Where Should I Buy an EV?

Data from the Center for Sustainable Energy Helps Us Identify EV-friendly Dealers

We regularly field inquiries from club members and others asking for dealer recommendations. Usually, it follows a negative interaction with a dealership, when they walked in mistakenly thinking their inquiry about purchasing an EV would be well received. Not so fast!

It has been well documented, in the NY Times, in 2 Sierra Club shopper studies, and other reporting, that many dealers are indifferent or even hostile to EVs. But there are *some* dealerships that make an effort to sell EVs. To help guide consumers interested in non-Tesla EVs, we obtained from the Center for Sustainable Energy (CSE), the consultant that manages the CHEAPR incentive program for the Department of Energy and Environmental Protection (DEEP), the number of rebates by dealership from the program's inception in 2015 through August 11, 2020.

I am using rebates as a rough proxy for sales/EV-friendliness. It's the best we can do. You won't find retailers of expensive vehicles, for example, a Jag or an Audi, on this list because the cost of the vehicles exceeds the MSRP eligibility cap. Consumers are eligible for one rebate lifetime, so repeat customers are not included. Some dealers may end up on our list in spite of themselves. But we can still use this directionally. Tesla is not included since it doesn't have dealers.

We are covering a 5+ year period and understand that EV models come and go. Some manufacturers got out of the gate quickly

(Tesla, GM, Nissan), while others came later to the party. The Chevy Volt, once the most widely registered EV in the state, has been discontinued. A couple of years ago, Honda introduced a PHEV Clarity that generated a fair number of sales. Since then, it has greatly slowed, reportedly due to distribution having been curtailed. There have also been 5 changes made during this period made by DEEP to rebate size and the MSRP price cap that determines eligibility. Finally, some dealers have multiple stores that were not separated in this dataset.

One-Third of Dealerships have not Awarded a Single Rebate

There are 270 franchised auto dealerships, according to their trade association (Connecticut Automotive Retailers Association) in CT. 185 of them have made a sale or lease associated with one or more rebates. Less than half, specifically 104, have disbursed 10 or more rebates and only 28, or about 10%, have awarded 50 or more rebates. (The denominator is somewhat inflated due to some dealers that don’t retail eligible plug-ins.)

The Top EV Dealers

These are the 5 dealers that have awarded more than 100 rebates.

- **A-1 Toyota (New Haven)**
- **Honda of Westport (Westport)**
- **Richard Chevrolet (Cheshire)**
- **Karl Chevrolet (New Canaan)**
- **Lynch Toyota (Manchester)**

Below are other top dealers for different makes that had between 50 and 100 rebates. Some makes haven’t had any dealer exceed 50 rebates.

GM – Ingersoll Auto (Danbury), O'Neill's Chevrolet/Buick (Avon), H&L Chevrolet (Darien), Maritime Chevrolet (Fairfield), Grossman Chevrolet/Nissan (Old Saybrook), Chevrolet of Milford (Milford), Partyka Chevrolet (Hamden).

Toyota – Hoffman Toyota (West Simsbury), New Country Toyota of Westport (Westport), Middletown Toyota (Middletown), Hartford Toyota Superstore (Hartford), Westbrook Toyota (Westbrook)

Ford – Steven's Ford (Milford), Stamford Ford/Lincoln (Stamford), Crowley Ford/Lincoln (Plainville)

Nissan – Grossman Chevrolet Nissan (Old Saybrook), Harte Nissan (West Haven), Crowley Nissan (Bristol)

BMW – BMW of Ridgefield (Ridgefield), BMW of Bridgeport (Bridgeport)

Finally, 2 stores that handle numerous brands:

Valenti Auto Sales (multiple locations) – Audi, VW, Porsche, Maserati, Fiat, Volvo, Alpha Romeo, Jaguar. (We presume most of the rebates come from VW.)

MJ Sullivan Automotive Corner (New London) – Chevrolet, Buick, Cadillac, Hyundai, Genesis

It should be acknowledged that this is a changing landscape. We are relying on the past as prologue to predict EV-friendliness and we hope it proves useful. As the EV landscape evolves and new models are introduced, we will update the data to the extent that it is available. We anticipate it will be. Going forward, the CSE has advised they will be making more granular data available with their normal releases of CHEAPR data.

Used EVs and CHEAPR Incentives

The used car market, in general, is more than double that for new vehicles. That does not appear to be the case for EVs to this point.

CHEAPR Likely to Implement Used EV Incentive in 2021

CHEAPR, the CT state EV purchase incentive program, is considering offering incentives for purchases of used EVs. This incentive would be limited to lower and middle-income individuals/families. There are a number of changes being considered by CHEAPR, but with respect to used EVs, the legislature specifically authorized this incentive, the proposal was well received by the board, and the public comments were favorable. It seems a lock to happen, though there are below the line development tasks that will cause it to not be available until next year.

What is the State of the Used EV Market

We don't have access to the data that would enable us to definitively answer this. But we have some information that may be useful for drawing inferences.

During the CHEAPR board meeting of July 17th, there was a presentation by the auto-dealership representatives on the board. They stated that there are few used EVs in the

marketplace and the prices were low, creating an unvirtuous circle. They support the incentive and think that that it promises to sufficiently stimulate consumer demand so that dealers will be willing to bid more aggressively at auctions to augment the supply in the state.

The used EV incentive will differ from the new car incentive in that it will also apply to independent used car dealers. Used car dealers do not have to be affiliated with a manufacturer. A Google search for “used EVs for sale in CT” brought up a results page consisting of only independent dealers, mainly large ones like Carvana, Iseecars, and CarGurus. Those companies had both paid and organic listings on this first page of the search results. A search for “used Teslas for sale” brought up a largely similar set of sites, except that Tesla itself appeared, as it is in the business of retailing its own used vehicles. There is another company specializing in used Teslas called OnlyUsedTesla.com.

I suspect that the board members who represent the dealerships are not factoring Tesla into their thinking. For them, EVs are still a niche product and many of the non-Tesla EVs in the used marketplace are the first generation (read: low range) models. (We may be at a point where this is beginning to change as later model EVs are now coming off-lease.) And the dealers, based on the search results and their own words, aren’t making a serious effort to source and sell them. The fact that the independents are spending money on sponsored links indicates that there is at least a minimally viable business. Search is highly targeted and can yield a positive return on a small campaign.

Quantify Used EVs from the DMV File

To get some kind of quantification of used EVs relative to new, I went back to the file we recently got from the DMV of all registered EVs in the state as of July 1, just to get an

idea of what was entering the market. My proxy for used EVs was vehicles added to the file between January and July with a model year earlier than 2019. This is a rough measure and is reflected in the chart at the top of the post. Each bar represents vehicles added to the file in the first half of the year sorted by make, with the orange portion being those that are categorized as used by our proxy measure. 22% of the EVs added to the file could be characterized as used based on this definition. 47% of the vehicles added are Tesla, but only 10% of those fit this definition of used.

- This, coupled with the information from the dealers, indicates a small used EV market at this point.
- Even though it is small, there is a used EV business.
- The fact that there is no franchise requirement begs the question of whether Tesla could sell used EVs in Milford (or elsewhere in the state) using the same rationale that led to their being able to lease. In the case of new vehicle leasing, customers still have to go out of state to pick up the vehicle. Would that be a requirement if they could sell used?
- The EV Club is supportive of a used CHEAPR EV incentive, but based on this information, along with the LMI restriction, we don’t expect that it will be disbursing large sums in 2021.
- It is important, as used and possibly other incentives, are incorporated into CHEAPR, that the stats page be updated to track them separately.

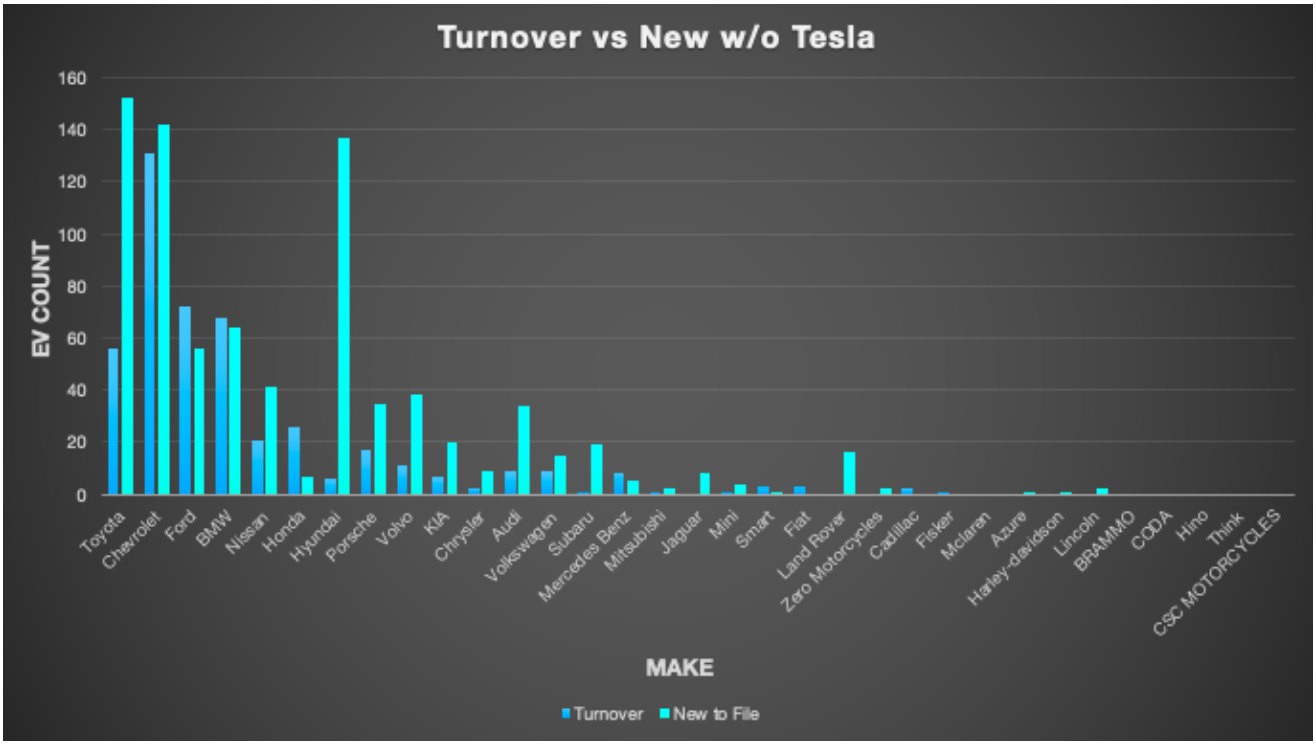
The CSE, DEEP’s consultant for CHEAPR, has been sent back to model new scenarios and we will see what they forecast.

Turnover Analysis – What EV Makes Are Moving Adoption

Turnover Analysis of EV Makes Driving Adoption

When we build our semi-annual EV dashboard with data sourced from the DMV, we, of course, look at trends by vehicle make. The analysis in this post is intended to give a more focused look at the recent impact of the various EV makes by isolating the vehicles that departed between January and July 2020 and comparing that turnover to the new vehicles added in the most recent July file.

The chart above shows that Tesla has low turnover, coupled with a high number of new vehicles added. That is not a surprising result. When analyzing EV adoption data, the answer to almost every question is “Tesla.” But the impact is seen more starkly in this view compared to the “trends by make” or “waterfall” charts in the dashboard. Since the outsized presence of Tesla tends to overwhelm everything else, it makes it hard to visualize any movement that may exist elsewhere. The answer: show the data without Tesla.



Turnover by Make Minus Tesla

What pops on this chart is the contribution increase from Hyundai. This may be an early signal of a serious EV push, followed this past week by the announcement that Hyundai is spinning off its Ioniq marque into a dedicated EV sub-brand (like Volvo with Polestar) and plans 3 new EV model introductions over the next several years, beginning with a mid-sized crossover in 2021.

Toyota, which has occupied a distant number 2 position over the past couple of years with its Prius Prime PHEV, showed a smaller increase on a lower base.

Ford is going in the opposite direction, with more EV turnover than additions. They have an eagerly anticipated launch in 2021 of the Mach-E, a crossover that bears the iconic Mustang logo.

Audi, Land Rover, and Subaru also spiked, but the numbers were low. Audi showed 9 departures and 34 adds for its new e-Tron. Land Rover, just entering the plug-in world (and separate from the Jaguar iPace), went from having 0 EVs to 16. Subaru had one departure and 19 adds.

CHEAPR Rebates Close Out a Slow Q2 – Will They Make Changes?

37 CHEAPR rebates in June

This tepid number was only slightly higher than the 27 in May, closing the quarter with a soft 81 rebates total and 275 for the first half of the year. This 275 compares to 818 during the first half of 2019.

Partly, this was due to the recession, but a lot of it has to do with the changes made to the program in October 2019, when the price cap for vehicle eligibility was lowered from $50K to $42K. You can see in the graph that the numbers immediately tanked in November and have stayed low.

CSE Proposal for CHEAPR Program Revisions

The CHEAPR board met on July 17th to entertain proposed program changes submitted by their consultant, the Center for Sustainable Energy (CSE). These proposed changes were a decidedly mixed bag. DEEP is accepting public comments until August 12th. Email comments to the at deep.mobilesources@ct.gov

These are our positions:

We support raising the vehicle MSRP price cap from $42K to $50K.*
We support raising the incentive levels back to where they were prior to October 2019.*
We support the supplemental incentive for low and middle income (LMI) individuals/families.
We support a rebate for used EVs, limited to LMI.
We support creating a pilot incentive of $500 for e-bikes for LMI.*
We advocate suspending the incentive for fuel-cell vehicles, which can be revisited in a few years.*
*Items with an asterisk are not part of the CSE proposal.
We went into more detail about these items in our previous post on the subject.
CHEAPR is extremely underspent. They have issued $287,500 in rebates through June against a budget pacing number of $1,750,000. The supplemental LMI and used EV rebates won't come online until next year. In other words, there is plenty of room to raise the levels.

Show us Dealership-Level Data

Dealership Data Request

The club regularly gets requests for dealer recommendations. Usually, this follows a poor dealership experience. We have an informal list of some dealers that have been recommended by members, but it is not complete and doesn't cover the whole state.

So we would like to let the data do the talking to the extent it can. Our objective is to publish a list of top dealers for each brand and we hope to have representation across the state.

We made the request to CHEAPR, which is run by the Center for Sustainable Energy (CSE), on June 23. On July 7, they advised that they were working on it. We are still waiting as of this writing on July 26th. Hopefully, we will receive it soon.

We will be using rebates is a proxy for sales and it is imperfect. When we publish the data, we will describe in detail what it represents and its limitations. We have asked for granular data. We will cut and sort the data to make it as clean as possible, perhaps by brand by county.

There was a recommendation in the DEEP EV Roadmap to create a dealer recognition program. We support this as long as it isn't vaporware. If it proves to be truly robust and stays up to date, then we may back off of the data.

We hope to be able to post the actual data soon. This doesn't seem like a difficult request.

Dashboard – Where the EVs Are

EVs are not uniformly distributed across the state

Fairfield County has consistently tracked at around 40% of EVs in the state and is 41% in this July 1, 2020 iteration. This compares with its having 26% of the state's population. All of the other counties under-index relative to population.

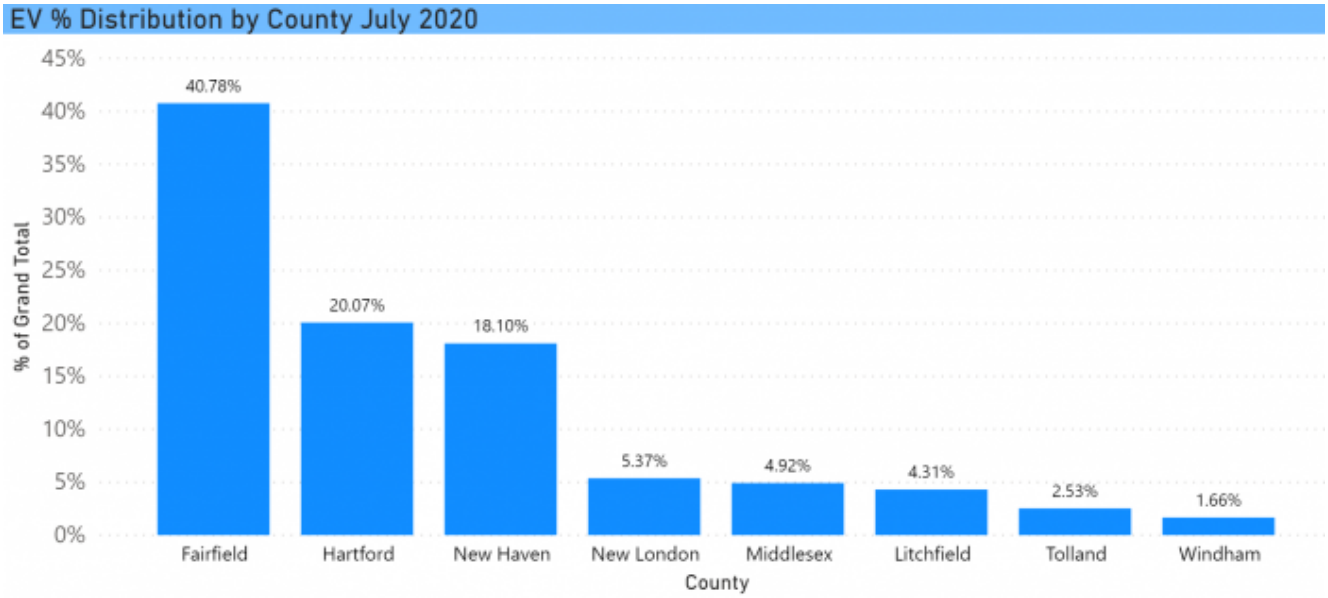


Chart: Barry Kresch

EV Distribution by City

The top cities largely held their position in terms of the number of registered EVs with Greenwich, Stamford, and Westport in the top 3 positions. This chart excerpt shows the most recent two data points, January and July, for the largest cities. Greenwich added the largest number of any city with 69 additional EVs since January.

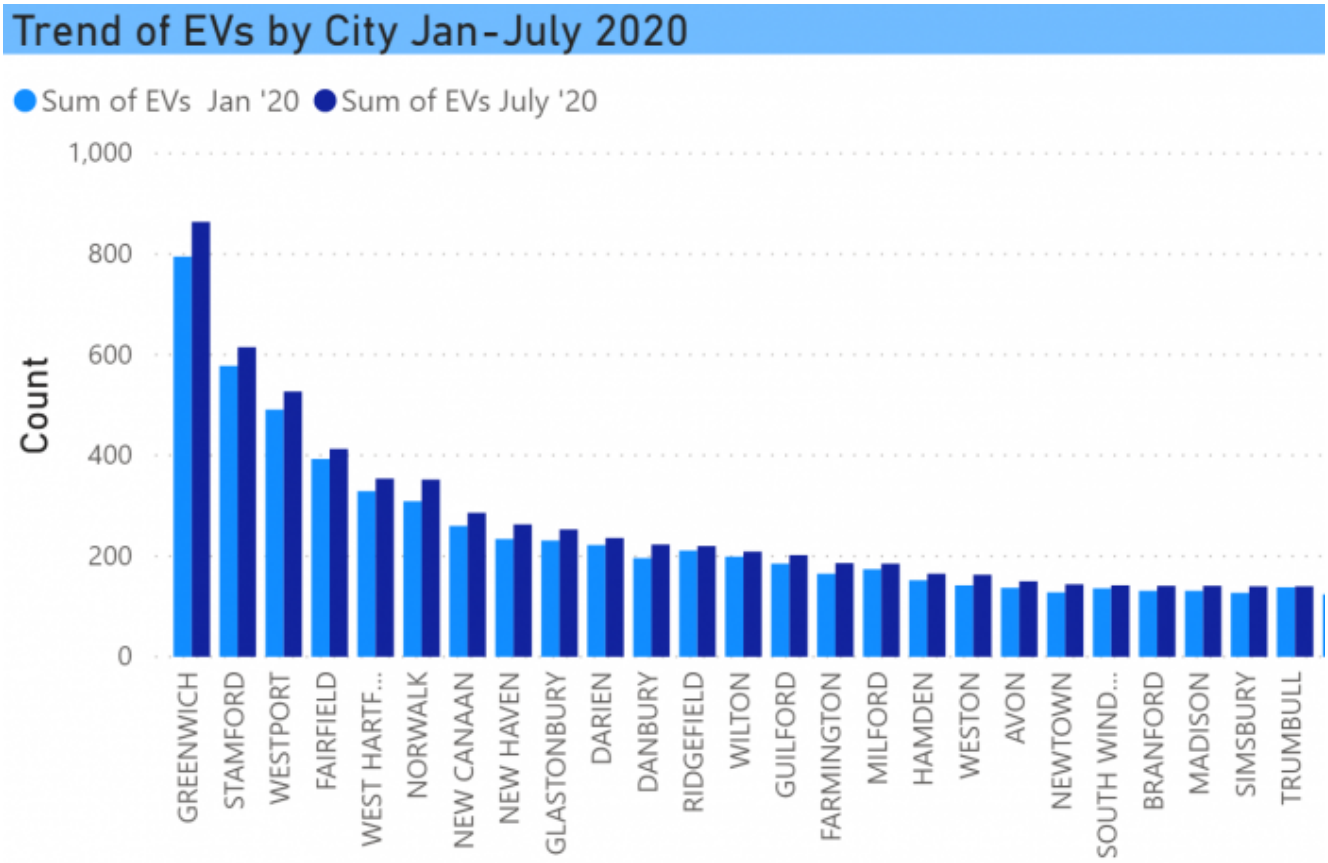
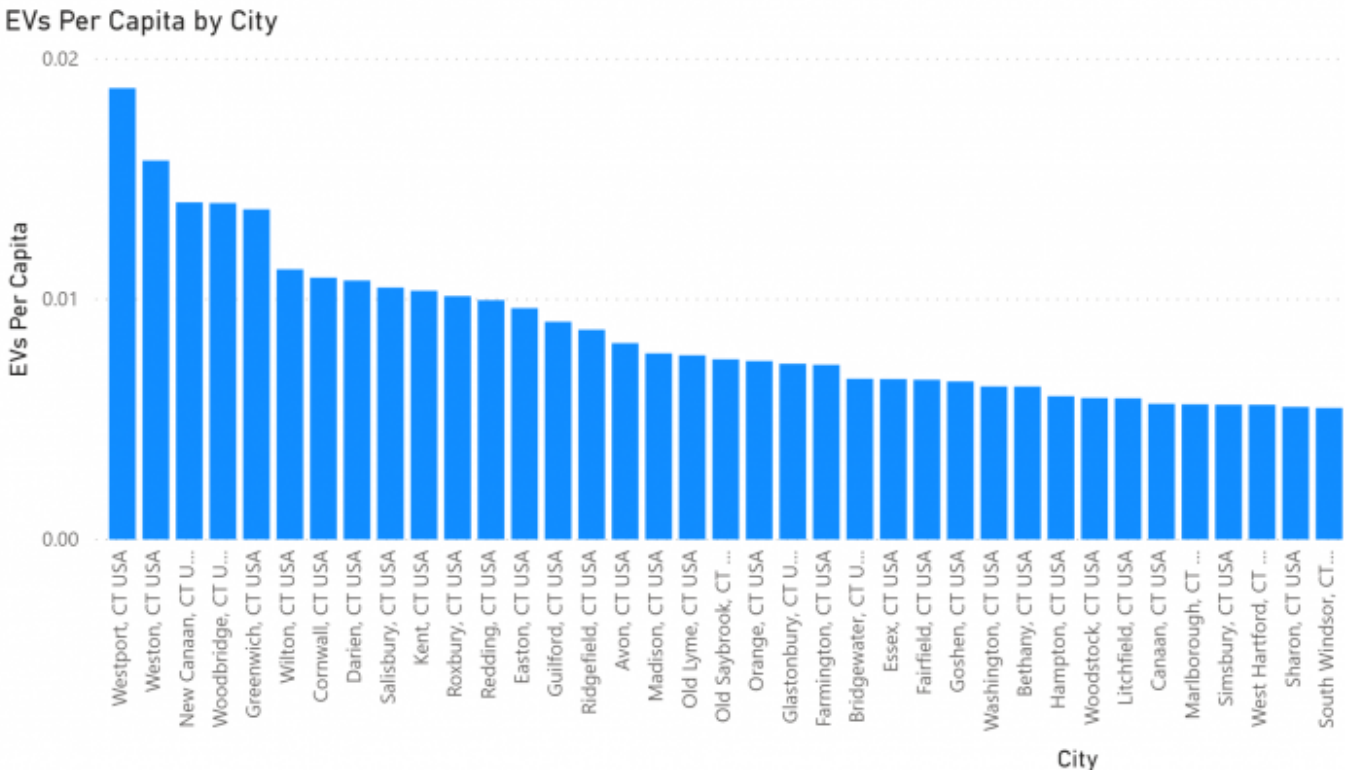


Chart: Barry Kresch

EVs Per Capita by City

Westport remains the leader in EVs per capita, followed by Weston, New Canaan, Woodbridge, and Greenwich. This screenshot is an excerpt of the top cities. The full list can be viewed in the dashboard (use the scroller).



BEV Registrations Show 35% Increase Over Past 12 Months

Fuel Type Trend

The mid-year 2020 update for the interactive EV Dashboard has been published. The relatively strong performance for BEVs contrasts with the change for PHEVs, which increased only 1% over the past 12 months. As of July 1, there were 6874 BEVs and 5092 PHEVs (along with 25 electric motorcycles and 3 fuel cell vehicles).

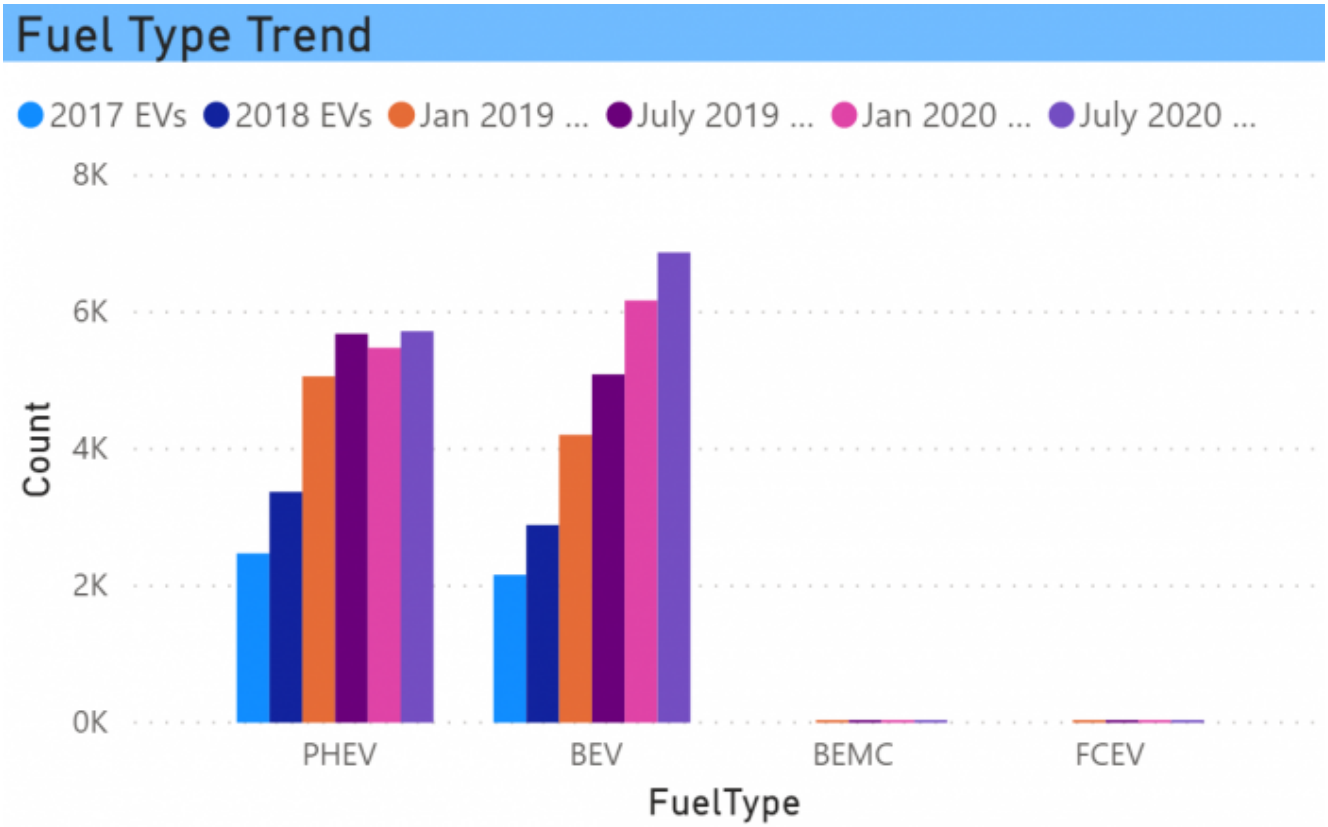


Chart: Barry Kresch

This has been the recent trend, with PHEV growth leveling off beginning with the January 2019 data point (covering the 2018 calendar year).

Trend of Registered EVs

There are now 12,624 EVs registered in the state, as of July 1.

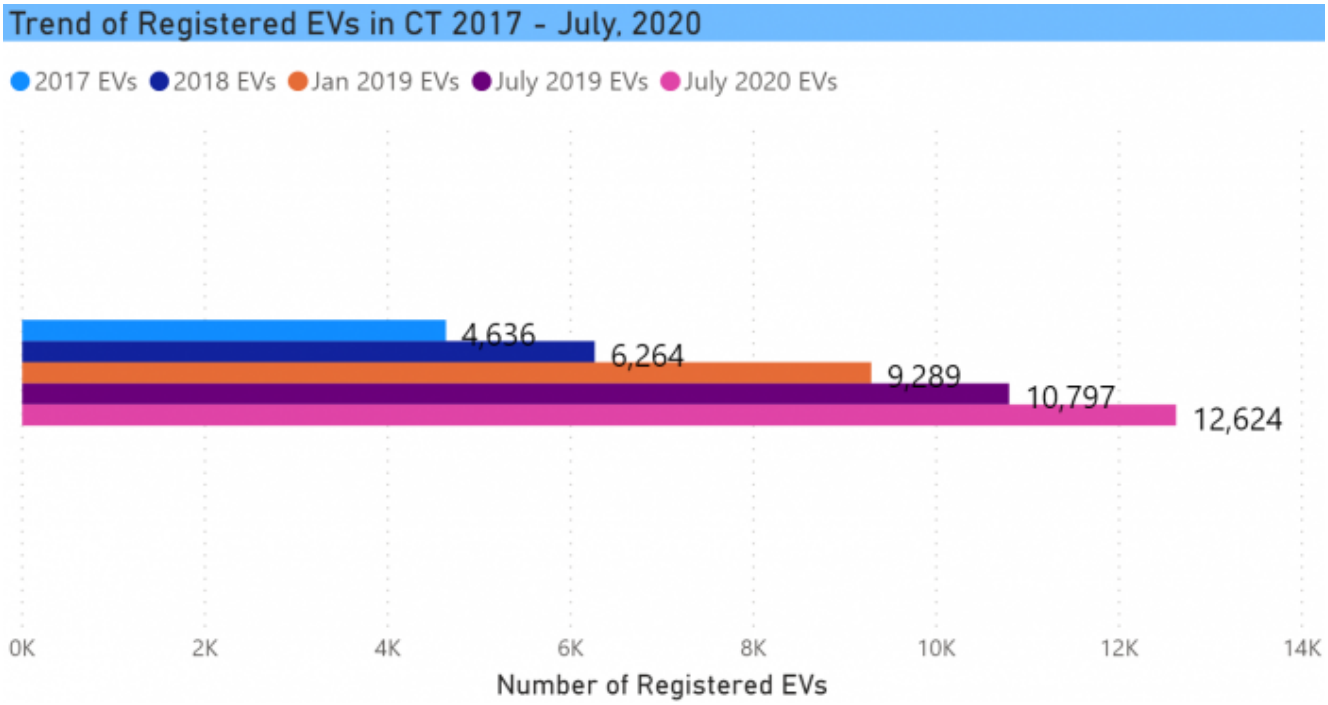


Chart: Barry Kresch

While the overall EV growth was slower than we would like, the last 6 months, perhaps surprisingly since they included the pandemic, was similar to the prior 6 months. There have been reports of EVs suffering a smaller sales decline than the industry at large. The 16.9% growth rate of the past 12 months is almost exactly double the 8.1% of the last 6 months.

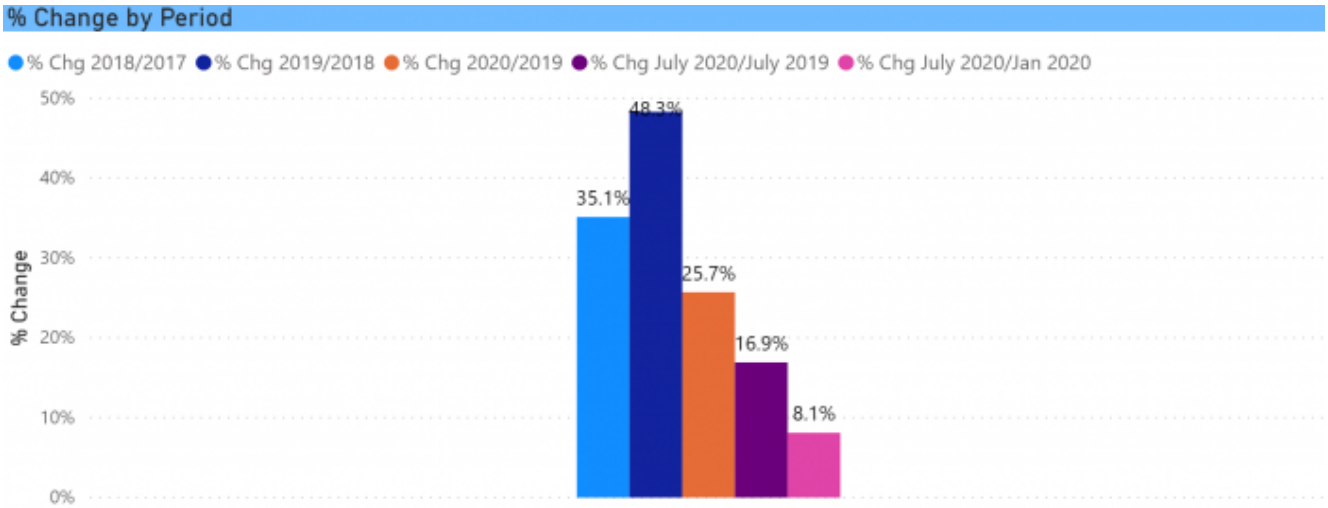


Chart: Barry Kresch

Trends by Make

The pattern that we have seen over the last few iterations of the dashboard holds here, namely that Tesla is the big driver. This chart tracks the change in EV registrations by Make since 2017. It is an excerpt – all makes are available in the dashboard.

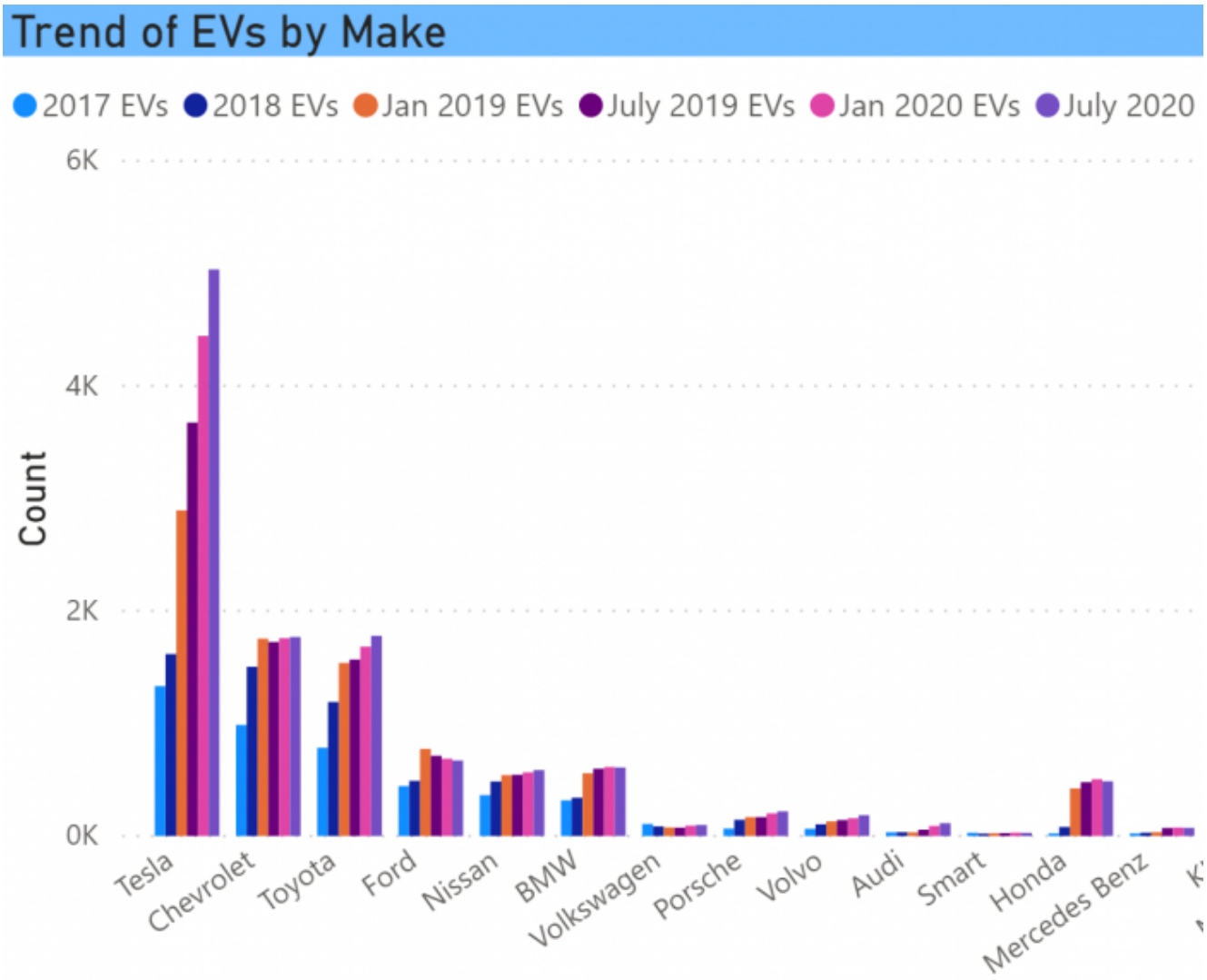


Chart: Barry Kresch

Tesla now accounts for 40% of all registered EVs in the state with 5035 vehicles. (For charts in this blog post that do not display values, those can also be seen on the dashboard by hovering over a chart element.)

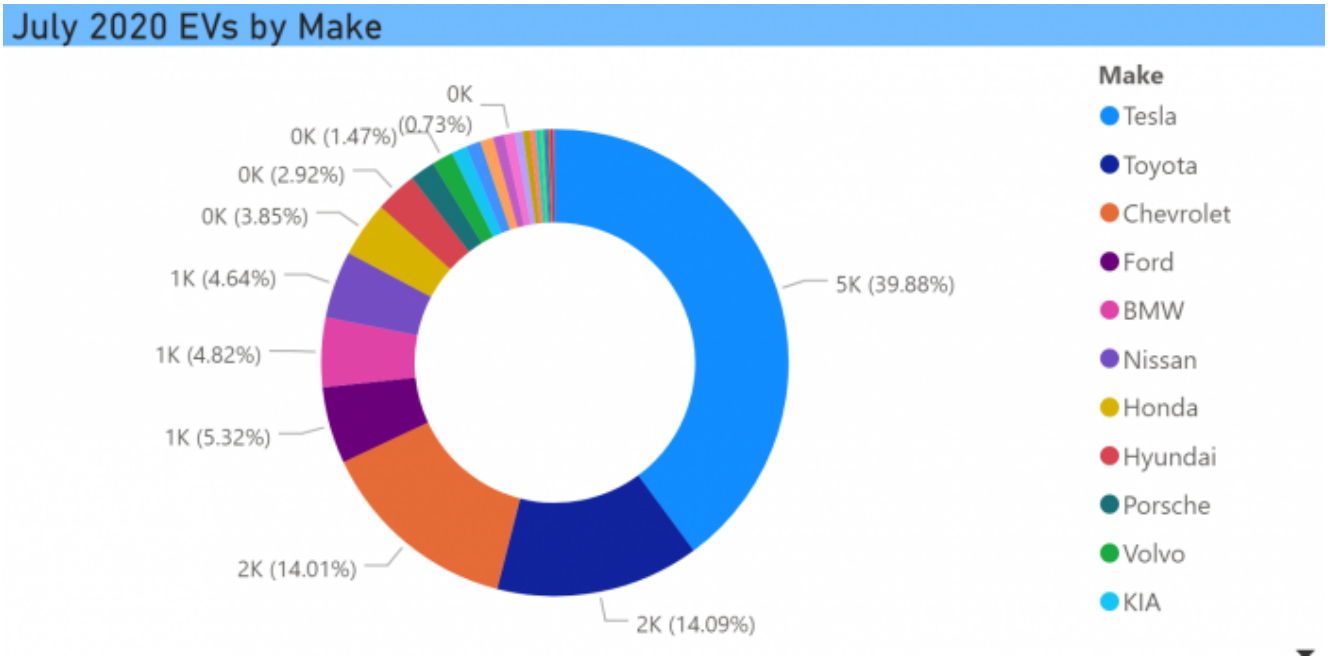


Chart: Barry Kresch

If we look at it from the perspective of the contribution of each make to the increase of the past 12 months, it is even clearer. This waterfall chart shows that Tesla was responsible for 74% of EV growth (all EVs, not just BEVs). Some manufacturers, as can also be seen in the trend chart, are seeing declines in net cumulative registrations.

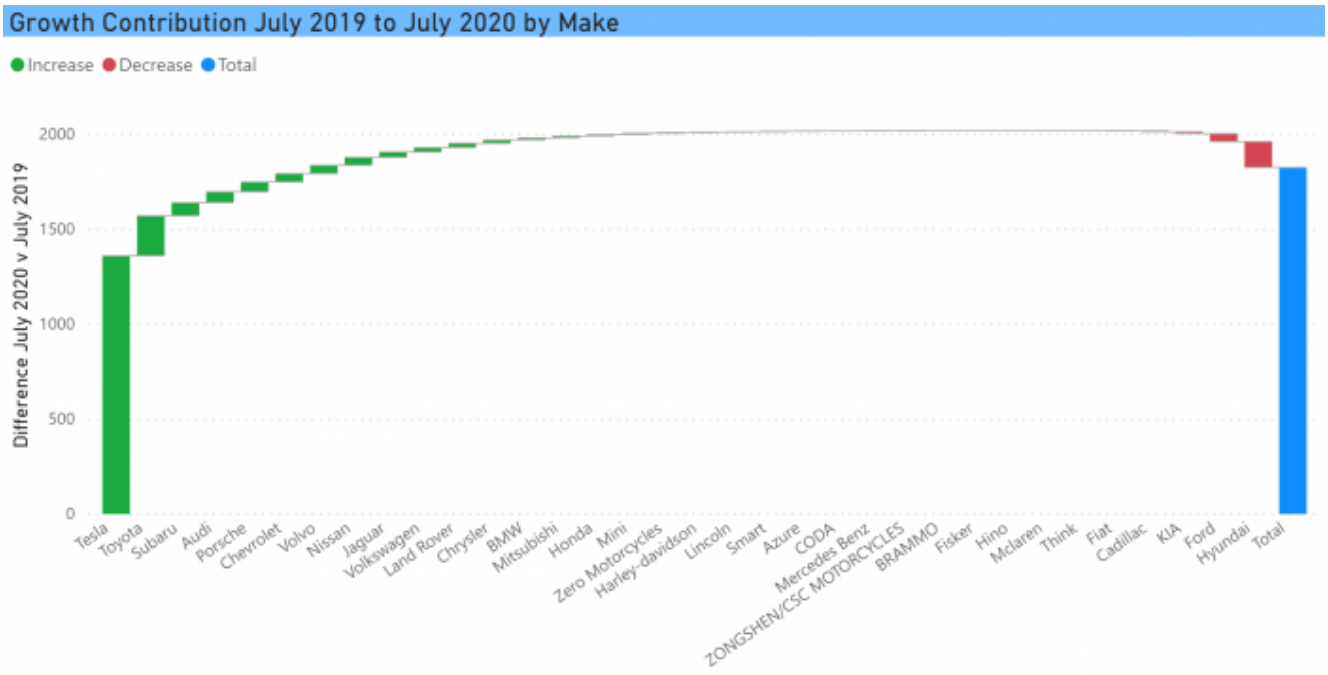


Chart: Barry Kresch

Trends by Model

When we drill into the individual models, it is the Model 3 that defines the picture. The growth of the Toyota Prius Prime (Prius Plug-in and Prius Prime are combined in these charts) has greatly slowed. The Model S and X have a steady, but not terribly large increase (and it is likely the Model 3 is cutting into sales of the S in particular). The Model Y has yet to make its presence felt with just 29 of them in the file. The Chevy Volt, once the most widely registered model in the state, has been discontinued. It has a presence in the used EV marketplace, but the overall numbers are showing a gradual decline. The Nissan Leaf is another major early EV that has slowed considerably in recent years.

The outlook for the rest of the year has to be characterized as uncertain. We aren’t close to being done with the pandemic and the bad economy. Manufacturers have delayed refreshes and new introductions until 2021. We are expecting significant refreshes for the and Bolt, the new Ford Mach-E, Rivian SUV and pickup, among others. The chart below is also an excerpt of individual model trends with the full chart available on the dashboard.

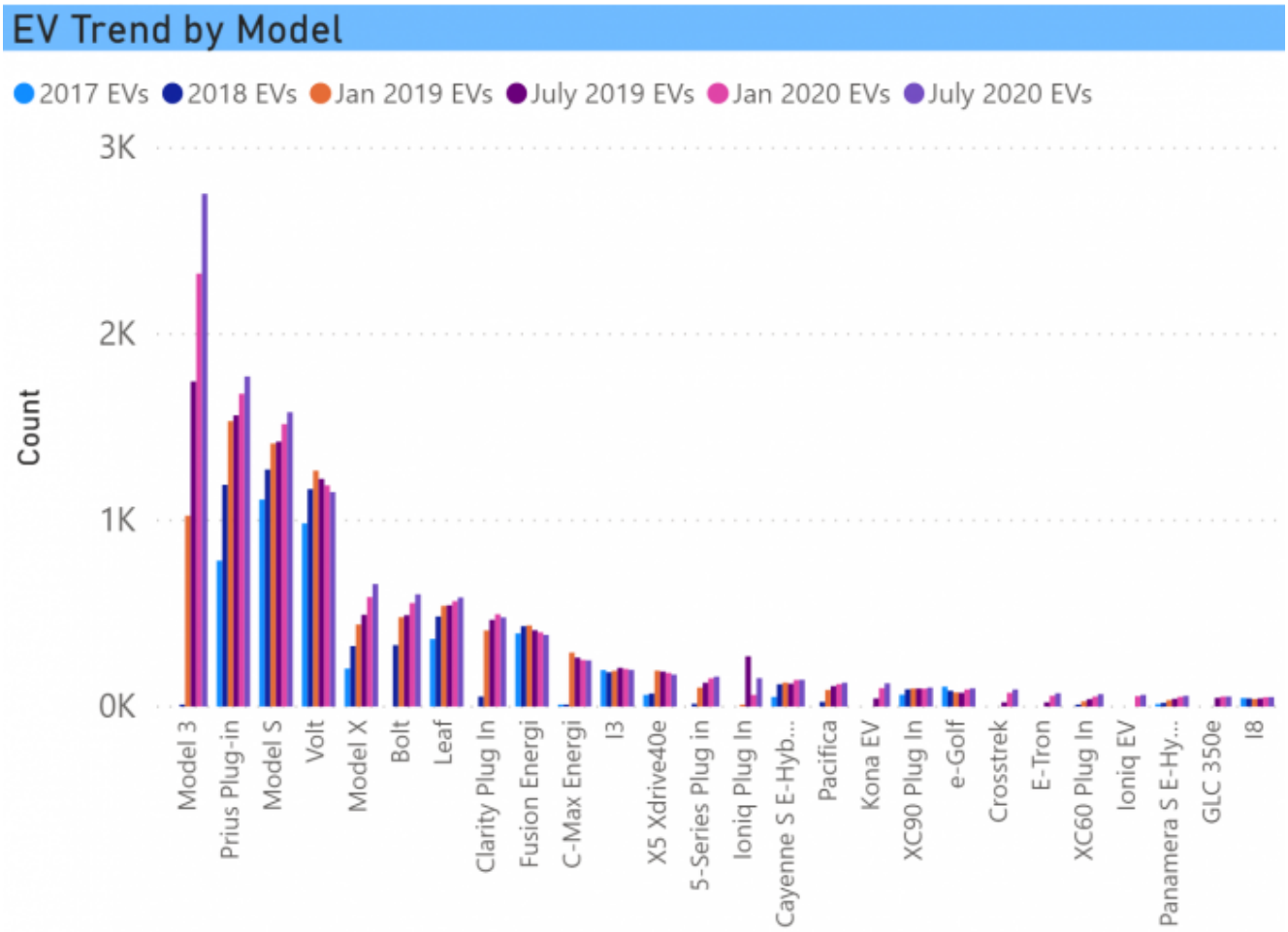


Chart: Barry Kresch

Newly Registered EVs

This is the chart of EVs by Make registered in the past 6 months. Tesla accounted for 47% of all new registrations, which is why it's current share has increased, and why BEVs are growing. There were a total of 1525 vehicles registered in the past 6 months. With a turnover of 578 vehicles, the net increase was 947.

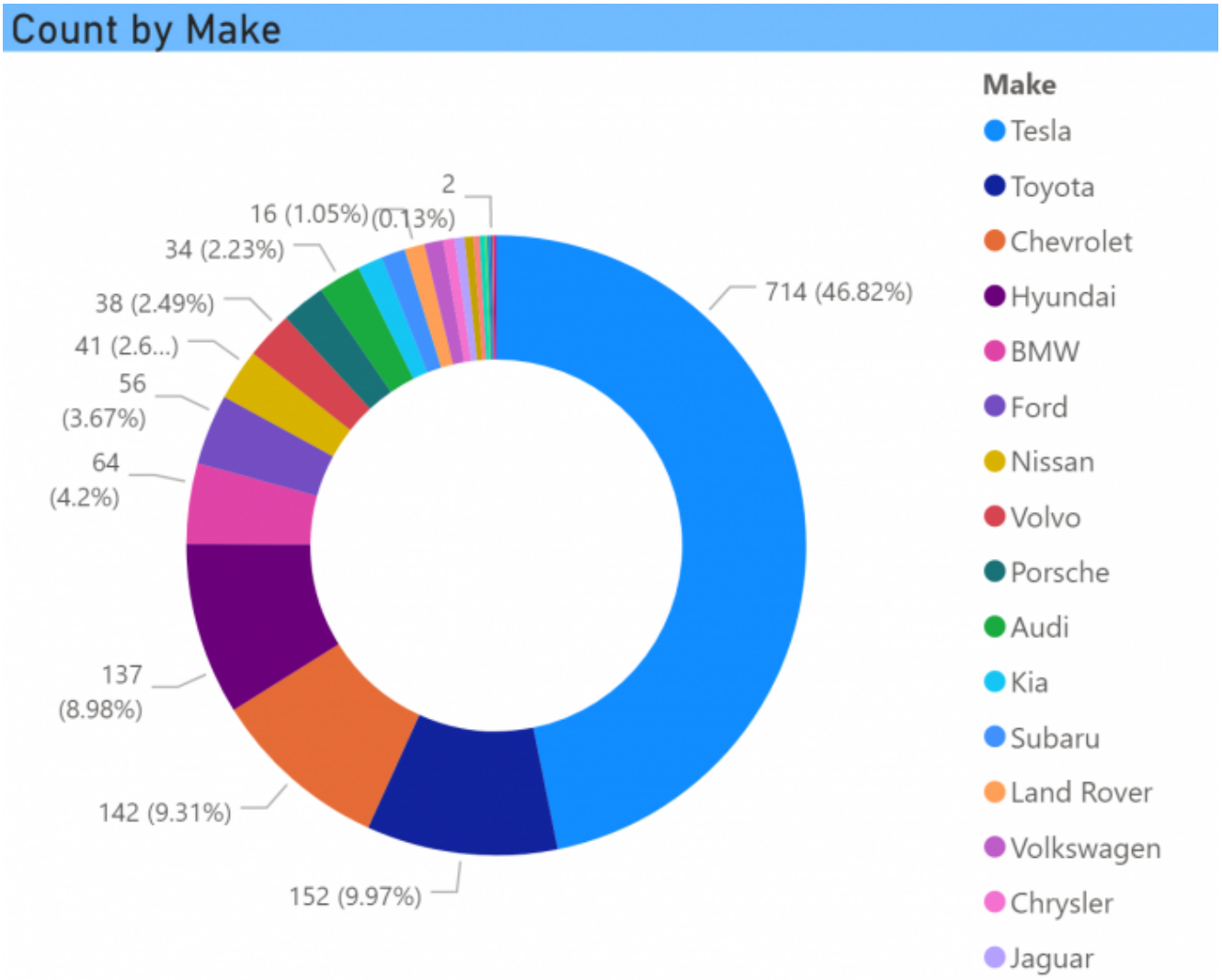


Chart: Barry Kresch

The increase we are seeing, assuming it remains similar for the second half of this year, is pacing below the necessary compound annual growth rate to meet the objectives of the ZEV MOU.

A word about the data:

The EV Club of CT has a standing Freedom of Information Act Request with the Department of Motor Vehicles. The DMV updates its census of EVs semi-annually, and when they do, they send us a file of the vehicle details. A reminder that this dataset is registrations, not sales. It includes new vehicle sales or leases, used EV purchases, people moving into the state who own EVs. We do not get the "denominator," meaning all of the vehicles registered in the state, so we are not able to look

at EV share of the total market.

The dashboard itself is interactive. Hovering over a chart element will display the value. The charts can be filtered by clicking in a chart element or by checking the boxes in the slicers. Multiple boxes can be checked. Please contact us if you have any questions.

CHEAPR Board Meeting Readout – Revised Incentive Proposal

The CHEAPR board virtually convened for their first meeting since late January to consider what the program should look like going forward.

To briefly recap recent history, changes were made to the rebate parameters on Oct. 15, 2019, which lowered the MSRP cap and the rebate amounts. The number of rebates immediately dropped precipitously. As CHEAPR morphed into its new administrative structure as of January 2020, these rebate levels were held over on an interim basis, which continues to this day. The board received a proposal for a revised rebate structure from the Center for Sustainable Energy (CSE), as well as a proposal for a used EV rebate, along with requests for an e-bike rebate. These are described below, but no final decision was taken. DEEP is setting up a mechanism to receive public comments for a 3-week period. The board will meet again

in 4 weeks for the next steps, which presumably could mean a vote.

New EV purchase rebate proposal:

New Vehicle Program Design		
Type	Base Rebate	Supplemental LMI Rebate
Fuel Cell EVs (FCEV)	$5,000	$2,000
All-Battery EVs >200 e-miles (BEV)	$1,500	$2,000
All-Battery EVs <200 e-miles (BEV)	$500	$1,500
Plug-in Hybrid EVs (PHEV)	$500	$1,500
MSRP Cap: $42,000		

As you can see, the proposal leaves the lower rebate for new vehicles in place and adds a supplemental LMI (lower-middle income) incentive. We do not endorse leaving the existing rebates and MSRP cap at these low levels that were established in October. There were a number of attendees from the public who also spoke in support of this position.

For the 4 months prior to the October change, there were 616 rebates awarded. The corresponding post-change period, November through February, saw 272 rebates. And this was before COVID. As a result of the changes, plus the recession, CHEAPR is 81% underspent through May (the latest available data at the time of this writing).

This is the proposal for used EVs:

Used Vehicle Program Design	
Type	LMI Rebate
Fuel Cell EVs (FCEV)	$5,000
All-Battery EVs (BEV)	$2,000
Plug-in Hybrid EVs (PHEV)	$750
MSRP Cap: None	

The supplemental LMI and used EV LMI proposed rebates are generous, and we accept the analysis that this is what is needed to make the program work. The definition of LMI is an AGI of $50,000 for a single person and $75,000 for a family. There is a proposed mechanism to verify this through federal income tax returns.

For either LMI incentive, the consumer, upon income

verification, would be given a voucher that they would then bring to the dealer. This would apply to both franchised dealerships and independent pre-owned car dealers. (The rebate for FCEVs in this context is ludicrous, but more on that later.) The two dealer representatives (Jim Fleming of the CT Automotive Retailers Association – CARA, and Brad Hoffman of Hoffman Automotive Group – both organizations are represented on the CHEAPR Board) who were on the Zoom both said that there are few used EVs available and that it will be a couple of years until there is a critical mass of inventory. They said the rebate would induce dealers to bid on used EVs that become available via an auction, which would speed the accumulation of inventory in the state. They also cautioned that the incentive has to be structured in a way that prevents "flipping."

The supplemental LMI and used EV rebates will not come online until the first quarter of 2021. The backend architecture still has to be developed.

The request for e-bike rebates met with a mixed response.

E-bikes were not part of the CSE proposal. Many on the Zoom felt that e-bikes have the potential to be a valuable component of an emission-free transportation mix, especially in the larger urban centers. A petition was submitted to DEEP to formally make this request. Here is a link to the letters. DEEP raised the question of whether it is statutorily permissible to incorporate e-bikes into CHEAPR (they will research that further). Some others felt that an e-bike rebate is a good idea, but that it shouldn't be part of CHEAPR.

Dealer Incentive

The proposal modifies the dealer incentives to be either $125

or $75, depending on the level of rebate. When CHEAPR was first begun, they were as high as $300.

Fuel Cell Vehicles

Several participants voiced skepticism about the inclusion of a fuel cell rebate, especially considering that no vehicles of this type are currently sold in the state. DEEP briefly explained (there really wasn't time to get into it) that it had to do with the multistate ZEV and CARB arrangements that CT participates in.

The CHEAPR board

While CHEAPR had a quorum to hold this meeting, over a year after the enabling legislation was passed, and 7 months into its first year, there are still unfilled positions. As far as we know, that number is 2. The board does not include any representation from an EV Advocacy organization (ahem, the EV Club), nor are there any persons of color. (The CHEAPR board itself doesn't appoint members, though they may have influence.)

Where are the Funds?

CHEAPR is funded to a level of $3MM for 2020. Through May, the program paid $242,000 in rebates. We estimate that payments to dealers amounted to approximately $29,000 (adjusting for Teslas). The presentation from the CSE listed an amount of $1.9MM remaining. So how was the other $829,000 spent?

These are the club's positions:

- Raise the incentives back to the pre-October, 2019 levels. Given that CHEAPR is so underspent and the supplemental LMI and used incentives will not happen

this year, there is virtually no financial risk. The data can be re-evaluated later in the year, along with updated modeling for the LMI and used incentives, to determine the plan for 2021. And even in 2021, based on the dealer POV, there won't be that many used EV rebates.

- We support the LMI and used EV incentives.
- We support e-bike incentives. There is enough money in 2020 to support a pilot. We are concerned that the wrangling will indefinitely delay action on this.
- Dispense with dealer incentives. They aren't having a noticeable impact. In the DEEP EV Roadmap, it was reported that incentives were often not being passed along by the dealerships to the salespeople, which is who they were intended for. And the landscape has changed. This is the concluding sentence on the subject: "*The auto dealer incentive may have been necessary during CHEAPR's earliest years, but the availability of greater numbers, models, and types of EVs and the need to maximize available funding for EV deployment may necessitate the discontinuation of the auto dealer incentive*."
- We have nothing against fuel cell vehicles but see no point in keeping this incentive. At least, we would like to hear a more convincing rationale. We don't see how credits earned from an out of state sale have anything to do with a local incentive.

This is what we think. Whatever your point of view, make it known to DEEP/CHEAPR. The information about how to do that will be provided when it becomes available.

CHEAPR Rebates Continue at Slow Pace – May Update

CHEAPR Rebates Continue to Crawl – Revised Guidelines Needed

UPDATE: CHEAPR Board Meeting Scheduled for July 17th.

CHEAPR recently published updated stats through May 30. The recent trend continues. May rebates totaled 25. The breakdown is 14 BEV, 11 PHEV, and 0 Fuel Cell.

With the publication of the May dataset, CHEAPR restated its data for April. For those who saw the blog post regarding the April data, the 13 rebates have been revised to 17. It is not unusual that minor adjustments are made a little after the fact.

CHEAPR has been pacing severely under budget as defined by total rebate dollars awarded relative to a straight line pacing of the $3MM annual budget (i.e. $250K monthly). Any month where rebates are under $250K will cause this underage to widen. The amount rebated in May was $26,500 and the expended funds are now 81% under the pace number.

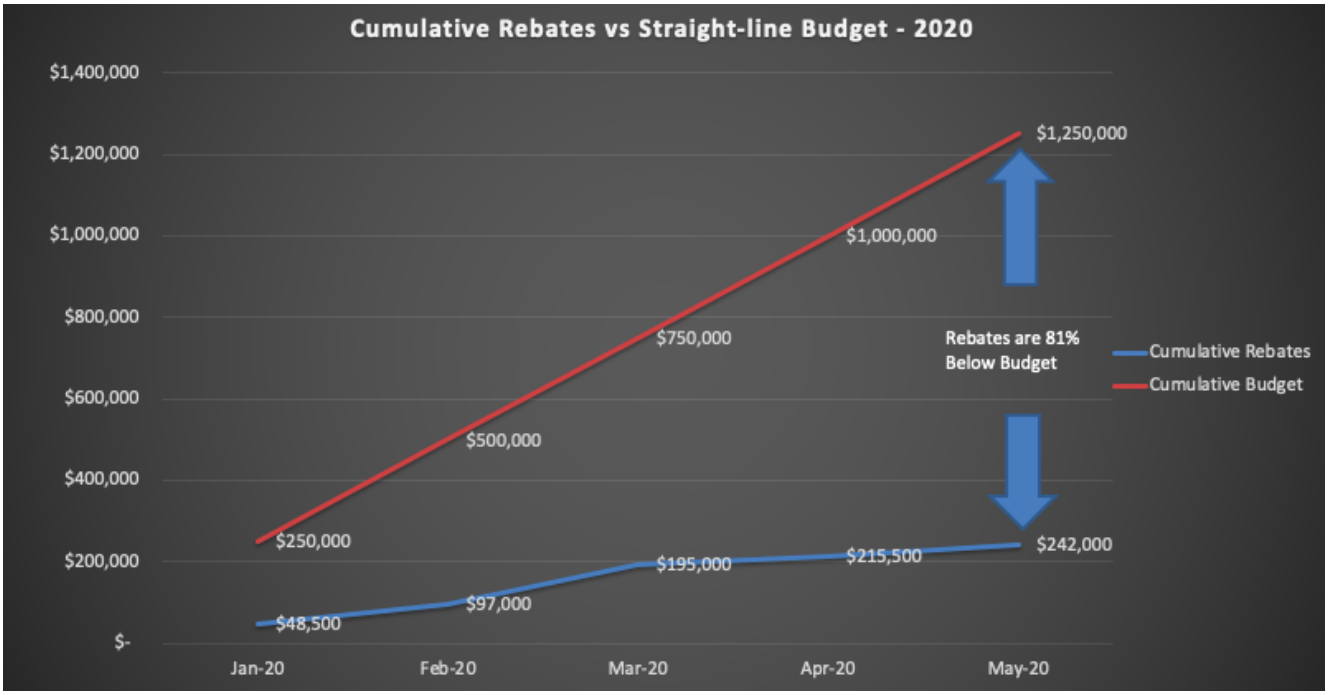


Chart: Barry Kresch

The most rebated vehicles were the Tesla Model 3 with 8 rebates and the Toyota Prius Prime, also with 8 rebates.

CHEAPR publishes stats on its website and makes an Excel download available, which is what we work from. There are two date columns and we use the application submission date rather than the sale date as that is what CHEAPR bases its own reporting on.

We have reached out to CHEAPR to request the names of the dealers associated with each rebate (for non-Teslas, obviously). Our request has been "escalated to management." It is common for our club to get asked for dealer recommendations by people in the market for an EV. By the time they contact us, they have usually already visited one or two dealers and it wasn't a pleasant experience. We have names of some dealerships that have been recommended by members, but this would be hard data and we think it will help, especially in areas of the state where we don't have a lot of members. We also understand its limitations and will act accordingly. Dealership-level info is published in some other states, NY for example.

The CHEAPR board is supposed to meet in July. We have not heard about a confirmed date. According to the website, the program will have some revisions for 2020 and we eagerly await to hear what they are. We feel the current structure is not working and have offered our input, which has been described in prior blog posts, such as this recent post from June 1.

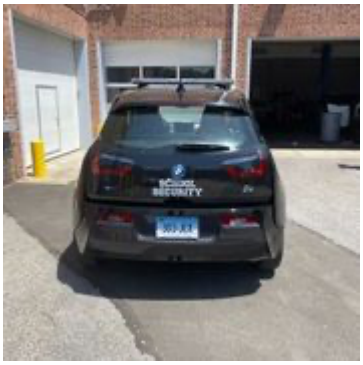
Blue Goes Green – Another EV for the Westport Police

Westport Police Department Receives Donation of Used BMW i3

The local police have been rather busy of late with the protests that have been occurring in the wake of George Floyd's murder at the hands of the Minneapolis PD, and, of course, coping with the stresses of the COVID-19 pandemic.

Not to lose sight of the significance of that, the greening of the municipal police force continues apace. The police department was recently the recipient of a donation of a used BMW i3 from a local resident. It is a 2015 REx model, which translates to an EPA-rated 72 miles of electric range, or up to 150 miles total, including the gasoline range-extender engine.

The vehicle has been customized for its duties and it looks sharp!



The “bimmer” joins a growing family of green vehicles as the police, part of the town’s push to net-zero, are testing a variety of vehicles for different use cases. This “new” addition is being used for security at Staples High School and adjacent Bedford Middle School, where security duty lasts 8-10 hours per day. It replaces a Ford Taurus that was consuming 6 to 8 gallons of gasoline daily, per Chief of Police Foti Koskinas. If we take an average daily usage of 7 gallons and multiply it by 200 service days per year (per the police), it works out to an estimated 1400 gallons of gasoline and 14 tons of carbon emissions annually. (Source for calculation: NASA)

There is a no-idling rule at Staples. Ironically, the most persistent offender has been the police since the patrol vehicle must remain running while on duty. Now they have emission-free idling running off the battery. When it comes to the police, this is why it is important to focus on gallons of gasoline used or saved rather than just MPG. A police vehicle spends thousands of hours idling over the course of its service life.

The low-speed patrolling around the schools means the electric drive will function at high efficiency.

Daily recharging? No sweat. There are two level-2 charging stations at Staples and the vehicle gets plugged in after hours.

Expanding Number of Green Vehicles

Along with the new arrival, the WPD has a Tesla Model 3 that was customized as a police cruiser and went into service during February, 2 plug-in Toyota Priuses that are used for parking and traffic enforcement at the town's two Metro-North train stations and downtown, and a Ford Explorer hybrid (not a plug-in hybrid) that was also acquired for cruiser duty this year. Before the Tesla and the hybrid Explorer, the standard vehicle for cruisers was a conventional Ford Explorer. The EPA-rated mileage of the hybrid Explorer is 28 MPG, compared to 16 MPG for the standard version. These 5 environmentally friendly vehicles, which comprise a little less than 10% of the total fleet, will enable the collection of data to refine the department's approach to future acquisitions.

Tesla Model 3 Update

This blog covered the vehicle entering service in February of this year here and here. There was a planned public press event for when the weather turned warmer, which did not happen due to the pandemic. We have a few updates.

According to Chief Foti, the vehicle has been performing as hoped and he describes the ongoing relationship with Tesla as excellent, crediting them with being very responsive and having a continued willingness to work with the PD in terms of making upgrades.

As previously reported, the Model 3 is already making use of the Tesla cameras. The Tesla lights are incorporated into the police emergency lighting, and all of the accessories requiring electricity are wired into the large battery.

Since we wrote about the vehicle in February, there have been two additional upgrades. The default setting for the headlights is that they turn off one minute after the car

turns off. This was not enough for the police. Tesla did some software recoding and the lights now persist longer.

The biggest open question at the time the vehicle was put into service was whether the police would be able to use the computer that is native to the vehicle rather than install their own. This is a complex challenge due to the need to have an airtight firewall between the police databases that would be accessed and Tesla's proprietary information. It is still a work in progress but there has been one significant development. Working with Tesla, the police have installed stationary radar, which logs directly into the computer. If they get to the point where the Tesla computer can be fully utilized, it would save between $5-$6,000 in customization costs.

The i3 donation was not a planned event, but it wouldn't have happened had not Chief Foti, the department, and the town administration not demonstrated a vision for how to move the town forward in an environmentally-friendly way (which also happens to save money). The EV Club applauds and supports that vision.