Alternative Pricing Strategy for Tesla Inc.'s Supercharger Network: Analysis of Current Pricing Structure and Suggestions for Optimizing Network Effect

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1. INTRODUCTION

Since Davis Guggenheim's documentary on former U.S. Vice President Al Gore's campaign to address global warming in 2006, what was once referred to as *An Inconvenient Truth* has increasingly become an undeniable one. To mitigate the rising trend in global temperatures, both public and industry sectors are taking greater initiatives through international trade and regulatory frameworks, most notably the United Nations Framework Convention on Climate Change's (UNFCCC) Paris Agreement. At the same time, it is uncertain whether "nationally determined contributions,"[1] or the autonomy of a country in adopting domestic policies for decreasing carbon emission, can prove effective without an enforcement mechanism. More importantly, a successful transition to renewable sources of energy requires significant demand from consumers since to do so will require collective efforts of individuals. As such, this paper analyzes Tesla Inc. (hereafter Tesla) with respect to its unique position in the energy sector for the following reasons.

Foremost, Tesla's recent decision to drop "Tesla Motors Inc." as its official organization name serves as a signal that the firm is no longer just an electric vehicle (EV) manufacturer. With the acquisition of SolarCity Corporation in 2016 and Solar Roof productions to begin in mid-2017, Tesla is starting to consolidate itself as an alternative energy service provider and, from this perspective, the subsequent sections examine Tesla as a monopolist facing high initial fixed cost. Further, given Tesla's efforts to alleviate consumers' concerns for limited driving range of EVs by expanding its network of charging stations – or Superchargers – across the mainland United States, there are also some network externalities to consider. As a result, this analysis of Tesla focuses on the pricing strategy adopted currently by Tesla for its Supercharger network and offers possible strategies for leveraging its developing network of charging stations by adopting a pay-what-you-want (PWYW) pricing system.

2. SUPERCHARGER NETWORK

2.1. Overview of Tesla Vehicles & Supercharging Stations

At the time of writing, Tesla, strictly speaking as an EV manufacturer, offers two different products: Model S for $66,000 and Model X for $86,000.[2] As an additional note, there are also 805 Supercharging stations in the U.S. with a total of 5,159 actively deployed Superchargers. Although Tesla's mass market product – Model 3 with base price of $35,000 – is not yet in production, the volume of pre-orders for Model 3 is still considered since all three models are compatible with Superchargers. In addition, it is worth noting that Tesla no longer offers free lifetime Supercharging for consumers who order their EVs after January 15, 2017.[3] Instead, the new buyers now receive annual credits for 400kWh (roughly equivalent to 1,000 miles) of charging at any Supercharging station. Upon exceeding the allotted amount of credits, the consumers then face a two-tier pricing structure. According to the company's website, "Tier 2" pricing is

[1] See Article 4, Paragraph 2 of the Paris Agreement. <http://unfccc.int/files/home/application/pdf/paris_agreement.pdf>

[2] For simplicity, this paper considers only the base prices of Tesla's EVs

[3] Although customers who ordered by January 15th 2017 will still charge their Tesla EVs for free, 'idling fees' ($0.40/minute) will still apply. For details, see <https://www.tesla.com/blog/building-supercharger-network-future>

applied while the car is charging at a rate of at least 60kW and is twice the amount as it costs for charging at "Tier 1" pricing. On the other hand, there are three conditions for which Tier 1 pricing is applied to a buyer: i) charging at a rate at or below 60kW, ii) charging while sharing Supercharger with another Tesla EV, and iii) if the Supercharger is located in a U.S. state that does not offer Tier 2 charging option.[4]

As Appendix A shows, 15 out of 46 U.S. states with Supercharging station currently provides charging services under a fixed pricing rate system. In average as a whole, the Tier 2 costs $0.17, but after taking into consideration only the states with fixed pricing,[5] the average cost reduces down to $0.15kWh (billed per hour of use). Meanwhile, the average cost for states with separate pricing structure incurs $0.18kW/minute when the car is recharging at a rate above 60kW. While Appendix B focuses on information on Tier 2 pricing distribution, Appendix C analyzes Tier 1 pricing information under separate pricing structure with mode occurring at $0.08kW/minute and an average of $0.09kW/minute. As an additional note, since Tesla's Supercharger network still relies on traditional power grids distributing fossil fuel generated electricity, it is possible that these prices may change over time with changes in prices of oil and gas. Nonetheless, this paper assumes that the prices will remain static as presented in the next two sections which detail the overall approach to this analysis.

3. LITERATURE REVIEW

3.1. Pay-What-You-Want & Shared Social Responsibility

To begin, this paper acknowledges Tesla's initiatives to emphasize corporate social responsibility (CSR) in transition to sustainable energy. However, as Gneezy A., Gneezy U., Nelson L., & Brown A. (2010) comment on CSR strategy, its adoption may yield limited success because either (a) "customers might assume that CSR practitioners have ulterior motives," or (b) "CSR purchases send a weak signal to oneself and to others regarding the buyer's 'social intentions.'"[6] As as result, this analysis borrows their notion of "shared social responsibility" (SSR) in order to suggest a pricing system that can better accommodate as well as to engage social preferences of individual Tesla drivers. Furthermore, this analysis also draws from some of the results found in Gnezzy A., Gneezy U., Riener G., & Nelson L.'s field experiment report in 2012 on the influence of identity and self-image in a PWYW pricing system.[7] In this case, identity and self-image is assumed to be influenced primarily by whether an individual owns Model S (lower-valuation) or Model X (higher-valuation).

With these in mind, the rest of this paper examines a buyer's self-image by associating with his or her ownership of any Tesla EV, and their identity with respect to the specific vehicle model they purchased. In other words, the simplified analytical model in this paper links the ownership of Tesla EV with self-image as an environmentally conscious individual. Hence, it is reasonable to consider that both driving an EV and using the Supercharger are charitable acts that contribute to better environment. Similarly, this analysis also considers Model X owners as those who are more conscious of their carbon footprints and thus have relatively higher willingness-to-pay than Model S owners.

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[4] Tesla's website further notes that regulations in some regions pose barriers for non-utility companies to sell electricity per kWh. As such, it offers two-tier charging service at a per minute unit for dynamic pricing.

[5] These states include California, Colorado, Florida, Idaho, Illinois, Maine, Maryland, Massachusetts, Minnesota, New York, Oregon, Utah, Virginia, Washington, West Virginia.

[6] See Gneezy, A., Gneezy, U., Nelson L., & Brown, A. (2010). "Shared social responsibility: A field experiment in Pay-What-You-Want pricing and charitable giving." *Science,* 329:5989. Pp. 325-327.

[7] See Gneezy, A., Gneezy, U., Riener G., & Nelson, L. (2012). "Pay-What-You-Want, identity, and self-signaling in markets." *Proceedings of the National Academy of Sciences.*

3.2. Network Effect & Competition

In addition, considering the decreasing trend in marginal cost of producing electricity – as measured in variable operation and maintenance (O&M) costs[8] – from renewable sources, the subsequent analysis presupposes that the marginal cost of operating Supercharger will eventually reach zero as Tesla's SolarCity continues to increase the share of electricity production from photovoltaics in the U.S. In doing so, this paper suggests that Tesla can obtain significant benefits from the potential network externalities – or network effects – in it Supercharger network. For one, Tesla owners are in some ways "locked-in" to the Supercharger network as consumers, unless they also own a gasoline-powered vehicle to use as a substitute.[9] More importantly however, there are three ways in which the Superchargers exert positive consumption externalities in which the amount of utility that a consumer derives from a good increases as the number of other consumers who uses the same product increase.

As Katz, M., & Shapiro, C. suggests in their 1985 *The American Economic Review* article on network externalities, positive network externalities can arise when there is (i) "direct physical effect of the number of purchasers on the quality of the product," (ii) "indirect effect[s]," or (iii) "when the quality and availability of post-purchase service for the [durable] good depend on the experience and size of the service network."[10] In the case of Tesla, the first condition can be satisfied given that the company allows individuals to suggest locations for additional Supercharging stations on their website.[11] As for the third condition, the "post-purchase service" in this context refers to charging either Model S or Model X at a Supercharger station. By this token then, fulfillment of the third condition solely depends on the geographic extensiveness of Tesla's network to enable long-range distance driving.

For the second condition on the other hand, there are two sources of indirect effects in the case of Tesla. First, similar to how Katz & Shapiro (1985) examines a firm's compatibility decision in investigating the indirect effects on networks, it is worth exploring the possibility of adopting greater compatibility between the Supercharger network and EVs produced by other manufacturers such as Chevrolet's Volt and Nissan's Leaf. Although Katz & Shapiro (1985) further suggest that compatibility can arise from either "joint adoption of a product standard" or "construction of an adapter,"[12] it is more likely for Tesla to implement the latter option on each of its Supercharging station to capture diverse, but larger market share given the dominant position of its network. Second, this paper also aims to introduce pricing compatibility across different Tesla drivers – similar to the concept of bundling goods – as another possible indirect effect to consider for the Supercharging network.

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4. COUNTERFACTUAL ANALYSIS USING EXISTING DATA

4.1. Description of Data Considered

Unfortunately, due to the timings of this writing and Tesla's decision to implement a two-tier pricing structure after using more than the annually allotted amount of credit, there is no data yet on how this pricing system will influence the overall demand and supply for Tesla EVs. As a result, this analysis uses the

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[8] See Appendix E.
[9] See Shapiro, C., & Varian, H. (1998). Information Rules. *Harvard Business School* Press: "Ch 2. Pricing Information", pp. 47.
[10] See pp. 424 in Katz L., & Shapiro, C. (1985). Network Externalities, Competition, and Compatibility. *The American Economic Review*. Vol. 75, No. 3: pp. 424-440.
[11] See <http://teslafactory.wufoo.com/forms/supercharging/>.
[12] See Katz L., & Shapiro, C. (1985). Pp. 434 under "III. The Private and Social Incentives for Network Compatibility".

company's data for both Model S and Model X deliveries made in 2016 that was gathered from Tesla's press releases made throughout the year (Appendix D). For simplicity, the delivery amounts are rounded down such that the Model S deliveries equal 50,000 units and Model X deliveries as 25,000 units for a total of 75,000 units delivered in 2016. In addition, without the free annual allowance for using Superchargers, the annual fuel costs for Model S and Model X owners are assumed at $600 and $750 per year, respectively, which are the estimates derived by the U.S. Environmental Protection Agency (EPA).[13] In effect, these estimated annual costs of $600 and $750 are the "switching costs" for a potential Tesla buyer. Lastly, since these 75,000 owners will still receive free lifetime charging at Tesla Superchargers, analyzing the potential loss and gains that could have been derived from this group of buyers under the announced two-tier payment structure can illustrate not only the opportunity cost (or gain) from implementing such pricing system, but also provides a rough framework to consider alternative pricing strategies.

4.2. Conceptual Framework

Using information from the previous sections and using then, let x_t^e represent the number of drivers who own one and/or two of Tesla's (denoted as *firm t)* EV that a potential buyer expects Tesla to have. Further, let y_t^e denote a potential buyer's expectation on the size of Tesla's Supercharger network. But while Katz & Shapiro (1985) set up their formal model of network competition for consumers in the case when multiple brands are incompatible such that each firm develops its own network,[14] one difference in this approach is that it considers only Model S and Model X which are compatible with Tesla's Supercharger network. From this perspective then, the following modified expression hopes to better capture consumer surplus for Tesla owners when they are able to recharge their vehicles for free without restrictions:

$$y_t^e = x^e_{t=S} + x^e_{t=X}$$
$$T\{\, y_t^e \,\} = t\{\, x^e_{t=S} \,\} + t\{\, x^e_{t=X} \,\}$$

Here, the number of active Tesla Supercharging stations in U.S. is denoted by $T\{\, y_t^e \,\}$ as a function of a buyer's expected size of the Supercharger network. Meanwhile, let $x^e_{t=S}$ and $x^e_{t=X}$ represent the expected number of Model S owners and Model Y owners using the network, respectively, and assume that there is homogenous valuation for the Supercharger network across both buyers and owners. Of course, taking into account of the heterogeneity in each individual's willingness-to-pay then, let r represent the individual's type such that,

$$r + v\{\, T\{\, y_t^e \}\,\} - p_{t=\{S,X\}}$$

where $r + v\{\, T\{\, y_t^e \}\,\}$ represents a buyer's maximum willingness-to-pay for either Tesla Model S and/or Model X, $p_{t=\{S\}}$ is the base price of Model S at $66,000, and $p_{t=\{X\}}$ the base price of Model X at $86,000. In effect, it can be said that a consumer buys Model S for any values $r + v\{\, T\{\, y_t^e \}\,\}$ that lie somewhere between the range [66000, 85999], and buys Model X if the sum yields at least 86000.[15] Also,

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[13] See Appendix F.

[14] As a result, their set-up used the assumption that when brands are incompatible, "each makes up its own network so $y_i^e = x_i^e$." See Katz & Shapiro (1985) pp. 426.

[15] Here, I assume only interested Tesla buyers in the market without charging costs so that each individual either (a) buys one (or more) Tesla EV or (b) not buy an EV due to price significantly higher than their valuations.

after taking into consideration that Tesla owners still incur annual fuel costs as estimated by EPA for their respective vehicles,

Using fixed estimate for annual fueling costs:

$$p_{t=\{S\}} = \$66{,}000 \rightarrow r + v\{\ T\{y_t^e\}\ \} - 66{,}000 - 600$$

&

$$p_{t=\{X\}} = \$86{,}000 \rightarrow r + v\{\ T\{y_t^e\}\ \} - 86{,}000 - 750$$

Under the assumptions that Tesla owners will exceed their 400kWh yearly allowance and actually pay the estimated amount for annual fueling costs, then the buyers who know that they will both exceed Tesla's annual allowance of 400kWh and cannot afford the additional \$600 to \$750 fueling costs each year. On a different note, given that Tier 1 pricing is applied when sharing Supercharger power with another Tesla vehicle and both the increasing trends in Tesla's vehicle productions and deliveries, this paper suggests that the average price for using a Supercharger will converge at \$0.09kW per minute in the long-term. Finally, letting $(m_t^e\{r\})$ be a buyer's expected amount of time spent charging their vehicle over the course of a year (measured in minutes per year) with respect to their buyer type r,

Using average of the current dynamic pricing structure:

$$r + v\{\ T\{y_t^e\}\ \} - p_{t=\{S,X\}} - \$0.09kW/minute(m_t^e\{r\})$$

such that,

$$\text{Buys Model S at } p_{t=\{S\}} = \$66{,}000 \text{ IF:} \rightarrow r + v\{\ T\{y_t^e\}\ \} >= 66{,}000 - \$0.09kW/minute(m_t^e\{r\})$$

$$\text{AND} \rightarrow r + v\{\ T\{y_t^e\}\ \} < 86{,}000 - \$0.09kW/minute(m_t^e\{r\})$$

$$\text{Buys Model X at } p_{t=\{X\}} = \$86{,}000 \text{ IF:} \rightarrow r + v\{\ T\{y_t^e\}\ \} >= 86{,}000 - \$0.09kW/minute(m_t^e\{r\})$$

5. DISCUSSION

5.1. Summary

To summarize, this analysis develops a simple model to examine a potential EV buyer's willingness-to-pay for either Tesla Model S and/or Model X and to investigate the influence of market demand on the growth of Supercharger network. At the same time, given the current industry practices imposed on distribution of electricity in some regions within the U.S., it is possible that Tesla's decision to work around such regulation by offering two-tier pricing structure may prove beneficial since providing a range of charging costs, as opposed to a single fixed rate, can increase the probability of capturing more buyers whose valuations for owning a Tesla EV with respect to the availability of Superchargers fall somewhere in-between the cost range. However, as the previous section suggests, the cost of using a Supercharger in the long-term can still serve as a deterrent for potential EV buyers especially in the presences of either cheaper substitutes (cost of driving gas-powered car) or when there is an increase in Supercharger pricing rate as a result of increase in prices of oil and gas. Thus, it is important for Tesla to continue providing incentives for owners to drive EVs and to avoid creating situations where Tesla owners feel the need to ration out their annual allowance of charging credits.

For these reasons, this paper suggests that Tesla can be more profitable in the long-term by experimenting with a PWYW pricing system as the marginal cost of generating electricity at Superchargers decrease over time with increase in generator capacity from renewable sources. Here, the underlying assumption is that, by doing so, Tesla can create opportunities to raise additional revenues from charging stations by also giving Tesla owners (those who ordered prior to January 15, 2017) a chance to contribute to expanding the Supercharger network while accommodating their budget constraints through a "charitable" PWYW structure. Alternatively, Tesla can further incorporate adaptors on to their Supercharger network to accommodate for charging different EVs such as BMW's i3 so that it can create additional cash flows from its already-existing network of EV charging stations.

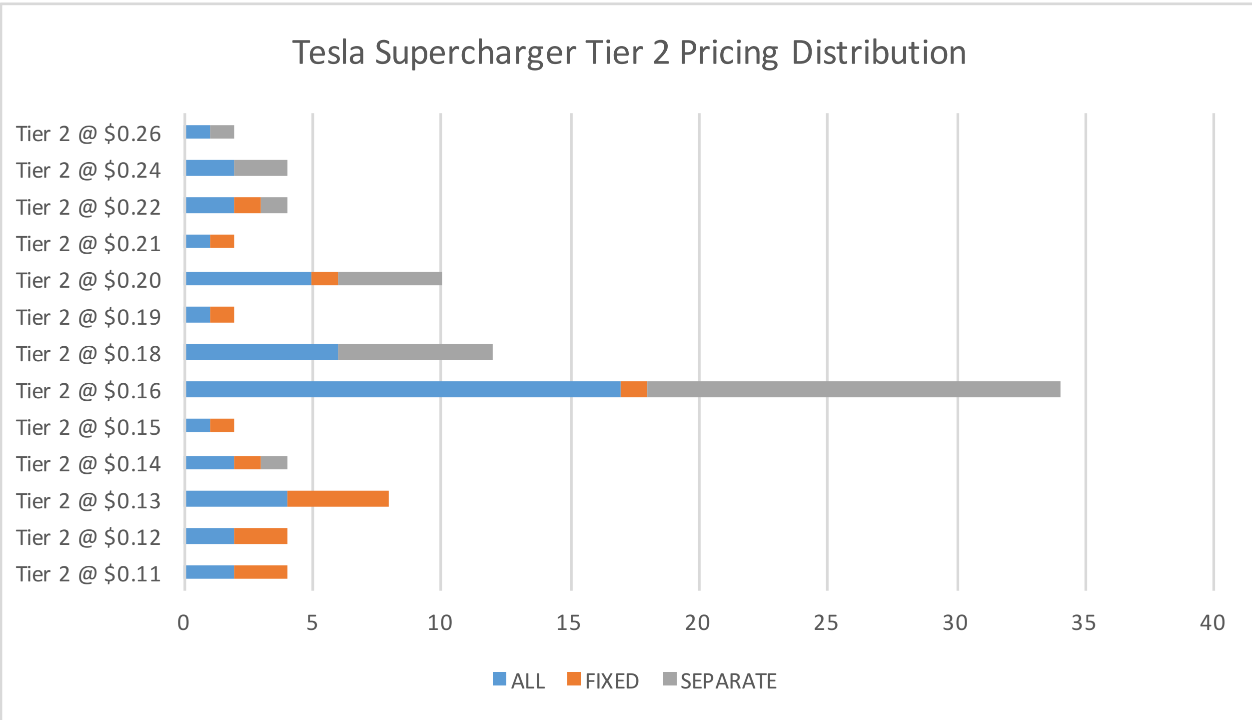
5.2. Limitations

Since this paper focused more so on the consumer-side of Tesla's EV market and not so analysis on the producer-side, one key limitation of this work is that it assumes that every Tesla owner wishes to make some contributions in the transition to sustainable sources of energy. In other words, the analysis relies heavily on the assumption that both Model S and Model X owners will contribute $[0,750] during a 1-year period under the PWYW pricing structure. Having said all these, there still needs additional research on Tesla owners' willingness-to-pay for charging their EVs to better evaluate whether PWYW would be a feasible pricing strategy for the firm. However, as Tesla begins to accumulate more data on its consumers' behaviors, I am hopeful that it will be soon possible to investigate the feasibility of adopting such strategy in at least a year's time. By then, it would also be interesting to consider how the mass market-intended Model 3 can change not only the EV industry, but also consumer expectation on vehicle ownership.

Appendix A. Tesla Supercharger Usage Fees in U.S. After Allotted 400kWh

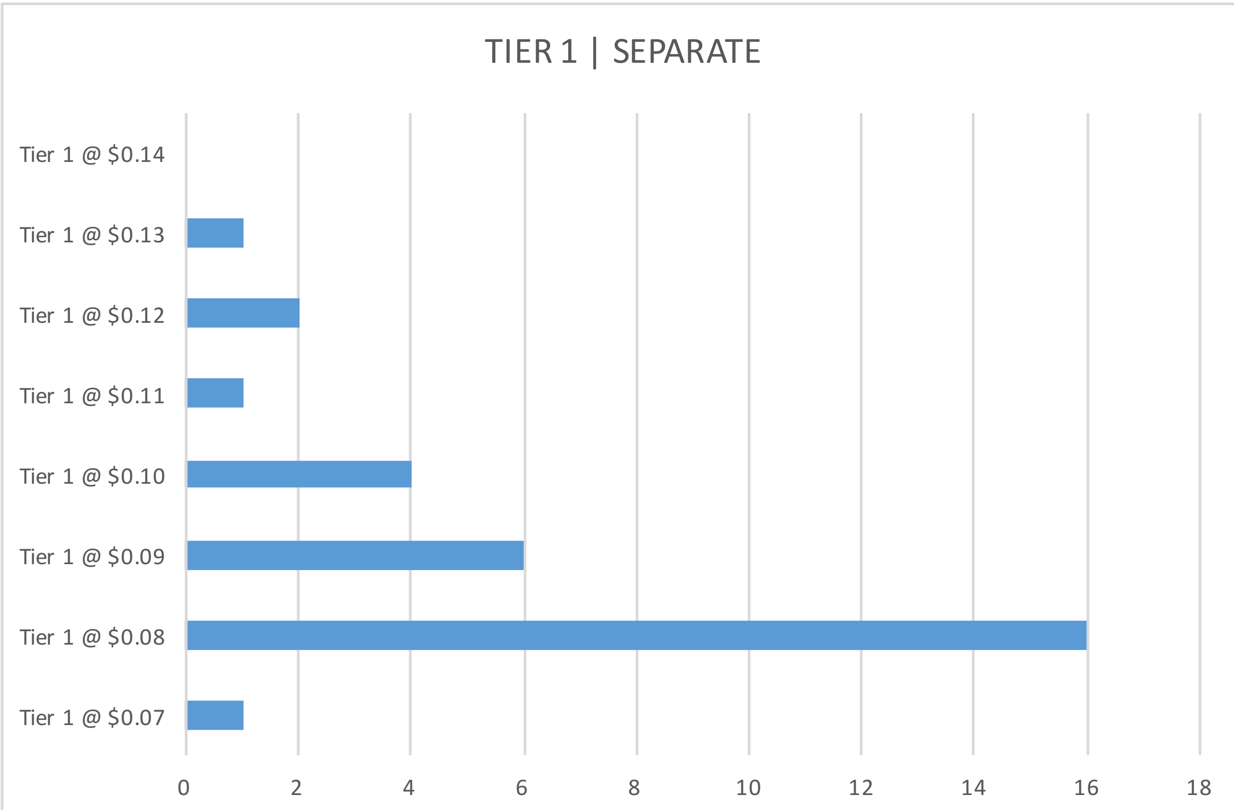
US STATE	TIER 2 (per min)	TIER 1 (per min)	AVG
Alabama	$ 0.18	$ 0.09	$ 0.14
Arizona	$ 0.16	$ 0.08	$ 0.12
California*	$ 0.20	-	-
Colorado*	$ 0.13	-	-
Connecticut	$ 0.26	$ 0.13	$ 0.20
Delaware	$ 0.18	$ 0.09	$ 0.14
Florida*	$ 0.13	-	-
Georgia	$ 0.16	$ 0.08	$ 0.12
Idaho*	$ 0.12	-	-
Illinois*	$ 0.15	-	-
Indiana	$ 0.16	$ 0.08	$ 0.12
Iowa	$ 0.16	$ 0.08	$ 0.12
Kansas	$ 0.18	$ 0.09	$ 0.14
Kentucky	$ 0.16	$ 0.08	$ 0.12
Louisiana	$ 0.14	$ 0.07	$ 0.11
Maine*	$ 0.21	-	-
Maryland*	$ 0.16	-	-
Massachusetts*	$ 0.22	-	-
Minnesota*	$ 0.14	-	-
Michigan	$ 0.20	$ 0.10	$ 0.15
Mississippi	$ 0.16	$ 0.08	$ 0.12
Missouri	$ 0.16	$ 0.08	$ 0.12
Montana	$ 0.16	$ 0.08	$ 0.12
Nebraska	$ 0.16	$ 0.08	$ 0.12
Nevada	$ 0.18	$ 0.09	$ 0.14
New Hampshire	$ 0.24	$ 0.12	$ 0.18
New Jersey	$ 0.20	$ 0.10	$ 0.15
New Mexico	$ 0.16	$ 0.08	$ 0.12
New York*	$ 0.19	-	-
North Carolina	$ 0.16	$ 0.08	$ 0.12
Ohio	$ 0.18	$ 0.09	$ 0.14
Oklahoma	$ 0.16	$ 0.08	$ 0.12
Oregon*	$ 0.12	-	-
Pennsylvania	$ 0.20	$ 0.10	$ 0.15
Rhode Island	$ 0.24	$ 0.12	$ 0.18
South Carolina	$ 0.18	$ 0.09	$ 0.14
South Dakota	$ 0.16	$ 0.08	$ 0.12
Tennessee	$ 0.16	$ 0.08	$ 0.12
Texas	$ 0.16	$ 0.08	$ 0.12
Utah*	$ 0.13	-	-
Vermont	$ 0.22	$ 0.11	$ 0.17
Virgina*	$ 0.13	-	-
Washington*	$ 0.11	-	-
West Virginia*	$ 0.11	-	-
Wisconsin	$ 0.20	$ 0.10	$ 0.15
Wyoming	$ 0.16	$ 0.08	$ 0.12

Appendix B. Tesla Supercharger Tier 2 Distribution Breakdown



	ALL	FIXED	SEPARATE
Tier 2 @ $0.11	2	2	0
Tier 2 @ $0.12	2	2	0
Tier 2 @ $0.13	4	4	0
Tier 2 @ $0.14	2	1	1
Tier 2 @ $0.15	1	1	0
Tier 2 @ $0.16	17	1	16
Tier 2 @ $0.18	6	0	6
Tier 2 @ $0.19	1	1	0
Tier 2 @ $0.20	5	1	4
Tier 2 @ $0.21	1	1	0
Tier 2 @ $0.22	2	1	1
Tier 2 @ $0.24	2	0	2
Tier 2 @ $0.26	1	0	1
TOTAL	46	15	31

Appendix C. Tier 1 Pricing Breakdown



	TIER 1 | SEPARATE
Tier 1 @ $0.07	1
Tier 1 @ $0.08	16
Tier 1 @ $0.09	6
Tier 1 @ $0.10	4
Tier 1 @ $0.11	1
Tier 1 @ $0.12	2
Tier 1 @ $0.13	1
Tier 1 @ $0.14	0
TOTAL	31

Appendix D. Tesla EV Deliveries in 2016

Quarter	Total Sales	Model S	Model X
Q1 2016	14820	12420	2400
Q2 2016	14370	9745	4625
Q3 2016	24500	15800	8700
Q4 2016	22200	12700	9500
TOTAL	75890	50665	25225

Appendix E.

Source: <http://www.eia.gov/outlooks/aeo/assumptions/pdf/electricity.pdf>.

Table 8.2. Cost and performance characteristics of new central station electricity generating technologies

Technology	First Available Year[1]	Size (MW)	Lead time (years)	Base Overnight Cost in 2015 (2015 $/kW)	Contingency Factors: Project Contin-gency Factor[2]	Contingency Factors: Techno-logical Optimism Factor[3]	Total Overnight Cost in 2015[4,10] (2015 $/kW)	Variable O&M[5] (2015 $/MWh)	Fixed O&M (2015 $/kW/yr.)	Heatrate[6] in 2015 (Btu/ kWh)	nth-of-a-kind Heatrate (Btu/ kWh)
Coal with 30% carbon sequestration (CCS)	2019	650	4	4,649	1.07	1.03	5,098	6.95	68.49	9,750	9,221
Conv Gas/Oil Comb Cycle	2018	702	3	911	1.05	1.00	956	3.42	10.76	6,600	6,350
Adv Gas/Oil Comb Cycle (CC)	2018	429	3	1,000	1.08	1.00	1,080	1.96	9.78	6,300	6,200
Adv CC with CCS	2018	340	3	1,898	1.08	1.04	2,132	6.97	32.69	7,525	7,493
Conv Comb Turbine[7]	2017	100	2	1,026	1.05	1.00	1,077	3.42	17.12	9,960	9,600
Adv Comb Turbine	2017	237	2	632	1.05	1.00	664	10.47	6.65	9,800	8,550
Fuel Cells	2018	10	3	6,217	1.05	1.10	7,181	44.21	0.00	9,500	6,960
Adv Nuclear	2022	2,234	6	5,288	1.10	1.05	6,108	2.25	98.11	10,449	10,449
Distributed Generation-Base	2018	2	3	1,448	1.05	1.00	1,520	7.98	17.94	9,004	8,900
Distributed Generation - Peak	2017	1	2	1,739	1.05	1.00	1,826	7.98	17.94	10,002	9,880
Biomass	2019	50	4	3,498	1.07	1.01	3,765	5.41	108.63	13,500	13,500
Geothermal[8,9]	2019	50	4	2,559	1.05	1.00	2,687	0.00	116.12	9,541	9,541
MSW - Landfill	2018	50	3	7,954	1.07	1.00	8,511	9.00	403.97	14,360	18,000
Conventional Hydropower[9]	2019	500	4	2,191	1.10	1.00	2,411	2.62	14.70	9,541	9,541
Wind[10]	2018	100	3	1,536	1.07	1.00	1,644	0.00	45.98	9,541	9,541
Wind Offshore	2019	400	4	4,605	1.10	1.25	6,331	0.00	76.10	9,541	9,541
Solar Thermal[8]	2018	100	3	3,895	1.07	1.00	4,168	0.00	69.17	9,541	9,541
Photovoltaic[8,11]	2017	150	2	2,362	1.05	1.00	2,480	0.00	21.33	9,541	9,541

Appendix F. Fuel Economies of Tesla Model S and Model X

Source: <http://www.fueleconomy.gov/feg/Find.do?action=sbs&id=36980&id=38171>.

	2016 Tesla Model X AWD - P90D	2016 Tesla Model S AWD - 60D
Personalize	Electric Vehicle  Automatic (A1) MSRP: $115,500	Electric Vehicle  Automatic (A1) MSRP: $71,000
EPA Fuel Economy 1 gallon of gasoline=33.7 kWh Show electric charging stations near me	**Electricity** **89** combined city/highway **MPGe** 89 city 90 highway 38 kWh/100 mi Electricity 250 miles Total Range	**Electricity** **104** combined city/highway **MPGe** 101 city 107 highway 32 kWh/100 mi Electricity 218 miles Total Range
	About All-Electric Cars	About All-Electric Cars
Unofficial MPG Estimates from Vehicle Owners Learn more about "My MPG" Disclaimer	User MPG estimates are not yet available for this vehicle	User MPG estimates are not yet available for this vehicle
You save or spend* Note: The average 2017 vehicle gets 26 MPG	**You SAVE** **$3,000** in fuel costs over 5 years compared to the average new vehicle	**You SAVE** **$3,750** in fuel costs over 5 years compared to the average new vehicle
Annual Fuel Cost*	$750	$600
Cost to Drive 25 Miles	$1.23	$1.04