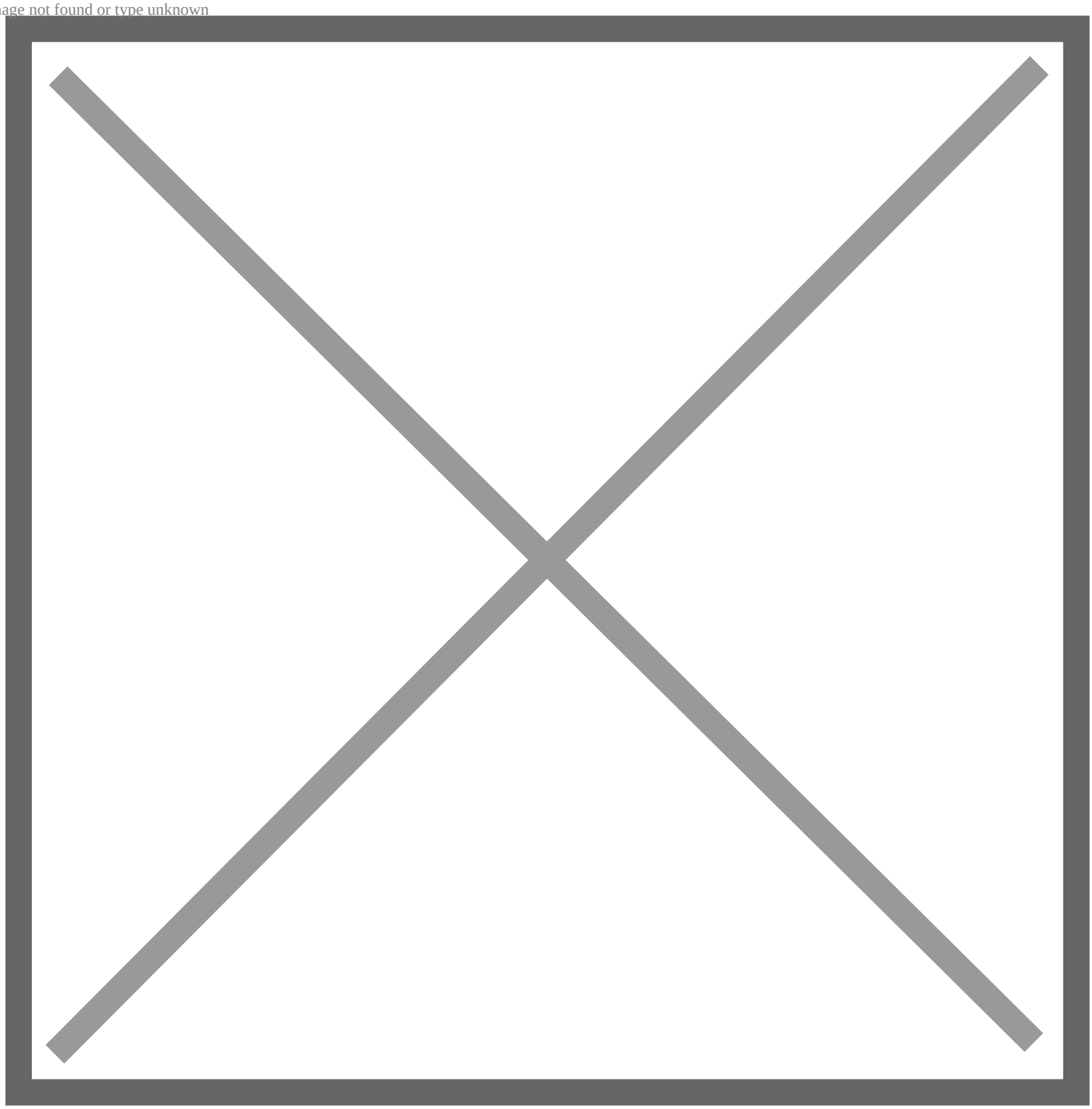
Do Plug-In Hybrid Owners Actually Plug In?

May 20, 2026

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Have your cake and eat it, too. A plug-in hybrid (PHEV) is the hybrid you know and love, like a Prius or RAV4 but, it also has a plug, a larger battery and powerful electric motor that can allow the vehicle to run solely on near-silent, battery-electric power.

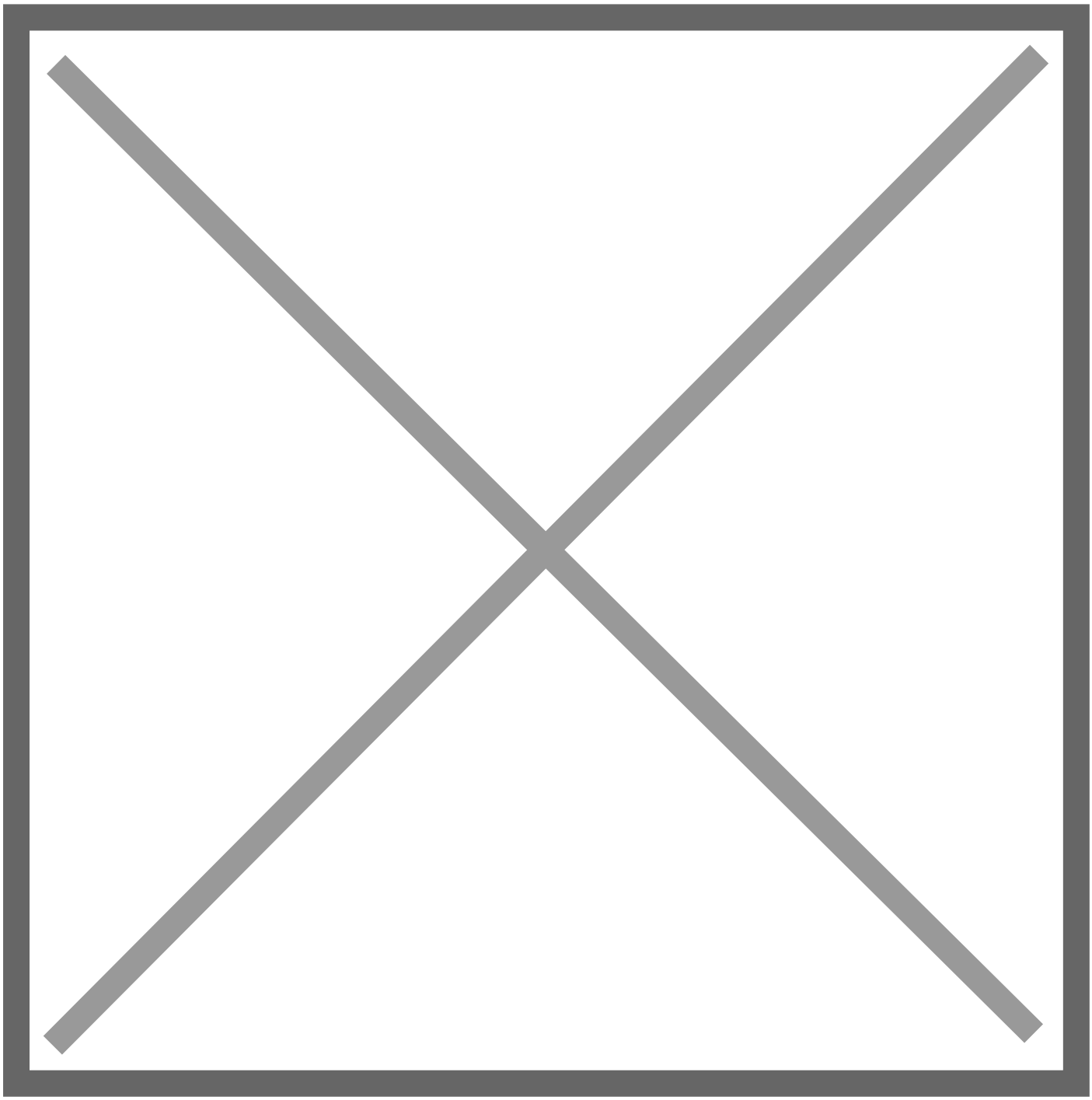
The ability for drivers to choose what can power their car makes a whole lot of sense these days.

The average cost per kilowatt-hour of electricity at home is 18 cents nationally making it cheaper to go 40 miles on plug power than the gas pump.[1]

Then again, there are a small number of places in the U.S. where the pendulum swings toward a non-plug-in advantage, where the per-mile cost of gasoline is cheaper than electricity.

Still, there's been a prevailing question of whether drivers who could be fueling on more affordable electrons are actually plugged in.

Toyota Research Institute North America (TRINA) sought to figure this out and, spoiler alert, it turns out that Toyota and Lexus PHEV drivers plug in quite a bit.



Karim Hamza and Ken Laberteaux from TRINA recently studied a group of Toyota and Lexus PHEVs to estimate how much people charge their vehicles. All told, they analyzed data from more than 6,000 PHEVs across the U.S. and Canada, including anonymized data from Toyota RAV4 Prime (the previous name for the plug-in RAV4) as well as the similarly sized Lexus NX 450h+.

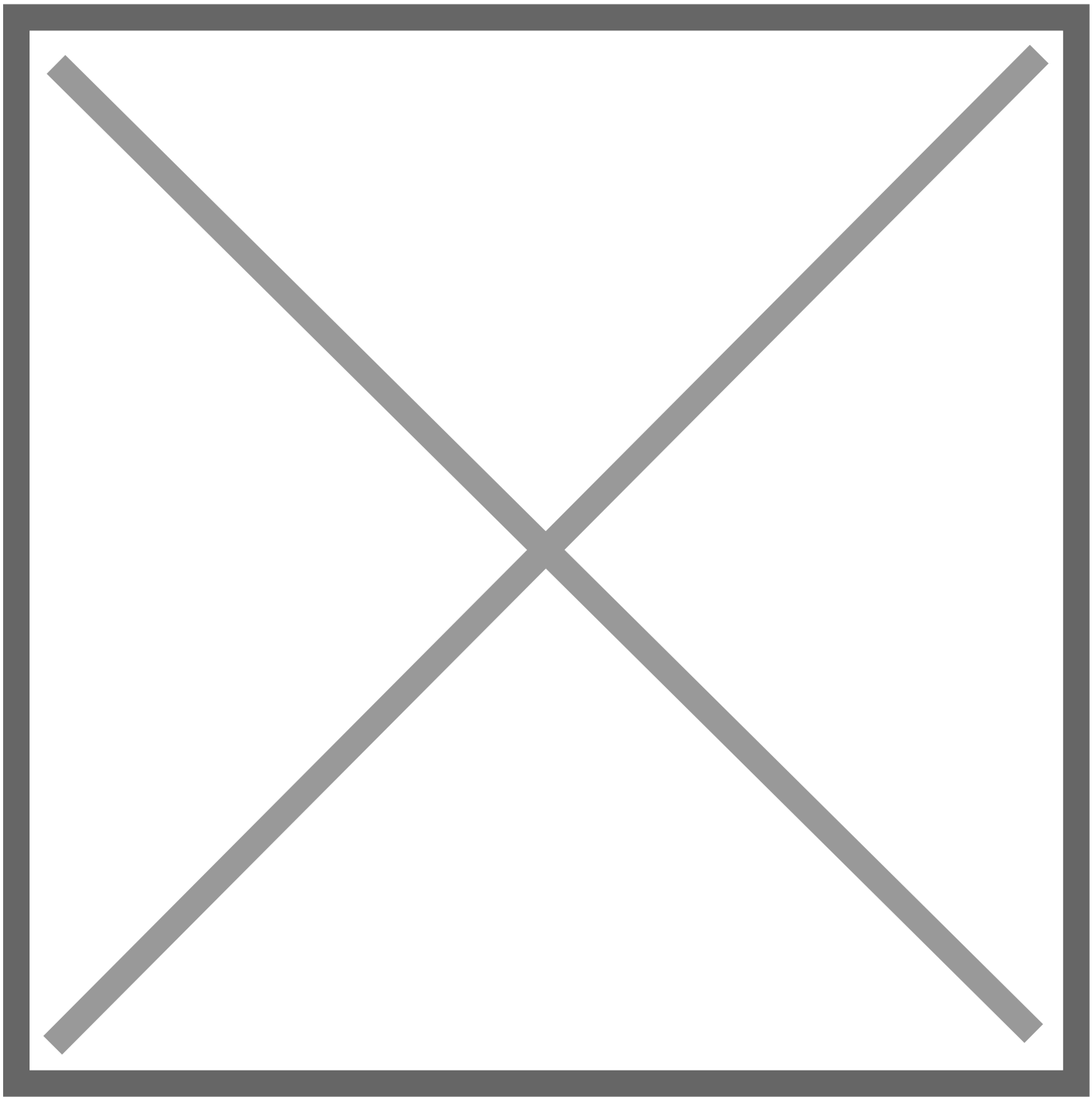
They discovered that, on average, Toyota PHEV owners plug in seven out of every 10 driving days, while the Lexus owners charge between eight and nine times per 10 driving days. They further reported notable variation across different regions where energy economics strongly encourage (or discourage) charging.

In fact, only 9% of Toyota drivers and 4% of Lexus drivers from this sample rarely plug in.

While not the focus of the released study, the TRINA team is currently testing two hypotheses as to why:

1. Some PHEV drivers may not have convenient home charging, for example living in multi-unit dwellings where the closest outlet to parking is out of reach.
2. As referenced above, in a small sliver of the U.S., the cost of electricity can make it more expensive to plug in versus operating the vehicle as a hybrid with gasoline fuel.

The earliest plug-in Prius had an EPA-estimated all-electric driving range of 11 miles and often needed the engine to supplement the available electric power. So we get it, it’s easy to be skeptical.



But the RAV4 PHEV and Lexus NX 450h+ in this study (model years 2021-2024) have an EPA-estimated* 42 and 37 miles of all-electric range, respectively, usually without the need for powertrain blending.

Today, Toyota and Lexus offer five 2026 model year PHEV vehicles with manufacturer-estimated all-electric ranges from 33 miles for the 2026 Lexus TX 550h+ and up to 54 miles for the 2026 Toyota RAV4 PHEV SE. So go ahead, have your cake.

Follow this link to learn more about the study, available as a peer-reviewed white paper published by SAE International: Identifying Patterns of Real-World Charging Frequency for a Sample of Plug-In Hybrid Electric Vehicles in North America – Technical Paper.

*EPA estimates. Actual mileage will vary.
[1] Electric Power Monthly – U.S. Energy Information Administration (EIA)