive and improved backseat, have made essentially no change. These changes do not affect customers' purchase decisions."
- "Tesla really doesn't need to think too much about how to maximize its marketing potential with Chinese drivers. The only thing it should do is to improve the car. We auto industry professionals don't think the Model S is a real car."
- "Only the Model 3's release can attract a large amount of customers in China if its price is set around $30,000, as they disclosed. Some people like to say BMW i3 is very competitive in the market, but I think its prices are still slightly high for Chinese consumers."
- "I am not positive about the Model X's release in China. I don't think it will be more successful than the Model S. Although the X is using an SUV concept, its mileage endurance limits its SUV character. … In China's SUV market, the BMW X5 and Audi Q5 and Q7 are all selling well."
- "The pending Model X release will affect the company's operations. It will hurt customers' trust. Overall, pending release is negative news."
- "To run into capacity constraints is just an excuse because I don't think they have capacity problems."

> **From attention to demand to real sales, it still has a long distance to go.**
>
> *Director, Large Auto Company, China*

Competition

- "Chinese EV manufacturers are not Tesla's competitors because the former are still in the low-end market while Tesla is focused on the high-end market. Currently, I think BMW i3 is Tesla's most deadly blow. The i3 is a very good option for a city commute. Its next step is to improve its mileage endurance to 300 km. In addition, GM's Volt is also competitive. Other companies seem to be in no hurry to release an EV."
- "It is impossible to think of Tesla leading the electric car market in China. We only say Tesla leads the high-end electric car market in China. In the EV market, many companies think they are the leaders."
- "You can't use the traditional way of thinking to determine factors that will affect Tesla's demand in China. The Chinese market is very different from other countries. Government policy is the most important factor in determining demand and sales because Chinese customers face a big challenge in getting a license plate. … Tesla needs to understand this and try to receive all the benefits the government gives to electric cars. Tesla buyers can get a free license plate in Shanghai, but still need to wait for a license plate through an auction in Beijing."
- "Meanwhile, Tesla need to strengthen its public relationship with and strategy in China."

Buyer Profile

- "The profile of the Model S buyer in China hasn't changed since the car was first released. Before it was released in China, more customers were looking forward about it. Now, although there are a lot of people who can afford to buy the Model S, the real buyers are in a wealthier group. We could say the major Tesla buyers in China are people who are not only rich but also have more free time."
- "Tesla's Model S is a niche product for small group of customers."
- "The Model X release will not be helped by these positive reports because the Model S has received a lot negative feedback in China."
- "The problem is not customers waiting for a charging network to be built or planned out, but how to find the place to park the car. Where do they install the charging system at home? Most Chinese customers lives in apartment buildings with limited parking spots."

> **Hybrid cars are selling very well in China. It is not because there are enough charging stations or these customers have strong environmental concerns; it is just because the government gives good subsidies and a free license plate. Many drivers only use these cars' traditional gas function and seldom use its electric function.**
>
> *Director, Large Auto Company, China*

Battery and Other Developments

- "Not only Tesla but also the whole industry is trying hard to improve mileage endurance, decrease costs and cut down the [battery] size and weight."
- "The new U.S. factory will definitely help Tesla. According to current battery prices, the Model S' battery cost is already nearly $30,000. I believe the new battery factory can help it to control and decrease battery costs. It will also help its overall supply chain due to sufficient battery supply, but it will not have any technology breakthrough."
- "Battery supply will be definitely an issue that holds back sales."
- "There are not enough charging stations in China to help spur greater EV sales. More charging station building relies on government and EV companies. … I heard that the government will release some new policies to encourage companies to invest in building charging stations."
- "Hybrid cars are selling very well in China. It is not because there are enough charging stations or these customers have strong environmental concerns; it is just because the government gives good subsidies and a free license plate. Many drivers only use these cars' traditional gas function and seldom use its electric function."
- "Of course, drivers feel comfortable with the idea of charging their Tesla at home, but the key thing is whether they can find charging stations easily when they leave."

2) Auto Industry Specialists in Europe

These 11 sources from various countries in Europe said Tesla's Model S is set for sales growth in 2015 though often off of a low base from 2014. Misconceptions about charging persist, but the largest impediment to sales is Tesla's constrained supply, according to seven sources. This may be an actual supply issue or a result of the company's allocations to different countries. All 10 sources who commented on the AWD version of the Model S expect it to add to sales, even if slightly at the expense of the basic Model S. Sources foresee no equivalent competition for the Model S this year, but several said some major manufacturers plan to enter the EV space within a few years.

Key Silo Findings

Trends

- All 11 see healthy and growing demand and sales for the Model S.
- 7 said the only thing holding back growth is short supply, whether an overall constraint or allocation to each country.

Competition

- No source reported a direct competitor for the Model S.

Buyer Profile

- Sources do not expect the Model X release to affect Model S demand and sales.
- Several said most Model S buyers already have another car.

Battery and Other Developments

- 6 rated their country's charging infrastructure as adequate or better, while 4 see it as unable to support large-scale EV travel.
- All 10 who addressed the AWD option believe that it will help spur additional demand and sales for the Model S.

1) President of a European EV association; repeat source

The EV market still represents a very small share of Europe's overall car sector, but is gaining ground in nearly each European country. Growth is tempered by a general negative perception of driving an EV, with fears of being stranded, and by a lack of a proper charging infrastructure, perhaps perceived. Incentives given to the EV sector continue to play a key role and vary by country. Lobbying against EVs is slowly losing steam. Tesla's level of success varies by European country and often is shaped by its investment in that area. Its new U.S. factory will help increase volume capacity. A real battery breakthrough is not expected in the near future, but Tesla is the best positioned to be the first, most likely with the launch of the Model 3.

Oct. 29, 2014, report: This source expected Tesla to succeed depending on the European country, and said most buyers were purchasing the Model S to have the latest technology, not necessarily for an environmental reason.

Trends

- "Like the last time we spoke, Tesla continues to register very healthy demand in Europe. The all-four-wheel drive option is activating their sales; this new model makes Tesla S even more attractive. Nobody would have thought that there could be an electric all-wheel drive car, and Tesla has managed to launch it."
- "The only people who have the actual sales figures are Tesla people, but I speak a lot with all types of people in the industry and Tesla themselves. I can assure you that demand for Tesla cars remains very strong. Their problem doesn't lie in demand but, if anything, in supply. They are going slowly and step by step. If they did things more quickly, they wouldn't be able to supply this growing demand. I find the concept of building a network of superchargers very good. That will make a real difference for Tesla vs. its competition: They tackle the two main concerns people have over EV: having a charging infrastructure [and] offering a really wide battery range."
- "The degree of Tesla's success is directly related to the support EVs get in each country and Tesla's degree of investment, especially in terms of superchargers and stores. At the same time, France is still small for Tesla not because of any lack of incentives but because France didn't seem one of the first countries where Tesla decided to invest in their charging network first."
- "They have become more visible. ... Almost every day I see a Tesla in the street now."
- "I haven't heard a single complaint from any of the Tesla owners, and I try to follow this company a lot. Word of mouth is excellent and working very well for them."
- "[Media coverage] has increased considerably in the last few months. Tesla is still a novelty; it is a success story."
- "I see the fact that Tesla is launching different models like the Tesla S, the D or the X as something very positive. I don't think that there is going to be cannibalization."
- "The company is likely to continue to grow in 2015, thanks to the product itself, the expansion of their superchargers and great word of mouth among other reasons. However, although it will grow, it will remain a very small market in Europe due to its high price and the general misconception of EVs in this continent. The majority of people are still very reticent about EVs, and it will take a long time to re-educate those people about ... battery range and charging infrastructure."

> **Although it will grow, it will remain a very small market in Europe due to its high price and the general misconception of EVs in this continent.**
>
> *President, European EV Association*

Competition

- "Tesla doesn't have any competitors either in the EV sector. It is a fantastic car, probably the best in the world. ... Due to some consumers' cautiousness about going for a fully electric vehicle first and who prefer to go step by step starting with a plug-in hybrid, perhaps the BMW i3 could be regarded as a competitor."
- "People start talking about possible competitors to Tesla, but it is clear they are not posing any threats to Tesla— like the GM's Bolt. Cars like this could change the market by expanding it. I am convinced that there will be room for the Bolt, for Tesla models and for many more. The EV market is still tiny and has an incredibly huge room for growth."
- "Other car makers are studying Tesla and trying to come up with something similar. The GM Bolt model will come with a battery range of 200 km—clearly inferior to Tesla in that respect. The GM model is also smaller than [Volkswagen's] Golf. ... The Tesla 3 will have a wider range, and I believe it will have a totally different design to what we have seen in a car so far."

Buyer Profile

- "I don't think the consumer profile of a Tesla has changed since October; people who buy a Tesla are buying it not because it is environmentally friendly but because it is much more than a car. You are buying the latest technology."
- "They are usually people with money, owning at least another car."
- "The majority of Tesla buyers in Europe at the moment are early adopters, many of whom are ordering thanks to fantastic word of mouth."

> **The problem with a charging network in Europe has been the lack of an integrated model, with some countries being in the hands of some companies that have proved to be less professional than expected.**
>
> *President, European EV Association*

Battery and Other Developments

- "Battery range continues to be one of the major concerns for anybody considering buying an EV along with the limited charging infrastructure in Europe. In this respect, Tesla clearly and by far stands out vs. competitors as it has the widest battery range available in the market and is building a network of superchargers. Apart from the experience of driving such an innovative car, this makes Tesla unique."

- “I believe Tesla will continue to be No. 1 in battery range for a few years.”
- “The new U.S. factory will improve supply of batteries all over the world.”
- “Lots of efforts are being made at a Pan-European level at the moment to promote the EV sector, with a special focus on a deployment of charging stations.”
- “The problem with a charging network in Europe has been the lack of an integrated model, with some countries being in the hands of some companies that have proved to be less professional than expected.”
- “A few EVs have been introduced before a proper charging infrastructure to support them was available. That has been one of the problems from a business point of view. … This situation is changing as some companies have started to invest in this sector professionally. All this shows that this sector is really at an infant stage.”
- “Governments are not giving clear signals. At the same time, OEMs in Germany, for instance, are not given the green lights to EVs. Everybody is scared to close factories and invest in something new big time.”

2) Marketing manager in Norway; repeat source

Demand for Tesla has remained strong, and any slowdown in deliveries is more a result of supply capacity constraints than weakening demand. The new AWD version is helping both sales and demand for the Model S, although it has somewhat cannibalized the standard Model S. The delayed release of the Model X is not really affecting sales and demand for Tesla cars. Forecasts for 2015 are good, but growth may be more moderate than during early 2014 because of capacity constraints and what the source believes to be the company’s interest in not “growing too rapidly.” The Model S continues to have no direct competitors given its superior battery range and Norway’s growing supercharger network. Tesla is well positioned to emerge with a battery that represents a “revolution” for the EV sector.

Oct. 29, 2014, report: This source said demand was ahead of supply and that Tesla had a comfortable lead. Challenges included production constraints and the local service infrastructure.

Trends

- “Demand for Tesla S has been solid recently. [In] months when it seemed to slow down [this is due to] delivery time and supply, which can vary, and also due to internal company policies. They allocate a certain volume of cars to a certain market/country depending on their strategy and priorities at the time.”
- “If you look at the trend of deliveries of Tesla S models … you will see that it is not increasing so much as in, say, March 2014, but this is a question not of fluctuations in demand but of supply and delivery time.”
- “The only people who have Tesla’s sales figures are Tesla people themselves. We only have registrations of cars that have already been delivered. … We can tell you that demand for Tesla cars remains solid.”
- “People are waiting for the delivery of AWD Model S. The new AWD is definitely driving demand for Tesla S in general. It is helping both demand and sales. … It has cannibalized the standard Model S to a certain degree as some regular Tesla S owners have put their standard Tesla on sale.”
- “It is logical to think that there could be an apparent pause in demand because of the delivery waiting time of the AWD but generally both demand and sales of Tesla S … continue to be going up.”
- “Some outsiders may believe that demand for Tesla cars in Norway may be reaching a plateau. I believe that it doesn’t have to do with demand but with supply; they have supply constraints; it is all determined by the size of the factory and the availability of batteries. They are planning to build a huge battery factory which will help them with their supply limitations.”
- “Tesla is doing things very well, but rather than doing it differently I would say that they should focus on their after-sales service. … It would be very difficult to maintain the huge growth rate shown during the first and second quarters of 2014 and to be able to service those cars at a top level.”
- “The Model X will do well and it won’t affect sales of the standard S very much.”
- “I don’t think that the later-than-expected launch of the X will affect demand for Tesla cars. The recent launch of the AWD version could to an extent appease some disappointments over that, if any.”

The new AWD is definitely driving demand for Tesla S in general. … It has cannibalized the standard Model S to a certain degree as some regular Tesla S owners have put their standard Tesla on sale.

Marketing Manager, Norway

Competition

- "I don't think that Tesla has any direct competitors at the moment in Norway, especially given its battery range."
- "I don't anticipate any competitors in the near future."
- "The main factor affecting Tesla's demand is supply. Competition is not an issue for them at the moment; price is not a hampering factor for potential buyers in Norway either due to our very advantageous incentives. Incentives are likely to remain the same. Safety issues are not really an issue in this country. In terms of charging, although improving, it is still a hampering factor for any potential customer. … However, that makes Tesla stand out and have a competitive advantage over other EV manufacturers given its growing network of superchargers."
- "Up until now fully electric vehicles were the only category in the car sector to enjoy high incentives, and that didn't include hybrids. Hybrids are going to start having more incentives and could be seen more of an alternative for a potential EV buyer, but I don't see any competitor in this category for Tesla in the foreseeable future."

Buyer Profile

- "In Norway, Tesla cars are not only for a privileged consumer segment."
- "It is a fantastic car at quite a reasonable price due to the incentives EVs get in this country."
- "The consumer profile of a Tesla buyer has remained very similar since its launch."
- "Demand continues to be driven by those who were reticent at the time of its [Model S] launch and that they now have decided to place trust in them and because of word of mouth. But I know there are also concerns about Tesla being able to service those cars properly."
- "I would say all kinds of customers are buying the new AWD Tesla S. … It is not so much someone who is buying a second Tesla."
- "Typically people who buy a Tesla are those who are interested in buying an EV. … They go for a Tesla because of its superior range vs. competitors, because it is relatively affordable in Norway."

> **Hybrids are going to start having more incentives and could be seen more of an alternative for a potential EV buyer, but I don't see any competitor in this category for Tesla.**
>
> *Marketing Manager, Norway*

Battery and Other Developments

- "The charging issue is still a concern for many potential EV buyers in Norway, especially due to the feared long-charging times for EVs in general. But that is precisely one of the reasons why Tesla stands out and is selling so well in Norway. … There are Tesla superchargers in most places in Norway."
- "The mega battery factory is expected to be running by 2017. Until that happens, battery supply will hold sales back. [The factory] will make a huge impact, but it won't be something that happens overnight. It is said that the capacity of this new mega battery factory will be equal to the total global battery production today. It will definitely have a very positive impact on supply."
- "Tesla's joint venture with Panasonic [Corp./TYO:6752] is likely to give them an advantage in battery development; I know batteries are picking up. I also know that LG [Corp./KRX:003550] is developing batteries and that there is going to be a lot of competition in this respect."
- "After 2017 and once [Tesla gets] the Model 3 in the market, that will kick-start competition from the big, well-established car companies, which will start investing very heavily in this sector."

3) German EV consultant; repeat source

The German government is planning to invest more heavily in a charging station infrastructure and is likely to give more support in terms of incentives. Although EVs still represent a very small portion of Germany's car market, sales have increased considerably. Demand has even become stronger in the last few months, and Tesla has emerged as the best-selling EV in Germany. Its 2015 sales will be helped by the launch of the AWD Model S, ongoing press coverage, and word of mouth. Tesla's main hindrance is its capacity constraints. So far BMW's and Volkswagen's alternatives have not been able to compete with Tesla. However, the source expects Audi to emerge with a true Tesla competitor.

Oct. 29, 2014, report: This source said Tesla was well positioned to grow in Germany, with consumers turning to the Model S for its technology and as a status symbol. Drivers' misconceptions about charging were the biggest obstacle for Tesla to overcome.

Trends

- "Despite the high levels of consumer loyalty to German cars, demand for Tesla S remains strong in Germany. The reasons continue to be because it is the best electric car in the market, because of its technology, due to the fact that it is fun to drive and because of its network of superchargers. Also, it continues to be a status symbol."
- "Its greater [word of mouth] … has also helped activate demand for Tesla S, as more and more people talk about Tesla in the news and an increasing number of company cars are Tesla S models."
- "I don't think that Tesla is doing anything wrong. Their only problem is capacity. … They sell every single car they bring to Germany. If they wanted, they could sell more cars here. They don't do any advertising at all."
- "Almost for the first time German car companies seem to have much more interest in EVs. A year ago it seemed that they were almost trying to ignore the growing demand for EVs."
- "The AWD option has helped sales for Tesla S because AWDs are very popular in this country and they constitute even a strong status symbol than the more regular Tesla S."
- "There will definitely be a market for the Tesla X in Germany because there are people who prefer a SUV. I don't think that its later-than-expected release will have a negative impact on demand for Tesla."
- "I expect demand for Tesla S to do very well during 2015. There are more and more EVs in the market, and it is becoming popular in its segment [of wealthy consumers and company executives]."
- "It is possible to drive really long distances with an EV; you just have to plan your trip a little bit. If I had to with an EV, I would definitely do it with a Tesla, as it is the most reliable option in the market."

> **If they wanted, they could sell more cars here. They don't do any advertising at all.**
>
> *German EV Consultant*

Competition

- "The German cars available in the non-ICE segment simply cannot compete with Tesla yet. To begin with [BMW and VW alternatives] all charge very slowly, definitely more slowly than Tesla. … I know [German car makers] are working hard at coming up with a better battery, but they are behind Tesla. … Some people are just going for Tesla because they know if it the best available in the market for a non-ICE car, even if it is not German."
- "The main factors affecting demand for Tesla cars will be the company's advantage in terms of speedy superchargers."
- "Until the gigafactory is up and running, Tesla will continue to face supply constraints."
- "It is hard to say when a car as good as Tesla will come up in the market. There could be other options able to compete with Tesla more properly either in 2015 or in 2016. … Audi claims to be launching an EV that will be even better than Tesla soon. … Many people, especially in Germany would prefer to buy a German car."
- "It won't be easy for Audi, but this company didn't start yesterday. They have already invested a lot in R&D."

> **Audi claims to be launching an EV that will be even better than Tesla soon. … It won't be easy for Audi, but this company didn't start yesterday. They have already invested a lot in R&D.**
>
> *German EV Consultant*

Buyer Profile

- "Most people buying a Tesla S are executives or owners of small companies driving them as company cars. Also … more taxi and leasing companies are buying Teslas."
- "When it is bought by a consumer, the Tesla S is a car for the wealthy or at least in the upper-middle-income segment, people who are very interested in electronics and technology who want to give the image of having the most modern and most fun car available."
- "Due to the infancy of Germany's EV sector, most S owners are still early adopters."
- "Some of the people buying an all-wheel-drive Tesla will be Tesla S owners, but most will be new to EVs and Tesla."

Battery and Other Developments

- "The major forthcoming change in Tesla battery that I see with the new gigafactory … will be in price; they will be able to produce more battery volume, and it is likely they will be cheaper than the ones available at the moment."
- "Tesla has a joint venture with Panasonic to develop their batteries, but I believe that Panasonic is running at full capacity for Tesla at the moment. That means that until the battery gigafactory is running, Tesla will face constraints in battery production."
- "They are likely to come up with a more advance battery, but it won't be something sudden or revolutionary in the market. It will be something gradual."

- “The German government has started investing more heavily in a public charging infrastructure. The perception by most people is that it is still not enough and slow. Again, this is where Tesla stands out, thanks to their superchargers. Tesla has built and is planning to build more superchargers in Germany, but if you wanted to travel in Germany with your Tesla now, you would be able to do it without the fear of being left stranded.”
- “EV incentives haven’t changed much in Germany since October, [but] there are talks of introducing more incentives at a federal, regional and municipal levels.”
- “There is a new law to be passed that will set the requirements for every charging station … regardless of whether it is a public or a Tesla supercharger. With this law, every charging station must have two types of plugs.”

4) President of an EV-related association in Germany; new source at repeat location

Despite the German government’s lack of support for the sector, EV sales will continue to grow during 2015. Tesla emerged as the sixth best-selling car in 2014, following the BMW i3, Daimler’s Smart Fortwo, Renault S.A.’s (EPA:RNO) Zoe and Volkswagen’s e-Up. Tesla has gained share thanks to word of mouth, customer satisfaction, constant publicity and its supercharging network. Tesla demand is expected to remain solid during 2015. In 2018 Audi could emerge as the first proper competitor, but Tesla already will have a more extended network of superchargers. Tesla’s supply constraint could be partly solved with its future gigafactory.

April 22, 2014, report: A different source at this location noted improved perception of the Model S since earlier in the year, and said the change had had taken many auto industry professionals in Germany—including himself—by surprise.

Trends

- “German OEMs have been lobbying against fully electric vehicles: they haven’t had much interest in supporting this sector because they were already making lots of money with their ICEs. … It seems that the government will start to support this sector more … because OEMs have started to show more interest in it, spurred by the emergence of Tesla in the sector. … Things are going to change rather soon with a threat of what eventually could become a huge competition for Tesla.”
- “Tesla has played a big part in this. Nobody thought it was going to do so well; it caught everyone by surprise, and now the big OEMs here want to invest more heavily in EVs.”
- “For what it is … Tesla is doing very well. It still represents a niche market, but it is making it grow. … It is likely to continue to grow rapidly in 2015, again from a low base and representing a very small portion of the market.”
- “The four-wheel-drive Tesla S will continue to spur demand for Tesla because of the growing popularity of AWDs in Germany at the moment. I firmly believe that the Tesla X will do much better than Tesla S because I expect it to be around €50,000 to €60,000 at a retail level, and that price will be reasonable enough to compete with other SUVs.”

> **It seems that the government will start to support this sector more … because OEMs have started to show more interest in it, spurred by the emergence of Tesla in the sector.**
>
> *President*
> *EV-related Association, Germany*

Competition”

- “Tesla is the best car available in the market right now, with the best technology, and they don’t have any competition in the EV sector. This will be the case at least until 2018.”
- “Audi has announced that they will launch a car that will be better than Tesla S. … It won’t be presented until 2017 and won’t be in the market until 2018.”

Buyer Profile

- “People buying a Tesla are not necessarily the super wealthy but those who want to have the best technology available in a car.”
- “Tesla buyers are still almost virtually all early adopters.”
- “The profile of a Tesla driver hasn’t changed: a man 40 to 55 years old, prepared to take risks and try something new, who enjoys driving and who wants to have the best car available in the market.”

Battery and Other Developments

- “In terms of battery development, Tesla is well and by far ahead of its competitors. They offer a battery with a 500-km range.”
- “We are at least four to five years behind in terms of battery development.”

- "I expect Tesla to continue to lead battery development for at least the next couple of years. … Also, with their gigafactory they will be able to produce a greater number of batteries at cheaper prices."
- "In terms of a charging infrastructure in Germany, as already mentioned, this country is really underdeveloped. There are programs to develop the charging network, but it will take at least a year to develop a proper infrastructure. Again, this is one of Tesla's advantages."

5) German EV research manager

Tesla's demand remains strong and is likely to accelerate in 2015 year to year, but it still accounts for a negligible share of Germany's car market. Despite the country's very limited network of public charging stations, Tesla stands at another level because of its own supercharger network and its high-income demographic. The AWD Model S and the Model X are likely to further add to demand for Tesla. No other car maker is able to offer such a wide battery range, but other companies have started to react. Tesla likely will see its first real competitor in Audi three years down the road.

Trends

- "Demand for Tesla cars has been very strong and has even accelerated in the last few months."
- "Apart from being undoubtedly the best car in the world, with the best available technology in the market, constant word of mouth and increasing publicity are working wonders for them. … I myself own a Tesla Roadster, a Tesla S and have already ordered a Tesla X, which will replace my wife's BMW convertible. … You just have to drive it once and you will fall in love with it."
- "Model D [the AWD Model S] is expected to do very well in Germany; this is because of the growing popularity of AWD cars in general, but Model X will do even better. Many people will sell their Porsche [Automobil Holding SE/POAHY] Cayenne, for instance, and buy a Tesla X."
- "The Tesla AWD model will cannibalize Tesla S but only to some extent. Another reason why the AWD will do very well is because it will be a step between the Tesla S and Tesla X, and the fact that the Tesla X launch is taking longer will make some people buy the AWD model in between."
- "I don't know what Tesla could do differently to sell more in Germany. They don't need to do anything more to spur demand. The Tesla S speaks for itself."

> **I don't know what Tesla could do differently to sell more in Germany. They don't need to do anything more to spur demand. The Tesla S speaks for itself.**
>
> *German EV Research Manager*

Competition

- "In terms of performance, The Tesla S can outperform any ICE cars available in the market."
- "Tesla S is the best option for long-distance driving in the market because of its battery range. Tesla S has been able to prove that it is possible and easy with the superchargers to drive long distances with an EV."
- "Audi and the other big German car makers will create proper competition for Tesla but not for at least three to five years. By then Tesla will have become very established with a network of superchargers [throughout] Western Europe."
- "[Car makers] are trying to appeal to those consumers with a high degree of loyalty towards German [products] to wait for them [to introduce an EV]. That's why they are promoting their plug-in hybrids, which is the only thing they can sell for the moment."
- "Around a year ago, Audi said that the maximum an EV could drive was 300 km; they also said they could do 150 km because offering a 300-km battery range would be too expensive. Well, Tesla has proven them to be wrong."
- "Many people are talking about the fully electric vehicle from General Motors, but that is an inferior car in terms of battery range, among other things."
- "Although they are not really Tesla's competitors, Tesla competes in the high end of the very premium cars, such as Mercedes, BMW and Porsche."
- "We don't trust [U.S. cars]; we believe they are not that fast and don't have great performance, but Tesla is regarded as something different."

Buyer Profile

- "Most people buying a Tesla S at the moment or expecting to buy it in the near future are early adopters. However, a portion of the ones buying the AWD Tesla model and Tesla X are likely to be owners of a Tesla S already."

- "A growing portion—although still very small—of current buyers of Tesla models are already EV drivers. It is estimated that half of the former owners of [GM's] Opel Amperas … have switched and bought a Tesla S."
- "People in this country who own a Tesla S usually own several cars."

Battery and Other Developments

- "Clearly Tesla is ahead of competition in terms of battery development, and the upcoming gigafactory is likely to strengthen its position, also in terms of being able to offer a wide range battery at cheaper prices in the future."
- "The joint venture with Panasonic will help them develop their batteries further, but developing a battery is something that takes a long time."
- "Germany is very poorly supplied with public charging stations, with first a total of 4,000 public stations. It also has a system of sharing electric charging with other EV drivers at a private level."
- "Despite new EU regulations regarding installation and the requirements each country member should have in their charging network, the German government is already trying to put obstacles … in terms of making the process … extremely bureaucratic, tedious and very controlled."

6) Marketing manager for a Dutch car association; repeat source

Despite a lower level of incentives during 2014 compared with 2013, EVs continue to sell well. December unit sales were 1,910 in 2012, 4,161 in 2013, and 6,825 in 2014. Tesla has emerged as the best-selling EV in Holland, for which EVs comprise almost 4% of the total car market. However, this contrasts with 5.5% registered in December 2013, when a program of attractive EV incentives expired. Also, a portion of the population questions whether EVs and their batteries are environmentally friendly. Tesla's consumer profile continues to be company executives. It will remain without a real competitor for the near future.

Oct. 29, 2014, report: September sales had climbed following a "steady" 2014 to date, which was due to the cessation of incentives at the end of 2013. Hybrids were outselling EVs because of largely unfounded battery range concerns.

Trends

- "Tesla has done very well in the last few months in Holland. It is a very attractive car. More and more people are interested in and talk more and more about it."
- "I expect demand for EVs to remain similar and demand for Tesla to at least remain the same, although I would say it is likely to increase because of the launch of the new Model D. More people talking about it in the press and very effective worth of mouth. Plans about opening a new assembly plant in Holland have resulted in lots of publicity and even more interest in Tesla."
- "Although incentives are less attractive than in 2013, potential Tesla buyers are less concerned about them as the brand is targeted at a higher-income group and is mainly bought as a company car, which comes with an exemption."
- "Plug-in hybrids continue to be bigger than EVs."
- "It is expected that the Dutch administration will announce a new program of incentives in 2015 or 2016, but it is still uncertain on whether they decide to increase them. As a result, the EV sector could be helped or hindered."

> **Plans about opening a new assembly plant in Holland have resulted in lots of publicity and even more interest in Tesla.**
>
> *Marketing Manager*
> *Dutch Car Association*

Competition

- "Tesla doesn't have any competitors in Holland. Period. There is not a single car that comes near Tesla."
- "Its superior technology and much wider range make it so unique. On top of that, no other car maker has invested in a fast-charging station network."
- "The recent launches by BMW could be regarded as competition although … their cars are different in terms of range, style and performance. Their launches are strengthening the plug-in hybrid sector in Holland in a way and, thus, competing with EVs and ultimately with Tesla. Plug-in hybrids get the same incentives as an EV."
- "More competition will come; everybody is trying to copy Tesla. But nobody has managed to come up with something at least as good. Everybody is behind Tesla in terms of battery development, which makes Tesla really stand out."

Buyer Profile

- “The consumer profile of a Tesla buyer remains the same; most continue to be people buying it as a as a company car because they get more attractive incentives than private consumers.”
- “People driving a Tesla here are usually top managers using them as company cars.”
- “[Private consumers buying Teslas] are very affluent, own more than one or two cars and do not use the Tesla as their main household car.”
- “People buying a Tesla don’t do it because they think it is very environmentally friendly car; there is still controversy over whether the batteries are that green. People buying a Tesla here do it because they want to have the most fun car to drive and because they want to have the latest technology.”

Battery and Other Developments

- “Holland [has] a very good charging infrastructure, so concerns over this matter shouldn’t be an issue. The big challenge in Holland is to change people’s negative perception of driving an EV.”
- “Tesla has the widest battery range in the market, and I believe it will come up with some real changes in about two years. I don’t think that any other car maker will be able to do it earlier. I believe Tesla is the best positioned to achieve that with the help of their joint venture with Panasonic.”

> **People buying a Tesla here do it because they want to have the most fun car to drive and because they want to have the latest technology.**
>
> *Marketing Manager*
> *Dutch Car Association*

7) Director of an EV association in Switzerland; repeat source

The Swiss EV market is growing rapidly although the number of EVs on the road is still low. Tesla’s success is due to several factors: Switzerland’s high per-capita income and small size, and a high demand for premium cars. Charging batteries is less of an issue in Switzerland than in other countries. This source expressed concerns about the 20% drop in the euro’s value against the Swiss franc.

Oct. 29, 2014, report: This source reported growth that increased as 2014 progressed, and also said that taxi companies using the Model S were helping to boost Tesla’s brand recognition.

Trends

- “We love buying cars in Switzerland. We have the highest motorization rate but also the highest CO_2 emission in Europe and one of the highest in the world. [Still] the Swiss population is not so convinced that EVs and hybrids are much more environmentally friendly than petrol cars.”
- “We are not a country of car manufacturers, but we are one of the neighboring countries of one the biggest producers in the world. Our strongest related industry is the car distribution and service industry, which still continues to very heavily support traditional petrol cars as they get higher margins than with EVs. The real business in Switzerland is focused not on car manufacturing but in car reselling. … This is one of the reasons why the EV sector is so underdeveloped in Switzerland.”
- “Switzerland is one of the very few countries where the development of a charging network is entirely in the hands of purely private companies, with no subsidies so far.”
- “EVs get … an exemption of a petrol tanking tax. … There are even talks to impose this tax on EVs. … EVs are also currently exempt of paying import taxes. In total, with the exemption of these two taxes combined, EV buyers save only 5% vs. an ICE car, which is nothing for a rather affluent population. Every second car you see on the road in this country costs around €70,000 or more.”
- “In spite of the little support to EVs by the current government and misconceptions of how environmentally friendly and efficient an EV can be, demand for EVs has increased considerably. Tesla emerged as the best-selling EV by the end of 2104.”
- “Demand and sales of Tesla cars in Switzerland remain strong and one of the reasons is Tesla’s competitive advantage against other EVs thanks to its network of superchargers. The fact that a public charging network is rather underdeveloped in Switzerland … makes Tesla stand out.”

> **The No. 1 person at Tesla in Switzerland [said] demand for Tesla S is very solid, but that the biggest problem Tesla has in Switzerland is not demand but supply, receiving more cars.**
>
> *Director, EV Association, Switzerland*

- "Tesla demand is also being fueled by a greater number of its cars being seen on the road. More taxi companies are buying the Tesla S; that is a great promotional tool for Tesla. … More leasing companies are also buying Tesla. We have seven prime ministers, one of whom started driving a Tesla last autumn."
- "The launch of the AWD Tesla is definitely helping demand and sales of Tesla S, as the AWD alternative is usually very popular in this country."
- "I don't think that the Tesla AWD is cannibalizing Tesla S very much."
- "I am sure that Tesla X will also be popular; its later-than-expected launch is not having any negative impact on demand or sales of Tesla S at the moment. People are not talking so much about Tesla X; all the focus is on the Tesla S and the AWD version. … Usually cars arrive later in Switzerland … so people are quite used to waiting."
- "The No. 1 person at Tesla in Switzerland [said] demand for Tesla S is very solid, but that the biggest problem Tesla has in Switzerland is not demand but supply, receiving more cars. He said he would like to have many more Tesla cars in his stores because the demand is there and they would definitely be sold."
- "I predict a very good year for Tesla. They are currently recruiting about 40 new members of their staff … for their sales division but also for their service division. They are also opening new stores in Switzerland's key cities and are recruiting."

Competition

- "Tesla is competing with the high-end series of Mercedes, Audi and BMW cars, but I don't really think Tesla has any strong direct competitors at the moment in Switzerland."
- "I don't see any other car that could compete with Tesla in the foreseeable future."
- "I don't think that price will be a hindering factor for Tesla sales as the segment in which Tesla is positioned in Switzerland is the affluent … consumer group. Price is not an issue for those potential buyers."
- "Competition won't hinder sales or demand for Tesla S in the foreseeable future. Safety issues are not a concern for Tesla buyers. … Not a single person has voiced any concerns about Tesla service stations or after-sales services in general to me."
- "The only thing that could hinder demand is supply limitations. It is a very new company in a new market for them, and it is quite logical to see that it is going through some growing pains. Tesla is doing everything from scratch here, and it takes awhile to get established."
- "The Chevy Volt was not a success in Europe, including Switzerland. When GM's new EV is launched, it won't be that easy for it to compete with Tesla. The same goes for Audi; they have been selling ICE cars, so there will be a change of culture needed to spur demand for them. Those things don't happen in a short time."

Buyer Profile

- "The consumer profile of a Tesla buyer hasn't changed since the last time we spoke and since Tesla S was released. Due to the infancy of the EV sector in Switzerland, virtually all Tesla buyers are early adopters."
- "Usually Tesla owners are either wealthy or top executives who drive it as a company car. However … in Switzerland, the price of a Tesla is less of an issue than it is in other countries."
- "Quite a few high-level executives at Swiss companies are driving Teslas. They could have any car since they, not their company, have to pay a penalty for the extra CO_2 emissions, but a growing number are choosing to buy a Tesla. It is a very attractive car and definitely a status symbol in this country."
- "People who buy a Tesla are those who want to have the latest technology, [who] have more than one car and enough money and are also attracted by the growing number of superchargers in this country."
- "If a household owns a Tesla, it wouldn't be used as a family car."
- "The EV industry doesn't support Tesla's strategy of having its own charging stations. We continue to develop the initiative of having combined charging stations, which started last autumn."
- "I think the authorities are building enough charging stations and the situation is going to improve."

Battery and Other Developments

- "I don't see any changes in battery development in the near future."
- "The only thing I expect is that prices will go down. Prices have already gone down by 10%, and the manufacturer that is best positioned to come up with lower prices is Tesla."

Quite a few high-level executives at Swiss companies are driving Teslas. They could have any car since they, not their company, have to pay a penalty for the extra CO_2 emissions, but a growing number are choosing to buy a Tesla.

Director, EV Association, Switzerland

- "The U.S. factory will have an effect on battery production, but real advances in technology will take awhile. This U.S. factory will have an impact on volume but not necessarily in terms of breakthrough technological changes."
- "This factory will help them with their issue with battery supply."

8) Marketing director of a Danish EV association; repeat source

The EV sector has continued to grow but from a low base, accounting for 0.9% share of the whole car market by the end of 2014. However, the incentive program will expire Dec. 31, 2015. Tesla is set to have healthy demand this year, thanks to consumer awareness, media coverage and the supercharging network. A direct competitor will not emerge until Audi releases its EV, but the source said the market will be big enough for both companies then.

Oct. 29, 2014, report: This source said the market is in its "infancy," with Tesla behind the Nissan Leaf but poised to grow. The source also voiced concern about the future of incentives beyond 2015.

Trends

- "Demand for the Model S has been healthy in Denmark, with it managing to emerge as the second best-selling car after the Nissan Leaf."
- "Although we only have delivery figures, demand in 2014 was at least as strong as demand in 2013, and I would say it has even accelerated. More Tesla cars have already been sold in the last six months, having become more visible in the streets … and also thanks to the growing number of superchargers. … Growth also is driven by the launch of the AWD because it has even more features and a better performance than the standard Tesla S."
- "Most Teslas sold in 2015 will be the AWD Tesla S."
- "Some standard Model S cars have already gone to the second-hand market; these people plan to buy the more advanced AWD model."
- "However, the overall EV sector, including Tesla will face some challenges in 2015 as there are lots of uncertainties over incentives and the government's support after Dec. 31, 2015. … General elections are expected to take place in the spring or in the autumn at the latest. The current government has been supportive of EVs, but there are fears that the more conservative party, likely to win the next elections, may not be so willing."
- "I expect 2015 to be as good as 2014 in terms of sales for Tesla because many of their cars already will have been ordered. … As for 2016, it is really too soon to predict."

> **Demand for the Model S has been healthy in Denmark, with it managing to emerge as the second best-selling car after the Nissan Leaf.**
>
> *Marketing Director*
> *Danish EV Association*

- "Tesla buyers know that Tesla offers a good after-sales support. … If your Tesla car breaks down in the middle of the road, everyone says that someone from Tesla very quickly comes to assist you and repair your car. … Also, Tesla offers an eight-year warranty, which also includes its battery."
- "If I had to highlight something negative or not so positive about the company, it would be perhaps their capacity constraints. That's the reason why their delivery times are so long."
- "Plug-in hybrids don't get the support that EVs get in Denmark, which makes them very expensive."

Competition

- "Tesla continues to have no competitor in the EV market, and I expect it to remain so during 2015 and 2016."
- "Audi has announced it will launch a fully electric vehicle in 2018 [but] that will help expand the market. And it could be the case that there could be room for everybody. … Tesla will carry on having a great competitive advantage, which is their supercharging network."

Buyer Profile

- "The segment where Tesla is in Denmark is a very premium one, with only very affluent people being able to afford it. … I believe the ADW will have even stronger demand than the standard Tesla."
- "The Tesla S is not just … for the super-rich. The standard of living is very high in Denmark. … I would say around 4% to 5% of the population could afford a Tesla."
- "Due to high taxation on cars in Denmark … most Tesla S owners only have one car. … Only 10% of the population has two cars. Also, we have extremely good public transportation … and this is a very small country."

- "Tesla drivers are usually males who buy it because they are fascinated with the latest technology."

Battery and Other Developments

- "The U.S. factory will help battery production, which will be good for Tesla as they have some capacity problems. There is more demand than supply for Tesla cars in Denmark."
- "I don't see any major changes in terms of battery technology in the near future, but prices are likely to get cheaper with their planned gigafactory."
- "In terms of charging stations, Denmark is well set, and it is a rather small country."
- "Tesla has increased the number of superchargers since the first one was introduced last year, and I believe the number will grow."
- "Other companies are trying to keep pace and heavily invest in R&D, but Tesla still well ahead of them."

> **The overall EV sector, including Tesla will face some challenges in 2015 as there are lots of uncertainties over incentives and the government's support after Dec. 31, 2015.**
>
> *Marketing Director*
> *Danish EV Association*

9) UK trade association; new source at repeat location

EVs continue to account for a very small portion of the United Kingdom's car market because of consumer concerns over battery range and prices. The disruption at and neglect of a large number of charging stations has hurt the EV market. Tesla was launched in the United Kingdom a few months after being introduced in Continental Europe, and is still very new. Tesla will benefit from being an aspirational brand and from having a superior battery range and growing supercharger network. Word of mouth and media coverage will spur Tesla's adoption.

<u>Oct. 29, 2014, report:</u> This source described the EV sector as small but growing rapidly. Tesla was poised to grow, given its positive initial perception as well as its charger network buildout.

Trends

- "EVs and plug-in hybrids still represent a very small portion of the market in the UK, but within the non-ICE car sector, plug-in hybrids enjoy more demand in the UK. … With plug-in hybrids, people … avoid the anxiety of battery range."
- "We need a network of charging stations that work; many of them are simply not working at the moment. What's worse is they are not being repaired and are being neglected. … One of the main companies providing charging stations in this country has recently been bought by another company."
- "All of this has created negative publicity for EVs, which could have a negative impact on [Tesla]. Things are being done to tackle this problem, but it hasn't been sorted out yet and is creating anxiety in consumers."
- "There is definitely a huge room for growth for the EV sector, but it is going to be challenging as all the stakeholders … need to work jointly."
- "Tesla is still at an infant state in the UK, more than in Continental Europe, for two reasons: Tesla S was launched a few months after it had been introduced in Continental Europe due to the fact that our cars have a right-side driving wheel. Also, the majority of Tesla's fast-charging stations are concentrated in London."
- "Tesla seems to be less affected by [battery and pricing concerns] due to its wider battery range and high-income targeting."
- "I believe Tesla is going to be a success in this country."
- "The launch of the AWD will help demand for the car. I don't know whether it will cannibalize the Tesla S."
- "Cars are launched in the UK later than in Continental Europe, so the launch of the Tesla X will not be until at least the end of [2016]. Nobody is concerned about Tesla X here at all."

> **The UK is relatively well supplied with a charging station infrastructure, especially in the London area. However, confusion over who is responsible for electric car charger maintenance is causing the network to break down.**
>
> *UK Trade Association*

Competition

- "There is no competition for Tesla in the UK's EV sector. It is by far the best EV. It [has] the longest battery range."
- "Due to the popularity of plug-in hybrids, BMW i3 could be competing with [Tesla]. But this is mainly for people who are reticent to buy a fully electric vehicle and would go for a plug-in hybrid first."
- "I don't see any competitor for Tesla in the next at least few years."

Buyer Profile

- "The consumer profile of a Tesla buyer hasn't changed since it was launched. Tesla S drivers are early adopters, but they buy Tesla not that because they want to protect the environment but because they want to have the best technology available in a car and can afford it."
- "Tesla drivers tend to be male of a rather high income."
- "People who buy a Tesla S tend to own more than one car; they wouldn't have a Tesla as their only car in the household as there are still concerns about the network of superchargers."
- "There is a great potential for Tesla in this country."

Battery and Other Developments

- "The UK is relatively well supplied with a charging station infrastructure, especially in the London area. However, confusion over who is responsible for electric car charger maintenance is causing the network to break down."
- "Most potential Tesla buyers are not deterred by this as a Tesla S wouldn't be their sole car in the household."
- "In terms of battery range, Tesla clearly is No. 1 and by far stands out above competition."
- "It is likely that Tesla will be the company to come up with a real technological change but not in the short term."

10) Chief editor for a Swedish automotive publication; repeat source

Despite Sweden's relatively low incentive support for EVs, Tesla has continued to increase sales and demand through word of mouth, media coverage, superior technology and the growing network of superchargers. Tesla is also well ahead in terms of battery development, but no real technical advances are expected in Tesla batteries for "at least two years." Sweden is the home of Volvo AB (STO:VOLV-B), which has lobbied against fully electric cars. Still, consumer perception regarding EVs is slowing changing. Tesla will lack real competition for the next few years.

Oct. 29, 2014, report: This source's interview was not included in the final report as it came in too late for publication. The source said the lack of EV incentives was holding back sales growth for the sector.

Trends

- "In spite of the relatively few incentives that EVs have in Sweden, they have managed to account for almost 1.7% of the total car market, one of the highest in Europe."
- "Also, in spite of uncertainties over new policies on incentives in the future due to the newly formed government … demand for EVs continues to increase, albeit from a low base. Concerns over the charging issue still deter potential buyers from switching to a non-ICE car although Sweden is well set with charging stations."
- "The government allocates a certain amount of fixed budget for EVs; once it goes over the budget for a particular year, people don't get any more subsidies. Last year's budget was 280,000 krona, and they ended up running out of money. … Still, sales of EVs do very well. Generally incentives are not so much a concern for Tesla buyers because in most cases they are very rich people."
- "Tesla has continued to do very well in Sweden, that demand for Tesla S remains strong, even increasing, and that it has managed to gain share in the EV sector in a very short time. Everybody continues to talk about them in the press. … But the biggest driver is the car itself. Tesla S is the best EV car in the market at the moment."
- "If the gull-wing doors … work well … then I think that Tesla X could even do better than the Tesla S."
- "Swedish people like SUVs and big cars in general, so I think that Tesla X will do at least as well but probably better than the Tesla S."
- "Their AWD version is expected to have increased demand for them. I think the AWD Tesla S will do great. It is a car that is even more suited to our topography and climate."
- "Their delivery times usually take around five to six months, which in a way is really negative for them as they can make it an even more aspirational car."
- "Their only constraint is production; they are constrained by production capacity, not demand. Also, I believe Panasonic is also facing some capacity constraints to come up with the number of batteries Tesla needs."

> **In spite of the relatively few incentives that EVs have in Sweden, they have managed to account for almost 1.7% of the total car market, one of the highest in Europe.**
>
> *Chief Editor*
> *Swedish Automotive Publication*

Competition

- "Tesla S has no competition in Sweden."
- "Nissan Leaf is one of the big sellers in this country, but to be honest, people buying a Nissan Leaf … would really prefer to buy a Tesla S but … cannot afford to. Tesla has now managed to outpace Nissan."
- "The other big sellers are Mitsubishi [Corp./TYO:8058] Outlander and Volvo V60 Plug-in … but they just belong to another league."
- "It will take awhile for car makers to come up with something as good as Tesla, not just in terms of the car itself but also the infrastructure Tesla is building around it."
- "Nissan, General Motors and Volkswagen are aiming at producing a car that is as good as Tesla to be able to compete with their Model 3 and with the same range, but they are not building a gigafactory, among other things."
- "GM has just shown the Bolt, but I don't see it as a competition for Tesla S. It runs with an additional, conventional engine."

Buyer Profile

- "The profile of a Tesla buyer hasn't really changed; most Teslas are company cars for high-level executives. In terms of private buyers, they are mainly wealthy people."
- "The majority of Tesla buyers are early adopters."
- "Many people who buy a Tesla in Sweden are not concerned about environmental issues; they … want to have the best car available right now with the best technology. And many want to impress their friends with it."

> **I don't think they will be able to come up with real technological changes until about around two years' time.**
>
> *Chief Editor*
> *Swedish Automotive Publication*

Battery and Other Developments

- "In terms of battery development, Tesla is taking the lead. … They have the widest battery range available."
- "With the gigafactory they will be able to produce a greater volume of cars. … As a result, they will be able to make cheaper cars. However, I don't think they will be able to come up with real technological changes until about around two years' time."
- "General Motors, BMW and Volvo have all said that they can make a car as good as a Tesla … but they cannot build such a battery at the same scale as Tesla. … To begin with, they don't have the infrastructure to build the superchargers."
- "Tesla's strength … is its supercharging network and the great scale at which they can make cheaper batteries."
- "Their joint venture with Panasonic will continue to give them a competitive advantage against other car makers."

11) Executive of a French EV association; repeat source

Tesla represents a very small share of France's overall car market because of its high retail prices. Still, the source said Tesla is a success story, thanks to its attractive designs, the driving experience, the battery range and the network of superchargers. Tesla likely will grow rapidly this year. Competition also will build a few years out, but the market will expand enough to support all EV manufacturers.

April 22, 2014, report: This source said the EV sector was very small but growing rapidly thanks to effective government incentives. Tesla was just beginning to pay attention to France's market at that time.

Trends

- "France has increased the number of incentives in the last 12 months, being one of the countries in Europe with the greatest level of support to EVs and PHEVs."
- "It will also have a 30% tax credit for the purchase of a private charging point, which has been approved by Parliament."
- "A road sign has been created to identify the location of public charging stations. Also, the government is encouraging private companies/investors to develop and invest in the charging point network."
- "The French government has announced the creation of an additional ecological bonus and an identification system for clean cars during 2015."
- "The fact that Tesla is still small in terms of market share doesn't mean that Tesla is performing badly in France. One of the reasons is because France didn't seem to be chosen as one of the first countries of focus by Tesla. Only a few

months ago there was only a single supercharger and a showroom was about to be opened. Now with a much wider network of superchargers and more showrooms, orders for Tesla S are really growing."

- "Only the most affluent income group can afford it. The Tesla S is not a volume car."
- "Tesla creates lots of publicity, which makes people desire the car. Customer satisfaction has been very good, both of which create great demand for Tesla without the need of much marketing."
- "I expect Tesla S to continue to do very well in 2015."
- "I don't know whether the Tesla X will cannibalize the Tesla S. I think that as the market expands, it will actually help the company grow further."

Competition

- "Tesla's most direct competitors are not in the fully electric vehicle sector. There is not a single 100% EV competing with Tesla at the moment. The ones competing with it are either thermic or plug-in hybrids, such as Porsches or BMW."
- "Competition is likely to grow in the future for Tesla. Some luxury manufacturers are planning to develop a 100% EV and launch it in about two to three years. … But I think it won't be a threat for Tesla; rather, the cake will grow and each one will have its piece of it. Tesla is positioned to have a big piece because of its technology, battery range and the network of superchargers."

> The fact that Tesla is still small in terms of market share doesn't mean that Tesla is performing badly in France. One of the reasons is because France didn't seem to be chosen as one of the first countries of focus by Tesla.
>
> *Executive, French EV Association*

Buyer Profile

- "They are not high-up executives using a Tesla as a company car. People buying an EV as a company car wouldn't have a Tesla in this country."
- "Tesla's buyers are mostly private consumers with a high income."

Battery and Other Developments

- "France has one of the most important networks of public charging stations [9,100 charging points at the moment]. This network will grow in 2015. This will also be helped by initiatives at a regional and municipal level."
- "Lots of efforts are being made by many companies to develop batteries to make them more efficient, last longer, lighter and cheaper."
- "Prices are likely to continue to go down, which will be helped with the opening of Tesla's gigafactory. I agree that this will affect volumes, result in lower prices. A real breakthrough in batteries technologically will take awhile, but Tesla is well positioned to continue to lead battery development."

3) Auto Industry Specialists in Japan

This source said Tesla's sales potential in Japan is severely inhibited by the government's strong commitment to hydrogen-fueled cars. Also, electricity is very expensive in Japan. Toyota has succeeded with its Prius hybrid and premium Lexus brand, and its Mirai hydrogen-powered vehicle is generating considerable interest. Tesla's Model S and upcoming Model X are too big for driving in Japan. Panasonic's presence in manufacturing lithium batteries has no effect in this country.

Key Silo Findings

Trends

- Tesla's Model S is too big and expensive to take hold in Japan.
- Hydrogen is the future for vehicles in Japan, where electricity is prohibitively expensive.

Competition

- Toyota's Prius has been by far the most successful EV/hybrid in Japan, and its success has helped Lexus sales.
- Toyota's just-announced Mirai, powered by hydrogen, is already popular with Japanese drivers.

Buyer Profile

- The Model S buyers in Japan have been "early adopters of everything."
- Model X will be slow to sell in Japan, given its large size.

Battery and Other Developments

- Panasonic's lithium battery operation has no effect in Japan, where the government is committed to hydrogen.

1) Senior consultant and Japan representative of an automobile consultant group in Tokyo

Tesla will only be a niche brand in Japan; the brand will be bought by people who are "mavericks" with a lot of money. The Model S is too costly and too big to park in Japan. Also, generating electricity is very expensive. Japanese manufacturers may well leave Tesla out when they develop a universal charging adapter. In December, Toyota announced the first hydrogen fuel car, the Mirai, and orders have been overwhelming. Hydrogen also will work well with hybrids; Toyota is in the process of converting the Prius over to hydrogen.

Trends

- "The Model S is big and expensive although it has a reasonable range. Despite the nice style, graphics and good speed, it is a niche brand. It will get squeezed with Japan's emphasis on hydrogen, and its future in Japan is dim. Tesla will be the niche of the niche of the niche. I would not put any money on the table [on Tesla]."
- "Japan has a hard time generating electricity. It is very expensive, and there is not a big future for EVs in Japan."
- "The Japanese government announced that they must build 100 hydrogen stations, so Toyota and others need to invest in hydrogen. Oil and gas are a finite source. Toyota has broken this chain with their hybrids, and we will see the Priuses switch over to hydrogen. A hybrid vehicle can run on hydrogen, gas and oil, diesel, or compressed natural gas; it should be no problem for Toyota to convert their Prius over to hydrogen."

Competition

- "Tesla is absolutely no threat to any of the Japanese brands."
- "Nissan tried with the Leaf to introduce electric vehicles in Japan, but they never gained traction. Their range is too short, and Leafs are now just used for fleet purchases and taxis."
- "Toyota is so successful with the Prius hybrids that this carries into the Lexus. People buy the Lexus in droves."
- "When Toyota announced the new Mirai, a hydrogen fuel cell vehicle, within five minutes they had 10 times more orders than they thought there would be."
- "Toyota and Nissan talked of an infrastructure of power plug-ins. Many Japanese manufacturers are working together for a universal plug. They don't want to pull out an adapter to recharge every time, which is what they and Tesla owners do now. It would not surprise me if these same manufacturers leave Tesla out of the process and set up a different plug altogether. Sure, Tesla owners could then get another adapter, but it is not easy using adapters."

> **SUVs are too big and too hard to park with our small, limited parking. I don't think the Model X will sell here.**
>
> *Sr. Consultant & Japan Representative*
> *Automobile Consultant Group, Tokyo*

Buyer Profile

- "The Tesla buyer in Japan is a maverick, unusual, entrepreneurs, people with lots of money. The buyer is an early adopter of anything."
- "The Japanese are not big on SUVs. They are big on vans … to move a family. But generally they like sedans for families, and they like hatchbacks. … SUVs are too big and too hard to park with our small, limited parking. I don't think the Model X will sell here."

Battery and Other Developments

- "Nissan started building electric charging stations for the Leaf, and Toyota went along with it. An infrastructure is now set up."
- "If [Panasonic wants] to make lithium batteries, that is fine. They do not influence the government, and the government has decided to go with hydrogen."
- "Panasonic is not stupid. They will be able to make lithium batteries, but I wouldn't put all my eggs in one basket."
- "Hydrogen is a fabulous source of fuel, and I can't wait until the whole world switches over."
- "Tesla put on a good show in a prominent part of Tokyo in September. I was there and got to meet the head of Tesla in Japan."
- "Elon Musk got unlucky in the short term with the lowering price of gas. At least it is nice for consumers."

4) Auto Industry Specialists in the United States

These three sources said the AWD Model S has been a plus for Tesla. It has drawn in new customers who appreciate the high performance, and also has led to trade-ins from Model S owners. The Model X will not affect demand for the Model S. Tesla lacks direct competition. Its unit sales this year could be affected by supply constraints but not by lower oil and gas prices.

Key Silo Findings

Trends
- All 3 said the AWD Model S has spurred demand, both from established and new Tesla customers.
- Some customers are trading in the basic Model S for the AWD version; this has led to a used market where the Model S is more affordable.

Competition
- None of the 3 sees any viable competition at this point.
- 1 mentioned the Bolt, but said it lacks an infrastructure.

Buyer Profile
- The Model X release will not directly affect the Model S, but 1 said a "slackening" of the latter's sales may occur.

Battery and Other Developments
- All 3 believe supply is a constraint for Tesla; 1 said battery supply as an issue.
- The 2 who commented on lower oil and gas prices said it does not affect Tesla demand.

1) Owner of a Tesla and a Tesla-authorized auto body shop; repeat source

Tesla's AWD sales may well surpass Model S sales. Greater Tesla sales are noted in states with tax incentives. Some families are buying two Teslas, while others are trading their Model S in for the AWD version. Newer buyers have been watching the cars for a while and are not affected by the price of gas. The Model X will not affect Model S sales because it caters to a different customer. The X's price can be justified by its cargo and passenger room. The SUV has a preorder list of more than 20,000; given that Tesla intends to deliver 50,000 cars in 2015, the company could become supply-constrained. Tesla does not have serious competition yet. Mercedes, BMW and Porsche must improve their EVs in order to catch up to Tesla.

Oct. 29, 2014, report: This source termed 2014 a "banner year" for the Model S, and noted no negative fallout from the delay to Model X's release. Only supply and price issues were expected to hold Tesla back.

Trends
- "I can only address the demand question locally, but I would think what's going on here is typical. We are seeing a substantial increase in Tesla owners as well as those intending to purchase one this year. A fair number of owners have or are selling/trading their 2WD Model S for the dual-motor AWD version. The lower price of the used fleet will attract new, slightly less well-off customers as well."
- "It doesn't look like the Model X is affecting Model S sales. They are usually different customers or the same ones getting a second Tesla. The Model X may well exceed the S sales. It's easier to justify the price for something that will carry a lot, pull a trailer, and hold lots of passengers comfortably and safely. I would not be surprised to see them used by businesses for some special applications. The AWD Tesla has more torque and strength than most large pickups."
- "Tesla is supply-constrained and will be for the foreseeable future. They are [still] selling cars without advertising, and there are 20,000-plus preordered Model Xs alone they have to build. Tesla intends to deliver around 50,000 cars in 2015."
- "In the luxury car market, the price is a bargain. It's not a deciding factor for most. Incentives can certainly affect sales. Those states with tax incentives have seen greater sales. Tesla has the only real high-speed charging

A fair number of owners have or are selling/trading their 2WD Model S for the dual-motor AWD version. The lower price of the used fleet will attract new, slightly less well-off customers as well.

Owner, Tesla & a Tesla-authorized Auto Body Shop

network in the world."

Competition

- "Serious competition does not exist yet."
- "Tesla competes with Mercedes, BMW, Porsche, Audi and Lexus. These companies still have competitive models available below the price of a new Model S. Their more expensive cars are no match, and those are the ones they will have to improve if they want to stop losing sales. Nissan and BMW have sub-$50,000 EVs; GM has the Volt PHEV. None of these are competition for Tesla, but they are selling well and will keep improving."
- "GM has announced a 200-mile range EV to be built in 2017. They don't have a fast-charging network as yet other than the up-to-50-kW CHAdeMO network. That's not fast enough for a battery big enough for a 200-mile range car if you are on the road. Many of them are located at car dealerships. … I think Nissan and BMW will soon have something similar."

Buyer Profile

- "The Models S and D will continue to attract new customers. They are the ultimate advanced vehicles. The addition of autopilot features and AWD to an already life-changing driving experience ensures heightened interest."
- "The new buyers are increasingly those who know someone who already has a Tesla or were waiting because they are used to the rest of the car industry, where the first-year cars are always lemons."
- "We are noticing that when people see the car and express interest, they come from every part of the political spectrum."

Battery and Other Developments

- "The battery factory Tesla is building is ahead of schedule and projected to begin producing batteries in mid-2017. Here's a little side issue no one is talking much about: Homeowners and businesses that have solar panels now have to sell or give back excess energy to their power companies, sometimes at unfavorable rates. It can make solar uncompetitive. With a relatively simple software change or in the case of the Nissan Leaf, nothing at all, an owner can use the car to store excess energy and then power their house or business from it when the sun is not shining. This will be another compelling reason to own an EV."
- "Falling gas prices do not affect Model S or X sales but are not helpful at the lower end of the EV market. Regarding the Model 3, look for it to be very different from the vehicles other companies are proposing. At the Detroit auto show Elon Musk was asked whether there was anything useful he learned from the Volt or other cars on the road. He said, 'No.'"
- "The only real barrier I see to steadily increasing sales for Tesla is the possibility of another recession or financial meltdown, which paradoxically would be due in part to the greed and shortsightedness of the investment community anyway."

With a relatively simple software change or in the case of the Nissan Leaf, nothing at all, an owner can use the car to store excess energy and then power their house or business from it when the sun is not shining. This will be another compelling reason to own an EV.

Owner, Tesla & a Tesla-authorized Auto Body Shop

2) Senior editor of a trade magazine; repeat source

The P85D (AWD Model S, or the Model D) is viewed as the newest and coolest vehicle around, and some basic Model S owners will want to trade in. People who buy the vehicle tend to live in winter weather climates. The Model X is delayed due to problems with door seals and range settings. It will need to have a range of more than 200 miles to attract attention, and a bigger battery pack may be required. Once these problems are overcome, the Model X will sell as well as, if not better than, the Model S. Tesla has purposely not displayed the Model X for fear that potential Model S buyers may decide to wait for a Model X. The Model 3 is closely tied to the gigafactory, so its introduction will be several years away. Tesla customers are not affected by gas prices or tax incentives. Mercedes, Audi, and BMW, among other manufacturers, will be introducing high-end EVs from 2016 to 2021. Another Tesla competitor on the horizon is hydrogen fuel cell cars, but their advantages may not be enough to eat into the electric market.

Oct. 29, 2014, report: This source said Model S sales were growing and in line with expectations despite a factory renovation. The source expected Model X to outsell the S, but said a battery breakthrough would not occur this decade.

Trends

- "In the United States, the P85D will boost Model S sales in the short term, but I'm not sure for how long. People see the P85D as the newest, the coolest, and will want to get the latest. It will impact the Model S in that some portion of Tesla owners will want to trade in their Model S."
- "The Model X has been delayed so many times, that people just take a wait-and-see attitude. Tesla is having problems with the door seals and also their range settings. Even Elon Musk has commented about how they've learned a lot about the Falcon door seals. It is a bigger car, so typically, bigger crossovers will have a lower mileage rating, which is the reason you do not see many electric crossovers. The Model X will need to have a range of more than 200 miles to attract interest."
- "The Model X could be as successful as traditional utility vehicles, and Musk said it could outsell the Model S, and it is possible that it could take away some sales. Tesla has not shown the Model X yet. They are worried that if they show the final product, people may rethink buying a Model S. But this won't happen in quarters one and two."
- "Supply will be an issue in the short term. Effectively, Tesla will not have competition for three or four years, until the Germans come out with a car. If more safety issues come up—and it doesn't look like they will—that could affect them. Incentives don't really interest Tesla clients, who on the whole, are a bunch of rich people. They would buy the car without tax credits; financial is not a huge incentive to them."
- "Tesla should cap the purchase price at one-third higher than the average price."

Tesla has not shown the Model X yet. They are worried that if they show the final product, people may rethink buying a Model S.

Senior Editor, Trade Magazine

Competition

- "There are a large number of SUVs in all ranges on the market, the Audi, BMW and Mercedes. The Model X will be up against them."
- "BMW has the biggest stake in the electric market, and we will see more BMW electrics. The i3 is a big city car, and no one buys city cars today. They want to go places."
- "The Mercedes ECO series is a dedicated electric platform. There will also be Volkswagen plug-in hybrids and some EVs. Look for Mercedes and also Audi in late 2016 to 2021."
- "[Tata Motors'] Jaguar just added an AWD to their 2013 sedan, and sales doubled in the Northeast. Mercedes and Audi now have an AWD option, and Tesla is following their lessons."
- "I don't have a lot of access to the European market, but I think it is tougher for Tesla outside of Norway and the Netherlands. The German core buyers are conservative and more brand-loyal. They are less willing to test something new. In Germany, the BMW i3 has not met projections. But Tesla has established a supercharger network, and that should help."
- "The Germans were rocked by Tesla's success. Tesla has been out since 2007, but they didn't pay any attention to it until 2013, when they finally realized they didn't have anything close to Tesla's performance, handling, accommodation and silent ride. They are seven years behind the curve."

Buyer Profile

- "There is zero data to show that gas pricing has an impact on buying plug-in cars. Early adopters are buying plug-ins. They are making a statement, and they don't care about gas anyway. Sales of plug-ins are just steadily increasing. Hybrid sales are affected; they have a linear relationship with gas prices. There is a purchase motivation about saving money and making statements with a hybrid."
- "People in the Northeast and other areas with winter weather will be buying the P85D to have the all-wheel drive."
- "The P85D opens up buyers and takes it to a new level. It is the fastest sedan in the world. It's for trade-ins and new customers who want bragging rights. I'm not sure of the overall pool. You have to get in a Tesla and ride in a Tesla to get it. It does everything better and more quietly and more smoothly. Watch the video of the P85D."

Tesla is pursuing a battery pack with smaller cells. They hope to put out 100,000 cars per year, but they won't be ready to do this until the gigafactory is ready.

Senior Editor, Trade Magazine

Battery and Other Developments

- "Tesla is pursuing a battery pack with smaller cells. They hope to put out 100,000 cars per year, but they won't be ready to do this until the gigafactory is ready."
- "The Model 3 and the gigafactory are linked. The factory may well be late. Tesla has never made an announcement deadline, but they need to finish the gigafactory in order to build the Model 3."
- "Tesla may up the power somewhat. It is now 125 kW, but it may go to 150 kW."

- "They continue to roll out superchargers at a fast clip, but they will need to add more. I hear that the stations between Los Angeles and San Francisco are packed with waiting lines on Friday evenings. Tesla is working on global stations as well."
- "I'm not convinced that the advantages of a hydrogen car will be enough to eat into the EV market."

3) Founder and chairman of trade associations; repeat source

Tesla should excel this year. The AWD Model S has renewed interest and brought awareness to the Tesla brand but will not take sales away from the basic Model S. The Model X may affect Model S sales to some extent. Tesla is constrained only by production and trying to meet the heavy demand, although it should easily meet 1,000 cars a week in 2015. Tesla continues to be in a league of its own, with no other EV competitors of its caliber. The supercharger network grows daily, and will cover much of the 48 contiguous states by the end of this year.

Oct. 29, 2014, report: Worldwide distribution was keeping demand steady, and all-wheel drive would help the Model S. The source noted no capacity constraints, and mentioned the potential for grid-level energy storage products to emerge from Tesla's gigafactory.

Trends

- "2015 will probably be a banner year for Tesla, certainly their best to date."
- "The innovative Model S is holding its own, with a steady demand. With the release of the P85D, that demand will be even stronger than before, as more discover the car. I believe the sales rate will increase or at least maintain. That's why [Tesla introduced all-wheel drive], as a stopgap measure while the X is being finalized."
- "There are drivers around the world who just now are discovering Tesla. With the many used Model S cars coming onto the market from owners who have the need for speed or improved traction for their journeys, the used market will snap up those earlier releases at whatever prices they will be offered at because they are much lower in price than brand-new ones—albeit without those two new features now introduced in the P85D. As a result, this two-year-old Model S has renewed interest, given its already substantial and now with an ever growing following."
- "It is a different kind of car, the X, a minivan/SUV crossover. Tesla will be entering a different market. I'm convinced that S sales will slacken somewhat, but those soccer moms who don't want a sedan will be psyched that they can get into an EV. I expect it will probably be more successful than the S because America hauls so much stuff and wants such capability. This X will be novel, the thing to have and will probably rob sales from the S. But I fully expect the interest in both to remain high due to the growing and free supercharger network."

> **AWD [Tesla] purchases will probably come from families with second homes in the mountains or well-heeled singles who feel the need for speed. The buyer income profile just took a jump to a higher level of expenditures.**
>
> *Founder & Chairman*
> *Trade Associations*

- "Their battery supply will be the primary constrainer. Charging is not an issue, since 80% to 90% is done at home with another 10% to 15% at work, which is where the cars are most of [22 hours] each day. Superchargers are springing up like crazy."
- "Tesla's constraint factors govern how fast the factory can turn out the cars. The demand is steady. Their shortages are being managed. I suspect they will easily maintain 1,000 cars per week in 2015 without issues. They run as a well-oiled machine. Their foresight in production planning of their goals told them to schedule a shutdown in July 2014 to enable higher volumes thereafter … There is a visible continuous process improvement going on, which other big auto companies only dream about."

Competition

- "There are few direct competitors. The answer depends on the depth of one's wallet and if the allure of driving electric is strong."
- "For those demanding luxury, the Mercedes B-class EV starts approaching the S, but it loses on range and really fast charging ability. Nissan has a pretty capable short-range Leaf for the masses, but again, it loses badly on range. Ditto the BMW i3. There aren't any EV competitors out there yet that can compare directly. Tesla has and maintains a lead for now, and their market hasn't even been fully developed yet."

Buyer Profile

- "AWD [Tesla] purchases will probably come from families with second homes in the mountains or well-heeled singles who feel the need for speed. The buyer income profile just took a jump to a higher level of expenditures."
- "The AWD [Model S/D] is so insanely powerful, it's scary! Its predecessor the P85+ is pretty awesome as well, but the D just takes it to another, never-before touched level."

Battery and Other Developments

- "The gigafactory outside of Reno is being constructed in phases and looks to be progressing nicely from photos revealed in the past two weeks. Its scale is remarkably huge. … Panasonic is the primary supplier and will deliver per contract."
- "2015 seems like the time to execute for both Tesla and Panasonic. Panasonic probably welcomes their business after a few years of some not-so-rosy results for their shareholders. The scale of output is astonishing. Each Model S and X will require 7,104 cells, with over 7.1 million per week needed. Mass production on that scale, with the attendant quality required, is something only the pharmaceutical companies can really grasp."
- "The charging network will fully cover nearly all of the 48 contiguous states by end of this year, at very comfortably spaced locations, with additional 'hole fillers' being placed during 2016 near/between the most densely populated areas. The summer of 2015 looks to be a traveling time for many, with low gas prices and many opportunities for free fast recharging of the Tesla cars."
- "This talk of range anxiety is mostly one OEM's propaganda, a fabricated ruse intended to promote plug-in hybrid sales, not pure battery electric vehicle [BEV] sales. Living with a pure BEV for just one week would enable almost everyone to understand the limitations of a BEV."
- "For seven decades, gasoline has been the primary transportation fuel. We had to guess, carefully watch that fuel gauge needle, but rely on intermediate tank-ups. Today, in the Tesla, that is gone. Their new trip planner software, downloaded from the OTA updates, accurately estimates whether drivers can make their target destination in advance, showing where a recharge will be needed. It allows for estimated vs. actual performance comparisons, compensating for elevation changes over mountains along the way."
- "This ability to upgrade software painlessly, silently, anywhere, for free, and to provide new features or correct bugs, is seriously disruptive to the old notion of changing automotive features. Furthermore, it allows and provides for feature-creep, when the engineering team doesn't yet want to release its baby to production."

5) Auto Supply Chain Sources

Two of these three sources said their Tesla business is growing, while the third cited economic concerns and a preference for hybrid cars in his area. All three said the AWD Model S represents added value for Tesla through superior performance and greater function in colder weather. Two believe supply will be the only constraint to Tesla's sales potential in 2015. One source said Tesla's resale value of 90% is far superior to industry norm of 50% to 55%.

Key Silo Findings

Sales Trends

- 2 of the 3 suppliers said business with Tesla has grown recently.
- All 3 said the AWD Model S is an added value.

Competition

- 2 continue to see no competition for Tesla.
- 1 mentioned the Volt and the upcoming Bolt from GM.

Battery and Other Developments

- 2 of 3 note potential supply constraint for Tesla in 2015.
- 1 said Tesla's resale value has been at 90%, compared with the industry norm of 50% to 55%.

1) Technical director of a Tesla supplier; repeat source

This company's Tesla business continues to climb, and sales are expected to grow further this year. Tesla's AWD model is the ideal car to drive in snow and ice. The Model X should do as well as the Model S and could cannibalize some sales among people who want a larger family car. Supply is Tesla's only issue, but the new gigafactory should help.

Oct. 29, 2014, report: Tesla business was meeting expectations, with growth 20% to 30% higher than a year ago (though original projections were for a doubling of the company's Tesla business in 2014).

Sales Trends

- "Our business with Tesla keeps going up as we get more applications and more programs with them. We have had a good year with Tesla, and I assume this will continue in 2015. They have the same high standards as Detroit, and we know they are demanding."
- "As far as I know, Tesla sells well although they may say it could be better. I'm seeing more and more Teslas around here. I now usually see at least one Model S every time I go into [the city]."
- "The AWD may be drawing more interest to Tesla. I'm not sure about the D's effect on the Model S. It is just a variation of the same car. But AWD is good for this part of the country. The low center of gravity allows you to handle the car better, especially in snow and ice. I have rented [another brand] AWD, and it is fantastic. I would think if you lived around here and had an option, it would be to get an AWD."
- "The X might affect the Model S sales because now people have a choice. But the Model X is a different vehicle and caters to a different taste. It might take some sales away from the Model S, but not too much."
- "It is hard to predict how the Model X will sell. I'm not sure why it wouldn't sell as well as the Model S, especially if they market it as an electric crossover."
- "Supply is the only thing that would impact Tesla. They have let it be known that they could build more if they had more batteries. The new plant will help."
- "I doubt that the government incentives, plus some local, affect the Tesla buyer."
- "Even when we talk about low gas prices, we know they will go back up. A momentary drop in gas prices won't stop you, and they won't stop Tesla buyers."
- "They just opened a Tesla store here."

The Volt, which also has an engine, looks like a dog. It is just utilitarian, no flash, no style. The Leaf is still not a flashy car.

Technical Director, Tesla Supplier

Competition

- "Others dabble in it with hybrids, but Tesla is the main player. They are serious about electric. There is nothing like a Tesla. It still has the slick features, is extremely unique."
- "The Volt, which also has an engine, looks like a dog. It is just utilitarian, no flash, no style. The Leaf is still not a flashy car."

Buyer Profile

- "The AWD should be of interest to folks in winter weather."
- "The Model X will be ideal for families."
- "A lot of people still doubt that Tesla will be successful. These people tend to be conservative."

Battery and Other Developments

- "There are several charging stations now spread out around here, and I believe they are going roughly per plan. You don't need a charging station on every corner, like you do a gas station."
- "People can charge their Teslas at their house."

2) Owner of a third-party, aftermarket Tesla accessories business

U.S. and non-U.S. sales spiked in November and have continued upward since then. Although orders are not always directly in line with Tesla sales, the source said the P85D (AWD Model S, or the Model D) has increased interest in the brand, especially among people seeking high-end performance sports cars. The Model X will attract females and bring further attention to Tesla, but it will not cannibalize Model S sales. Tesla's issue is supply, but the company is getting better at mass production. Supercharging stations are spaced strategically in the source's area, but most Tesla owners charge up at home. Eventually superchargers will be powered by solar.

Sales Trends

- "Since late November to now, we have been seeing an increase in our own orders, which spiked and now continue upward. This might have to do with a lot of P85D deliveries. Tesla had its heaviest sales month ever in December 2014. I think they sold 3,500 vehicles."
- "We are in a unique position because we can see how Tesla is selling by the influx of sales that occur. There is not always a direct correlation [between Model S and accessory sales] because there is some intake due to our marketing and word of mouth."
- "The all-wheel drive is having an effect. People are taking note. They are now getting into a totally new market. The P85D performance is unbelievable, paving the way for an interesting segment."
- "We are on the wait list for a Model X. It is a great second car for Tesla. It is a combination of SUV and minivan. There is a lot of space in that car due to the flat battery pack. It is very unique."
- "The Model X won't cannibalize Model S sales. I think it will accelerate Tesla's growth."
- "The issue is supply. How many cars can they produce? Tesla gets better and better at mass market, and they are producing more cars each week."
- "They only have one factory right now. They have no factories in China or Europe."

Competition

- "I don't see Tesla has having any competitors yet. This is a blind spot, even forgetting that it has a battery."
- "Try to compare Tesla to other EVs. There are no other luxury sedans with such high performance, electric or not. … And you can't compare the Leaf or Volt."
- "People attracted to the P85D previously were looking at Porsche, [Fiat S.p.A.'s/FIATY] Ferrari, Austin Healey, Mercedes, BMWi5."
- "The Porsche Cayenne and BMWi5 are two cars that do tremendously well and may compete with the Model X."

Buyer Profile

- "The P85D is attracting a unique and different buyer, someone attracted to very high-end sports cars."
- "The Model X will attract a different audience as well. It can be a second car for a household. I believe there will be more traffic for female buyers, those who wouldn't consider buying a Model S will be very pleased with the room in the Model X and the style."

> **It is rare that Tesla owners charge their cars outside of their garage, maybe once every three to four months.**
>
> *Owner, Third-party, Aftermarket Tesla Accessories Business*

Battery and Other Developments

- "It is rare that Tesla owners charge their cars outside of their garage, maybe once every three to four months. How often do people drive more than three hours at a time? Not very often. Ninety percent of the time people charge their car every night. When they wake up, it is full."
- "I couldn't comment on the price of charging at home. We use solar to charge our cars. The supercharger network will eventually be powered by solar."
- "These cars are made to order, and it is usually a few months' wait. There are always problems in production after the order, and they are always a few months behind. Their order book is so full, they need to ramp up production to meet demand. No one should worry about Tesla demand."
- "Tesla's resale value is at 90%, while all the other manufacturers have a resale value of 50% to 55%.
- "I don't think hydrogen fuel cells will represent a threat to Tesla in the next three to five years. They do not have an infrastructure set up yet. I think there are less than 50 stations worldwide, and they haven't made much of an impact. There is one station in Florida and a cluster in Southern California. Someday it might be interesting, say in five to 10 years. But by then EV will have had a bigger opportunity to evolve."
- "We get a lot of orders from overseas. … The highest concentration is in Norway, then the Netherlands and Denmark. We have a lot of queries from Asia, but the shipping costs are too high. The same with Australia, which has recently received the Tesla. It is hard to justify the shipping costs."

3) Automobile software developer

Tesla does not sell well in regions that are economically depressed or that primarily buy U.S.-made cars. Some buyers prefer sedans, so the Model X and the AWD Model S will not take sales away from the standard Model S. Falling gas prices will not affect people's interest in alternative fuels. The success of EVs will depend on the availability of charging stations, for which the infrastructure needs to be developed further.

> **Electric and hybrid cars are just starting to gain attention, and people will turn to the brands they know.**
>
> *Automobile Software Developer*

Sales Trends

- "Tesla is not big around here. It does not have a presence. I've only seen one or two cars in [this area]. It is hard to say if it will change in 2015, but I rather doubt it."
- "My guess, mass-market EVs are 20 to 30 years away."
- "I don't think the Tesla AWD will affect Model S sales. Nor the Model X. Some drivers just prefer a sedan."
- "The Tesla AWD is a good idea for areas with bad weather. It would be more stable in our weather, but I don't think the new AWD will enhance Tesla presence here."
- "Tesla makes money on its licensing agreements."

Competition

- "There is a push around here for the Volt and Bolt. … The hybrids are more appealing, and we are seeing quite a few."
- "People here are also big on BMW, Mercedes, high-end Cadillac, and SUVs. Electric and hybrid cars are just starting to gain attention, and people will turn to the brands they know. Falling gas prices may slow some EV adoption, but people are interested in the new system."
- "I'm seeing a lot of Fiats from Chrysler around here. I don't know if they are electric or not. People are also starting to lease the Ford C-Max plug-in. They aren't opposed to EVs."
- "We see the Leaf around here sometimes, but there just isn't an infrastructure for it. There are only a few charging stations."
- "The infrastructure … would be Tesla's biggest downfall, and they need to continue building this up. People are used to filling up a gas engine in just minutes, so an overnight charge or a charge on the road that takes a few hours could be a big adjustment."

> **Hydrogen is on par with gasoline. … They are offering free licensing techs to gas stations around here. … Everyone is looking at this option seriously, along with the other alternative fuels.**
>
> *Automobile Software Developer*

Buyer Profile

- "I don't know who the buyers of the Tesla are. We don't have any around here."
- "Perception is reality. Any delay in a release makes people question what is going on. If Tesla's cars come out late, like the SUV, the consumer may have concerns that they can still get parts somewhere down the road. No one wants to be stuck with an $80,000 car and no parts. The buyer needs to have confidence."
- "EV range has to be appealing to more people. … If they came out with a $30,000 to $40,000 EV with a couple-hundred-mile range, I'd be a buyer."

Battery and Other Developments

- "There are a few charging stations around here at businesses, but they only have a few spots. A friend has a Ford C-Max, and he charges the car at work. He was given a card to swipe and charge the electricity, and it is very cheap."
- "Hydrogen is on par with gasoline, and you fill the car just like with gas. They are offering free licensing techs to gas stations around here, so you can buy hydrogen at a gas station and fill up your car in the same way as gas. No, it would not be cheaper than gas; people want to make their money. Everyone is looking at this option seriously, along with the other alternative fuels."
- "I'd be worried about investing that much money in a car and having battery issues. If you are leasing an EV, then there wouldn't be that much concern."

Secondary Sources

The following 10 secondary sources discussed Tesla's growth in China, its AWD Model S, and the company's future.

Tesla in China

Tesla fell short of its 2014 sales goal for China, and blamed consumer concerns about charging stations. However, the real reason could be Chinese consumers' resistance to adopting EVs. Tesla expects to manufacture its vehicles in China in three to four years and for the country to make up 35% of its global sales. It also started a trade-in program to spur sales in China.

Dec. 27, 2014, RT.com article

At the time of the article, Tesla had sold only 3,431 cars in China, well short of expectations. CEO Elon Musk hopes to start building cars in China in three to four years and believes the market will contribute 35% of the company's global sales. Tesla also is offering a trade-in program in China.

- "Tesla Motors is to begin offering Chinese buyers the chance to trade in their own vehicles for Model S electric cars, worth more than $100,000 each. The plan is part of the company's strategy to boost sales in the world's biggest car market."
- "The program applies to all car brands and types—gasoline, diesel, and electric cars—but won't apply to second-hand Model S owners. The company will deduct the value of the sale from the price of the luxury electric car, which starts from 648,000 yuan (US$104,000) in China."
- "Tesla started delivering Model S sedans in China in April, and since then the company has sold 3,431 electric cars there, according to aastocks.com."
- "Musk has said he expects to start building the cars in China within three to four years, and estimates are that the Chinese market will contribute 35 percent of the company's global sales, or 10,000 cars a year. Some 18 million cars were sold in China last year, but only 38,000 were new energy cars."
- "The Palo Alto, California-based carmaker has nine stores and service centers in six Chinese cities, and has been working with two Chinese companies to build charging stations in the country. It has 700 power points in 70 cities across China, making it the market with the biggest network after the US, Tesla said."

Feb. 1 Seeking Alpha opinion piece

Tesla's U.S. sales might not be enough to offset weak demand in China. The article's author believes Tesla's real problem is Chinese consumers' resistance to EV adoption. Tesla must manufacture its cars in China in order for the Model 3 to be affordable for the Chinese consumer.

- "Feria Investor recently published an article on SA—Tesla: Will A Weakening China Be Offset By The US—a well-argued piece without the extreme views that the Tesla name so often engenders. However I think the article was mistaken in its basic premise that a booming USA would cancel out a downturn in China. Both auto sales and the economy as a whole look more promising in China than in the USA."
- "The problem for Tesla in China is not the economy or the policy of the Chinese Government, but resistance by the Chinese consumer to electronic vehicles of any sort from any manufacturer. Local low-cost EV manufacturer BYD has also reported disappointing sales, although it is going ahead with plans for a plug-in hybrid SUV. However, despite the disappointing volume in the market, it is believed that plug-in electric vehicles on the road in China have now exceeded those in the U.S. My own personal unscientific opinion is that, apart from the Chardonnay drinking classes in California and some others, in general the majority of the American population is likely to remain loyal to their gas guzzling big cars."
- "Tesla is aiming to have its model X SUV selling in China early in 2016, and the dual motor version Model S should be there soon. Whether or not manufacturing plans in China proceed as mentioned in the past by Elon Musk remains a moot point, but a crucial one, as it is likely he will need local manufacture of the economical Model 3 in order to gain serious large-scale traction in the market."

Jan. 14 article from The Motley Fool

Tesla surprised investors when warning that sequential sales in China had fallen sharply. The company blamed misinformation about its charging stations, but not all of China's electric car manufacturers are struggling. The more economical Chinese electric car maker Kandi and its car share program may pose a threat to Tesla.

- "Tesla is struggling in China, but that doesn't mean that homegrown players in the world's most populous nation are having the same problems. In fact, what's bad for Tesla may ultimately be good for Kandi Technologies Group (NASDAQ: KNDI)."
- "Tesla stunned investors at the Automotive News World Congress on Tuesday night, warning that sales in China had fallen sharply sequentially. Wasn't China supposed to be Tesla's promising catalyst for accelerating growth? Making matters worse for Tesla, the maker of high-end all-electric sedans isn't looking to turn a profit until at least 2020."
- "Why are sales tanking in China? CEO Elon Musk blames the shortfall on what he sees as misperceptions when it comes to charging requirements for electric vehicles. That may be true, but that's a weak scapegoat. If the public sees it that way, the misperception is the new perception. A common misperception can explain why sales for a particular product never took off, but it doesn't justify a sudden and sharp decrease in Chinese demand for Tesla's expensive sedans."
- "China's Kandi car program offers bicyclists and mass-transit users a way to shop for groceries or go out on a date without the limitations of the other means of transportation. Kandi's garages do the charging, so the misperceptions that Tesla is alluding to—or perhaps the larger fears of ponying up a lot of money to buy an electric car in the first place without easy access to a charging station—don't really apply here."
- "Don't let Tesla's grim view of China in the near term lead you to write off the country's hunger for electric cars. There are different models trying to give it a go, and they aren't all struggling."

Tesla Model S P85D

Tesla's AWD Model S (also known as the P85D or Model D) accelerates from 0 to 60 mph in 3.2 seconds, and now makes up 70% of Model S sales. The car's full power is realized when accelerating from a complete stop. However, the autopilot feature failed to impress.

Nov. 30, 2014, Planetsave article

Tesla's Model S P85D accelerates from 0 to 60 mph in 3.2 seconds. CEO Elon Musk estimates that 70% of all Model S sales are the P85D.

- "Blink and you are from there to here and missed the scene at 0 to 60 MPH in just 3.2 seconds. You felt it though. This wicked acceleration is driving quick sales of the D. *GAS2* reports that Tesla's CEO and Chairman, Elon Musk, estimates about 70% of the orders for the new Model S include the new Dual Motor Drive. Many of them are for the top-end, P85D version that will blast off at the quickest pace."
- "But Tesla's goal is societal progress, and the P85D is the clearest example of how it continues to push the boundaries of the automobile world. The biggest goal on the horizon, of course, is an 'affordable' Tesla—the Model 3—that will be half the S's base $70,000 price tag. Impatient for the affordable Model 3? Check out this option: a number of Tesla Model S test cars and loaners are now ripe to find real homes. Planetsave's post informs us that the such a Tesla buy is nearing a total savings of over $25,000. One has to act quickly, though. Again, this is driven by the new Tesla D. Perhaps Musk will get his wish."

Dec. 22, 2014, Greencarreports.com article

At first, Tesla's AWD (P85D) version did not seem faster than the basic Model S. However, when accelerating from a complete stop, the "insane" power was realized. The reviewer found the autopilot feature to be unimpressive,

- "The first P85D arrived on the East Coast about 10 days ago, making its public debut at the opening of the new Tesla gallery/service center/Supercharger in Paramus, New Jersey. The car, in basic black, was fitted with 21-inch wheels, high-performance Michelin tires, and virtually every bell and whistle except the panoramic roof. List price was about $130,000. It's the quickest 0-to-60-mph time of any sedan in the world."
- "It didn't feel all that much different than my S85. (Oh, how spoiled I've become.) Quicker, yes, but not an entirely new level of quickness. It didn't have the feel of getting hit from behind by a train, as a Motor Trend tester had reported. I didn't feel dizzy, nor did I feel the skin flatten on my cheeks from the G-forces."

- “This time the on-ramp was long and straight, and the traffic was light. With no cars behind me, I slowed to a complete stop, and punched the accelerator again. Like a rocket—Wham! This time I got it. Cheeks flattened, stomach squeezed, blood rushed to the back of my head. For the first time in a car, I felt G-forces reminiscent of my days as a pilot. And of course I couldn’t help screaming in delight. That’s faster than one of Elon Musk’s SpaceX Falcon 9 rockets, which would theoretically pull 1.15 G if launched horizontally.”
- “The run from 33 to 60 mph works out to ‘only’ 0.65 G—barely half the acceleration you get from 0 to 28 mph. Clearly, Tesla engineers have tweaked the torque curves and gearing of the two motors to maximize stoplight performance, not highway passing performance.”
- “Tesla sells a lot of cars based on those screams of delight in the first second or two after the throttle is floored. With the P85D, they’re going to sell a lot more.”
- “Autopilot: The P85D is equipped with 12 ultrasonic sensors, a forward-looking radar, and forward-looking camera. With future software updates, this will eventually allow automatic lane- and distance-keeping with other cars, speed management, and collision avoidance. For now, however, the autopilot has only two functions, neither particularly eye-opening. First, there’s a lane departure warning. If the camera senses the car getting too close to a white line, the driver feels a gentle three-pulse vibration of the steering wheel. Second, the camera reads speed limit signs, and if you go over the limit, the speedometer arc turns red above the limit. (Thankfully, the driver can set the warning threshold at any desired increment above or below the posted limit.)”

Tesla’s Predictions

Last April, Elon Musk asserted that Tesla might only sell 5,000 Teslas in China. Still, in August, Tesla claimed it would sell 100,000 vehicles by the end of 2015, and Musk expected the company to manufacture 500,000 vehicles by 2020. The addition of the Model 3 line will push total volume to 250,000 vehicles produced in 2017 or 2018.

April 22, 2014, *San Jose Mercury News* article

In April, Elon Musk expected Tesla to sell only 5,000 cars in China for 2014.

- “Musk said previously Tesla might sell 5,000 cars this year in China but emphasized Tuesday that was ‘just a guess.’”
- “‘I do think that’s probably a good number. Maybe it will be higher,’ he said. ‘I don’t honestly know. Thus far the response has been very positive.’”

Aug. 1, 2014, *Fortune* article

Tesla stated it would deliver 100,000 vehicles by the end of 2015. Elon Musk expects the Model X and Model S to make up sales in 2015, each at a rate of 1,000 per week.

- “By 2020, Tesla estimates the facility will be able to make enough batteries to supply 500,000 vehicles a year.”
- “Tesla announced Thursday that it plans to deliver more than 100,000 cars in 2015. Musk said he expects that number to come from about 1,000 Model S and 1,000 Model X cars manufactured each week through the end of 2015.”
- “‘If they have the batteries and the Chinese demand, then they could get 100,000 cars next year,’ [Karl Brauer, senior analyst at Kelley Blue Book] said. ‘And Elon isn’t in the habit of making predictions he can’t live up to; if he says it, then he thinks it’s really possible.’”

Tesla’s Future

Tesla will compete with Toyota’s Mirai hydrogen fuel-cell vehicle in 2016. The delayed Tesla X SUV is scheduled to be delivered in the third quarter, but this release date is being questioned by the industry. The Tesla gigafactory already is racking up steep costs, but once in operation will be able to produce the batteries needed for demand in 2020.

Jan. 28 Green Car Reports article

Tesla will be competing with Toyota’s hydrogen fuel-cell vehicles in 2016. A Toyota executive believed Tesla had put all of its “eggs in one basket” by only producing electric vehicles. He also said Elon Musk had unfairly criticized fuel cell vehicles and that his negativity stemmed from insecurity.

- "Toyota's public attack on electric cars shows no signs of letting up. Now, a Toyota executive has all but sneered at Tesla Motors for putting 'all its eggs in one basket' by making only battery-electric cars."
- "But when the topic turned to the 2016 Toyota Mirai, [Toyota's senior vice president for U.S. operations, Bob Carter] said that Toyota's first production hydrogen fuel-cell vehicle had so far received 1,600 orders in Japan during the first month it could be ordered."
- "That's four times the projection Toyota had made, although it's worth noting that more than half of those orders were from government agencies and fleets, not retail buyers."
- "In the U.S., meanwhile, Toyota has now logged 16,000 'hand-raisers,' or consumers who have signed up to learn more about the Mirai--which will go on sale during the second half of this year."
- "With regard to electric-car maker Tesla, however, Carter said he had been 'disappointed' in comments by CEO Elon Musk that hydrogen-powered cars should be called 'fool-cell vehicles.' Perhaps stung by the attention paid to every pronouncement and tweet made by the high-visibility Musk, Carter attributed the comments to what might be viewed as insecurity on Tesla's part about the future of plug-in electric vehicles. 'If I had all my eggs in one basket … I might be making the same comments.'"
- "Carter also said of the fuel-cell car: 'In reality, Mirai IS an electric vehicle. But the electricity is produced onboard… versus off the grid.'"
- "Meanwhile, Musk recently said during a Q&A following the Detroit Auto Show that Tesla might not be profitable until 2020 when assessing its performance using conventional Globally Accepted Accounting Standards, or GAAP."

Jan. 3 Newsfactor article

The Tesla X SUV might hit the market in the third quarter. Volvo, BMW and Audi are all releasing an electric SUVs.

- "Some of the interesting automotive announcements in 2014 will make for the most compelling storylines of 2015. How will the all-aluminum F-150 alter the automotive landscape? How will American buyers react to the wave of subcompact crossovers ready to hit the marketplace in 2015? Will the Tesla Model X … ever hit the road?"
- "The long-awaited and much-delayed second car produced by the all-electric performance luxury brand might be delivered in the third quarter of 2015, more than a year after it was originally slated. Might."
- "Plug-in crossover competition is heating up from Audi, BMW and even Volvo. Delivery of the all-electric crossover with gull wing doors is expected to cost anywhere from 5 to 10 percent more than the $70,000 Model S base model sedan. Development of Tesla's new gigafactory should lead to more battery output and the acceleration of the Tesla Model III, a $40,000 all-electric compact Tesla for everyone."

Jan. 16 SlashGear article

Tesla's Reno gigafactory is set to be completed by 2020— right when Tesla is expected to release its $30,000 Model 3. The factory's foundation alone has run $16 million.

- "The Gigafactory is set to be complete by 2020, and rip out about 500,000 battery packs annually. Clearly no small undertaking, Tesla will have to go big so we'll take a Tesla home."
- "The foundation alone for the first Gigafactory (outside Reno, Nevada) will cost $16 million. Though the permits don't say how big the factory is, *Forbes* points out Tesla's own documents say it will be 10 million square feet, and have several buildings."
- "Steel construction will cost $15 million. The land was basically fee to Tesla, who will spend $2 billion of their own cash complimented by $1.4 billion from the state of Nevada. All told, the cost of the first gigafactory is expected to be right around $5 billion."
- "It's a big bet for Tesla, but a necessary one. The factory is expected to be complete right around 2020, when Tesla is also expected to release their Model 3, a $30,000 all-electric sedan. That's also about the time Musk says Tesla should start turning a profit, so Gigafactories may be Tesla's true turning point."

Additional research by Gloria Shao, Isabel Bernabe and Renee Euchner.

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