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Saturday, 12 January 2013 22:15

editor's blog entry

So, as you may have noticed, my brother stole the EV + PV thunder at our home recently, zipping down from Boulder to Aurora, Colo. with his family in their brand new Tesla Model S to become the first EV to directly plug into sunshine at our home .

More than three years ago when I started SolarChargedDriving.Com, I kind of figured we, ourselves, would be the first to plug an EV into PV -- which we put on our home in June 2010, 5.59 kW worth of it to be exact -- here. But it wasn't to be thanks to unexpected circumstances that cropped up for us a little over a year ago.

Model S not in our price range

Had we been able to follow through and get an EV when they first became available in Colorado a little over a year ago, we wouldn't have ended up with a Model S, which, unfortunately, isn't in our price range.

It probably would have been a Nissan LEAF. But as practical a car as the LEAF is for the tens of thousands in the U.S. who now have one, and as practical as it would have been for us for most of our driving, it hasn't escaped me that, unlike the Tesla Model S with the 85 kWh battery pack that my brother has, which consistently delivers more than 200 miles of range, and which my brother could drive down to Aurora and back to Boulder, a 90-mile roundtrip of which about 95 percent is pure highway driving, without charging, the LEAF would likely not be able to make that trip without having to be charged in the middle.

The fact that we could not realistically get from our home in Aurora to Boulder and back in a LEAF (85 miles of highway driving + 5 miles on roads that are stop and go, but fairly high speed) on a single charge is something I've thought about quite a lot.

My brother plugged his Tesla Model S into sunshine (or, really, sucked down a few of the thousands of extra solar kWh we've produced in 2 1/2 years with home solar) for about one and a half hours at our home and managed to add just four miles of range for his 45-mile trip back to Boulder -- we do not have a 240-volt EV charging station, just so-called trickle charge option here at our house. That same scenario would not have been acceptable for us if we had a LEAF and drove it 45 miles to Boulder to visit Thomas, who, in fact, does not yet have a 240-volt charging station for his family's Model S.

80 miles of highway driving

I'm guessing we would have to plug in a LEAF for at least four hours, probably six, at a trickle charge rate in order to add enough range to feel comfortable enough to hit the highway for 40-miles of 65 mph driving, on top of the 40 miles of highway driving we would have put down in order to get from Aurora to Boulder, at least in a reasonable amount of time.

I guess, if we had a LEAF, we could take a route from Aurora to Boulder with less highway driving. But, of course, I would have no desire to do this. And why should I have to do it? It would be extremely inconvenient and inefficient in terms of time use.

The other option would be to find a 240-volt charging station in Boulder and have my brother pick us up and drive us to his house from the charging station, also not the most convenient, or time efficient approach.

The fact that we could not realistically get from our home in Aurora to Boulder and back in a LEAF (85 miles of highway driving + 5 miles on roads that are stop and go, but fairly high speed) on a single charge is something I've thought about quite a lot. First, because it underscores the massive superiority of a Tesla Model S (at least the 85 kWh battery pack version), at least in our individual case, as we do, in fact, make the 90-mile round trip from Aurora to Boulder fairly frequently.

Model S in class of its own

Second because it underscores the fact that while pure EVs can indeed meet the needs of even those who want to travel medium-long distances mostly, if not exclusively while doing highway driving, the EVs that can do this, or, really, *the only* pure EV that can do this, basically, the Tesla Model S, is still way out of the price range for most Americans, including us.

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I'm grateful my brother and his family -- who have the financial means to do so -- have invested their money in a Model S, and that they will be solar-charging their Model S. The world is a better place because of this.

I'm hoping -- check that, REALLY hoping -- there are enough other people with the financial means to buy a Model S (there are about 3,000 Model S EVs on the road in the U.S. right now) to: a) keep Tesla afloat and doing well; b) help drive down the price of pure EVs such that EVs with more range, meaning EVs that can cover 200+ miles on a single charge so that the masses can afford them.

In the end, while 70 to 80 miles of pure EV range is good enough for many people and most, even all, of their driving, it's clear it's not enough for everyone, or at least not enough for all of their driving, including us, as the 90-mile highway driving roundtrip between my brother's house in Boulder and ours in Aurora -- one we make regularly -- makes very clear.

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