Tesla, Inc.
Form 10-Q
April 29, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2019

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission File Number: 001-34756

Tesla, Inc.

(Exact name of registrant as specified in its charter)

Delaware	91-2197729
(State or other jurisdiction of	(I.R.S. Employer
incorporation or organization)	Identification No.)

3500 Deer Creek Road

Palo Alto, California	94304
(Address of principal executive offices)	(Zip Code)

(650) 681-5000

(Registrant’s telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 (“Exchange Act”) during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company
Emerging growth company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of April 22, 2019, there were 173,720,801 shares of the registrant's common stock outstanding.

TESLA, INC.

FORM 10-Q FOR THE QUARTER ENDED MARCH 31, 2019

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Forward-Looking Statements

The discussions in this Quarterly Report on Form 10-Q contain forward-looking statements reflecting our current expectations that involve risks and uncertainties. These forward-looking statements include, but are not limited to, statements concerning our strategy, future operations, future financial position, future revenues, projected costs, profitability, expected cost reductions, capital adequacy, expectations regarding demand and acceptance for our technologies, growth opportunities and trends in the market in which we operate, prospects and plans and objectives of management. The words “anticipates,” “believes,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “projects,” “v and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements that we make. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those in the forward-looking statements, including, without limitation, the risks set forth in Part II, Item 1A, “Risk Factors” in this Quarterly Report on Form 10-Q and in our other filings with the Securities and Exchange Commission. We do not assume any obligation to update any forward-looking statements.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Tesla, Inc.

Consolidated Balance Sheets

(in thousands, except for par values)

(unaudited)

	March 31, 2019	December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$2,198,169	$3,685,618
Restricted cash	130,950	192,551
Accounts receivable, net	1,046,945	949,022
Inventory	3,836,850	3,113,446
Prepaid expenses and other current assets	464,908	365,671
Total current assets	7,677,822	8,306,308
Operating lease vehicles, net	1,972,502	2,089,758
Solar energy systems, net	6,241,637	6,271,396
Property, plant and equipment, net	9,850,929	11,330,077
Operating lease right-of-use assets	1,253,027	—
Intangible assets, net	273,568	282,492
Goodwill	74,312	68,159
MyPower customer notes receivable, net of current portion	413,181	421,548
Restricted cash, net of current portion	353,679	398,219
Other assets	801,867	571,657
Total assets	$28,912,524	$29,739,614
Liabilities		
Current liabilities		
Accounts payable	$3,248,827	$3,404,451
Accrued liabilities and other	2,276,951	2,094,253
Deferred revenue	762,810	630,292
Resale value guarantees	480,225	502,840
Customer deposits	768,276	792,601
Current portion of long-term debt and finance leases	1,705,711	2,567,699
Total current liabilities	9,242,800	9,992,136
Long-term debt and finance leases, net of current portion	9,787,950	9,403,672
Deferred revenue, net of current portion	1,157,343	990,873
Resale value guarantees, net of current portion	211,390	328,926
Other long-term liabilities	2,475,135	2,710,403
Total liabilities	22,874,618	23,426,010

Commitments and contingencies (Note 13)		
Redeemable noncontrolling interests in subsidiaries	570,284	555,964
Equity		
Stockholders' equity		
Preferred stock; $0.001 par value; 100,000 shares authorized; no shares issued and outstanding	—	—
Common stock; $0.001 par value; 2,000,000 shares authorized; 173,682 and 172,603 shares issued and outstanding as of March 31, 2019 and December 31, 2018, respectively	174	173
Additional paid-in capital	10,563,746	10,249,120
Accumulated other comprehensive loss	(35,019)	(8,218)
Accumulated deficit	(5,923,305)	(5,317,832)
Total stockholders' equity	4,605,596	4,923,243
Noncontrolling interests in subsidiaries	862,026	834,397
Total liabilities and equity	$28,912,524	$29,739,614

The accompanying notes are an integral part of these consolidated financial statements.

Tesla, Inc.

Consolidated Statements of Operations

(in thousands, except per share data)

(unaudited)

	Three Months Ended March 31, 2019	2018
Revenues		
Automotive sales	$ 3,508,741	$ 2,561,881
Automotive leasing	215,120	173,436
Total automotive revenues	3,723,861	2,735,317
Energy generation and storage	324,661	410,022
Services and other	492,942	263,412
Total revenues	4,541,464	3,408,751
Cost of revenues		
Automotive sales	2,856,209	2,091,397
Automotive leasing	117,092	104,496
Total automotive cost of revenues	2,973,301	2,195,893
Energy generation and storage	316,887	375,363
Services and other	685,533	380,969
Total cost of revenues	3,975,721	2,952,225
Gross profit	565,743	456,526
Operating expenses		
Research and development	340,174	367,096
Selling, general and administrative	703,929	686,404
Restructuring and other	43,471	—
Total operating expenses	1,087,574	1,053,500
Loss from operations	(521,831)	(596,974)
Interest income	8,762	5,214
Interest expense	(157,453)	(149,546)
Other income (expense), net	25,750	(37,716)
Loss before income taxes	(644,772)	(779,022)
Provision for income taxes	22,873	5,605
Net loss	(667,645)	(784,627)
Net income (loss) attributable to noncontrolling interests and redeemable noncontrolling interests in subsidiaries	34,490	(75,076)
Net loss attributable to common stockholders	$ (702,135)	$ (709,551)
Net loss per share of common stock attributable to common stockholders		
Basic	$ (4.10)	$ (4.19)
Diluted	$ (4.10)	$ (4.19)
Weighted average shares used in computing net loss		

per share of common stock		
Basic	172,989	169,146
Diluted	172,989	169,146

The accompanying notes are an integral part of these consolidated financial statements.

Tesla, Inc.

Consolidated Statements of Comprehensive Loss

(in thousands)

(unaudited)

	Three Months Ended March 31,	
	2019	2018
Net loss attributable to common stockholders	$ (702,135)	$ (709,551)
Other comprehensive (loss) income:		
Foreign currency translation adjustment	(26,801)	49,573
Comprehensive loss	$ (728,936)	$ (659,978)

The accompanying notes are an integral part of these consolidated financial statements.

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Tesla, Inc.

Consolidated Statements of Redeemable Noncontrolling Interests and Equity

(in thousands, except for par values)

(unaudited)

	Redeemable Noncontrolling Interests	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity	Noncontrolling Interests in Subsidiaries	Total Equity
Balance as of December 31, 2017	$397,734	168,797	$169	$9,178,024	$(4,974,299)	$33,348	$4,237,242	$997,346	$5,234,588
Adjustments for prior periods from adopting ASC 606	8,101	—	—	—	623,172	—	623,172	(89,084)	534,088
Adjustments for prior periods from adopting Accounting Standards Update No. 2017-05	—	—	—	—	9,386	—	9,386	—	9,386
Reclass from mezzanine equity to equity for Convertible Senior Notes due in 2018	—	—	—	68	—	—	68	—	68
Exercises of conversion feature of convertible senior notes	—	—	—	(38)	—	—	(38)	—	(38)
Common stock issued, net of shares withheld for employee taxes	—	953	1	94,017	—	—	94,018	—	94,018
Stock-based compensation	—	—	—	146,825	—	—	146,825	—	146,825

Contributions from noncontrolling interests	38,126	—	—	—	—	—	—	35,578	35,578
Distributions to noncontrolling interests	(10,960)	—	—	—	—	—	—	(32,054)	(32,054)
Net loss	(27,166)	—	—	—	(709,551)	—	(709,551)	(47,910)	(757,461)
Other comprehensive income	—	—	—	—	—	49,573	49,573	—	49,573
Balance as of March 31, 2018	$405,835	169,750	$170	$9,418,896	$(5,051,292)	$82,921	$4,450,695	$863,876	$5,314,571

	Redeemable Noncontrolling Interests	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity	Noncontrolling Interests in Subsidiaries	Total Equity
Balance as of December 31, 2018	$555,964	172,603	$173	$10,249,120	$(5,317,832)	$(8,218)	$4,923,243	$834,397	$5,757,640
Adjustments for prior periods from adopting ASC 842	—	—	—	—	96,662	—	96,662	—	96,662
Exercises of conversion feature of convertible senior notes	—	0	0	3	—	—	3	—	3
Common stock issued, net of shares withheld for employee taxes	—	1,029	1	77,952	—	—	77,953	—	77,953
Issuance of common stock upon acquisitions and assumed awards	—	50	0	14,536	—	—	14,536	—	14,536
Stock-based compensation	—	—	—	229,724	—	—	229,724	—	229,724
Contributions from noncontrolling interests	30,420	—	—	—	—	—	—	16,401	16,401
	(10,797)	—	—	—	—	—	—	(28,565)	(28,565)

Distributions to noncontrolling interests									
Buy-outs of noncontrolling interests	—	—	—	(7,589)	—	—	(7,589)	—	(7,589)
Net income (loss)	(5,303)	—	—	—	(702,135)	—	(702,135)	39,793	(662,342)
Other comprehensive loss	—	—	—	—	—	(26,801)	(26,801)	—	(26,801)
Balance as of March 31, 2019	$570,284	173,682	$174	$10,563,746	$(5,923,305)	$(35,019)	$4,605,596	$862,026	$5,467,622

The accompanying notes are an integral part of these consolidated financial statements.

Tesla, Inc.

Consolidated Statements of Cash Flows

(in thousands)

(unaudited)

	Three Months Ended March 31, 2019	2018
Cash Flows from Operating Activities		
Net loss	$(667,645)	$(784,627)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation, amortization and impairment	467,577	416,233
Stock-based compensation	208,378	141,639
Amortization of debt discounts and issuance costs	40,108	39,345
Inventory write-downs	80,843	18,546
Loss on disposals of fixed assets	18,421	52,237
Foreign currency transaction (gains) losses	(39,130)	47,661
Non-cash interest and other operating activities	116,050	(3,984)
Operating cash flow related to repayment of discounted convertible notes	(188,107)	—
Changes in operating assets and liabilities, net of effect of business combinations:		
Accounts receivable	(99,640)	(169,142)
Inventory	(809,152)	(322,081)
Operating lease vehicles	13,012	(97,196)
Prepaid expenses and other current assets	(46,103)	(50,001)
Other non-current assets	28,064	(57,583)
Accounts payable and accrued liabilities	(27,577)	317,983
Deferred revenue	317,888	45,795
Customer deposits	(25,173)	67,359
Resale value guarantee	(47,394)	—
Other long-term liabilities	19,974	(60,560)
Net cash used in operating activities	(639,606)	(398,376)
Cash Flows from Investing Activities		
Purchases of property and equipment excluding finance leases, net of sales	(279,932)	(655,662)
Purchases of solar energy systems	(25,261)	(72,975)
Business combinations, net of cash acquired	(650)	—
Net cash used in investing activities	(305,843)	(728,637)
Cash Flows from Financing Activities		
Proceeds from issuances of convertible and other debt	1,494,066	1,775,481
Repayments of convertible and other debt	(1,970,709)	(1,389,388)
Repayments of borrowings issued to related parties	—	(17,500)
Collateralized lease (repayments) borrowings	(133,891)	(87,092)
Proceeds from exercises of stock options and other stock issuances	77,953	94,018
Principal payments on finance leases	(66,656)	(18,787)
Common stock and debt issuance costs	(7,757)	(2,913)

Proceeds from investments by noncontrolling interests in subsidiaries	46,821	73,704
Distributions paid to noncontrolling interests in subsidiaries	(85,257)	(52,942)
Payments for buy-outs of noncontrolling interests in subsidiaries	(7,589)	(2,921)
Net cash (used in) provided by financing activities	(653,019)	371,660
Effect of exchange rate changes on cash and cash equivalents and restricted cash	4,878	10,102
Net decrease in cash and cash equivalents and restricted cash	(1,593,590)	(745,251)
Cash and cash equivalents and restricted cash, beginning of period	4,276,388	3,964,959
Cash and cash equivalents and restricted cash, end of period	$2,682,798	$3,219,708
Supplemental Non-Cash Investing and Financing Activities		
Acquisitions of property and equipment included in liabilities	$119,903	$286,975
Estimated fair value of facilities under build-to-suit leases	$—	$56,169

The accompanying notes are an integral part of these consolidated financial statements.

Tesla, Inc.

Notes to Consolidated Financial Statements

(unaudited)

Note 1 – Overview

Tesla, Inc. (“Tesla”, the “Company”, “we”, “us” or “our”) was incorporated in the State of Delaware on July 1, 2003. We desig develop, manufacture and sell high-performance fully electric vehicles and design, manufacture, install and sell solar energy generation and energy storage products. Our Chief Executive Officer, as the chief operating decision maker (“CODM”), organizes the Company, manages resource allocations and measures performance among two operating and reportable segments: (i) automotive and (ii) energy generation and storage.

Note 2 – Summary of Significant Accounting Policies

Unaudited Interim Financial Statements

The consolidated balance sheet as of March 31, 2019, the consolidated statements of operations, the consolidated statements of comprehensive loss , the consolidated statements of redeemable noncontrolling interests and equity and the consolidated statements of cash flows for the three months ended March 31, 2019 and 2018, as well as other information disclosed in the accompanying notes, are unaudited. The consolidated balance sheets as of December 31, 2018 was derived from the audited consolidated financial statements as of that date. The interim consolidated financial statements and the accompanying notes should be read in conjunction with the annual consolidated financial statements and the accompanying notes contained in our Annual Report on Form 10-K for the year ended December 31, 2018.

The interim consolidated financial statements and the accompanying notes have been prepared on the same basis as the annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for a fair statement of the results of operations for the periods presented. The consolidated results of operations for any interim period are not necessarily indicative of the results to be expected for the full year or for any other future years or interim periods.

Revenue Recognition

Automotive Sales Revenue

Automotive Sales with and without Resale Value Guarantee

Automotive sales revenue includes revenues related to deliveries of new vehicles, and specific other features and services that meet the definition of a performance obligation include access to our Supercharger network, internet connectivity, Autopilot, full self-driving and over-the-air software updates. Deferred revenue activity related to the access to our Supercharger network, internet connectivity, Autopilot, full self-driving and over-the-air software updates on automotive sales with and without resale value guarantee amounted to $1.04 billion and $882.8 million as of March 31, 2019 and December 31, 2018, respectively. Deferred revenue is equivalent to the total transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied, as of the balance sheet date. Revenue recognized from the deferred revenue balance as of December 31, 2018 was $37.4 million for the three months ended March 31, 2019. Of the total deferred revenue on automotive sales with and without resale value guarantees, we expect to recognize $462.3 million of revenue in the next 12 months. The remaining balance will be recognized over the various performance periods of the obligations, which is up to the eight-year life of the vehicle.

At the time of revenue recognition, we reduce the transaction price and record a sales return reserve against revenue for estimated variable consideration related to future product returns. Such estimates are based on historical experience. On a quarterly basis, we assess the estimated market values of vehicles under our buyback options program to determine whether there will be changes to future product returns. As we accumulate more data related to the buyback values of our vehicles or as market conditions change, there may be material changes to their estimated values. Due to price adjustments we made to our vehicle offerings during the three months ended March 31, 2019, we estimated that there is a greater likelihood that customers will exercise their buyback options. As a result, we adjusted our sales return reserve on vehicles previously sold under our buyback options program resulting in a reduction of automotive sales revenues of $500.5 million. If customers elect to exercise the buyback option, we expect to be able to subsequently resell the returned vehicles, which resulted in a corresponding reduction in automotive cost of sales of $408.8 million. The net impact was $91.7 million reduction in gross profit.

Automotive Regulatory Credits

We recognize revenue on the sale of regulatory credits at the time control of the regulatory credits is transferred to the purchasing party as automotive revenue in the consolidated statement of operations. Deferred revenue related to sales of automotive regulatory credits was $140.0 million and $0 as of March 31, 2019 and December 31, 2018, respectively. We expect to recognize the deferred revenue as of March 31, 2019 over the next 2 to 3 years.

Automotive Leasing Revenue

Automotive leasing revenue includes revenue recognized under lease accounting guidance for our direct leasing programs as well as the two programs with resale value guarantees described below.

Direct Vehicle Leasing Program

We have outstanding leases under our direct vehicle leasing programs in certain locations in the U.S., Canada and Europe. As of March 31, 2019, the direct vehicle leasing program is only offered for new Model S and Model X leases to qualified customers in the U.S. and Canada. Qualifying customers are permitted to lease a vehicle directly from Tesla for up to 48 months. At the end of the lease term, customers have the option of either returning the vehicle to us or purchasing it for a pre-determined residual value. We account for these leasing transactions as operating leases. We record leasing revenues to automotive leasing revenue on a straight-line basis over the contractual term, and we record the depreciation of these vehicles to cost of automotive leasing revenue.

We capitalize shipping costs and initial direct costs such as the incremental cost of contract administration, referral fees and sales commissions from the origination of automotive lease agreements as an element of operating lease vehicles, net, and subsequently amortize these costs over the term of the related lease agreement. Our policy is to exclude taxes collected from a customer from the transaction price of automotive contracts.

Vehicle Sales to Leasing Partners with a Resale Value Guarantee and a Buyback Option

We offer buyback options in connection with automotive sales with resale value guarantees with certain leasing partner sales in the United States. These transactions entail a transfer of leases, which we have originated with an end-customer, to our leasing partner. As control of the vehicles has not been transferred, these transactions were accounted for as interest bearing collateralized borrowings in accordance with ASC 840, Leases, prior to January 1, 2019. Under this program, cash is received for the full price of the vehicle and the collateralized borrowing value is generally recorded within resale value guarantees and the customer upfront deposit is recorded within deferred revenue. We amortize the deferred revenue amount to automotive leasing revenue on a straight-line basis over the option period and accrue interest expense based on our borrowing rate. We capitalize vehicles under this program to operating lease vehicles, net, on the consolidated balance sheet, and we record depreciation from these vehicles to cost of automotive leasing revenue during the period the vehicle is under a lease arrangement. Cash received for these vehicles, net of revenue recognized during the period, is classified as collateralized lease (repayments) borrowings within cash flows from financing activities in the consolidated statements of cash flows. With the adoption of ASC 842 on January 1, 2019, all new agreements under this program will be accounted for as operating leases under ASC 842 and there will be no material change in the timing and amount of revenue recognized over the term. Consequently, any cash flows for new agreements will be classified as operating cash activities on the consolidated statements of cash flows.

At the end of the lease term, we settle our liability in cash by either purchasing the vehicle from the leasing partner for the buyback option amount or paying a shortfall to the option amount the leasing partner may realize on the sale of the vehicle. Any remaining balances within deferred revenue and resale value guarantee will be settled to automotive leasing revenue. The end customers can extend the lease for a period of up to 6 months. In cases where the leasing partner retains ownership of the vehicle after the end of our option period, we expense the net value of the leased vehicle to cost of automotive leasing revenue. The maximum amount we could be required to pay under this program, should we decide to repurchase all vehicles, was $415.0 million and $479.8 million as of March 31, 2019 and December 31, 2018, respectively, including $301.2 million within a 12-month period from March 31, 2019. As of March 31, 2019 and December 31, 2018, we had $470.0 million and $558.3 million, respectively, of such borrowings recorded in resale value guarantees and $85.6 million and $92.5 million, respectively, recorded in deferred revenue liability. For the three months ended March 31, 2019 and 2018, we recognized $52.9 million and $82.5 million, respectively, of leasing revenue related to this program. The net carrying amount of operating lease vehicles under this program was $396.0 million and $468.5 million as of March 31, 2019 and December 31, 2018.

Vehicle Sales to Customers with a Resale Value Guarantee where Exercise is Probable

For certain international programs where we have offered resale value guarantees to certain customers who purchased vehicles and where we expect the customer has a significant economic incentive to exercise the resale value guarantee provided to them, we continue to recognize these transactions as operating leases. The process to determine whether there is a significant economic incentive includes a comparison of a vehicle's estimated market value at the time the option is exercisable with the guaranteed resale value to determine the customer's economic incentive to exercise. We have not sold any vehicles under this program since the first half of 2017 and all current period activity relates to the exercise or cancellation of active transactions. The amount of sale proceeds equal to the resale value guarantee is deferred until the guarantee expires or is exercised. The remaining sale proceeds are deferred and recognized on a straight-line basis over the stated guarantee period to automotive leasing revenue. The guarantee period expires at the earlier of the end of the guarantee period or the pay-off of the initial loan. We capitalize the cost of these vehicles on the consolidated balance sheet as operating lease vehicles, net, and depreciate their value, less salvage value, to cost of automotive leasing revenue over the same period.

In cases where a customer retains ownership of a vehicle at the end of the guarantee period, the resale value guarantee liability and any remaining deferred revenue balances related to the vehicle are settled to automotive leasing revenue, and the net book value of the leased vehicle is expensed to cost of automotive leasing revenue. If a customer returns the vehicle to us during the guarantee period, we purchase the vehicle from the customer in an amount equal to the resale value guarantee and settle any remaining deferred balances to automotive leasing revenue, and we reclassify the net book value of the vehicle on the consolidated balance sheet to used vehicle inventory. As of March 31, 2019 and December 31, 2018, $136.6 million and $149.7 million, respectively, of the guarantees were exercisable by customers within the next 12 months. For the three months ended March 31, 2019 and 2018, we recognized $47.5 million and $16.1 million, respectively, of leasing revenue related to this program. The net carrying amount of operating lease vehicles under this program was $169.2 million and $211.5 million as of March 31, 2019 and December 31, 2018.

Energy Generation and Storage Sales

Energy generation and storage sales revenues consists of the sale of solar energy systems and energy storage systems to residential, small commercial, and large commercial and utility grade customers. Upon adoption of the new lease standard (refer to Leases section below for details), energy generation and storage sales revenues will include agreements for solar energy systems and power purchase agreements ("PPAs") that commence after January 1, 2019, as these are now accounted for under ASC 606. We record as deferred revenue any non-refundable amounts that are collected from customers related to fees charged for prepayments and remote monitoring service and operations and maintenance service, which is recognized as revenue ratably over the respective customer contract term. As of March 31, 2019 and December 31, 2018, deferred revenue related to such customer payments amounted to $155.8 million and $148.7 million, respectively. Revenue recognized from the deferred revenue balance as of December 31, 2018 was $16.6 million for the three months ended March 31, 2019. We have elected the practical expedient to omit disclosure of the amount of the transaction price allocated to remaining performance obligations for energy generation and storage sales with an original expected contract length of one year or less and the amount that we have the right to invoice when that amount corresponds directly with the value to the performance to date. As of March 31, 2019, total transaction price allocated to performance obligations that were unsatisfied or partially unsatisfied for contracts with an original expected length of more than one year was $102.3 million. Of this amount, we expect to recognize $4.7 million in the next 12 months and the remaining over a period up to 29 years.

Deferred revenue also includes the portion of rebates and incentives received from utility companies and various local and state government agencies, which is recognized as revenue over the lease term. As of March 31, 2019 and December 31, 2018, deferred revenue from rebates and incentives amounted to $35.3 million and $36.8 million, respectively.

We capitalize initial direct costs from the execution of solar energy system sales and PPAs, which include the referral fees and sales commissions, as an element of solar energy systems, net, and subsequently amortize these costs over the term of the related sale or PPA.

Revenue by source

The following table disaggregates our revenue by major source (in thousands):

	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018
Automotive sales without resale value guarantee	$ 3,683,381	$2,182,514
Automotive sales with resale value guarantee (1)	(390,621)	299,038
Automotive regulatory credits	215,981	80,329
Energy generation and storage sales (2)	212,100	297,895
Services and other	492,942	263,412
Total revenues from sales and services	4,213,783	3,123,188
Automotive leasing	215,120	173,436
Energy generation and storage leasing (2)	112,561	112,127
Total revenues	$ 4,541,464	$3,408,751

(1) We made pricing adjustments to our vehicle offerings during the three months ended March 31, 2019, which resulted in a reduction of automotive sales with resale value guarantee revenues. Refer to Automotive Sales with and without Resale Value Guarantee section above for details. The amount presented represents gross automotive sales with resale value guarantee in the three months ended March 31, 2019 net of such pricing adjustments impact.

(2) Following the adoption of ASU No. 2016-02, Leases, solar energy system sales and PPAs that commence after January 1, 2019, where we are the lessor and were previously accounted for as leases, will no longer meet the definition of a lease and will instead be accounted for in accordance with ASC 606 (refer to the Leases section below for details).

Leases

In February 2016, the FASB issued ASU No. 2016-02 (“ASC 842”), Leases, to require lessees to recognize all leases, with certain exceptions, on the balance sheet, while recognition on the statement of operations will remain similar to current lease accounting. Subsequently, the FASB issued ASU No. 2018-10, Codification Improvements to Topic 842, Leases, ASU No. 2018-11, Targeted Improvements, ASU No. 2018-20, Narrow-Scope Improvements for Lessors, and ASU 2019-01, Codification Improvements, to clarify and amend the guidance in ASU No. 2016-02. ASC 842 eliminates real estate-specific provisions and modifies certain aspects of lessor accounting. This standard is effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. We adopted ASC 842 as of January 1, 2019 using the cumulative effect adjustment approach (“adoption of the new lease standard’). In addition, we elected the package of practical expedients permitted under the transition guidance within the new standard, which allowed us to carry forward the historical determination of contracts as leases, lease classification and not reassess initial direct costs for historical lease arrangements. Accordingly, previously reported financial statements, including footnote disclosures, have not been recast to reflect the application of the new standard to all comparative periods presented. The finance lease classification under ASC 842 includes leases previously classified as capital leases under ASC 840.

Agreements for solar energy systems and PPAs that commence after January 1, 2019, where we are the lessor and are currently accounted for as operating leases no longer meet the definition of a lease upon the adoption of ASC 842 and will instead be accounted for in accordance with ASC 606. Under these two types of arrangements, the customer is not responsible for the design of the energy system but rather approved the energy system benefits in terms of energy production to be received over the term. Accordingly, the revenue from the solar energy system agreements starting January 1, 2019 are now recognized as earned, based on the amount of electricity delivered at the contractual billing rates, assuming all other revenue recognition criteria have been met. Under the practical expedient available under ASC 606-10-55-18, we recognize revenue based on the value of the service which is consistent with the billing amount. There is no change to the amount and timing of revenue recognition for PPA arrangements.

We have lease agreements with lease and non-lease components, and have elected to utilize the practical expedient to account for lease and non-lease components together as a single combined lease component, from both a lessee and lessor perspective. From a lessor perspective, the timing and pattern of transfer are the same for the non-lease components and associated lease component and, the lease component, if accounted for separately, would be classified as an operating lease. Additionally, we have determined that the leases previously identified as build-to-suit leasing arrangements under legacy lease accounting (ASC 840), were derecognized pursuant to the transition guidance provided for build-to-suit leases in ASC 842. Accordingly, these leases have been reassessed as operating leases as of the adoption date under ASC 842, and are included on the consolidated balance sheet as of March 31, 2019.

Operating lease assets are included within operating lease right-of-use assets, and the corresponding operating lease liabilities are included within accrued liabilities and other for the current portion, and within other long-term liabilities for the long-term portion on our consolidated balance sheet as of March 31, 2019. Finance lease assets are included within property, plant and equipment, net, and the corresponding finance lease liabilities are included within current portion of long-term debt and finance leases for the current portion, and within long-term debt and finance leases, net of current portion for the long-term portion on our consolidated balance sheet as of March 31, 2019.

We have elected not to present short-term leases on the consolidated balance sheet as these leases have a lease term of 12 months or less at lease inception and do not contain purchase options or renewal terms that we are reasonably certain to exercise. All other lease assets and lease liabilities are recognized based on the present value of lease payments over the lease term at commencement date. Because most of our leases do not provide an implicit rate of return, we used our incremental borrowing rate based on the information available at adoption date in determining the present value of lease payments.

Adoption of the new lease standard on January 1, 2019 had a material impact on our interim unaudited consolidated financial statements. The most significant impacts related to the (i) recognition of right-of-use ("ROU") assets of $1.29 billion and lease liabilities of $1.24 billion for operating leases on the consolidated balance sheet, and (ii) de-recognition of build-to-suit lease assets and liabilities of $1.62 billion and $1.74 billion, respectively, with the net impact of $96.7 million recorded to accumulated deficit, net of deferred tax impact, as of January 1, 2019. We also reclassified prepaid expenses and other current asset balances of $141.6 million and deferred rent balance, including tenant improvement allowances, and other liability balances of $69.7 million relating to our existing lease arrangements as of December 31, 2018, into the ROU asset balance as of January 1, 2019. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. The standard did not materially impact our consolidated statement of operations and consolidated statement of cash flows.

The cumulative effect of the changes made to our consolidated balance sheet as of January 1, 2019 for the adoption of the new lease standard was as follows (in thousands):

	Balances at December 31, 2018	Adjustments from Adoption of New Lease Standard	Balances at January 1, 2019
Assets			
Prepaid expenses and other current assets	$ 365,671	(300)	$ 365,371
Property, plant and equipment, net	11,330,077	(1,617,373)	9,712,704
Operating lease right-of-use assets	—	1,285,617	1,285,617
Other assets	571,657	(141,322)	430,335
Liabilities			
Accrued liabilities and other	2,094,253	117,717	2,211,970
Current portion of long-term debt and finance leases	2,567,699	—	2,567,699
Long-term debt and finance leases, net of current portion	9,403,672	—	9,403,672
Other long-term liabilities	2,710,403	(687,757)	2,022,646
Equity			
Accumulated deficit	(5,317,832)	96,662	(5,221,170)

Income Taxes

There are transactions that occur during the ordinary course of business for which the ultimate tax determination is uncertain. As of March 31, 2019 and December 31, 2018, the aggregate balances of our gross unrecognized tax benefits were $264.1 million and $253.4 million, respectively, of which $252.4 million and $243.8 million, respectively, would not give rise to changes in our effective tax rate since these tax benefits would increase a deferred tax asset that is currently fully offset by a valuation allowance.

Net Income (Loss) per Share of Common Stock Attributable to Common Stockholders

Basic net income (loss) per share of common stock attributable to common stockholders is calculated by dividing net income (loss) attributable to common stockholders by the weighted-average shares of common stock outstanding for the period. During the three months ended March 31, 2019, we increased net loss attributable to common stockholders by $7.6 million to arrive at the numerator used to calculate net loss per share. This adjustment represents the difference between the cash we paid to a financing fund investor for their noncontrolling interest in one of our subsidiaries and the carrying amount of the noncontrolling interest on our consolidated balance sheet, in accordance with ASC 260, Earnings per Share. Potentially dilutive shares, which are based on the weighted-average shares of common stock underlying outstanding stock-based awards, warrants and convertible senior notes using the treasury stock method or the if-converted method, as applicable, are included when calculating diluted net income (loss) per share of common stock attributable to common stockholders when their effect is dilutive. Since we intend to settle in cash the principal outstanding under the 1.25% Convertible Senior Notes due in 2021 and the 2.375% Convertible Senior Notes due in 2022, we use the treasury stock method when calculating their potential dilutive effect, if any. Furthermore, in connection with the offerings of our bond hedges, we entered into convertible note hedges (see Note 10, Long-Term Debt Obligations). However, our convertible note hedges are not included when calculating potentially dilutive shares since their effect is always anti-dilutive.

The following table presents the potentially dilutive shares that were excluded from the computation of diluted net loss per share of common stock attributable to common stockholders, because their effect was anti-dilutive:

	Three Months Ended March 31,	
	2019	2018
Stock-based awards	10,663,223	9,630,761
Convertible senior notes	1,088,699	1,527,584
Warrants	—	301,504

Restricted Cash

We maintain certain cash balances restricted as to withdrawal or use. Our restricted cash is comprised primarily of cash as collateral for our sales to lease partners with a resale value guarantee, letters of credit, real estate leases, insurance policies, credit card borrowing facilities and certain operating leases. In addition, restricted cash includes cash received from certain fund investors that have not been released for use by us and cash held to service certain payments under various secured debt facilities. The following table totals cash and cash equivalents and restricted cash as reported on the consolidated balance sheets; the sums are presented on the consolidated statements of cash flows (in thousands):

	March 31, 2019	December 31, 2018	March 31, 2018	December 31, 2017
Cash and cash equivalents	$2,198,169	$ 3,685,618	$2,665,673	$ 3,367,914
Restricted cash	130,950	192,551	120,194	155,323
Restricted cash, net of current portion	353,679	398,219	433,841	441,722
Total as presented in the consolidated statements of cash flows	$2,682,798	$ 4,276,388	$3,219,708	$ 3,964,959

Concentration of Risk

Credit Risk

Financial instruments that potentially subject us to a concentration of credit risk consist of cash, cash equivalents, restricted cash, accounts receivable, convertible note hedges, and interest rate swaps. Our cash balances are primarily invested in money market funds or on deposit at high credit quality financial institutions in the U.S. These deposits are typically in excess of insured limits. As of March 31, 2019 and December 31, 2018, no entity represented 10% of our total accounts receivable balance. The risk of concentration for our interest rate swaps is mitigated by transacting with several highly-rated multinational banks.

Supply Risk

We are dependent on our suppliers, the majority of which are single source suppliers, and the inability of these suppliers to deliver necessary components of our products in a timely manner at prices, quality levels and volumes acceptable to us, or our inability to efficiently manage these components from these suppliers, could have a material adverse effect on our business, prospects, financial condition and operating results.

Operating Lease Vehicles

Vehicles that are leased as part of our direct vehicle leasing program, vehicles delivered to leasing partners with a resale value guarantee and a buyback option, as well as vehicles delivered to customers with resale value guarantee where exercise is probable are classified as operating lease vehicles as the related revenue transactions are treated as operating leases (refer to the Resale Value Guarantees Financing Programs under ASC 842 section above for details). Operating lease vehicles are recorded at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the expected operating lease term. The total cost of operating lease vehicles recorded on the consolidated balance sheets as of March 31, 2019 and December 31, 2018 was $2.42 billion and $2.55 billion, respectively. Accumulated depreciation related to leased vehicles as of March 31, 2019 and December 31, 2018 was $446.3 million and $457.6 million, respectively.

Warranties

We provide a manufacturer's warranty on all new and used vehicles, production powertrain components and systems and energy storage products we sell. In addition, we also provide a warranty on the installation and components of the solar energy systems we sell for periods typically between 10 to 30 years. We accrue a warranty reserve for the products sold by us, which includes our best estimate of the projected costs to repair or replace items under warranties and recalls when identified. These estimates are based on actual claims incurred to date and an estimate of the nature, frequency and costs of future claims. These estimates are inherently uncertain given our relatively short history of sales, and changes to our historical or projected warranty experience may cause material changes to the warranty reserve in the future. The warranty reserve does not include projected warranty costs associated with our vehicles subject to lease accounting and our solar energy systems under lease contracts or PPAs, as the costs to repair these warranty claims are expensed as incurred. The portion of the warranty reserve expected to be incurred within the next 12 months is included within accrued liabilities and other while the remaining balance is included within other long-term liabilities on the consolidated balance sheet. Warranty expense is recorded as a component of cost of revenues in the consolidated statements of operations. Accrued warranty activity consisted of the following (in thousands):

	Three Months Ended March 31,	
	2019	2018
Accrued warranty—beginning of period	$747,826	$401,790
Warranty costs incurred	(54,189)	(44,681)
Net changes in liability for pre-existing warranties, including expirations and foreign exchange impact	37,750	501
Additional warranty accrued from adoption of the new revenue standard	—	37,139
Provision for warranty	112,521	71,117
Accrued warranty—end of period	$843,908	$465,866

For the three months ended March 31, 2019 and 2018, warranty costs incurred for vehicles accounted for as operating leases or collateralized debt arrangements were $5.6 million and $5.8 million, respectively.

Recent Accounting Pronouncements

Recently issued accounting pronouncements not yet adopted

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, to require financial assets carried at amortized cost to be presented at the net amount expected to be collected based on historical experience, current conditions and forecasts. Subsequently, the FASB issued ASU No. 2018-19, Codification Improvements to Topic 326, to clarify that receivables arising from operating leases are within the scope of lease accounting standards. The ASUs are effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. Adoption of the ASUs is on a modified retrospective basis. We are currently obtaining an understanding of the ASUs and plan to adopt them on January 1, 2020.

In January 2017, the FASB issued ASU No. 2017-04, Simplifying the Test for Goodwill Impairment, to simplify the test for goodwill impairment by removing Step 2. An entity will, therefore, perform the goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognizing an impairment charge for the amount by which the carrying amount exceeds the fair value, not to exceed the total amount of goodwill allocated to the reporting unit. An entity still has the option to perform a qualitative assessment to determine if the quantitative impairment test is necessary. The ASU is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. Adoption of the ASU is prospective. We are currently obtaining an understanding of the ASU and plan to adopt the ASU prospectively on January 1, 2020. The ASU is currently not expected to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that Is a Service Contract. The ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The ASU is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. Adoption of the ASU is either retrospective or prospective. We are currently obtaining an understanding of the ASU and plan to adopt the ASU prospectively on January 1, 2020.

Recently adopted accounting pronouncements

In February 2016, the FASB issued ASU No. 2016-02, Leases, to require lessees to recognize all leases, with limited exceptions, on the balance sheet, while recognition on the statement of operations will remain similar to legacy lease accounting, ASC 840. The ASU also eliminates real estate-specific provisions and modifies certain aspects of lessor accounting. Subsequently, the FASB issued ASU No. 2018-10, Codification Improvements to Topic 842, ASU No. 2018-11, Targeted Improvements, ASU No. 2018-20, Narrow-Scope Improvements for Lessors, and ASU 2019-01, Codification Improvements, to clarify and amend the guidance in ASU No. 2016-02. The ASUs are effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. We adopted the ASUs on January 1, 2019 on a modified retrospective basis through a cumulative adjustment to our beginning accumulated deficit balance. Prior comparative periods have not been recast under this method, and we adopted all available practical expedients, as applicable. Further, solar leases that commence on or after January 1, 2019, where we are the lessor and which were accounted for as leases under ASC 840, will no longer meet the definition of a lease. Instead, solar leases commencing on or after January 1, 2019 will be accounted for under ASC 606. In addition to recognizing operating leases that were previously not recognized on the consolidated balance sheet, our build-to-suit leases were also de-recognized with a net decrease of approximately $96.7 million to our beginning accumulated deficit after income tax effects, as our build-to-suit leases no longer qualify for build-to-suit accounting and are instead recognized as operating leases. Upon adoption, our consolidated balance sheet include an overall reduction in assets of $473.3 million and a reduction in liabilities of $570.0 million. The adoption of the ASUs did not have a material impact on the consolidated statement of operations or the consolidated statement of cash flows.

In August 2017, the FASB issued ASU No. 2017-12, Targeted Improvements to Accounting for Hedging Activities, to simplify the application of current hedge accounting guidance. The ASU expands and refines hedge accounting for both non-financial and financial risk components and aligns the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The ASU is effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. Adoption of the ASU will be prospective for us. We adopted the ASU on January 1, 2019, and the ASU did not have a material impact on the consolidated financial statements.

In January 2018, the FASB issued ASU No. 2018-01, Land Easement Practical Expedient Transition to Topic 842, to permit an entity to elect a practical expedient to not re-evaluate land easements that existed or expired before the entity's adoption of ASU No. 2016-02, Leases, and that were not accounted for as leases. The ASU is effective for the same periods as ASU No. 2016-02, and the ASU did not have a material impact on the consolidated financial statements.

Note 3 – Intangible Assets

Information regarding our acquired intangible assets was as follows (in thousands):

	March 31, 2019				December 31, 2018			
	Gross Carrying Amount	Accumulated Amortization	Other	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Other	Net Carrying Amount
Finite-lived intangible assets:								
Developed technology	$152,431	$(46,396)	$1,005	$107,040	$152,431	$(40,705)	$1,205	$112,931
Trade names	1,775	(624)	143	1,294	45,275	(44,056)	170	1,389
Favorable contracts and leases, net	112,817	(18,345)	—	94,472	112,817	(16,409)	—	96,408
Other	35,559	(12,485)	662	23,736	35,559	(11,540)	719	24,738
Total finite-lived intangible assets	302,582	(77,850)	1,810	226,542	346,082	(112,710)	2,094	235,466

Indefinite-lived intangible assets:								
IPR&D	60,290	—	(13,264)	47,026	60,290	—	(13,264)	47,026
Total indefinite-lived intangible assets	60,290	—	(13,264)	47,026	60,290	—	(13,264)	47,026
Total intangible assets	$362,872	$(77,850)	$(11,454)	$273,568	$406,372	$(112,710)	$(11,170)	$282,492

The in-process research and development ("IPR&D"), which we acquired from SolarCity, is accounted for as an indefinite-lived asset until the completion or abandonment of the associated research and development efforts. If the research and development efforts are successfully completed and commercial feasibility is reached, the IPR&D would be amortized over its then estimated useful life. If the research and development efforts are not completed or are abandoned, the IPR&D might be impaired. The fair value of the IPR&D was estimated using the replacement cost method under the cost approach, based on the historical acquisition costs and expenses of the technology adjusted for estimated developer's profit, opportunity cost and obsolescence factor. In April 2019, the Company determined that it would abandon further development efforts on the IPR&D and will impair the remaining $47.0 million in the quarter ending June 30, 2019.

Total future amortization expense for intangible assets was estimated as follows (in thousands):

Nine months ending December 31, 2019	$25,921
2020	32,692
2021	32,692
2022	32,692
2023	26,511
Thereafter	76,034
Total	$226,542

Note 4 – Fair Value of Financial Instruments

ASC 820, Fair Value Measurements, states that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. The three-tiered fair value hierarchy, which prioritizes which inputs should be used in measuring fair value, is comprised of: (Level I) observable inputs such as quoted prices in active markets; (Level II) inputs other than quoted prices in active markets that are observable either directly or indirectly and (Level III) unobservable inputs for which there is little or no market data. The fair value hierarchy requires the use of observable market data when available in determining fair value. Our assets and liabilities that were measured at fair value on a recurring basis were as follows (in thousands):

	March 31, 2019				December 31, 2018			
	Fair Value	Level I	Level II	Level III	Fair Value	Level I	Level II	Level III
Money market funds (cash and cash equivalents & restricted cash)	$812,279	812,279	$—	$ —	$1,812,828	$1,812,828	$—	$ —
Interest rate swap (liability) asset, net	(7,867)	—	(7,867)	—	11,070	—	11,070	—
Total	$804,412	$812,279	$(7,867)	$ —	$1,823,898	$1,812,828	$11,070	$ —

All of our money market funds were classified within Level I of the fair value hierarchy because they were valued using quoted prices in active markets. Our interest rate swaps were classified within Level II of the fair value hierarchy because they were valued using alternative pricing sources or models that utilized market observable inputs, including current and forward interest rates. During the three months ended March 31, 2019, there were no transfers between the levels of the fair value hierarchy.

Interest Rate Swaps

We enter into fixed-for-floating interest rate swap agreements to swap variable interest payments on certain debt for fixed interest payments, as required by certain of our lenders. We do not designate our interest rate swaps as hedging instruments. Accordingly, our interest rate swaps are recorded at fair value on the consolidated balance sheets within other assets or other long-term liabilities, with any changes in their fair values recognized as other income (expense), net, in the consolidated statements of operations and with any cash flows recognized as investing activities in the consolidated statements of cash flows. Our interest rate swaps outstanding were as follows (in thousands):

March 31, 2019			December 31, 2018		
Aggregate Notional	Gross Asset at Fair	Gross Liability at	Aggregate Notional	Gross Asset at Fair	Gross Liability at

	Amount	Value	Fair Value	Amount	Value	Fair Value
Interest rate swaps	$773,188	$ 4,523	$ 12,390	$800,293	$ 12,159	$ 1,089

Our interest rate swaps activity was as follows (in thousands):

	Three Months Ended March 31,	
	2019	2018
Gross gains	$ 155	$ 9,663
Gross losses	$ 19,443	$ 35

Disclosure of Fair Values

Our financial instruments that are not re-measured at fair value include accounts receivable, MyPower customer notes receivable, rebates receivable, accounts payable, accrued liabilities, customer deposits, the participation interest and debt. The carrying values of these financial instruments other than the participation interest, the convertible senior notes, the 5.30% Senior Notes due in 2025, the solar asset-backed notes, the solar loan-backed notes and the automotive asset-backed notes approximate their fair values.

We estimate the fair value of the convertible senior notes and the 5.30% Senior Notes due in 2025 using commonly accepted valuation methodologies and market-based risk measurements that are indirectly observable, such as credit risk (Level II). In addition, we estimate the fair values of the participation interest, the solar asset-backed notes, the solar loan-backed notes and the automotive asset-backed notes based on rates currently offered for instruments with similar maturities and terms (Level III). The following table presents the estimated fair values and the carrying values (in thousands):

	March 31, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Convertible senior notes	$2,781,150	$3,141,976	$3,660,316	$4,346,642
Senior notes	$1,779,546	$1,563,750	$1,778,756	$1,575,000
Participation interest	$19,367	$18,871	$18,946	$18,431
Solar asset-backed notes	$1,172,288	$1,205,960	$1,183,675	$1,206,755
Solar loan-backed notes	$189,842	$200,111	$203,052	$211,788
Automotive asset-backed notes	$1,057,645	$1,064,698	$1,172,160	$1,179,910

Note 5 – Inventory

Our inventory consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Raw materials	$1,079,216	$ 931,828
Work in process	277,155	296,991
Finished goods	2,151,012	1,581,763
Service parts	329,467	302,864
Total	$3,836,850	$ 3,113,446

Finished goods inventory included vehicles in transit to fulfill customer orders, new vehicles available for immediate sale at our retail and service center locations, used vehicles and energy storage products. As this was our first quarter delivering Model 3 vehicles outside of North America, finished goods inventory has increased as there are longer lead times associated with finite production capabilities at a single factory from which all Model 3 vehicles are shipped globally.

For solar energy systems, we commence transferring component parts from inventory to construction in progress, a component of solar energy systems, once a lease contract with a customer has been executed and installation has been initiated. Additional costs incurred on the leased systems, including labor and overhead, are recorded within construction in progress.

We write-down inventory for any excess or obsolete inventories or when we believe that the net realizable value of inventories is less than the carrying value. During the three months ended March 31, 2019 and 2018, we recorded write-downs of $64.2 million and $17.3 million, respectively, in cost of revenues.

Note 6 – Solar Energy Systems, Net

Solar energy systems, net, consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Solar energy systems in service	$6,461,833	$ 6,430,729
Initial direct costs related to customer solar energy system lease acquisition costs	101,204	99,380
	6,563,037	6,530,109
Less: accumulated depreciation and amortization	(550,558)	(495,518)
	6,012,479	6,034,591
Solar energy systems under construction	49,648	67,773
Solar energy systems pending interconnection	179,510	169,032
Solar energy systems, net (1)	$6,241,637	$ 6,271,396

(1) As of March 31, 2019 and December 31, 2018, solar energy systems, net, included $36.0 million of finance leased assets with accumulated depreciation and amortization of $4.2 million and $3.8 million, respectively.

Note 7 – Property, Plant and Equipment

Our property, plant and equipment, net, consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Machinery, equipment, vehicles and office furniture	$6,584,307	$ 6,328,966
Tooling	1,418,368	1,397,514
Leasehold improvements	987,916	960,971
Land and buildings	2,631,607	4,047,006
Computer equipment, hardware and software	525,138	487,421
Construction in progress	622,180	807,297
	12,769,516	14,029,175
Less: Accumulated depreciation	(2,918,587)	(2,699,098)
Total	$9,850,929	$ 11,330,077

As of December 31, 2018, the table above included $1.69 billion of gross build-to-suit lease assets. As a result of the adoption of the new lease standard on January 1, 2019, we have de-recognized all build-to-suit lease assets and have reassessed these leases to be operating lease right-of-use assets within the consolidated balance sheet as of March 31, 2019 (see Note 2, Summary of Significant Accounting Policies). This includes construction in progress associated with certain build-to-suit lease costs incurred at our Buffalo manufacturing facility, referred to as Gigafactory 2.

Construction in progress is primarily comprised of tooling and equipment related to the manufacturing of our vehicles and a portion of Gigafactory 1 construction. Completed assets are transferred to their respective asset classes, and depreciation begins when an asset is ready for its intended use. Interest on outstanding debt is capitalized during periods of significant capital asset construction and amortized over the useful lives of the related assets. During the three months ended March 31, 2019 and 2018, we capitalized $7.5 million and $18.8 million, respectively, of interest.

Depreciation expense during the three months ended March 31, 2019 and 2018 was $299.4 million and $245.2 million, respectively. Gross property and equipment under finance leases as of March 31, 2019 and December 31, 2018 was $1.72 billion and $1.52 billion, respectively. Accumulated depreciation on property and equipment under finance leases as of these dates was $276.8 million and $231.6 million, respectively.

Panasonic has partnered with us on Gigafactory 1 with investments in the production equipment that it uses to manufacture and supply us with battery cells. Under our arrangement with Panasonic, we plan to purchase the full output from their production equipment at negotiated prices. As these terms convey a finance lease, as defined in ASC 842, Leases, their production equipment, we consider them to be leased assets when production commences. This results in us recording the cost of their production equipment within property, plant and equipment, net, on the consolidated balance sheets with a corresponding liability recorded to long-term debt and finance leases. For all suppliers and partners for which we plan to purchase the full output from their production equipment located at Gigafactory 1, we have applied similar accounting. As of March 31, 2019 and December 31, 2018, we had cumulatively capitalized costs of $1.41 billion and $1.24 billion, respectively, on the consolidated balance sheets in relation to the production equipment under our Panasonic arrangement. We had cumulatively capitalized total costs for Gigafactory 1, including costs under our Panasonic arrangement, of $4.92 billion and $4.62 billion as of March 31, 2019 and December 31, 2018, respectively.

Note 8 – Other Long-Term Liabilities

Other long-term liabilities consisted of the following (in thousands):

	March 31, 2019	December 31, 2018
Accrued warranty reserve	$590,211	$ 547,125
Build-to-suit lease liability	—	1,662,017
Operating lease right-of-use liabilities	1,000,886	—
Deferred rent expense	—	59,252
Financing obligation	45,566	50,383
Sales return reserve	524,222	84,143
Other noncurrent liabilities	314,250	307,483
Total other long-term liabilities	$2,475,135	$ 2,710,403

As of December 31, 2018, the table above included $1.66 billion of gross non-current build-to-suit lease liabilities. As a result of the adoption of the new lease standard on January 1, 2019, we have de-recognized all build-to-suit lease liabilities and have reassessed these leases to be operating lease right-of-use liabilities as of March 31, 2019. Due to price adjustments we made to our vehicle offerings during the three months ended March 31, 2019, we increased our sales return reserve significantly on vehicles previously sold under our buyback options program. Refer to Note 2, Summary of Significant Accounting Policies, for details on these transactions.

Note 9 – Customer Deposits

Customer deposits primarily consisted of cash payments from customers at the time they place an order or reservation for a vehicle or an energy product and any additional payments up to the point of delivery or the completion of installation, including the fair values of any customer trade-in vehicles that are applicable toward a new vehicle purchase. Customer deposits also include prepayments on contracts that can be cancelled without significant penalties, such as vehicle maintenance plans. Customer deposit amounts and timing vary depending on the vehicle model, the energy product and the country of delivery. In the case of a vehicle, customer deposits are fully refundable up to the point the vehicle is placed into the production cycle. In the case of an energy generation or storage product, customer deposits are fully refundable prior to the entry into a purchase agreement or in certain cases for a limited time thereafter (in accordance with applicable laws). Customer deposits are included in current liabilities until refunded or until they are applied towards the customer's purchase balance. As of March 31, 2019 and December 31, 2018, we held $768.3 million and $792.6 million, respectively, in customer deposits.

Note 10 – Long-Term Debt Obligations

The following is a summary of our debt as of March 31, 2019 (in thousands):

	Unpaid Principal Balance	Net Carrying Value Current	Long-Term	Unused Committed Amount (1)	Contractual Interest Rates		Contractual Maturity Date
Recourse debt:							
1.25% Convertible Senior Notes due in 2021 ("2021 Notes")	1,380,000	—	1,258,166	—	1.25	%	March 2021
2.375% Convertible Senior Notes due in 2022 ("2022 Notes")	977,500	—	878,824	—	2.375	%	March 2022
5.30% Senior Notes due in 2025 ("2025 Notes")	1,800,000	—	1,779,546	—	5.30	%	August 2025
Credit Agreement	1,856,000	—	1,856,000	415,217	1% plus LIBOR		June 2020-July 2023
Vehicle and other Loans	75,498	498	75,000	—	1.8%-4.7%		June 2019-December 2021
1.625% Convertible Senior Notes due in 2019	565,992	550,999	—	—	1.625	%	November 2019
Zero-Coupon Convertible Senior Notes due in 2020	103,000	—	93,161	—	0.0	%	December 2020
Solar Bonds	24,313	3,396	21,432	—	3.0%-5.8%		March 2020 - January 2031
Total recourse debt	6,782,303	554,893	5,962,129	415,217			
Non-recourse debt:							
Warehouse Agreements	174,243	40,591	133,652	925,757	3.9%-4.2%		September 2020
Canada Credit Facility	64,894	30,819	34,075	—	3.6%-5.9%		November 2022
Term Loan due in 2019	164,798	164,798	—	—	6.1	%	April 2019 (2)
Term Loan due in 2021	166,805	7,117	158,835	—	6.3	%	January 2021
China Loan Agreement	11,172	11,172	—	510,328	3.9	%	March 2020
Cash equity debt	462,931	9,335	439,374	—	5.3%-5.8%		July 2033-January 2035
Solar asset-backed notes	1,202,253	30,327	1,141,961	—	4.0%-7.7%		

						September 2024-February 2048
Solar loan-backed notes	196,924	10,671	179,171	—	4.8%-7.5%	September 2048-September 2049
Automotive asset-backed notes	1,062,750	460,314	597,331	—	2.3%-7.9%	December 2019-June 2022
Solar Renewable Energy Credit and other Loans	36,438	32,559	3,495	18,132	4.4%-8.2%	September 2019-July 2021
Total non-recourse debt	3,543,208	797,703	2,687,894	1,454,217		
Total debt	$10,325,511	$1,352,596	$8,650,023	$1,869,434		

The following is a summary of our debt as of December 31, 2018 (in thousands):

	Unpaid Principal Balance	Net Carrying Value Current	Long-Term	Unused Committed Amount (1)	Contractual Interest Rates	Contractual Maturity Date
Recourse debt:						
0.25% Convertible Senior Notes due in 2019 ("2019 Notes")	920,000	912,625	—	—	0.25 %	March 2019
2021 Notes	1,380,000	—	1,243,496	—	1.25 %	March 2021
2022 Notes	977,500	—	871,326	—	2.375 %	March 2022
2025 Notes	1,800,000	—	1,778,756	—	5.30 %	August 2025
Credit Agreement	1,540,000	—	1,540,000	230,999	1% plus LIBOR	June 2020
Vehicle and other Loans	76,203	1,203	75,000	—	1.8%-7.6%	January 2019-December 2021
1.625% Convertible Senior Notes due in 2019	565,992	541,070	—	—	1.625 %	November 2019
Zero-Coupon Convertible Senior Notes due in 2020	103,000	—	91,799	—	0.0 %	December 2020
Solar Bonds	24,725	119	25,190	—	2.6%-5.8%	January 2019-January 2031
Total recourse debt	7,387,420	1,455,017	5,625,567	230,999		
Non-recourse debt:						
Warehouse Agreements	92,000	13,604	78,396	1,008,000	3.9%-4.2%	September 2020
Canada Credit Facility	73,220	31,766	41,454	—	3.6%-5.9%	November 2022
Term Loan due in 2019	180,624	180,624	—	—	6.1 %	January 2019
Term Loan due in 2021	169,050	6,876	161,453	—	6.0 %	January 2021

Cash equity debt	466,837	10,911	441,472	—	5.3%-5.8%	July 2033-January 2035
Solar asset-backed notes	1,214,071	28,761	1,154,914	—	4.0%-7.7%	September 2024-February 2048
Solar loan-backed notes	210,249	9,888	193,164	—	4.8%-7.5%	September 2048-September 2049
Automotive asset-backed notes	1,177,937	467,926	704,234	—	2.3%-7.9%	December 2019-June 2022
Solar Renewable Energy Credit and other Loans	26,742	16,612	9,836	17,633	5.1%-7.9%	December 2019-July 2021
Total non-recourse debt	3,610,730	766,968	2,784,923	1,025,633		
Total debt	$10,998,150	$2,221,985	$8,410,490	$1,256,632		

(1) Unused committed amounts under some of our credit facilities and financing funds are subject to satisfying specified conditions prior to draw-down (such as pledging to our lenders sufficient amounts of qualified receivables, inventories, leased vehicles and our interests in those leases, solar energy systems and the associated customer contracts, our interests in financing funds or various other assets). Upon draw-down of any unused committed amounts, there are no restrictions on use of available funds for general corporate purposes.

(2) On April 16, 2019, the maturity date of the Term Loan due in 2019 was extended to June 2019.

Recourse debt refers to debt that is recourse to our general assets. Non-recourse debt refers to debt that is recourse to only specified assets of our subsidiaries. The differences between the unpaid principal balances and the net carrying values are due to convertible senior note conversion features, debt discounts or deferred financing costs. As of March 31, 2019, we were in material compliance with all financial debt covenants, which include minimum liquidity and expense-coverage balances and ratios.

2019 Notes

During the first quarter of 2019, we repaid the $920.0 million in aggregate principal amount of the 2019 Notes.

Credit Agreement

On March 6, 2019, we amended and restated the senior asset-based revolving credit agreement (the “Credit Agreement”) to increase the total lender commitments by $500.0 million to $2.425 billion, and extend the term of substantially all of the total commitments to July 2023.

China Loan Agreement

On March 1, 2019, one of our subsidiaries entered into a loan agreement with a syndicate of lenders in China for an unsecured facility of up to RMB 3.50 billion (or the equivalent amount drawn in U.S. dollars), to be used for expenditures related to the construction of and production at our Gigafactory Shanghai. Borrowed funds bear interest at an annual rate of: (i) for RMB-denominated loans, 90% of the one-year rate published by the People’s Bank of China, and (ii) for U.S. dollar-denominated loans, the sum of one-year LIBOR plus 1.0%. The loan facility is non-recourse to our assets.

Term Loan due in 2019

On April 16, 2019, we extended the maturity of the Term Loan due in 2019 to June 2019.

Interest Incurred

The following table presents the interest expense related to the contractual interest coupon, the amortization of debt issuance costs and the amortization of debt discounts on our convertible senior notes with cash conversion features, which include the 2018 Notes, the 2019 Notes, the 2021 Notes and the 2022 Notes (in thousands):

	Three Months Ended March 31,	
	2019	2018
Contractual interest coupon	$ 10,359	$ 10,548
Amortization of debt issuance costs	1,470	1,615
Amortization of debt discounts	28,074	29,859
Total	$ 39,903	$ 42,022

Note 11 – Leases

We have entered into various non-cancellable operating and finance lease agreements for certain of our offices, manufacturing and warehouse facilities, retail and service locations, equipment, vehicles, and solar energy systems, worldwide. We determine if an arrangement is a lease, or contains a lease, at inception and record the leases in our financial statements upon lease commencement, which is the date when the underlying asset is made available for use by the lessor.

Our leases, where we are the lessee, often include options to extend the lease term for up to 10 years. Some of our leases also include options to terminate the lease prior to the end of the agreed upon lease term. For purposes of calculating lease liabilities, lease terms include options to extend or terminate the lease when it is reasonably certain that we will exercise such options.

Lease expense for operating lease payments is recognized on a straight-line basis over the lease term. Certain operating leases provide for annual increases to lease payments based on an index or rate. We estimate the annual increase in lease payments based on the index or rate at the lease commencement date, for both our historical leases and for new leases commencing after January 1, 2019. Differences between the estimated lease payment and actual payment are expensed as incurred. Lease expense for finance lease payments is recognized as amortization expense of the finance lease ROU asset and interest expense on the finance lease liability over the lease term.

The balances for the operating and finance leases where we are the lessee are presented as follows (in thousands) within our consolidated balance sheet:

	March 31, 2019
Operating leases:	
Operating lease right-of-use assets	$1,253,027
Accrued liabilities and other	$208,362
Other long-term liabilities	1,000,886
Total operating lease liabilities	$1,209,248
Finance leases:	
Solar energy systems, net	$31,742
Property, plant and equipment, net	1,447,502
Total finance lease assets	$1,479,244
Current portion of long-term debt and finance leases	$353,115
Long-term debt and finance leases, net of current portion	1,137,927
Total finance lease liabilities	$1,491,042

The components of lease expense are as follows (in thousands) within our consolidated statement of operations:

	Three Months Ended March 31, 2019
Operating lease expense:	
Operating lease expense (1)	$134,804
Finance lease expense:	
Amortization of leased assets	$57,265
Interest on lease liabilities	23,561
Total finance lease expense	$80,826
Total lease expense	$215,630

(1) Includes short-term leases and variable lease costs, which are immaterial.

Other information related to leases where we are the lessee is as follows (in thousands):

	March 31, 2019	
Weighted-average remaining lease term:		
Operating leases	6.7 years	
Finance leases	4.5 years	
Weighted-average discount rate:		
Operating leases	6.4	%
Finance leases	6.6	%

Supplemental cash flow information related to leases where we are the lessee is as follows (in thousands):

	Three Months Ended March 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 111,320
Operating cash flows from finance leases (interest payments)	$ 22,820
Financing cash flows from finance leases	$ 66,656
Leased assets obtained in exchange for new finance lease liabilities	$ 217,847
Leased assets obtained in exchange for new operating lease liabilities	$ 22,004

As of March 31, 2019, the maturities of our operating and finance lease liabilities (excluding short-term leases) are as follows (in thousands):

	Operating Leases	Finance Leases
Nine months ending December 31, 2019	$209,220	$315,700
2020	258,435	413,362
2021	228,692	621,471
2022	182,345	277,952
2023	153,498	8,142
Thereafter	477,857	15,992
Total minimum lease payments	1,510,047	1,652,619
Less: Interest	300,799	161,577
Present value of lease obligations	1,209,248	1,491,042
Less: Current portion	208,362	353,115
Long-term portion of lease obligations	$1,000,886	$1,137,927

As of March 31, 2019, we have excluded from the table above an additional operating lease for a facility that has not yet commenced of $55.8 million. This operating lease is expected to commence in the second half of 2019 for an initial lease term of 11.5 years.

As previously reported in our Annual Report on Form 10-K for the year ended December 31, 2018 and under legacy lease accounting (ASC 840), future minimum lease payments under non-cancellable leases as of December 31, 2018 are as follows (in thousands):

	Operating Leases	Finance Leases
2019	$275,654	$416,952
2020	256,931	503,545
2021	230,406	506,197
2022	182,911	23,828
2023	157,662	4,776
Thereafter	524,590	5,938
Total minimum lease payments	$1,628,154	1,461,236
Less: Interest		122,340
Present value of lease obligations		1,338,896
Less: Current portion		345,714
Long-term portion of lease obligations		$993,182

Non-cancellable Operating Lease Receivables

Under the new lease standard, we are the lessor of certain vehicle arrangements as described in Note 2, Summary of Significant Accounting Policies. As of March 31, 2019, maturities of our operating lease receivables from customers for each of the next five years and thereafter were as follows (in thousands):

Nine months ending December 31, 2019	$392,255
2020	446,135
2021	293,069
2022	189,094
2023	188,787
Thereafter	2,469,055
Total	$3,978,395

As previously reported in our Annual Report on Form 10-K for the year ended December 31, 2018 and under legacy lease accounting (ASC 840), future minimum lease payments to be received from customers under non-cancellable leases as of December 31, 2018 are as follows (in thousands):

2019	$501,625
2020	418,299
2021	270,838
2022	186,807
2023	188,809
Thereafter	2,469,732
Total	$4,036,110

The above tables do not include vehicle sales to customers or leasing partners with a resale value guarantee as the cash payments were received upfront. For our solar PPA arrangements, customers are charged solely based on actual power produced by the installed solar energy system at a predefined rate per kilowatt-hour of power produced. The future payments from such arrangements are not included in the above table as they are a function of the power generated by the related solar energy systems in the future. Following the adoption of the new lease standard, solar energy system sales and PPAs that commence after January 1, 2019, where we are the lessor and were previously accounted for as leases, will no longer meet the definition of a lease and are therefore not included in the table as of March 31, 2019 (refer to Note 2, Summary of Significant Accounting Policies).

Note 12 – Equity Incentive Plans

In 2010, we adopted the 2010 Equity Incentive Plan (the “2010 Plan”). The 2010 Plan provides for the granting of stock options, RSUs and stock purchase rights to our employees, directors and consultants. Stock options granted under the 2010 Plan may be either incentive stock options or nonqualified stock options. Incentive stock options may only be granted to our employees. Nonqualified stock options may be granted to our employees, directors and consultants. Generally, our stock options and RSUs vest over four years and are exercisable over a maximum period of 10 years from their grant dates. Vesting typically terminates when the employment or consulting relationship ends.

As of March 31, 2019, 13,370,496 shares were reserved and available for issuance under the 2010 Plan.

2018 CEO Performance Award

In March 2018, our stockholders approved the Board of Directors’ grant of 20,264,042 stock option awards to our CEO (the “2018 CEO Performance Award”). The 2018 CEO Performance Award consists of 12 vesting tranches with a vesting schedule based entirely on the attainment of both operational milestones (performance conditions) and market conditions, assuming continued employment either as the CEO or as both Executive Chairman and Chief Product Officer and service through each vesting date. Each of the 12 vesting tranches of the 2018 CEO Performance Award will vest upon certification by the Board of Directors that both (i) the market capitalization milestone for such tranche, which begins at $100 billion for the first tranche and increases by increments of $50 billion thereafter, and (ii) any one of the following eight operational milestones focused on revenue or eight operational milestones focused on Adjusted EBITDA have been met for the previous four consecutive fiscal quarters on an annualized basis. Adjusted EBITDA is defined as net income (loss) attributable to common stockholders before interest expense, provision (benefit) for income taxes, depreciation and amortization and stock-based compensation.

Total Annualized Revenue (in billions)	Annualized Adjusted EBITDA (in billions)
$20.0	$1.5
$35.0	$3.0
$55.0	$4.5
$75.0	$6.0
$100.0	$8.0
$125.0	$10.0
$150.0	$12.0
$ 175.0	$14.0

As of March 31, 2019, two operational milestones: (i) $20.0 billion total annualized revenue and (ii) $1.5 billion annualized adjusted EBITDA have been achieved, subject to the formal certification by our Board of Directors, while no market capitalization milestones have been achieved. Consequently, no shares subject to the 2018 CEO Performance Award have vested as of the date of this filing.

As of March 31, 2019, the following operational milestone was considered probable of achievement:

- Adjusted EBITDA of $3.0 billion

Stock-based compensation expense associated with the 2018 CEO Performance Award is recognized over the longer of the expected achievement period for each pair of market capitalization or operational milestones, beginning at the point in time when the relevant operational milestone is considered probable of being met. If additional operational milestones become probable, stock-based compensation expense will be recorded in the period it becomes probable including cumulative catch-up expense for the service provided since the grant date. The market capitalization milestone period and the valuation of each tranche are determined using a Monte Carlo simulation and is used as the basis for determining the expected achievement period. The probability of meeting an operational milestone is based on a subjective assessment of our future financial projections. Even though no tranches of the 2018 CEO Performance Award vest unless a market capitalization and a matching operational milestone are both achieved, stock-based compensation expense is recognized only when an operational milestone is considered probable of achievement regardless of how much additional market capitalization must be achieved in order for a tranche to vest. At our current market capitalization, even the first tranche of the 2018 CEO Performance Award will not vest unless our market capitalization were to more than double from the current level and stay at that increased level for a sustained period of time. Additionally, stock-based compensation represents a non-cash expense and is recorded as a selling, general, and administrative operating expense in our consolidated statement of operations.

As of March 31, 2019, we had $543.0 million of total unrecognized stock-based compensation expense for the operational milestones that were achieved but not vested or considered probable of achievement, which will be recognized over a weighted-average period of 2.9 years. As of March 31, 2019, we had unrecognized stock-based compensation expense of $1.51 billion for the operational milestones that were considered not probable of achievement. For the three months ended March 31, 2019, we recorded stock-based compensation expense of $55.0 million related to the 2018 CEO Performance Award. From March 21, 2018, when the grant was approved by our stockholders, through March 31, 2018, we recorded stock-based compensation expense of $6.7 million related to the 2018 CEO Performance Award.

2014 Performance-Based Stock Option Awards

In 2014, to create incentives for continued long-term success beyond the Model S program and to closely align executive pay with our stockholders' interests in the achievement of significant milestones by us, the Compensation Committee of our Board of Directors granted stock option awards to certain employees (excluding our CEO) to purchase an aggregate of 1,073,000 shares of our common stock. Each award consisted of the following four vesting tranches with the vesting schedule based entirely on the attainment of the future performance milestones, assuming continued employment and service through each vesting date:

- 1/4th of each award vests upon completion of the first Model X production vehicle;
- 1/4th of each award vests upon achieving aggregate production of 100,000 vehicles in a trailing 12-month period;
- 1/4th of each award vests upon completion of the first Model 3 production vehicle; and
- 1/4th of each award vests upon achieving an annualized gross margin of greater than 30% for any three-year period.

As of March 31, 2019, the following performance milestones had been achieved:

- Completion of the first Model X production vehicle;
- Completion of the first Model 3 production vehicle; and
- Aggregate production of 100,000 vehicles in a trailing 12-month period.

We begin recognizing stock-based compensation expense as each performance milestone becomes probable of achievement. As of March 31, 2019, we had unrecognized stock-based compensation expense of $10.0 million for the performance milestone that was considered not probable of achievement. For the three months ended March 31, 2019 and 2018, we did not record any additional stock-based compensation related to these awards.

2012 CEO Performance Award

In August 2012, our Board of Directors granted 5,274,901 stock option awards to our CEO (the “2012 CEO Performance Award”). The 2012 CEO Performance Award consists of 10 vesting tranches with a vesting schedule based entirely on the attainment of both performance conditions and market conditions, assuming continued employment and service through each vesting date. Each vesting tranche requires a combination of a pre-determined performance milestone and an incremental increase in our market capitalization of $4.00 billion, as compared to our initial market capitalization of $3.20 billion at the time of grant. As of March 31, 2019, the market capitalization conditions for all of the vesting tranches and the following performance milestones had been achieved:

- Successful completion of the Model X alpha prototype;
- Successful completion of the Model X beta prototype;

- Completion of the first Model X production vehicle;
- Aggregate production of 100,000 vehicles;
- Successful completion of the Model 3 alpha prototype;
- Successful completion of the Model 3 beta prototype;
- Completion of the first Model 3 production vehicle;
- Aggregate production of 200,000 vehicles; and
- Aggregate production of 300,000 vehicles.

We begin recognizing stock-based compensation expense as each milestone becomes probable of achievement. As of March 31, 2019, we had unrecognized stock-based compensation expense of $5.7 million for the performance milestone that was considered not probable of achievement. For the three months ended March 31, 2019, we recorded no stock-based compensation expense related to the 2012 CEO Performance Award. For the three months ended March 31, 2018, we recorded stock-based compensation expense of $0.1 million related to this award.

Our CEO earns a base salary that reflects the currently applicable minimum wage requirements under California law, and he is subject to income taxes based on such base salary. However, he has never accepted and currently does not accept his salary.

Summary Stock-Based Compensation Information

The following table summarizes our stock-based compensation expense by line item in the consolidated statements of operations (in thousands):

	Three Months Ended March 31,	
	2019	2018
Cost of revenues	$ 19,837	$ 18,085
Research and development	72,482	61,107
Selling, general and administrative	114,079	62,447
Restructuring and other	1,980	—
Total	$ 208,378	$ 141,639

We realized no income tax benefit from stock option exercises in each of the periods presented due to cumulative losses and valuation allowances. As of March 31, 2019, we had $1.72 billion of total unrecognized stock-based compensation expense related to non-performance awards, which will be recognized over a weighted-average period of 3.0 years.

Note 13 – Commitments and Contingencies

Operating Lease Arrangement in Buffalo, New York

We have an operating lease arrangement with the Research Foundation for the State University of New York (the “SUNY Foundation”) where the SUNY Foundation is constructing a manufacturing facility where we have housed the development and production of solar products and components, referred to as Gigafactory 2, with our participation in the design and construction, is installing certain utilities and other improvements and is acquiring certain manufacturing equipment designated by us to be used in the manufacturing facility. Following the adoption of ASC 842, we no longer recognize the build-to-suit asset and related depreciation expense or the corresponding financing liability and related amortization for Gigafactory 2 in our consolidated financial statements. During the three months ended March 31, 2018, we began production at the manufacturing facility, although construction has not been fully completed as of March 31, 2019.

Legal Proceedings

Securities Litigation Relating to the SolarCity Acquisition

Between September 1, 2016 and October 5, 2016, seven lawsuits were filed in the Delaware Court of Chancery by purported stockholders of Tesla challenging our acquisition of SolarCity. Following consolidation, the lawsuit names as defendants the members of Tesla's board of directors as then constituted and alleges, among other things, that board members breached their fiduciary duties in connection with the acquisition. The complaint asserts both derivative claims and direct claims on behalf of a purported class and seeks, among other relief, unspecified monetary damages, attorneys' fees, and costs. On January 27, 2017, defendants filed a motion to dismiss the operative complaint. Rather than respond to the defendants' motion, the plaintiffs filed an amended complaint. On March 17, 2017, defendants filed a motion to dismiss the amended complaint. On December 13, 2017, the Court heard oral argument on the motion. On March 28, 2018, the Court denied defendants' motion to dismiss. Defendants filed a request for interlocutory appeal, but the Delaware Supreme Court denied that request without ruling on the merits but electing not to hear an appeal at this early stage of the case. Defendants filed their answer on May 18, 2018. The parties are proceeding with discovery. The case is set for trial in March 2020. The parties are also deciding on a mediation date.

These plaintiffs and others filed parallel actions in the U.S. District Court for the District of Delaware on or about April 21, 2017. They include claims for violations of the federal securities laws and breach of fiduciary duties by Tesla's board of directors. Those actions have been consolidated and stayed pending the above-referenced Chancery Court litigation.

We believe that claims challenging the SolarCity acquisition are without merit and intend to defend against them vigorously. We are unable to estimate the possible loss or range of loss, if any, associated with these claims.

Securities Litigation Relating to Production of Model 3 Vehicles

On October 10, 2017, a purported stockholder class action was filed in the U.S. District Court for the Northern District of California against Tesla, two of its current officers, and a former officer. The complaint alleges violations of federal securities laws and seeks unspecified compensatory damages and other relief on behalf of a purported class of purchasers of Tesla securities from May 4, 2016 to October 6, 2017. The lawsuit claims that Tesla supposedly made materially false and misleading statements regarding the Company's preparedness to produce Model 3 vehicles. Plaintiffs filed an amended complaint on March 23, 2018, and defendants filed a motion to dismiss on May 25, 2018. The court granted defendants' motion to dismiss with leave to amend. Plaintiffs filed their amended complaint on September 28, 2018, and defendants filed a motion to dismiss the amended complaint on February 15, 2019. The hearing on the motion to dismiss was held on March 22, 2019, and on March 25, 2019, the Court ruled in favor of defendants and dismissed the complaint with prejudice. On April 8, 2019, plaintiffs filed a notice of appeal. We continue to believe that the claims are without merit and intend to defend against this lawsuit vigorously. We are unable to estimate the possible loss or range of loss, if any, associated with this lawsuit.

On October 26, 2018, in a similar action, a purported stockholder class action was filed in the Superior Court of California in Santa Clara County against Tesla, Elon Musk and seven initial purchasers in an offering of debt securities by Tesla in August 2017. The complaint alleges misrepresentations made by Tesla regarding the number of Model 3 vehicles Tesla expected to produce by the end of 2017 in connection with such offering, and seeks unspecified compensatory damages and other relief on behalf of a purported class of purchasers of Tesla securities in such offering. Tesla thereafter removed the case to federal court. On January 22, 2019, plaintiff abandoned its effort to proceed in state court, instead filing an amended complaint against Tesla, Elon Musk and seven initial purchasers in the debt offering before the same judge in the U.S. District Court for the Northern District of California who is hearing the above-referenced earlier filed federal court case. On February 5, 2019, the Court stayed this new case pending a ruling on the motion to dismiss the complaint in the above earlier filed case. Now that the above-referenced earlier filed federal court case has been dismissed, the parties are negotiating a briefing schedule for the motion to dismiss that defendants will be filing in this case. We believe that the claims are without merit and intend to defend against this lawsuit vigorously. We are unable to estimate the possible loss or range of loss, if any, associated with this lawsuit.

Litigation Relating to 2018 CEO Performance Award

On June 4, 2018, a purported Tesla stockholder filed a putative class and derivative action in the Delaware Court of Chancery against Mr. Musk and the members of Tesla's board of directors as then constituted, alleging that such board members breached their fiduciary duties by approving the stock-based compensation plan. The complaint seeks, among other things, monetary damages and rescission or reformation of the stock-based compensation plan. On August 31, 2018, defendants filed a motion to dismiss the complaint; plaintiff filed its opposition brief on November 1, 2018 and defendants filed a reply brief on December 13, 2018. The hearing on the motion to dismiss is set for May 9, 2019. We believe the claims asserted in this lawsuit are without merit and intend to defend against them vigorously.

Securities Litigation Relating to Potential Going Private Transaction

Between August 10, 2018 and September 6, 2018, nine purported stockholder class actions were filed against Tesla and Elon Musk in connection with Elon Musk's August 7, 2018 Twitter post that he was considering taking Tesla private. All of the suits are now pending in the U.S. District Court for the Northern District of California. Although the complaints vary in certain respects, they each purport to assert claims for violations of federal securities laws related to Mr. Musk's statement and seek unspecified compensatory damages and other relief on behalf of a purported class of purchasers of Tesla's securities. Plaintiffs filed their consolidated complaint on January 16, 2019 and added as defendants the members of Tesla's board of directors. The now-consolidated purported stockholder class action is stayed while the issue of selection of lead counsel is briefed and argued before the U.S. Court of Appeals for the Ninth Circuit. We believe that the claims have no merit and intend to defend against them vigorously. We are unable to estimate the potential loss, or range of loss, associated with these claims.

Between October 17, 2018 and November 9, 2018, five derivative lawsuits were filed in the Delaware Court of Chancery against Mr. Musk and the members of Tesla's board of directors as then constituted in relation to statements made and actions connected to a potential going private transaction. In addition to these cases, on October 25, 2018, another derivative lawsuit was filed in the U.S. District Court for the District of Delaware against Mr. Musk and the members of the Tesla board of directors as then constituted. The Courts in both the Delaware federal court and Delaware Court of Chancery actions have consolidated their respective actions and stayed each consolidated action pending resolution of the above-referenced consolidated purported stockholder class action. We believe that the claims have no merit and intend to defend against them vigorously. We are unable to estimate the potential loss, or range of loss, associated with these claims.

On March 7, 2019, various stockholders filed a derivative suit in the Delaware Court of Chancery, purportedly on behalf of the Company, naming Elon Musk and Tesla's board of directors, also related to Mr. Musk's August 7, 2018 Twitter post that is the basis of the above-referenced consolidated purported stockholder class action as well as Mr. Musk's February 19, 2019 Twitter post regarding Tesla's vehicle production. The suit asserts claims for breach of fiduciary duty and seeks declaratory and injunctive relief, unspecified damages, and other relief. Plaintiffs moved for expedited proceedings in connection with the declaratory and injunctive relief. Briefs were filed on March 13, 2019 and the hearing held on March 18, 2019. Defendants prevailed, with the Court denying plaintiffs' request for an expedited trial and granting defendants' request to stay this action pending the outcome of the above-referenced consolidated purported stockholder class action.

Settlement with SEC related to Potential Going Private Transaction

On October 16, 2018, the U.S. District Court for the Southern District of New York entered a final judgment approving the terms of a settlement filed with the Court on September 29, 2018, in connection with the actions taken by the U.S. Securities and Exchange Commission (the "SEC") relating to Elon Musk's prior statement that he was considering taking Tesla private. Without admitting or denying any of the SEC's allegations, and with no restriction on Mr. Musk's ability to serve as an officer or director on the Board (other than as its Chair), among other things, we and Mr. Musk paid civil penalties of $20 million each and agreed that an independent director will serve as Chair of the Board for at least three years, and we appointed such an independent Chair of the Board and two additional independent directors to the Board, and further enhanced our disclosure controls and other corporate governance-related matters. On April 26, 2019, a proposed amendment to the settlement to modify certain of the previously-agreed disclosure procedures to clarify the application of such procedures was submitted to the Court for approval. All other terms of the prior settlement are proposed by the parties to be reaffirmed without modification.

Certain Investigations and Other Matters

We receive requests for information from regulators and governmental authorities, such as the National Highway Traffic Safety Administration, the National Transportation Safety Board, the SEC, the Department of Justice ("DOJ") and various state, federal and international agencies. We routinely cooperate with such regulatory and governmental requests.

In particular, the SEC has issued subpoenas to Tesla in connection with (a) Mr. Musk's prior statement that he was considering taking Tesla private and (b) certain projections that we made for Model 3 production rates during 2017 and other public statements relating to Model 3 production. The DOJ has also asked us to voluntarily provide it with information about each of these matters and is investigating. Aside from the settlement with the SEC (including the proposed amendment as described above) relating to Mr. Musk's statement that he was considering taking Tesla private, there have not been any developments in these matters that we deem to be material, and to our knowledge no government agency in any ongoing investigation has concluded that any wrongdoing occurred. As is our normal practice, we have been cooperating and will continue to cooperate with government authorities. We cannot predict the outcome or impact of any ongoing matters. Should the government decide to pursue an enforcement action, there exists the possibility of a material adverse impact on our business, results of operation, prospects, cash flows, and financial position.

We are also subject to various other legal proceedings and claims that arise from the normal course of business activities. If an unfavorable ruling or development were to occur, there exists the possibility of a material adverse impact on our business, results of operations, prospects, cash flows, financial position and brand.

Indemnification and Guaranteed Returns

We are contractually obligated to compensate certain fund investors for any losses that they may suffer in certain limited circumstances resulting from reductions in U.S. Treasury grants or ITCs. Generally, such obligations would arise as a result of reductions to the value of the underlying solar energy systems as assessed by the U.S. Treasury Department for purposes of claiming U.S. Treasury grants or as assessed by the IRS for purposes of claiming ITCs or U.S. Treasury grants. For each balance sheet date, we assess and recognize, when applicable, a distribution payable for the potential exposure from this obligation based on all the information available at that time, including any guidelines issued by the U.S. Treasury Department on solar energy system valuations for purposes of claiming U.S. Treasury grants and any audits undertaken by the IRS. We believe that any payments to the fund investors in excess of the amounts already recognized by us for this obligation are not probable or material based on the facts known at the filing date.

The maximum potential future payments that we could have to make under this obligation would depend on the difference between the fair values of the solar energy systems sold or transferred to the funds as determined by us and the values that the U.S. Treasury Department would determine as fair value for the systems for purposes of claiming U.S. Treasury grants or the values the IRS would determine as the fair value for the systems for purposes of claiming ITCs or U.S. Treasury grants. We claim U.S. Treasury grants based on guidelines provided by the U.S. Treasury department and the statutory regulations from the IRS. We use fair values determined with the assistance of independent third-party appraisals commissioned by us as the basis for determining the ITCs that are passed-through to and claimed by the fund investors. Since we cannot determine future revisions to U.S. Treasury Department guidelines governing solar energy system values or how the IRS will evaluate system values used in claiming ITCs or U.S. Treasury grants, we are unable to reliably estimate the maximum potential future payments that it could have to make under this obligation as of each balance sheet date.

We are eligible to receive certain state and local incentives that are associated with renewable energy generation. The amount of incentives that can be claimed is based on the projected or actual solar energy system size and/or the amount of solar energy produced. We also currently participate in one state’s incentive program that is based on either the fair market value or the tax basis of solar energy systems placed in service. State and local incentives received are allocated between us and fund investors in accordance with the contractual provisions of each fund. We are not contractually obligated to indemnify any fund investor for any losses they may incur due to a shortfall in the amount of state or local incentives actually received.

Our lease pass-through financing funds have a one-time lease payment reset mechanism that occurs after the installation of all solar energy systems in a fund. As a result of this mechanism, we may be required to refund master lease prepayments previously received from investors. Any refunds of master lease prepayments would reduce the lease pass-through financing obligation.

Letters of Credit

As of March 31, 2019, we had $224.3 million of unused letters of credit outstanding.

Note 14 – Variable Interest Entity Arrangements

We have entered into various arrangements with investors to facilitate the funding and monetization of our solar energy systems and vehicles. In particular, our wholly owned subsidiaries and fund investors have formed and contributed cash and assets into various financing funds and entered into related agreements. We have determined that the funds are variable interest entities (“VIEs”) and we are the primary beneficiary of these VIEs by reference to the power and benefits criterion under ASC 810, Consolidation. We have considered the provisions within the agreements, which grant us the power to manage and make decisions that affect the operation of these VIEs, including determining the solar energy systems or vehicles and the associated customer contracts to be sold or contributed to these VIEs, redeploying solar energy systems or vehicles and managing customer receivables. We consider that the rights granted to the fund investors under the agreements are more protective in nature rather than participating.

As the primary beneficiary of these VIEs, we consolidate in the financial statements the financial position, results of operations and cash flows of these VIEs, and all intercompany balances and transactions between us and these VIEs are eliminated in the consolidated financial statements. Cash distributions of income and other receipts by a fund, net of agreed upon expenses, estimated expenses, tax benefits and detriments of income and loss and tax credits, are allocated to the fund investor and our subsidiary as specified in the agreements.

Generally, our subsidiary has the option to acquire the fund investor’s interest in the fund for an amount based on the market value of the fund or the formula specified in the agreements.

Upon the sale or liquidation of a fund, distributions would occur in the order and priority specified in the agreements.

Pursuant to management services, maintenance and warranty arrangements, we have been contracted to provide services to the funds, su