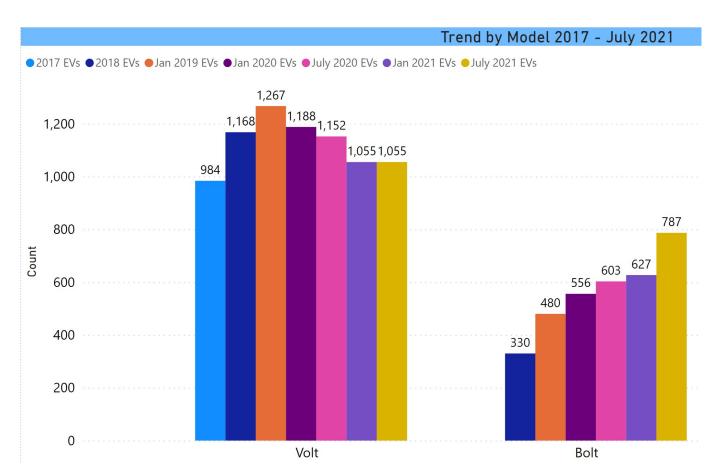
Bolt Owners Still Treading Water

The Chevrolet Bolt recall is inching closer to the one year mark, having started in November of last year. GM expanded the scope of the vehicles being recalled over the course of several stages until in August, it expanded to every Bolt manufactured. That's the bad news/good news. The recall involves every Bolt, but it hasn't been a big seller. The irony is that was beginning to change. Since the introduction of the redesigned model this year which came with a lower price, it has been getting traction as one of the better BEV values. Below is the registration trend of the Bolt in CT, compared with its stablemate Volt that was discontinued in 2019. The most recent numbers in the chart are as of July 1, which was before deliveries began of the Bolt EUV.



There may finally be a ray of hope. ElectricDrive.com reported that GM has <u>identified the cause</u> and that its supplier, LG Chem, has restarted production lines. New battery cells could be reaching dealers by later this month. It is not known how long it will take to work through the recall backlog as well as the resumption of new vehicle manufacturing. The automaker also announced "new diagnostic software" to be deployed over the next 60 days.

The recall does tell us a couple of things. If you read the ElectricDrive piece, the problem is described as a defect in the manufacturing process. There is more detail than that, but the point is that it isn't a problem with the battery design or underlying technology. It is strictly quality control. the article, it specifies that the problem occurred at the LG plant in Korea. But LG opened a plant in Michigan in 2019 and newer Bolts have batteries manufactured at that facility. The fact that GM included Bolts with batteries manufactured in each facility indicates a more across the board concern. (Batteries are very heavy and expensive to ship. It is much more cost-effective to co-locate battery and vehicle manufacturing. The Michigan facility is likely part of how GM was able to lower the price of the refreshed Bolt. Perhaps it provides some measure of hope that there will be a meaningful battery manufacturing presence in this country, a critical national security technology, as opposed to our usual practice of developing technology and then ceding the manufacturing to the Chinese, e.g. solar panels.)

There are a number of Bolt owners among club members. For a variable number of months now, depending upon which recall batch their vehicle is in, they have been living with a vehicle that needs to be garaged outdoors and used in a range-compromised fashion. The Bolt's 259 mile range is now effectively 163 with the guidance to maintain a battery state of charge of not less than 70 miles and no more than 90%. With this slow-rolling, multi-stage recall, where there is still no

definitive no end in sight, how proactively has GM or its Chevy dealers been communicating with their customers? Bolt owners responded to our query between September 21st and October 4th.

GM has been in a difficult spot, given the expanding scope of the recall, the elusive nature of the cause, and possibly its negotiations to get LG to assume some portion of the liability. Nonetheless, GM and Chevy dealers are responsible to the customers and the general consensus is that there has been a minimal level of communication. The near-silence from GM may be be because it hasn't had much to say, but there does not seem to be much of a communications strategy in place. The number of communications from GM seems to basically be one, or one per recall if the vehicle was in one of the earlier batches before the full scope of the problem became apparent. The content boils down to, "be patient." Some owners are frustrated, while others have more equanimity, with GM getting points for proactively expanding the scope of the recall. The dealers don't seem to be much in the loop. Updates have not been forthcoming as the saga has dragged on. No complimentary loaners have been provided.

Some customers have requested that GM repurchase their vehicle. One advised that there is a YouTube channel called "Wrenching Fool" that provides guidance on how to go about getting a case number. The repurchase requests are being evaluated by GM on a case by case basis and do not appear to have been resolved to this point.

There was one exception to that. Club-member Glen Zackowski reports reaching a favorable repurchase deal with his dealership, Grossman Chevrolet, in Old Saybrook. He will have to wait until the car is fixed. At that point, he will be the owner of a new Bolt EUV. No doubt, staying in the family helped. Customers also report that they like the car. They just wish this process had been made easier for them.

Bolting Into The Future

Town of Westport Adds 2 Chevy Bolt EVs To Its Fleet

The Town of Westport has announced further progress to its march to net-zero by 2050 with the addition of 2 Chevrolet Bolt battery-electric vehicles to its fleet. The vehicles are the standard-level trim options and they are the new 2021 model.

Westport has been taking tangible steps to achieve its environmental objectives. These Bolts will be used for municipal inspections by the Engineering Division and the Tax Assessor. The current practice is for vehicles to be swapped out around every four years. As other vehicles turn over, the town plans to continue converting its inspection fleet to EVs.

The Bolt was selected due to its reasonable price, reputation for quality engineering, and being the right size. It has an EPA-rated range of 259 miles.

The Bolt typically comes with an 8-year/100,000-mile battery warranty. However, these vehicles were obtained through Enterprise Fleet Leasing and will almost certainly have been

turned over before getting to that point.

Importantly, EVs last a long time, have a low maintenance profile and could lower carrying costs. This was taken into account when making this decision.







Electric Vehicles Parade

Through Fairfield

Westport and

Numerous EV Models Appear in Parade

30 EVs participated in this parade, a joint effort between the EV Club of CT and the Sustainable Fairfield Task Force. Parade participation was capped at this number to avoid being overly disruptive to local traffic



There was one novelty vehicle, a 1903 Baker replica. In its day, the Baker was quite the speedster, topping at about 48 MPH. It is a reminder that electricity was the dominant mode of energizing cars around the turn of the previous century.

The parade followed a roughly 25-mile route, beginning at the Westport Metro-North Depot, where the proceedings were kicked off by Westport First Selectman Jim Marpe. The route headed north up Imperial Avenue, jagged over Jesup to then proceed up Main Street, looping around Avery and Myrtle, and taking a left onto the Post Rd. heading East. There it stayed until

hitting downtown Fairfield, where it veered off to Old Town Hall and concluded with a second brief ceremony with Fairfield officials.

Throughout the event, masking was required and social distancing was observed.

Escorting the parade was the Westport Police Tesla Model 3 that has been fully outfitted as a police cruiser.

Deliveries of the newest Tesla Model, the "Y", have been coming into CT, and this was one of 4 appearing in the parade.



Tesla Model Y



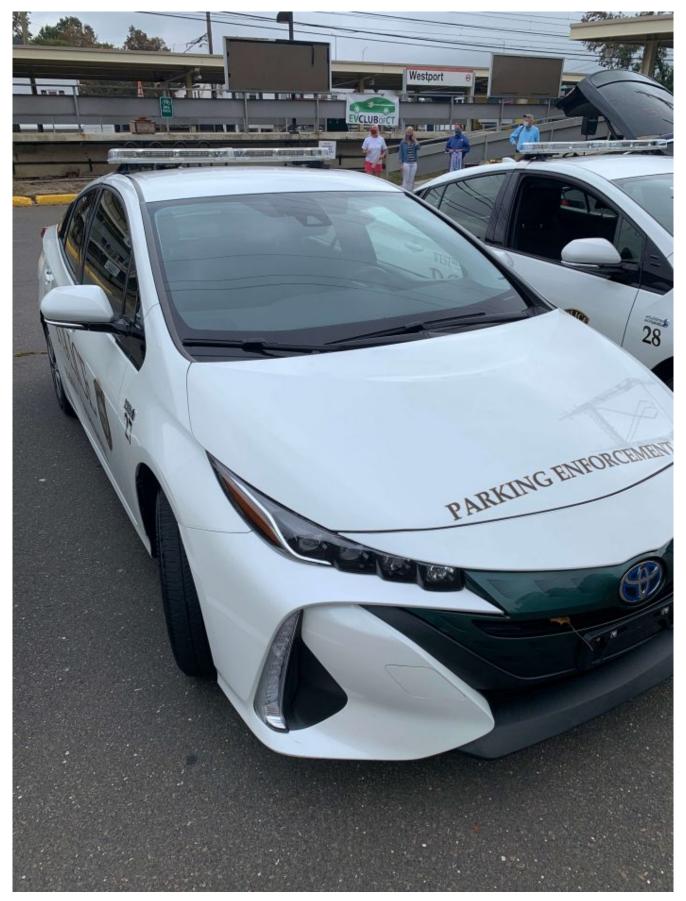
Kia Soul EV



Chevy Bolt



Porsche Taycan



Plug-in Prius Prime Westport Parking Enforcement Vehicle

This Toyota Prius Prime, a plug-in hybrid, is one of four plug-in vehicles currently in use by the Westport Police and

it was the rear bookend of the parade.

CHEAPR Changes a Bad Idea — Op-Ed in Hartford Business Journal

Changes to CHEAPR = large decline in rebates

Club-member, Barry Kresch, penned an Op-Ed that was published in the Hartford Business Journal that discusses the early data regarding the impact of the way DEEP changed the parameters of the CT CHEAPR EV incentive program, and why rebates declined 71%. (This blog has also posted a couple of earlier entries about it here and here and here.) The incentive was lowered to a maximum of \$1500 for a BEV and \$500 for a PHEV, and eligibility restricted only to vehicles with an MSRP of no more than \$42,000. The lower MSRP cap caused rebates for the Tesla Model 3 to practically disappear, but the effect goes deeper (pun intended).

The word count is constrained for these Op-Eds and the format does not permit graphical exhibits, so this post will be used to expand on a few points. First, these are the graphics from the CHEAPR stats page reflecting the pre and post periods

relative to the date of the incentive changes (the incentive change was 10/15). The date range appears in the upper right portion of the image.

Data last updated: December 30, 2019 (most recent months partial) 9/3/2019 10/10/2019 **Filter By:** Home Zip Code: Application Date: -(ID) Program Summary (select to filter) Rebate Dollars Rebates Plug-in hybrid electric vehicle \$26,500 **PHEV** 37 (electricity and gasoline) Highway capable, four-wheeled, BEV \$396,000 204 all-electric vehicle Total \$422,500 241 Rebates by Make and Model (select to filter) Tesla Model 3 Chevrolet Bolt EV 27 Nissan LEAF or LEAF Plus 16 Toyota Prius Prime 14 Hyundai Kona Electric

Hyundai Ioniq Electric Honda Clarity PHEV Chevrolet Volt Hyundai Ioniq Plug-in Hybrid Kia Niro EV Volkswagen e-Golf BMW i3 REx or i3s REx 2 Kia Niro Plug-In Hybrid 2 BMW i3 or i3s | 1 Chrysler Pacifica PHEV | 1 Ford Fusion Energi | 1 Subaru Crosstrek Plug-In Hybrid | 1 20 40 80 100 120 140 Number of Rebates

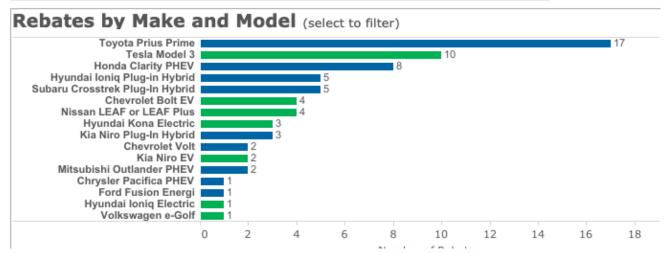
"Pre" period, Sept 3 through Oct. 10

Data last updated: December 30, 2019 (most recent months partial)

Filter By: Home Zip Code: Application Date: 10/23/2019 11/30/2019

Program Summary (select to filter)

		Rebate Dollars	Rebates	
PHEV	Plug-in hybrid electric vehicle (electricity and gasoline)	\$22,000	44	
BEV	Highway capable, four-wheeled, all-electric vehicle	\$33,500	25	36%
Total		\$55,500	69	64%



"Post" period of Oct. 23 through Nov. 30

While most of the decline was Model 3 related, other vehicles were also affected. We note the steep falloff in the Chevy Bolt. The premium version of the 2020 Bolt begins at \$41,985. Bolt rebates declined from 27 to 4. The BMW i3 no longer appears, and it had 2 rebates in the "pre" period. The Nissan Leaf declined from 16 to 4, and it is possible to exceed \$42,000 with a Leaf Plus.

If the lowering of the price cap was intended to avoid subsidizing more affluent buyers, this is belied by the fact that the cap on fuel cell vehicles was raised to \$60,000.

Massachusetts Incentive Program

As a point of comparison, the Massachusetts incentive program (back online after a brief hiatus) has incentives that are

more generous than CHEAPR before the changes. The max incentive for a BEV is 67% higher at \$2500. The PHEV rebate is triple CT at \$1500 but the vehicle must have an electric range minimum of 25 miles to be eligible, which we think is a sensible requirement. Importantly, there is a price cap and it is \$50,000, the same as CT before October 15th.

Current Incentive Structure Penalizes BEVs

We would like to underscore an important point. Batteries are the most expensive part of an EV and the lowering of the price cap, based on the above data, clearly tilts the incentives toward PHEVs, which have increased from 15% to 64% of the rebates. This works against maximizing the reduction of greenhouse gas emissions.

Do Incentives Work?

We have been asked this question. Perhaps what is still the best (and most extreme) example occurred in Georgia. At one time, GA had the fourth-highest number of EVs on the road of any state in the country, circa 2015. And it was due to one of the most generous incentives of any state: a \$5000 state tax credit for the purchase or lease of a new EV. Not only was the incentive repealed in its entirety, but a \$200 road-use tax was imposed on EVs. The result? Between June and August of 2015, EV sales plunged 89%. The road-use tax exceeds the amount of money paid in gas taxes by a typical ICE driver. And, of course, there are too few EV drivers to compensate for the decreasing ability of gas taxes to fund needed road improvements. It was clearly punitive toward EVs. It worked, but it also underscores the value of incentives. (Source: WSB-TV) The EV road use fee is reported to be the brainchild of the American Legislative Exchange Council (ALEC), the organization of conservative state legislators that writes draft legislation and often supports fossil-fuel interests. See this article in Consumer Reports.

Budget

With respect to DEEP managing its budget, there is one new item on the horizon, namely an incentive for used EVs. This was authorized by the legislature in the same bill that provided the new funding stream for CHEAPR. There has been no announcement from DEEP regarding when this may be implemented, how much the incentives would be, or whether there is any means-testing involved. This could conceivably be what caused DEEP to be concerned about their budget. Given that they were on track to be within their allotment, we think a datagathering phase before implementing changes would have made for better-informed decisions.