**NH Sierra Club’s REV-UP EVs Survey and Report October 2016**

**By Randy Bryan, Sierra Club Volunteer**

**Re: NH’s Plug-in Electric Vehicles Dealerships**

The New Hampshire Sierra Club conducted a survey of NH Electric Vehicle Dealerships to determine how well they handled the customer shopping experience for Plug-In Electric Vehicles [PEVs]. The NH survey was inspired by and followed the protocols of a recent national Sierra Club’s Electric Vehicle Initiative study [REV-UP EV 2016] conducted in the 10 CALEV-ZEV states. NH Sierra Club’s survey was the first extension, anywhere in the country, of the national Survey to a non-ZEV state. The NH Sierra Club wanted to see how NH EV dealerships compare to ZEV State dealerships and if the same lessons apply.

**Acknowledgements:**

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**Plug-In Vehicle Sales Environment:**

Most of NH is in a Federal “non-Attainment Area” for air quality [gov’t speak for poor air quality]. This has various consequences to public health [costs], and acidification of rain and rivers. While NH has put considerable effort into squeezing carbon from utility energy generation via the Regional Greenhouse Gas Initiative [RGGI] and the Renewable Energy Fund [RFS, rebates for solar], transportation emissions have been largely ignored. In fact, transportation is now the largest CO2 emitter category in NH and nationally. Given the continued alarming rise in global CO2 emissions and the consequent rise of global temperatures, which are causing increasingly expensive damages, ignoring vehicle emissions seems ill advised. Plug-in electric vehicles offer the most aggressive and cost effective path to minimize, and eventually eliminate, CO2 emissions from transportation.

Plug-In Electric Vehicles [PEVs, including all-electric and plug-in hybrid vehicles] sales are growing rapidly and now represent over 1% of cars sales nationally, with California about 4-5 times that pace. Almost 150,000 PEVs will be sold in the US in 2016. As battery technology and costs improve, and as the charging infrastructure expands, the attractiveness of PEVs will increase to a greater share of the market. As an example, the arrival of new batteries that enable 200 mile all-electric vehicles [EVs] priced in the $30-40k range will be available in 2017-2019 [current EVs have a range of 100 miles for about $30-35k]. These new PEVs will appeal to a much wider share of the market and could boost PEV sales quickly to 5+% of the market. Chevrolet, Tesla, and Nissan have announced such vehicles. BMW, VW, Ford and Mercedes are said to be close to such announcements. Further improved Battery technology and costs by 2025 should yield PEVs that are similar in price and capability as combustion vehicles, yet with much lower operating costs. This trend may very well be a “slam-dunk” recipe for market take-over by PEVs.

 Tesla, for example, has received 400,000 pre-orders for its Model 3 [200 mile EV for about $40k] and will start shipping in 2017-18. Tesla, by itself, plans to ship over 200k EVs in 2018 and up to 500k EVs in 2020. For the moment, Tesla seems to have an especially dedicated fan club, since it has, by far, the best charging infrastructure. Whereas, the other Automakers with lesser [slower, less well planned and maintained] charging infrastructure are announcing similar cars without the achieving same level of interest.

For PEV Sales, the USA can be divided into 3 segments: California, the other 9 CALEV-ZEV states, and the remaining 41 non-ZEV states. California started the ZEV movement decades ago with mandates that Automakers produce an increasing % of PEVs, or pay penalties, or not be allowed to sell any cars in California [CAL- ZEV Mandate]. Nine additional States recently aligned their policies with California to adopt the same ZEV Mandate. All of the New England States, except NH have adopted the ZEV Mandate [in a NESCAUM MOU of 2012]. As a result, the Automakers have been forced to increase their production and selection of PEV/ZEV models. As evidence of their reluctance to boost PEV sales, over half of these models are only available in ZEV Mandate states [called “compliance cars”]. California has nearly 30% national PEV sales and 3x the PEV sales % as the other ZEV states. The other 9 ZEV states have nearly 2x the sales % as the non-ZEV states [including NH] who have PEVs available on a lower priority. [Note; NH is still #18 among all states in PEV sales %].

Are the PEV Automakers/ Dealerships handling PEV sales well? Are they ready for rapid growth in this segment? What are best practices for PEV sales?

**The national REV-UP EV Survey 2016:**

The national Sierra Club wondered why some PEV Dealerships were having greater success than others. So, Sierra Club recently conducted a survey [REV-UP EVs 2016] in select states of Car Dealerships for Manufacturers who sell Plug-In Electric Vehicles [PEVs], to see how well they manage the PEV shopping experience. The Rev-Up EV Report was released this past August 2016 and showed a variety of Dealership and Manufacturer actions contributing to success or failure.

The REV-UP EV survey was conducted by Sierra Club’s national Electric Vehicle Initiative group, utilizing some 174 volunteers from around the country to visit and grade some 308 PEV Dealerships of 13 Automakers in all 10 CALEV-ZEV states. Some Dealerships with at least one PEV in stock were visited by the volunteers in a mock-shopping experience. This Survey was designed to shed light on trends in the consumer PEV shopping experience, not to be statistically representative.

Key findings of the national REV-UP EV Survey:

“ Our volunteers told us that nearly half the time EVs were not displayed prominently, and that the Plug-in cars were often hard to find on a dealership lot. Many volunteers told us that sales people we spoke with neglected to inform them of state and federal incentives that could lower the cost of an EV. Some people even found themselves unable to test drive an EV because the dealership failed to charge it.”

Key indicators of Dealership success at PEV sales were: the number of PEVs in stock, the amount of education of sales staff about PEVs and incentives, whether PEVs were prominently displayed, and the number and availability of PEV for test drives.

In general, PEV Dealerships seemed poorly prepared for the coming steep increases in PEV models, performance, price and market interest. The REV-UP EVs 2016 report is referenced at Report end.

**The NH Rev-Up EV Survey 2016**

The NH Sierra Club Transportation group wanted to see how NH’s PEV Dealerships [in a non-ZEV State] compared to the ZEV States. The NH REV-UP Survey followed the questions and protocols of the national survey. As a non-ZEV state, fewer plug-in models are available for sale here [no PEV “compliance cars”]. Hence, there were fewer Manufacturers to survey. Only the big-4 PEV Automakers’ Dealerships were surveyed [Chevrolet, Nissan, Ford and BMW]. Notably, Tesla does not have a showroom in NH, and 3 others [Toyota, Audi, Smart] have minimal PEV sales and weren’t included.

NH is a comparatively small state, so, of the possible dealerships, a greater percentage were surveyed to gain statistical significance. 51 dealerships were researched in the state and 16 of them were visited. All NH research and surveying was done by one volunteer, whereas many volunteers were used in the national survey. Results were submitted to the same national Sierra Club REV-UP EV survey group for analysis.

Key findings:

NH has less than half as many PEV models for sale as in ZEV Mandate States
Only 28 of the 51 NH PEVs dealerships researched had one or more PEVs in stock
 12% less than national ZEV State average
NH Dealerships with PEVs in stock had about ½ as many in stock as in ZEV states
NH Dealerships without PEVs in stock had insignificant PEV sales.
The greater the number PEVs in stock, the greater number of PEVs sold per month

NH Sales staff were only about 2/3 as knowledgeable about PEVs as in ZEV States
Very Few NH Sales staff knew anything about public charging infrastructure.
NH Sales staff were only ½ as informative about PEV Incentives as in the ZEV states

Most NH Sales staff said there were too few PEV customers to stay knowledgeable.
Many NH Sales staff said Automakers based available stocking levels on past sales, so pre-stocking of more PEVs to boost PEV sales was very difficult.
Many NH Sales staff said there was little to no advertising of PEVs by the Automakers or Dealerships
Of the 16 NH Dealerships visited:
 5 handed the shopper off to a rookie sales person who were bright people but knew little.
 One rookie invited in the EV expert and the experience was excellent
 3 handed the shopper to a resident EV expert and experience was very good to excellent
 3 experienced sales person knew very little about PEVs and showed limited interest
 1 Sales person tried to switch the shopper to an non-PE Vehicle
One Sales person said “I can’t help you, I haven’t sold one in 2 years”.
One Sales person said “We don’t offer a demo ride until the customer is ready to buy”.
One Sales person said “A recent prospect said he wanted a particular PEV with a particular Color and Trim. The nearest one was 275 miles away. We lost the sale.”
The more knowledgeable Sales persons said; limited EV range, higher price and limited infrastructure were the primary sales resistors. None had a sales strategy to overcome these issues.
Note that most of the Dealership sales people were men, especially senior salesmen. However, a greater % of junior sales people were women rising up the ladder.

Are the problems with the Public, Dealerships or the Automakers?

**NH Survey Summary**

The NH Survey results generally indicate a much lower emphasis on PEV sales by Automakers and Dealerships in NH than in ZEV states. This can be seen in the number of PEV models offered, media marketing, PEV stocking levels, vehicle displays and test-rides, and Sales staff education level. Following best practices for PEV sales seemed to be a better indicator of PEV sales success than dealership size. The Automakers and Dealerships seem reluctant to do things in NH which would boost sales of PEVs, and they claim the Public seems under informed/motivated to buy PEVs.

Yet, sales of PEVs in NH are not far behind the ZEV states [#18 of 51 states, 2015 PEV registrations]. Clearly, there are interested buyers in NH, in spite of the apparently worse PEV shopping environment.

The NH Sierra Club salutes the following NH Dealerships who offered a superior PEV sales experience:
 Dover Auto Group Chevrolet, Dover NH
 Ford of Londonderry, Londonderry NH
 Peters Nissan, Nashua NH
 Roundtree Ford, Swanzy [Keene] NH

**Actionable Recommendations:**

Automakers – more PEV models offered nationally, more and better PEV advertising, higher stocking policies and incentives for dealerships, better and more frequent education for Dealership staff, participation in expanding-improving national charging infrastructure.

Dealerships – more and better PEV advertising, greater sales incentives and quotas for sales staff, better and more frequent education of sales staff, much greater stocking of PEVs, participation in State level expansion of charging infrastructure. Have at least one well-trained PEV salesman on the floor at all times. Get interested PEV prospects to the PEV expert quickly. Have a sales strategy for handling PEV sales resistors.

NH – Consider joining the ZEV Mandate states. Expand incentives for PEV purchases and planned charging infrastructure. Expand public education on plug-in electric vehicles and their benefits.

**Report References:**

National Sierra Club’s REV-UP EVs Survey Report: <https://www.sierraclub.org/sites/www.sierraclub.org/files/uploads-wysiwig/1371%20Rev%20Up%20EVs%20Report_09_web%20FINAL.pdf>

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