

New York Road Trip Account

There have been many accounts of long distance trips in the Tesla model S up and down both coasts and across the country. We also have an account of an east to west cross country trip involving a Nissan LEAF and several two wheeled electric vehicles.

This is my account of a trip my wife Diane and I made in our 2012 Toyota RAV4-EV from Winter Haven, Florida to Rhinebeck, NY via the Auto Train which started April 27, 2014 and ended on May 14, 2014.

This trip was a vacation the purpose of which was to spend time with family and do some touring of Philadelphia and Baltimore, places we had zoomed past many times on the Interstate Bypass on trips from NY State to Washington DC.

My wife and I are in our early 70's and not about to engage in an endurance run to see how fast you can get from Florida to NY in an EV. If we want fast we would take a plane.

There really is no contest, if you want to show automobile endurance over long distances, you throw civilized human needs aside, get two or more drivers in the car and stop only for fuel, food and toilet stops, all combined into one. Then after ten minutes resume driving while eating and taking turns driving and sleeping.

Not my idea of a vacation. At least not at my age. Two or three hours on the Interstate is enough for us in a day. So I'm not here to tell you my EV is the same as a gas car because it is not. My car doesn't use gas. On this trip which consisted of 1,057 miles of highway driving, we paid nothing for fuel.

You might say, well your family paid for the fuel you used while plugged in at their home, and that is true. But in Falls Church and New Paltz where we did most of the family charging, all driving done while we were there, was done in the EV saving more money on gas than the cost of electricity used.

So what's it like driving an EV on vacation? Well in addition to the normal planning about the route you will take, who you will visit, what points of interest you want to see, where you will stay and packing, you need to think about where you will charge. You can read about our charging plan in the Appendix.

Departure - (April 27, 2014)

On April 27 having charged the car to 80% after the last trip, I got up at 6:00 am and plugged the car in, to do what Toyota calls an extended charge, to bring it up to 100% from the 80%, Toyota calls a normal charge. While the car was topping up we got dressed, had breakfast and did any last minute loading of stuff into the car. Most of that had been done the day before.

The night before I had put the addresses of the Marriott Residence Inn – Orlando which is actually located in Lake Mary, the Amtrak station in Sanford and our family's residence in Falls Church into the GPS.

I keep a record book in the car of odometer readings and charging details, so I recorded our Odometer reading of 8104 and our 100% extended charge range of 141 miles. At 10 am with GPS set for our first stop we pulled out of the garage on the first leg of our EV adventure.

The morning drive on I-4 with the vent open, bringing in comfortable outside air, went well. We arrived at the Hotel around noon with a range remaining of 80 miles and an odometer reading of 8170. We had traveled 66 miles but only used 61 miles of range. When driving under ideal conditions like this, the car seems to be capable of going about 10% further than originally predicted.

Lake Mary

On arrival both chargers were open, so I updated my record book and plugged into the Charge Point charging station. I have a card I leave on the dash with my cell phone number that indicates how long I expect to be charging. I used a paper clip to indicate when I expect charging to finish. I indicated 3 pm since I planned a normal charge that might take about 2 hours or so.



Illustration 1- Marriott Residence Inn – Orlando in Lake Mary, FL

As it turns out the room was ready so we checked in. There was an Applebee's about a third of a mile away, across the parking lot, so we walked over there for lunch. I had French onion soup, chicken quesadilla and a mocha shake with some chocolate mousse cake for dessert. This was the beginning of a very festive vacation in terms of dessert. I also got a mocha shake to go, to enjoy at the station the next day while we waited for departure. The room had a freezer so we could keep it cold.

My wife had a more modest lunch of soup and the same shake. After lunch we checked on the car and it was finished, so I unplugged and moved it so it wasn't blocking the station.

That evening we enjoyed an HBO Special called "700 Sundays" with Billy Crystal. We don't get HBO at home so this was a treat. It was so good we watched it again after breakfast.

Breakfast was included at the hotel. It was great with scrambled eggs, bacon, sausage and many other choices such as waffles, pancakes and cold cereal. I enjoyed juice and coffee with my bagel, eggs and meat.

After getting organized, at about 9:30 am, we headed for the train station with an 80% charge and a range of 122 miles.

Amtrak Station at Sanford - (April 28, 2014)

We were about fifth or sixth in line for check-in at 11:30 am. Someone pulled in right behind me. He was very interested in the electric RAV4-EV. He had never seen one before, which is not surprising, since it is a California compliance car only sold in that state. I told him I bought it used with 6,500 miles on it for \$32,000 before tax, title, shipping and tags. I showed him the charge inlet behind the "Gas Cap" door cover. He laughed. He wanted to know how far does it go and how long does it take to charge. He seemed quite interested. He was interested enough that I gave him a copy of my book, "Turning Point in History". He was pleased to have it.



Illustration 2- Amtrak Station Sanford, FL

As 11:30 rolled around they started checking each car in and placing a magnetic number on the drivers door of each car. Ours was number 036. The attendant placed the number on sideways. I had never seen that before. I took a photo just as the driver was ready to take the car away to board the train.



Illustration 3- No. 036 Boarding

I sat in the train station with my wife drinking my mocha shake from the day before while waiting to board the train. They had more than 300 cars to load. It was the most of any trip we have made. Most likely ours was the only electric car that day. Looking around the waiting room as a crowd of over 500 passengers grew, it was clear that it was the end of April and time for the snow birds to head north. The waiting room was an array of canes, walkers and wheel chairs being used by silver haired seniors with varying levels of ambulatory skills. We are thankful for our ability to get around unassisted. Although, we each have a cane in the trunk, just in case.



Illustration 4- Amtrak Waiting Room in Sanford, FL

The train was so booked our original ticket was for coach, something we did not look forward to. But every day for a couple of weeks before the trip, three times a day, my wife called asking about cabin cancellations. Fortunately, just two days before the departure there was a cancellation. Unfortunately, it was for the larger, more expensive one. We took it anyway. So we had avoided our miserable night in coach. We even had a shower, which I took advantage of.

We had dinner with a man and his adult son on the train who, when I told them we were driving an electric car to Long Island and points north, had lots of questions. Surprisingly we sat with the same two at breakfast. That has never happened to us on the train before.

Arrival at Amtrak Station in Lorton, VA (April 29, 2014)

On arrival in Lorton, Virginia, we waited for hours for our car to be unloaded. There were about a dozen people left in the waiting room when we heard, "zero thirty six, zero three six" called.

It was 48 degrees and raining. Although the GPS was preprogrammed for family in Falls Church, it had decided we had not yet completed our arrival in Sanford. I removed the earlier destinations from the route and we were on our way, but I was freezing. My wife was struggling with her navigator duties and the air conditioning system trying to figure out how to get the heat on, something we have no use for in Florida. After some confusion and a short period of max air (most unwelcome) while trying to get connected to I-95, we finally found ourselves at a comfortable cabin temperature for the 15 mile drive to Falls Church.

Falls Church, VA

On arrival, after all the hugs and kisses, I ran back out to the car and got my heavy duty extension cord out. The routine was familiar after having done this with the Nissan LEAF the past two year's visits. The 2012 LEAF charging cord doesn't work with the RAV4-EV for some reason, so I bought the Tesla UMC (Universal Mobil Connector) and had the Tesla plug removed and replaced with a 50 amp J-1772 plug which illuminates like a flashlight when the other end of the cable is plugged into the wall.

The Tesla UMC is nice because it comes with a set of adapters that allow you to charge at any 110 volt 15 or 20 amp wall outlet, or 220 volt 30 or 50 amp outlet or a 50 amp welders outlet. I have made other adapters that will allow me to charge at 220 volts and 20 amps for twist lock or push in outlets. Here we are using a simple 110 volt 15 amp outlet on the patio deck.

After running the extension cord from the deck to the driveway, I plugged the UMC into the extension cord and plugged the J-1772 into the car. I got into the car and entered the mileage. After an overnight on the train, it was now April 29, the odometer reads 8200 miles and the remaining range was 74 miles. We had traveled 30 miles and used 48 miles of range. The heat had taken a toll on the range. We should have used the heated seats.

We stayed two nights in Falls Church catching up with family on developments since our last visit. A couple of us decided to make a grocery run. We unplugged the car and gave our host a chance to drive. In the course of our stay both of our hosts had a chance to drive the car. By morning it was charged up to 80% with 114 miles of range. We drove a total of 8 miles on a couple of short errands.

On Wednesday night before going to bed, I plugged in for an extended charge of 100% for our departure on Thursday morning, May 1. We got up Thursday morning with an odometer reading of 8208 and a range of 137 miles. The temperature was already 58 degrees and the rain had finally stopped. It was looking like a good driving day. It was 9:30 am and we were off to Baltimore and the Little Italy garage for a booster charge on our way to Mount Laurel, NJ.

Baltimore, MD – (May 1, 2014)

The trip to Baltimore was well timed with moderate traffic and fair weather not requiring heat or air conditioning. We arrived in late morning, almost noon. We saw a large garage in front of us with a large banner near the top that said "Little Italy". I mistakenly assumed this was our destination, ignored the GPS and drove up the ramp.

I asked the attendant if they had an electric car charging station. She said yes and directed us to the location. We parked the car and soon found that this was not a Charge Point charging station. It was a SEMA station. I didn't understand. Plug Share indicated that the Little Italy garage had a Charge Point station. It would only be later that afternoon before I realized I had chosen the wrong and more expensive garage. We spoke to the attendant hoping she had a card to unlock the free charging station. No such luck. After about 15 minutes of following the guest instructions posted on the wall, I was able, with my iPhone, to login to their web site and give them a credit card number so they could enable the charging station and give me a free charge.



Illustration 5- Unexpected SEMA charging station, Baltimore

We arrived with an odometer reading of 8261 and a range of 93 miles. We had driven 53 miles and used only 44 miles of range. We were down 2 of 16 bars which is the equivalent of 6 out of 20 bars on the state of charge meter. The RAV4-EV has 16 bars on the display which indicate a normal 80% charge, but if you do an extended charge, you get an extra 20% (a virtual undisplayed 4 bars). Since we left with the extended charge we really had 20 bars even though we could only see 16. We arrived with 14 bars left.

We are now off to explore Little Italy. Lots of places to eat. But I had seen on my virtual tour of the neighborhood a nice looking Bakery. I didn't remember the location. At the time I was all wrapped up in finding charging stations. I had fouled that one up too, although I still hadn't realized it. I thought Plug Share had gotten it wrong about the type charging station.

After wandering around for quite a while, there it was on Bank Street not far from the corner of South Central Avenue. We went inside and were delighted with the place. It was a magnificent bakery, but you could also have a meal. They offered a combination platter of 5 items of your choice for two people. We chose meatballs, lasagna, gnocchi, manicotti, something like quiche but I can't remember the Italian name. After, for dessert, we got an assortment of pastry which was way more than we could eat. We had cannoli , tiramisu, a mocha cake. I also had coffee and chocolate gelato. We packed up what we couldn't eat and took it with us. I enjoyed the cake at our hotel that evening in Mount Laurel.



Illustration 6- The Piedigrotta Bakery in Little Italy

As we left the Piedigrotta Bakery on Bank Street and crossed Central Avenue, we headed towards the garage where the car was parked with our little bag of goodies. It was then that I spotted the sign for the Little Italy garage. We checked it out. Right there by the South Central Avenue entrance was the Charge Point Charging Station. I guess Plug Share was right. I just went to the wrong garage.

When we got back to the car we had a range of 138 miles after two and a half hours. It was still charging but we had little more than 100 miles to go so we unplugged and started out for Mount Laurel.

New Jersey State Police Stop

I drive between 55 and 65, closer to 55 most of the time. About 16 miles from our destination a New Jersey State Policeman pulled me over. He was concerned that I was OK because I was driving so slow. My bet is the truck drivers were talking on the radio about this old guy from Florida driving around 55 and 60 holding things up. I told the officer I was fine and he seemed to accept that. His parting remark was, "You know, it's OK to drive 70". I thought this was interesting since the speed limit was 65. Things have changed since Jimmy Carter was President and the speed limit was 55. They must have been driving 80 in the fast lane. For the last 16 miles I picked things up to between 65 and 70. Everyone was still passing me and looking at me as if to say, "If you're going to park, why don't you pull off the road?".

LEEDS Certified Wyndham Hotel

The Mount Laural Wyndham Hotel is like no other hotel we have ever stayed at. It is a LEEDS Certified building. The initial evidence of this is the solar parking lot. More than half of the parking spaces are under a solar covered canopy. The charging station has a level 3 CHADEMO fast charger used by the LEAF and some other Asian EVs, but not usable by our car. The other was a level 2 charging station with no billing system. We pulled up to the level 2 station and started an 80% normal charge. I don't like to start an extended charge until we are ready to leave. I like to finish the extended charge just in time.



Illustration 7:- A portion of the Solar Array at the LEEDS Certified Wyndham Hotel in Mount Laural, NJ.

When we arrived the odometer reading was 8368 and the range was 37. We traveled 107 miles and used 101 miles of range. We had 5 bars remaining out of approximately 20 total. Not sure because we unplugged slightly early in Baltimore. We had about 20% capacity remaining.

We checked in and my wife called room service for a sandwich. I had a cup of coffee and some mocha cake from the bakery in the room. Around 9:30 pm the car reached 80% having been plugged around 4 pm. I unplugged and parked in the spot next to the station so if anyone needed it they would have access.

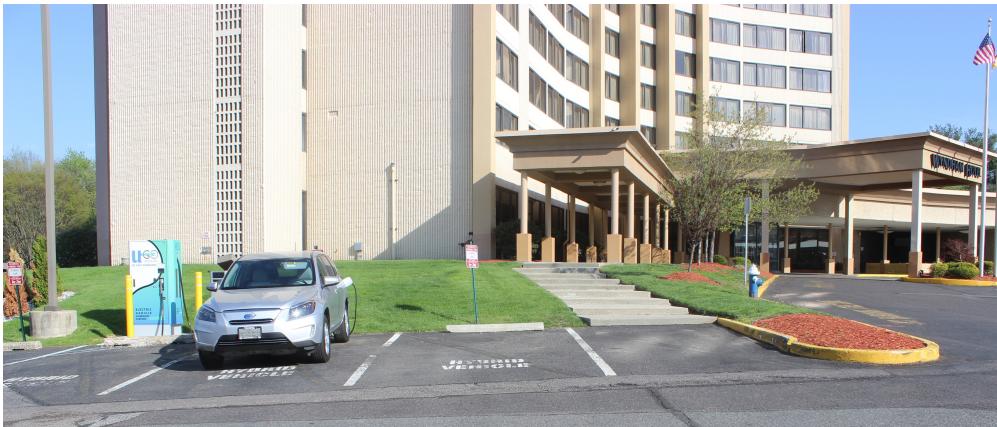


Illustration 8- Wyndham Level 3 CHADEMO Station and Level 2 Station

In the morning I went down around 7:30 am and plugged in for an extended charge. My wife had room service bring breakfast. I had French toast and she had an omelet. I showered and shaved after breakfast. We got organized and waited for traffic to ease up. Around 9:10 or so we went down to the car and loaded up. I wrote down the range was 137 miles. We had learned that we were picking up about 10% on the range, so we decided to try to go straight through to Long Island. We had back up charging stations at two Rutger's campuses and one at the Court House on Staten Island.

The charge was completed and I was gathering courage to make the push straight through. This would be the longest trip we had ever made on a single charge. We were about a mile from I-95 with an easy on ramp. As we proceeded north, the further we went, the more obvious it became that difference between the remaining range and the distance to our destination was increasing. We could see that we would arrive with over 30 miles remaining. We passed the Rutger's campuses without stopping. As we approached Staten Island we decided to keep going without visiting the charging station at the Court House.

It seemed the further north we drove the lower the speed limit. But that only slowed traffic a little. Crossing the Verrazano Narrows Bridge brought us to the Gowanus Parkway and the Brooklyn Queens Expressway known as the BQE to the natives. The lanes are narrow here and it seems as if the roads have not been marked since 1935. Only vestigial remains of pavement markings seem to remain here and there, as vehicles drive three abreast, leaving each other room like members of some sort of precision flying team maneuvering in formation without mishap. I felt like a rookie who had missed the flight briefing.

Some how with my wife's interpretation of the GPS instructions we found ourselves traveling east on the Long Island Expressway or the LIE as the natives call it. The speed limit is 55 but drivers here seem unconcerned about that.

Hilton Garden Inn Long Island – (May 2, 2014)

We pulled into the Hilton Garden Inn which is right off the LIE with 34 miles of range remaining. We drove right to the Charge Point charging station. The odometer reading was 8482, so we traveled 114 miles, a little less than the 123 we expected. We plugged in using one of the two J-1772 plugs. I put my courtesy card in the window indicating expected completion around 5 pm for a normal 80% charge. There were four charging stations. Two located where I was and two on the other side of the lot. Not likely I would be preventing anyone from charging. But my contact information was there just in case.

We spent the afternoon relaxing in our room, recovering from the stress of driving in unfamiliar territory. We had had a good breakfast in Mount Laurel and my wife had saved some leftovers. We snacked on her goodies and I got an ice cream bar from the snack cubby in the lobby.



Illustration 9- Hilton Garden Level 2 Charging

Well rested, at 5 pm we headed to the restaurant and had dinner. I stopped on the way to unplug the car. It was finished when we got there. The range was 118 miles. We then headed back inside to dinner.

I don't remember what I had for dinner. I think it was chicken something. I know it was too much and I didn't finish it. But I did find a very nice piece of chocolate cake on the menu which I enjoyed with a cup of coffee.

The next day Saturday May 3, we spent with family in Huntington about 7 miles from the hotel. When I arrived, I parked in the driveway which was a steep hill. In Florida I don't have to deal with hills much. On most grades the creep on the car will keep it from rolling backward. But in this driveway as I moved forward trying to get off the road without hitting the car in front of me, I noticed as soon as I took my foot off the brake the car rolled backwards. I resorted to something I don't usually do. As I held my foot gently on the accelerator so the car wouldn't roll backwards, I put my left foot on the brake hoping to creep forward in a more controlled manner alternating brake and accelerator. The car balked, it shifted into neutral and rolled backward. I have since learned the car has a safety feature called Smart Stop Technology which is intended to prevent runaway acceleration.

It was a big gathering. It was a great opportunity to see people in a single stop without driving all over New York State. My sister had been on a recent Trip to Casablanca and some other exotic places. We caught up on her trip and she told me she had a little gift for me. We went out to her car and while we were there she had a chance to see the car. She had seen our LEAF and driven it a couple of years earlier. She was surprised and impressed with the size of this car by comparison. Most people are.

When we got back inside we found they were serving lunch in the back yard. They had a buffet of Italian food. I enjoyed the baked ziti and the chicken parmesan while discussing family and politics with my brother-in-law. But the real treat was the desserts.

This was a real opportunity to continue my vacation celebration. All the desserts were made by a single family member. She is really talented. She had different types of exotic brownies, no not those kind. These were nuanced with various subtle favors.

There were the obligatory homemade cannoli and many others including cookies. But the best was a large sheet layer cake. One side was filled with a mocha mousse and the other with cannoli cream. I had a nice big piece from the mousse side.

My brother told me he was taking home some of the leftover desserts. I told him to grab some of the layer cake from the mousse side for me. We would be spending a couple of nights at his house starting tomorrow, Sunday night.

On the way over we ended up on the LIE due to a GPS error or my misunderstanding of the GPS. In any case I didn't want to duplicate that mistake on the way back to the hotel in the dark, so along with our good byes I asked for instructions. As it turned out the GPS agreed with the instructions I was given and we returned without incident to the hotel.

The next day Sunday would be a taxing one for the car. It was our intention to go from Long Island to Rhinebeck, a distance of about 125 miles and then on to New Paltz a distance of 33 miles. We would need to do some charging somewhere along the way. Although there are public charging stations near our destination in Rhinebeck, they were not in walking distance. We decided the best plan would be to charge early in the day while we had time rather than later while running out of daylight. We found a Tesla model S owner living in Dobbs Ferry, which is on our way, in Plug Share. So our route in the morning would be Long Island to Dobbs Ferry to Rhinebeck for a visit and then on to New Paltz.

I got up at 6:30 am and went down to the car to start an extended charge for the long day ahead. Back to the room to get cleaned up and ready to go. I brought a luggage cart with me. When we had the cart loaded up we went down to the car and loaded everything into it. We returned the cart and went to breakfast.

They had a nice breakfast buffet with just about anything you could imagine. I had my usual scrambled eggs and bacon with orange juice, coffee and what looked like a plain bagel. After eating my eggs and bacon, I split the bagel in half to put some butter and strawberry jam on it, I discovered it was almost orange inside. It tasted pretty good and as I ate it while drinking my coffee, the bus boy explained it was an egg bagel. I know this area prides itself on its high quality baked goods, so this is no real surprise. A treat we don't get in Florida.



Illustration 10- Breakfast at the Hilton Garden Inn, LI.

After breakfast we went back to the room, picked up any odds and ends and checked out. By the time we got to the car and got ourselves organized and programmed the GPS for our destinations through New Paltz, the car was 100% charged. The odometer read 8497 and we had a range of 138 miles. We were off to the LIE westbound.

Long Island Departure – (May 4, 2014)

We were headed to the Whitestone Bridge but missed a connection and wound up taking the Throgs Neck Bridge. There were no ill consequences and did not affect the distance to Dobbs Ferry. Once over the bridge we took the Hutchinson River Parkway, known as the Hutch, to the Cross County Parkway and then the Saw Mill River Parkway north to Dobbs Ferry. Not far from the parkway we found our host's model S parked in his driveway next to his NEMA 14-50 outlet.

Dobbs Ferry Way-point

He came out as we pulled up and with a little shuffling we were parked at the post with the outlet. We quickly got engaged in conversation about cars and forgot why we were there. Without losing too much time my wife encouraged me to plug-in. I got my Tesla UMC out of the back of the car and put the 14-50 adapter on it and plugged it into the post. The range was 104, down from 138 having used 34 miles of range. The odometer read 8537 having traveled 40 miles.

I gave our host a copy of my book, "Turning Point in History" which he seemed happy to have. He invited us inside where we met his family. We chatted about our cars and exchanged experiences. He told me he was expecting company and he had to go to the train station to pick them up. We all went outside and he drove off in the model S. After visiting with his family outside for a while I did some estimating and decided we could unplug and be on our way. We had only picked 14 miles on the range indicator now showing 118 miles, but the distance to Rhinebeck according to the GPS was showing 75 miles.

Dobbs Ferry Departure

As we pulled out of the driveway the model S was coming up the hill. He pulled into the driveway as we drove away waving. Suddenly the GPS changed the distance to Rhinebeck to 95 miles. My wife was quite alarmed. I told her it was probably taking us across the Tappan Zee Bridge and up the Thruway on the other side of the river. Sure enough as we passed the Thruway exit off the Saw Mill River Parkway the distance to Rhinebeck on the GPS dropped about 20 miles. We would have no trouble getting to our first stop but there was some doubt about New Paltz. The other problem was that we were on the hilliest part of the trip. We could see as we traveled that we weren't losing any range, but we weren't gaining 10% as we had on earlier legs of the trip either.

We arrived at the family residence in Rhinebeck with 34 miles remaining and an odometer reading of 8620. We had used 84 miles of range and traveled 83 miles. So it was clear the car was less efficient by about 10% in the mountains of the Taconic State Parkway. Still with all the errors traveling 83 miles instead of the anticipated 75 we had a large enough buffer that we made it with room to spare, but we still had to get to New Paltz which is 33 miles away, too close for comfort.

Apogee - Rhinebeck, NY

Well, they all came out to greet us. After all the greetings our host asked us if we needed to plug in. This was a welcome offer. Even at 110 volts and 15 amps we would pick up the buffer we needed for the evening trip. I got my heavy extension cord out that I had last used in Falls Church and my host plugged it into the outlet on the house.

I got out the Tesla UMC and attached the 110 volt 15 amp adapter and connected to the extension cord and plugged the J1772 into the car.



Illustration 11- Charging at Level 1 in Rhinebeck, NY

We all went inside to catch up on the latest projects and activities of everyone there. Later we went out in the back yard to see recent improvements and future projects. After that a bunch of us took a walk around the neighborhood. There was some talk about pizza and the order was placed. Now normally I would have made the pizza run in my car but this time I really wanted to get the most charge possible, so we left my car plugged in and we took the gasser.

We all sat around the table eating pizza and afterward enjoyed a Klondike bar. As the afternoon pressed on we decided we wanted to get the last hour of driving in before dark. After 6 hours we had 53 miles of range giving us the 20 mile buffer we needed to feel comfortable on this last short trip of the day. It is ironic that in Dobbs Ferry we only got 14 miles at 220 volts and 50 amps and in Rhinebeck we got 19 miles at 110 volts and 15 amps. Of course we were plugged in much longer. In any case both charges were useful and necessary to the success of the days effort.

Now at the apogee of our north - south orbit, having said our farewells, we leave the northern most point and begin the return journey south as we pass through the New York State Thruway toll booth at Kingston. The short ride south is uneventful. We exit the Thruway and wind our way through New Paltz and find our way to family south of town for a 2 night stay.

New Paltz, NY

As we enter the driveway my brother is waiting with the garage door open. He has removed one of his cars so I can pull in and charge. The range shows 20 miles remaining, well within our comfort zone. The odometer reads 8653 so we have traveled 33 miles and used exactly 33 miles of range. Having pulled into the garage right there within 3 feet of the charge port on the car is a 220 volt outlet used to connect a portable generator during an emergency, but normally a functioning outlet.

There was some confusion about the pin configuration and amperage of the outlet. There was some speculation that it was 30 amps but in the end it turned out to be a NEMA 6-20 providing 20 amps at 220 volts. Unfortunately the Tesla UMC does not have an adapter for this outlet. Fortunately I have a scheme for this circumstance.

The UMC and the car can detect the voltage of the source but not the current. Each Tesla connector is coded with a resistor that tells the UMC the maximum current available at the outlet. The UMC then signals a slightly lower current on to the car's charger for safety. The only 20 amp adapter Tesla provides is for 110 volts so that is the adapter I put on the UMC.

The problem is this won't fit into the outlet. So I have an adapter I made that plugs into a NEMA 6-20 with a 110 volt receptacle on the other end. The UMC seems to interpret all this well and tells the car's charger it can safely draw 16 amps at the supplied voltage of 220 volts. This will be much faster than using 110 volts.

Having solved the charging issue, we got our bags out of the car and went into the house. After settling in we sat at the kitchen table for a cup of coffee. My brother got me a piece of that mocha mousse filled cake from the gathering in Long Island. After our evening treat, we went into the living room to visit. My brother is a hi-fi and electronics buff. We talked about his latest equipment updates and the relative merit of various HDMI cables late into the evening.

The next morning while my brother was showering, my wife and I rode into town to the bank with my sister-in-law. She drove our car and highlighted some local improvements and points of interest along the way. The town had recently installed new antique street lamps. She was impressed with the EV driving experience.

When we got back, my brother was up and about and we sat down and had breakfast together. After breakfast we went outside. My brother had an old Ford Taurus wagon they use for hauling, parked in the driveway with a dead battery. He got out his charger and his extension cord but it wouldn't reach. I pulled out my heavy duty cord and the combination reached.

We went back inside and sat down in the living room and reminisced about the party on Long Island. We discussed possible activities for the day. We talked about a hike on the local trail. We talked about a walk on the Poughkeepsie Railroad bridge. But in the end we decided to go into town and have lunch.

My brother drove our car into town. He did all the driving for the rest of the day. He made a point of pointing out all the advantages of the electric car. He seemed very impressed.

All the fruit trees were in blossom and we sat on the deck outside for lunch. The waitress sat us in the shade. We all felt it was too chilly, so while she was getting the drinks, we moved into the sun. The table was half sun and half shade. It soon became a game of musical chairs as those in the sun got too warm and those in the shade got too cold. We kept changing places. My wife and I shared a quesadilla and my sister-in-law a pear pizza. My brother had his usual steak.

After lunch we went back to the house and visited for a while. Soon I fell asleep on the couch while visiting. When I woke up I found I was not the only one snoozing. Once we all got our second wind we resumed our visit and eventually got around to talk of dinner. We settled on a place in Newburgh down by the river where the old ferry landing once was and which, in recent years, has resumed operation.

My brother did the driving and this longer ride gave him a chance to put the car to the test. When we got to the restaurant, we were going to sit out side until we realized they had propane heaters on the deck. We didn't want the smell of fossil fuel burning while we were eating, so we decided to sit inside. I enjoyed fried fish and chips except I substituted coleslaw for the chips.

After dinner I decided I wanted a milk shake. My brother had a favorite home made ice-cream place in mind. We headed south on River Road towards New Windsor. We missed the turn for 9W and wound up in Vales Gate on Route 32 headed north back to Newburgh. We never found his special place. But we went to his alternate favorite on the way back home. I asked for a shake made with both chocolate and coffee ice-cream and my wife asked for chocolate. When we got to the drive up window the guy didn't know which was which. My wife and I tasted both and couldn't tell either. They were good generic ice-cream shakes in any event.

On return to the house, we checked the Taurus and it was finished charging. We disconnected our extension cords and put them away. We had driven 14 miles earlier in the day and 45 miles that evening. The range was down to 66 miles. It would take about 6 hours for an extended charge so I decided to charge before going to bed.

Later that evening we sat around the table and I had a second piece of that mocha mousse filled layer cake from Long Island to continue my vacation celebration. After that we sat in the living room discussing the virtues of electric cars late into the evening. We wrapped things up some time after midnight and I went down and plugged the car in before going to bed.

Our time in New Paltz was coming to a close. We got up, had breakfast and loaded the car for our trip to New Jersey. The car had finished the extended charge I had started before going to bed. I unplugged and packed up the UMC and adapters I had been using.

The odometer was reading 8712 and we had a range of 132 miles which would be more than enough for the days activities. We said our good byes and continued the return trip south, retracing our route of the previous evening to Newburgh where we would take the NYS Thruway.

Visit at Wycoff – (May 6, 2014)

Things went smoothly until, as we were approaching the Harriman exit, things got confusing. The GPS was indicating that we should take the exit for Route 17. I knew I wanted to stay on the Thruway south. I did not want to take Route 17, so I ignored the GPS. This turned out to be a big mistake. My decision avoided the toll gate for ticket holders not having EZPass and took us through the high speed EZPass lane and the Thruway south. This toll would have to be paid somehow through the mail when we got back home. We continued on our way to the Garden State Parkway and eventually to another brothers home in Wycoff, NJ. It was a short trip. The odometer read 8771 and the range was 72. We had traveled 59 miles and used used 60 miles of range. We were only about 30 miles from our final destination for the day in Summit, NJ, so we were good.

My brother offered to let us plug in at 110 volts and I accepted although we would not add much range in the short time we would be there. I had to run the extension cord from the 15 amp outlet on the porch to the car on the driveway and hook up the UMC. Once we had the car charging we went inside to catch up on things. We talked about his rescue dog for a while and then went outside to see his emergency generator he had installed after hurricane Sandy. It switches on automatically when the power goes off and is powered by natural gas.

We had been here once before. He had recently added a second story to what had been a single story house. It was completed when we were last there but his music room over the garage was not then complete. We went up there and visited for a while and listened to his hi-fi. We decided to go out to lunch and afterward visited his office which we had never seen. I had onion soup and chicken parmesan. It was great but the portions were so large we couldn't finish it all. However I was not so full that I couldn't try their tiramisu ice-cream to continue my vacation celebration.

After leaving his office we went back to the house. I unplugged, packed up my extension cord and the UMC. We said our goodbyes and were on our way to the DeBary House in Summit where we would spend the night before moving on to Philadelphia. The range was 83 miles. We had picked up 11 miles in the 3 hours we were there.

DeBary House in Summit, NJ

It was a short ride to the DeBary Inn. When we arrived the odometer read 8798 and the range was 60 miles. We had traveled 27 miles and used 23 miles of range. It seems after leaving the hilly country of New York, the New Jersey flats had brought back our 10% advantage in the range.

The Inn is located in a quiet residential neighborhood. It was hard to pick out among all the large homes. We quickly found the driveway and drove directly to the back of the building where I knew the NEMA 14-50 outlet was from seeing the CNBC video piece on the Tesla model S and the Inn.

[Link to CNBC video of Tesla model S and DeBary inn](#)

[Yahoo link to same video](#)

Apparently, Jim Cramer of CNBC Squawk Box is part owner of the Inn. He did a Tesla model S test drive which terminated at the Inn. You can use either of the links above to see the video. I love his line, "When you get behind the wheel, you want to get behind the stock." Not completely consistent with his Tesla stock reviews.

We parked the car and my wife went inside to register while I got the UMC out and put on the NEMA 14-50 adapter. After I started a normal charge, I went inside to see how my wife was doing. One of the guests had let her in. The front door had a combination lock. Later I realized the reservation confirmation email had the combination in it. There was no staff present. You just sign the guest book and go to your room. The key was in the room.



Illustration 12- NEMA 14-50 outlet for "Tesla" Charging

We had number 3 which we found on the first floor. Our very spacious room had a king sized bed, bathroom and our own direct door to the outside. It was a very comfortable bed and breakfast with the old home style charm you might expect. There was a large circular dining room with windows all around. In the common area was a piano which a guest was playing. There were bottles of wine in an ice bucket near large comfortable sitting areas to just sit and relax. WiFi was available throughout so you could catch up on email and social media. All in all, a charming place to stay while traveling with an electric car.

I went out to the car and brought in our luggage. It took about an hour and a half for the 80% charge to complete, so when it did I unplugged and put the UMCC in the car. After our big mid afternoon meal we weren't very hungry so I had a cup of coffee, my wife had her tea and we had some snacks from my wife's goodie bag and spent a relaxing evening.

In the morning, I got up at 7:30 am and plugged the car in for an extended charge. I showered and got organized and we went to breakfast. I had the breakfast I am accustomed to at home, cereal and fruit. They had strawberries, blueberries and bananas along with my usual Cheerios and Raisin Bran. I finished up with juice, coffee and a bagel. We enjoyed having our breakfast in the spacious dining room.

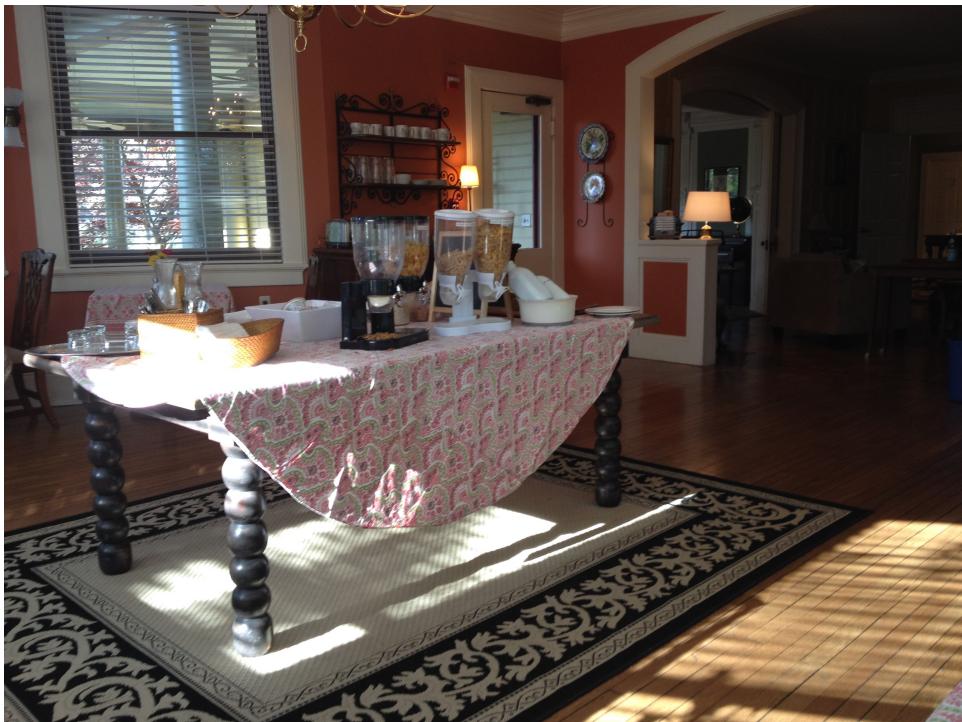


Illustration 13- Breakfast Room at the DeBary Inn, Summit, NJ

After breakfast, I went out to check on the charging process. It had finished in about an hour and a half. The range was 131 miles. I disconnected and packed up the UMC. I pulled around to the front and we loaded up the car. We were ready to set out for Philadelphia.

Philadelphia, PA – (May 7, 2014)

The GPS took us straight to the Hampton Inn at the Convention Center in Philadelphia. About half way down the block from the hotel entrance was 2 hour parking. We pulled into a spot there. The hotel has no on site parking or charging. The range was 47 and the odometer read 8890. So we had traveled 92 miles and used 84 miles of range.

We locked up the car and started walking toward the hotel entrance when two police officers walked by. For some reason after they passed, I turned and saw them looking over our car. We returned to the car and they explained that we need to pay to park. They were very helpful and understanding. There was a nearby kiosk where you pay and get a ticket to display on your dash. They helped us through the process and we were on our way. Lucky!

By now it was about 11:30 am. We checked at the desk and they said the room would not be ready until after 2:00 pm. We asked if we could check our bags and they said yes. We went back to the car and unloaded and left our bags at the hotel. We asked directions to the Parkway Garage on Filbert St. and they gave us a map.

The hotel entrance was on the corner of Race St. and 13th St. where our car was parked. All the streets are one way, so we drove down 13th St. to the corner, drove around the block and drove south on 12th St. We drove through the tunnel under the convention center. As it turns out, the garage had an entrance on 12th St. on the opposite side of the Convention Center from the hotel.

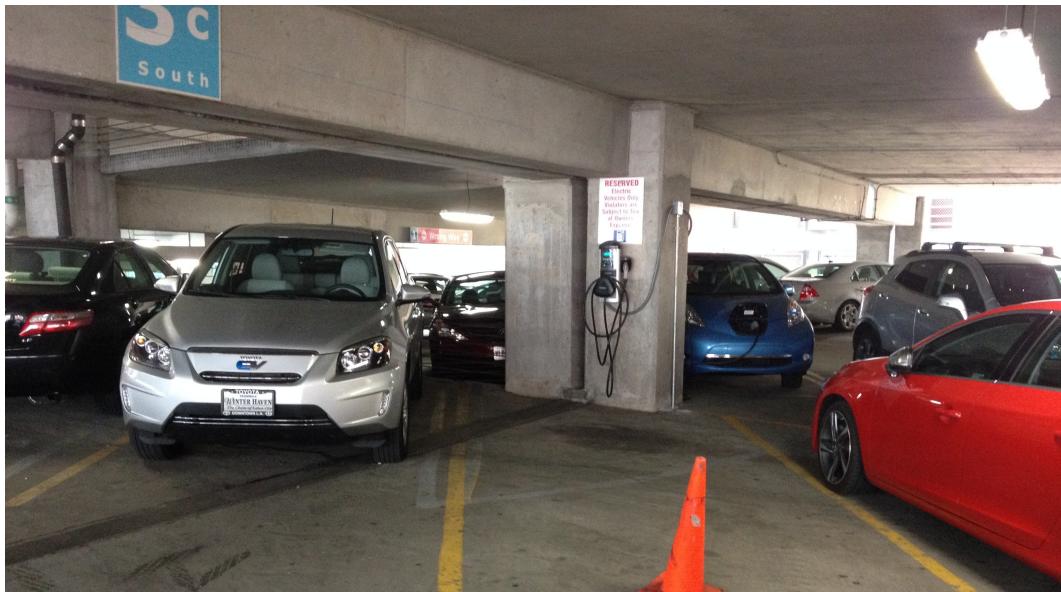


Illustration 14- Parkway Public Parking, Filbert St. Philadelphia, PA

We pulled in and up a long narrow ramp to the second level where there was an attendant. I parked and asked the attendant about charging. She was very helpful. She took us on foot up to the third level where there were two Charge Point charging stations. There was a blue Nissan LEAF plugged in but not charging blocking one station, but the other was open. My wife and the attendant stayed there while I went back to get the car. I pulled in and quickly got the car started on a normal 80% charge. It was down 9 bars and the range being 47, it would take about 3 hours to finish. I put my courtesy card on the dash with my cell phone number an an indication that it was OK to unplug at 4:00 pm. Charging would be free with the only cost being what every one else pays to park which is \$35 per day. It was a nice facility with security personnel and cameras.

We left the garage and I was looking for a shake. Across 12th St. was Reading Terminal Market, an indoor market with all types of vendors with little booths selling food and all sorts of merchandise. Bassett's Ice Cream was just inside the entrance. We ordered two mocha shakes. Seven dollars each. They were good and we drank them as we strolled around the market. We soon came upon Wursthaus Schmitz. They had one of my favorites, schnitzel. We each got pork schnitzel, red cabbage and warm potato salad. What a treat.

After lunch we walked back to the hotel. We went north on 12th St. through the tunnel under the Convention Center and turned left on Race St. to the hotel entrance on 13th St., a short three block walk. When we got back to the hotel, the room was not yet ready, so we sat down in the lobby. After about 20 minutes they told us we could go up to the room. We got our checked bags and went to the room.

It was a nice room with a king sized bed and a nice view of the city on the 8th floor. We got organized and decided to take a nap. Around 4:00 pm we decided to check on the car. I didn't want to block the charging station while not charging. When we got there, I unplugged and moved the car over one spot which was now empty. It was occupied when we arrived. This would allow me to have access to the charging station even if the spot directly in front of it was blocked in the morning when I would be wanting to do an extended charge before leaving for Baltimore.

The Nissan LEAF was still plugged in to the other station but not charging. We are still in the early days of electric car charging, so people driving EVs are not used to sharing the infrastructure. Blocking access to a charging station for hours after charging is complete, is no problem until the day comes when someone else needs the station before the blocking party returns. For this day, there were only two EVs and two stations. But who knows, a third EV could have been looking to charge while I was charging and the LEAF was blocking. That third EV would have had to try another less convenient garage. But I suppose the blockers will learn how to share when they themselves are blocked by other infrastructure abusers.

We left the garage and walked to the corner at Arch St. We decided this would be a good time to see the Rocky Steps while it was still light. The steps were outside the city center where the rest of the sights we wanted to see tomorrow are. So we hailed a cab and were there in a few minutes. We arrived just seconds after a tour bus.

They were all crowded around the Rocky Statue at the bottom of the steps for a group photo. After that, all the tour members lined up for individual photos. We stood around and waited our turn. We took our photos and then my wife engaged a couple of vendors selling Rocky Tee Shirts. After some give and take they agreed on a price and she came away with the center piece of her outfit for the next day.

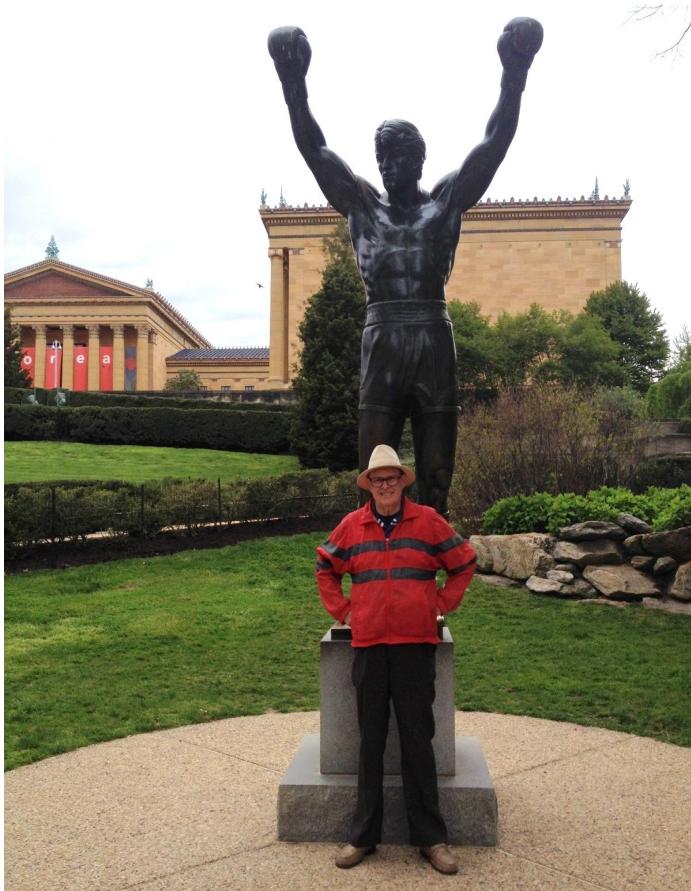


Illustration 15- Me and the Rocky Statue near steps

From there we started the long hike up the steps to Rocky's triumphant roost overlooking Philadelphia. No we didn't run up the steps. But we did attain the summit where we took lots of photos as if we had run up the steps. From there we went down the steps to the curb where we hailed a cab back to the hotel. They had coffee and cookies in the lobby which we snagged on the way up to the room.



Illustration 16- My wife Diane at the top of the steps at the Museum of Art

We rose the next morning for our big day exploring the Philadelphia City Center. Before setting out for the day, we wanted to take advantage of the buffet breakfast included with the room. They had a wide selection of hot and cold breakfast choices. I repeated my usual traveling breakfast of juice, coffee, scrambled eggs bacon and bagel. It was a hearty meal that would sustain us for some extended trekking. The food was good and the surroundings pleasant. It was a large comfortable dining room.

We then set out to our first stop, the Constitution museum, on a chilly misty morning. We were carrying umbrellas as we walked east on Race St., passing through Chinatown. They have a formal presentation that was about to start in 20 minutes. So we purchased tickets for that. The very large space was buzzing with middle school and high school student groups. We went to the second floor where they had a room filled with life size bronze statues of the signers of the Declaration of Independence and the Constitution grouped in various numbers and poses. Some were individuals others were in twos and threes. Some standing others seated at a table. It was interesting background for what we would, later in the day, see at the actual signing location.



Illustration 17- Me with Bronze Signers at the Constitution Museum

From there we went to a large area with exhibits that summarized the history of our government through the present. We had spent only a few minutes there when they announced that the presentation was about to start.

There were two queues. We were at the head of one of them. I guess we stood out among all the students. One of the attendants brought us into the theater by ourselves. I think they wanted us comfortably seated before the mad rush began. The theater was a large, circular, bowl shaped, theater in the round. We were seated in the first row at the lowest level closest to the circular performance area at the center of all the seating. Soon the students and their teachers and chaperons began streaming in. It was all quite orderly with each school being seated in its own section.

The presentation was a combination of video combined with a live presenter. The video was projected at times on the floor and the walls all around and above the highest row of seating. It was educational, informative and even inspirational.

We went from the theater back to the exhibits. I was intrigued by a display about Harry Truman which featured a "Key West" shirt he wore at his vacation retreat in Key West. I have a shirt I feel is very similar, but my wife informs me the colors are different. Still, I now consider that shirt to be my Harry Truman shirt.



Illustration 18- Harry Truman's Key West Shirt at Constitution Museum

From there we walked to the Liberty Bell. It had warmed up and dried up such that the wait in the long line was pleasant. We chatted with the family behind us. Their young son told us about his visit to Independence Hall which we planned to see next. Once inside we saw many informative displays which we quickly passed by in our rush to see the Liberty Bell with its famous crack. This was our first trip to Philadelphia, so our first experience with these land mark sites. We took pictures of each other and moved on to the visitors center.



Illustration 19- My wife Diane at the Liberty Bell

From there we went to Independence Hall. We followed the crowd and found ourselves in a large quadrangle on the other side of the building. We asked a park ranger about the signing room and were told a tour was about to start. We could see people queuing up near a Park Ranger. We were told we needed tickets which are free at the Visitors Center. We had neglected to do this while we were there, not knowing it was necessary. We were told the Ranger giving the tour might have some extra tickets. So we went over and asked and were told no he had none. In front of us in the queue was a group of students. Their chaperon was handing out tickets to his group members and he told us he had two extra tickets which he kindly gave to us. Someone up there likes us.



Illustration 20- My wife Diane at Independence Hall

Once inside, we all sat down on long benches in a large anteroom. The National Park Interpreter began to explain what we were about to see and the significance of the Declaration of Independence and the Constitution. He used a painting of the signing room and the signers which was hanging on the wall.

He asked if the painting was depicting the signing of the Declaration of Independence or the Constitution. Someone raised their hand and answered correctly. The interpreter then explained the painting of the signing room with Washington in it, was the signing of the Constitution. This is because George Washington was not present and did not sign the Declaration of Independence. He then asked if anyone knew the names of signers. John Hancock was the first to be mentioned. People tended to mention the names of signers from their home state as I eventually did.

I offered the name of Rufus King. My Aunt had taken me to his residence in Jamaica, Queens on Long Island in New York as a child. What seemed amazing was that as each visitor mentioned the name of a signer, the interpreter would give a short biography of that signer, where he was from, what state he represented and which of the two documents he had signed along with some other interesting fact. For Rufus King he said he was a representative from New York who was born in Massachusetts, went to Harvard, signed the Constitution and was a supporter of the movement to abolish slavery in the Constitution. Of course this effort failed to become part of the Constitution at the signing.

When the discussion was finished we were led to a large courtroom. This is where the Supreme Court of Pennsylvania met. From there we went across the hall to the Assembly Room also known as the Signing Room since both the Declaration of Independence and the Constitution were signed here. This room is arranged just as it was in the painting we had seen earlier. Having seen the bronze statues in the Constitution Museum also helped us to visualize the signing events.



Illustration 21- Me in the Signing Room, note Washington's chair at center

We walked from Independence Hall to the Franklin Museum. This had recently been modernized and had many interesting displays relating to the life of a very interesting Founding Father, Diplomat and inventor. We were getting tired at this point and didn't take maximum advantage of this marvelous museum. We decided to find ourselves a place to eat.

We walked north on South 4th St. to Market St. and turned right. After walking one block to South 3rd St., there was the Pizzicato Restaurant. My wife ordered mine-strone and a personal pizza. I got ravioli. The pizza was very large so I had piece of that also. The food was fine quality and very enjoyable. For dessert I decided to continue my vacation celebration with a nice piece of fine Italian dark chocolate layer cake. My wife enjoyed a Flan.

After lunch we decided to catch a cab back towards the hotel. We decided to stop at the garage. I wanted to be able to do an extended charge in the morning before leaving but did not want to block the spot in front of the charger all night. I also knew the cord would not reach the charge port unless I backed the car into the adjacent spot. When we got to the garage we went to the 3rd level and I turned the car around. That Nissan LEAF was there again blocking access to the other charger, plugged in but not charging.

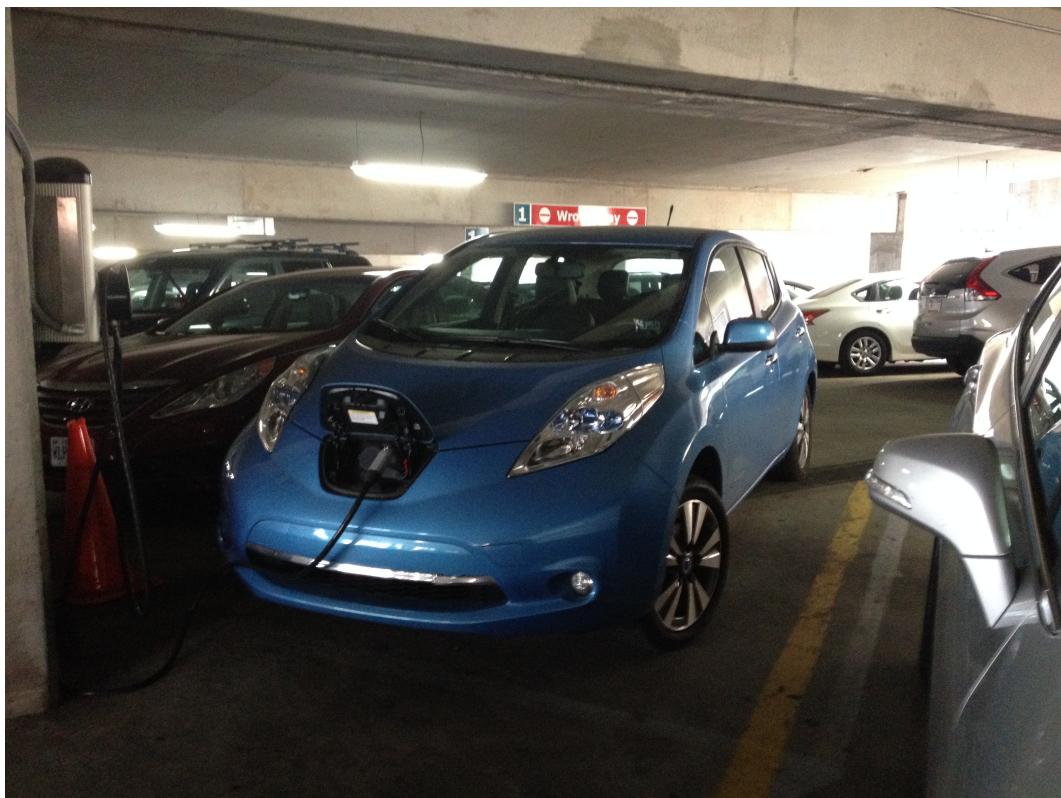


Illustration 22- Nissan LEAF blocking station long after charge completed

We left the garage and my wife decided to do some shopping at the Reading Terminal Market. She wanted to get some gifts for family and friends. It was almost closing time, but she found appropriate gifts before closing time. We walked back to the hotel through the tunnel and over Race St. Back at the room we had coffee and snacks we picked up in the lobby.

We got up early the next morning, got dressed and walked back to the garage to start an extended charge. We brought a few things with us to leave in the car so we would have less to carry on our return for final departure. When we got there the spots on both sides of the charging spot were open so I turned the car around and pulled straight in to the charging spot on the theory that it would be easier to get out when the charge was finished and we were ready to leave. My precaution of backing in to the adjacent spot was unnecessary, but better safe than sorry. We plugged the car in for an extended charge and went back to the hotel for breakfast. This was the first time we did not see the blue LEAF since we arrived. I guess he had not arrived for the day yet.

Breakfast at the hotel was pretty much a repeat of the previous day. After breakfast we went back to the room and did the final packing and sat down to relax for a while. A little after 9:00 am we picked up our remaining things and went down to the front desk and checked out. From there we headed for the garage. The car had been charging for an hour and a half and the range was 130, so I decided to stop it and be on our way to Baltimore.

Baltimore, Take Two - (May 9, 2014)

The trip to Baltimore was uneventful. This time we went right to the Little Italy garage on South Central Ave. and Bank St. This time I decided not to get creative and followed the GPS all the way. We arrived with an odometer reading of 8989 having traveled 99 miles. The range was 39 miles and we were down 10 bars. We had used 81 miles of range to go 99 miles. The Charge Point Station was right at the entrance off South Central Ave. We plugged in and set out on our mid day Baltimore adventure.

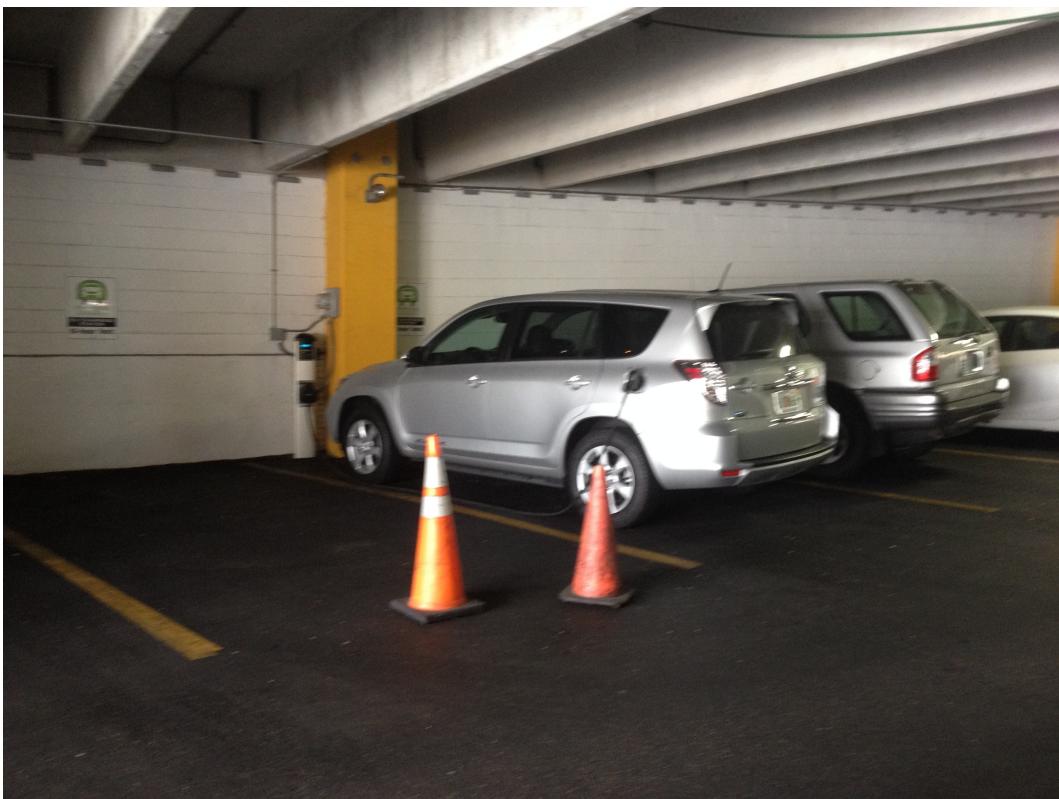


Illustration 23- Little Italy Parking Garage, Baltimore, MD

The Piedigrotta Bakery was just steps away, but my wife wanted to see a little more of Baltimore than just Little Italy. She wanted to visit the Port of Baltimore. We walked west on Bank St. and worked our way through Little Italy to Fawn St. and kept walking west to President St. along the water. From there we walked north. When we got to Pratt St. we turned left and started walking west again. I was looking for a shake. We asked a young woman if there was a place nearby where we could get one. She directed us to Five Guys further down Pratt St.

The building was a small indoor multi-level mall. Five Guys was upstairs. It was crowded with a long line. My wife went to the restroom while I waited. They had a sign that suggested you could place your order on line while you waited. I was fiddling with my phone and had found the web site but was not having much luck placing an order when I found myself at the head of the queue. I asked for a shake and was told they don't do shakes, but I could get one across the hall.

Across the hall was the Great American Cookies/Marble Slab Creamery. Sure enough, they had shakes. I bought two mocha shakes. My wife likes cookies so I got her a chocolate chip and a macadamia nut. My wife returned from the ladies room just as I came out of the store.

We sat down on a bench that was right there and I enjoyed my shake. As it turns out the weather was cold and my wife was not interested in finishing her shake, so I drank the rest of that one too. She was so cold she bought a scarf on the way back from the ladies room. She had also bought a pair of socks. She was unable to find a clean pair in the bags we had at the hotel earlier that morning. She was developing blisters from walking around without socks. I was wondering why that trip to the ladies room took so long.

At this point we continued exploring the port. There were a few ships there. Among them was the sailing ship the USS Constellation. A Sloop-of-war, with a displacement of 1,400 long tons, length of 181 ft (waterline), 199 ft (overall) and a beam of 41 ft (waterline) 43 ft extreme.

She had a crew of 20 officers, 220 sailors, 45 marines and Armament of:

16 x 8 in chambered shell guns

4 x 32-pounder long guns

1 x 20-pounder Parrott rifle

1 x 30-pounder Parrott rifle

3 x 12-pounder bronze boat howitzers



Illustration 24- Me and USS Constellation in Baltimore Harbor

The USS Constellation was the last sail only war ship. It was built for the Navy in 1854. This was a majestic site to see and it dominated the view of the port. It serves as a reminder of sustainable wind powered ocean going transport carrying a crew of 285 souls. A fitting symbol on our electric car journey through the Mid Atlantic states.

Suddenly on our walk around the promenade we came upon Buba Gump Shrimp Co. My wife was delighted, so we went inside. She ordered a traditional shrimp cocktail and cream of crab soup. I had the dumb luck coconut shrimp. My wife didn't finish her soup, but I enjoyed every bit of my coconut shrimp. No dessert. I had other plans.

After lunch we headed back towards the car with the intention of stopping at the Piedigrotta Bakery to pick up some Italian Pastry to bring with us to our family in Falls Church. On the way back, my wife insisted I take a photo of the large guitar on top of the Hard Rock Cafe on Pier 4. If You look carefully, in Illustration 24, you can see it to the right of the large tower. We worked our way to and through Little Italy to the bakery. I bought cannoli, napoleons and my favorite mocha layer cake. The lady packed it up carefully so it would survive the car trip. She put an ice pack in the bottom of the bag, then all the pastries and finally an ice pack on top. It was double bagged. I was surprised how heavy it was carrying it back to the car. Some of that was the two ice packs, I guess. Fortunately the car was close.

Return To Falls Church

Our adventure was 3 hours. The range was 96 miles which is more than enough to get to Falls Church which is less than 50 miles. We pulled the plug with about a 70% charge and were on our way loaded with pastry. In about an hour we arrived at the family residence in Falls Church. After greetings and rushing the pastry inside, which survived the trip well, I went back out to the car.

The odometer read 8771. The range was 48 miles. So we drove 59 miles and used 48 miles of range. It looks like the pastry wasn't so heavy that it affected the range. We were down 9 bars. I pulled out my extension cord and the UMC. I plugged the extension cord in on the deck and stretched it out to the driveway and plugged the UMC in using the 15 amp 110 volt adapter for a normal 80% charge and went inside.

Falls Church is the only place we stayed at overnight on both the north bound and south bound return trip. We did visit Baltimore on both the northbound and southbound journeys for a mid day meal. It was Friday afternoon May 9th and we would be here until Tuesday morning May 13th.

We visited for a while as we waited for other guests to arrive. There was discussion about dinner which was being ordered. The plan was to get vegan Asian food at the Loving Hut nearby. It turns out that me and the man of the house would make the food run in the electric car. We unplugged the car and headed for Rogers Drive. It seemed appropriate that we were picking up meatless vegan food in our electric car. The Loving Hut promotes the idea that eating vegan helps to save the planet, so we were doing double duty on that score today. As soon as we got back, after backing into the driveway, I plugged back in to continue the normal charge I had started on our initial arrival. Backing in is important because the charge port is at the back of the car and the cord won't reach otherwise.

When we returned the other couple had arrived. We sat together and enjoyed the food and conversation. We had not met this couple before. It turns out he is a city planner and drives a Prius. He was interested in the electric car, public charging and our trip experiences.

After dinner we all enjoyed one or another of the Italian pastries. I continued my vacation celebration with a piece of the mocha layer cake. Nothing like being predictable like my range indicator on the RAV4-EV. After dinner I went out to the car and got a copy of my book to give to this young man. He seemed happy to have it. Later as he and his wife were leaving, he asked me to sign the book. I never quite get that. It happens from time to time when I give someone a copy of my book. I always oblige.

Over the next few days we enjoyed relaxing in the beautiful spring surroundings. The weather had cleared and warmed by the sun. All the flowering trees were in blossom making our daily walks extra pleasant. Through that long weekend which included Mother's Day, we went out to dinner only once. We celebrated Mother's Day that Saturday evening in order to beat the crowd the next day. We all piled into the electric car and headed down Leesburg Pike to the Dogfish Head Ale House for dinner. I had fried fish and chips which was good.

This stay was an opportunity to reorganize and catch up on laundry interspersed with an episode of *Cosmos*, walks in the woods, conversation and lots of meals topped off with Italian pastry. Soon enough our stay in Falls Church was coming to an end. The night before leaving, I wanted to start an extended charge that would complete about the time we wanted to leave. The car was down 2 bars which when combined with the 4 bars of capacity not displayed was really 6 bars or 30%. It would take about 9 hours to charge. The odometer reading in my log book along with other data is unclear. So I can only guess it was about 9075, which means we drove about 33 miles while at Falls Church visiting.

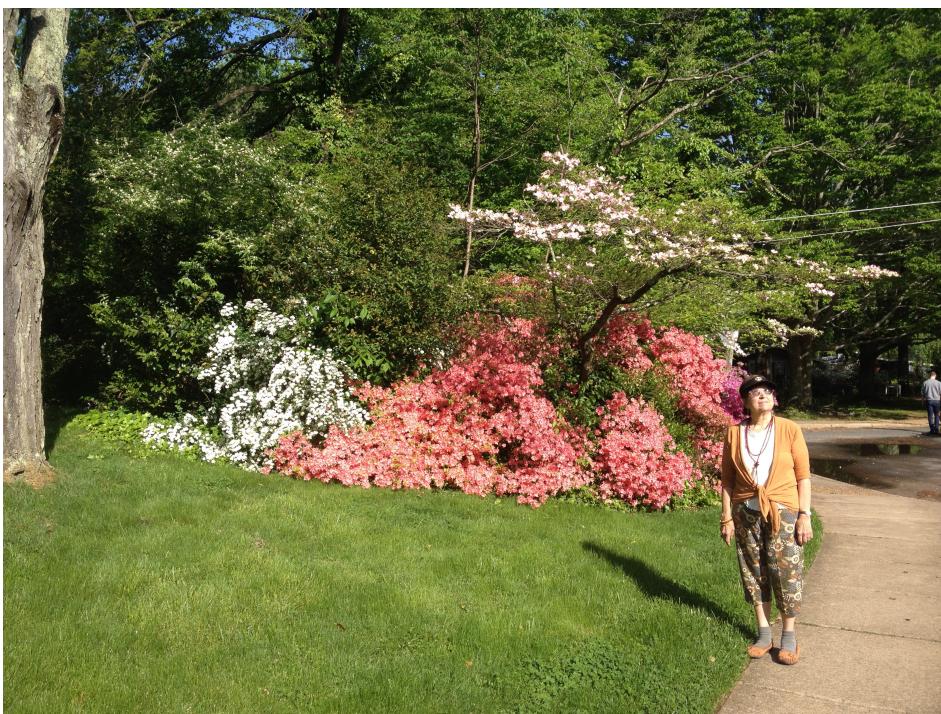


Illustration 25- My wife Diane in Falls Church with trees in blossom

In the morning we got up and had breakfast and started the ordeal of packing the car. I first unplugged the UMC from the car, then disconnected from the extension cord and packed the UMC away. There would be no more charging before we got home. I went to the deck and unplugged the extension cord. I used some paper towels to clean the cord as I coiled it up. It was dirty from laying on the damp ground. Once the cleaning of equipment was completed and stowed, we packed our bags.

Excitement In Lorton -(May 13, 2014)

It was getting to be a little after 9:00 am so we went inside and said our farewell. The charge was complete when I unplugged so I'm guessing our range was about 134 miles. I forgot to write it down. We were good since it was less than 20 miles to the train station at Lorton and less than 70 miles to home from the station at Sanford. I wish I could say the trip home was uneventful but there were some unpleasant surprises ahead.

The trip to Lorton went smoothly. We arrived about 10:00 am and were the first in line. A woman pulled up behind us in a Camry Hybrid. She got out of her car and showed a lot of interest. She asked all the usual questions. Did it use any gas? How far will it go on a charge? She said her son had a Prius and was going to get an electric for his next car. I gave her a copy of my book which she seemed to appreciate when an old man about my age pulled up in a pickup truck. She soon was engaged in conversation with him when we went inside to check in.

We stayed inside for a while to enjoy the air conditioning. The lady in the Camry sat nearby and chatted with us in between getting up and going over to chat with the old man in the pickup truck. He soon told her he was going out to take a nap in the truck. Eventually, at 11:30 am we all had to go to our cars to get ready to queue up for loading.

We were first in line and given the number 41. The numbers are randomly assigned and serve only to let you know when your car is unloaded on arrival. We pulled up under the canopy in lane 2 which is closer to the building leaving lane 1 open to my left.



Illustration 26- No. 41 being inspected prior to boarding

Soon the lady came in behind me in lane 2. The next thing I noticed is the third vehicle in the line at the gate, the old man in the pickup truck is racing towards me at high speed. I was standing in the island at the farthest point from the building under the canopy. All the attendants were rushing towards the oncoming pickup truck waving their arms and yelling, "Stop!". Of course this was all futile. Of what use are people on foot in the face of such a menace. Some of the attendants, realizing their fate if they didn't move, began stepping back out of the way. Suddenly at the only break in the island at the edge of the canopy between two pillars the truck swung hard to the left with a couple of attendants running along side of him waving their arms. It was clear to me at this point that I and my car was out of danger, but I had no idea what was going on. The thought that came to mind was - terrorist attack. I was wondering if this train would be leaving for Florida today.

The truck continued its hard left on what seemed like two wheels, completing a successful "U" turn. Now he was headed out of the complex. Whether to avoid oncoming traffic or intent on destruction, I didn't know, but he then made another hard left that looked to me like he was headed for the train waiting at the platform. I was definitely curious as to what would happen next and was tempted to leave my current position for a better view of a developing scene that was now out of my view. My wife was running around and was at this point much closer than I. I decided to stay where I was. My car was parked here with the keys in it. I didn't know if this was some sort of diversion or what. If it was intended to be a diversion, it was successful. Everyone at the station was at the entrance to the canopy. If someone intended to create further havoc with my car there was no one but me to stop them.

What I heard next was the crash that ended that chaos. It was quite loud and to me sounded like he may have made it to the train. I stayed at my position until things settled down and gradually got back to normal. Eventually the normal routine resumed. An attendant inspected the exterior of the car for preexisting damage and took photos. Then a driver got into the car and drove onto the train's double decker enclosed car carrier.



Illustration 27- Our RAV4 - EV approaching the ramp for loading at Lorton, VA

I took photos of the process and finally felt free to leave my post and join my wife to hear the details of the final moments of the calamity.

My wife explained how the truck had completely flattened the bench she had been sitting on earlier. It appeared to me that he then proceeded to knock down a small tree, run over it and continue on to a second tree which he knocked down before it stopped him. Just then an ambulance arrived and they took the driver aboard. The ambulance did not leave the area but pulled over to the parking area. Soon after he was released from the ambulance with some scratches and bruises.



Illustration 28- The Pickup Truck that caused all the excitement

There was much speculation among bystanders about the cause or motivation behind the incident. The lady in the Camry explained how after she pulled her car under the canopy behind mine, that the old man did not pull his truck up to the booth to get a number. The attendant left the booth and went up to the truck to find the old man sleeping. When she woke him up the truck began its high speed rampage. The lady in the Camry was glad to have a chance to pull up behind me to safety before he was awakened.

All the speculation ended when the police released him and he went into the terminal where the lady in Camry joined him. I was taking a picture of the truck in its final resting place when a policeman approached me and asked me if I was a witness. I told him where I was positioned and that I had seen most of what happened but that the final crash was out of my field of view. He had no problem with that and was more interested in how events commenced and developed at the outset. Apparently the old man said the gas pedal was stuck down. The policeman wanted to see if my account of events corroborated the fact that the speed was high and constant from the outset. I told him what I saw and he seemed satisfied that the old man's account was reasonable.

At this point, the rest of us went inside to continue discussing events of the morning. I got an ice cream bar and my wife got a turkey sandwich. The lady in Camry sat nearby, but as soon as she saw the old man sit down, she went and joined him. I finished my ice cream bar and my wife offered me some of her sandwich. I had a few bites, not a lot. This would later prove to have been a big mistake.

The lady in the Camry came back with more details. Apparently the old man was in touch with his insurance company. They told him to go out and get some photos before the transporter came to take his truck away. We could see him walking out to his truck as we spoke.

The Drama Continues

At this point my wife started to complain of feeling nauseous. She said she was going to the ladies room. It was getting close to passenger boarding time so I decided after a few minutes to go and wait for her near the entrance to the restrooms. When she came out we went right to the train and found our compartment. She was not doing well with frequent trips to the restroom down the hall.

Whether it was something she ate or the morning's excitement, she wasn't doing well. Although as the train got underway on our trip south she seemed to perk up. At 5:00 pm she was willing to go to dinner in the dining car. I asked the porter to open our beds while we were eating. I had chicken Marsala. My wife ordered red Jello and tea. She was quite perky as we visited with the couple seated at our table. Sandy and Bob told us how they had just sold their house in upstate New York and it sold in one day for the asking price. We told them about our electric car trip. As it turns out my wife didn't eat more than a spoonful of her Jello. I decided to have a cup of coffee and a piece of cheese cake to end my vacation celebration. Then I went ahead and ate my wife's Jello.

We went back to our cabin and the porter had opened our beds as I had asked him to. My wife laid down. I had noticed they had cardboard ice buckets at the beverage station as we passed, so I went back and got two. At that point I was ready to lay down and rest. There weren't any other choices at this point. Once the beds are open there is no place to sit. I stripped to shorts and tee shirt and climbed into the upper. As the evening wore on I dozed as my wife was having a terrible time with frequent trips to the restroom. At some point late in the evening I started to feel funny myself. I don't know if it was sympathy sickness or that turkey sandwich at the station.

At some point it became overwhelming. I told my wife to give me one of those ice buckets. She gave me a plastic drinking cup. Big mistake. Round one came up and filled the cup halfway. I said, "the bucket". Round two filled the cup. Round three started as the bucket was rising under the now over flowing cup with some amount of splash missing the bucket. My wife was not happy. The bucket was dripping, either leaking or splash on the sides. I said, "Get the waste bin", which is steel and lined with a plastic bag. That came up under the ice bucket and the mess was finally contained. She left the cabin with the whole mess and got rid of it.

She returned and I got up and changed into a clean tee shirt and shorts and went to the restroom to get cleaned up. My wife took the opportunity to clean up her bed. We both got back into bed and at some point had a restful remainder of the night.

The next morning we had no interest in breakfast. We got dressed and asked the porter to close up the beds while we stood in the corridor. We sat up resting quietly for the remainder of the trip to Sanford. When we arrived, we waited in the waiting room for our number 41 to be called. Miraculously, our car was among the first to come off. There were no more than 30 cars that came off before us. We went out to the car loaded our stuff into the car and headed for home.

The Ride Home -(May 14, 2014)

The trip home was uneventful. When we got home, we went in and sat down in our recliners and rested. We didn't bother unloading the car until the next day. At some point that afternoon I decided to check the final data and start a normal 80% charge. The odometer read 9161. The range was 54 miles and we were down 8 bars. Which is half of the normal 80% charge or 40% remaining. We started our trip with an odometer reading of 8104, so we had traveled 1,057 miles since the car was last parked in our garage.

On the sojourn we had come to know our RAV4-EV much better. We had come to understand its capabilities more intimately. We had learned that it had much more potential than we expected when we purchased it and even with our Florida driving experience had not realized its full potential. Prior to this, our longest trip had been from Cocoa Beach to Winter Haven, 98 miles on a single charge. It was that trip that encouraged us to make this trip to New York. With our newfound confidence in our car we made our first round trip on a single charge to a SUNEVA (Sun Coast Electric Vehicle Association) meeting at the Mercedes Dealer on Dale Mabry in Tampa. In the past, trips to Tampa and Orlando had always included a charge before returning.

Epilogue

Our trip is over and the paper work is done. It was not an endurance run or a Canon Ball Run. It was not my intention to show that it couldn't be done, because if it was I could have done as John Broder did in his article "Stalled Out on Tesla's Electric Highway". No my intent was quite different. I wanted to take a nice vacation using my new electric car. It could have been done more quickly in a gas car or even this car. The idea was for two people in their 70's to do some things they wanted to do without driving any more than three hours per day and with as few one night stands as possible and no successive one night stands. We spent one night in Mount Laurel NJ on the way to Long Island and one night in Summit, NJ on the way home. We got to spend time with family in several locations and we got to see Philadelphia and Baltimore for the first time. These had always been places we drove around on the bypass on the way to Washington DC or on the way back.

I wrote this trip account for anyone interested in understanding in detail what it means to take a road trip in an electric car. It takes planning. But as you can see reading this account, there was no range anxiety and no sitting and waiting for charging. The car charged while we were enjoying ourselves. At no point did we wait to use a charging station until someone else finished charging. At no point did we encounter a gas car blocking access to a charging station. The blue Nissan LEAF was the only car blocking a charging station after charging was complete, but a second station was available. At no point did we even see another car charging.

It is perhaps all a little bit boring and mundane for a reader, but for us it was fun. It is clear a road trip can be done with the charging infrastructure we have. And it is clear that the infrastructure will improve as will the cars. Also worth noting is that our car does not have the level 3 fast charging capability. All of our charging was done at level 1 (110 volts) or level 2 (220 volts). But most of all what is clear to us is that having made this trip, we now have confidence in knowing that any place we want to go in Florida is within our reach.

Appendix

The New York Road Trip Planing

As with all successful electric car trips in these early days of rapidly emerging charging infrastructure, the trip starts long before the departure date. Each leg of the trip needs to be planned so that it is consistent with the car's range and that there is a convenient charging station at each destination along with backup charging locations in case the target location is out of service or previously occupied.

I am sure this trip could be completed on an ad-hoc basis with no advanced planning, but I am too old, at the age of 74, for that kind of adventure. I would no sooner consider traveling without a charging plan than I would travel without hotel or motel reservations in advance. There was a time when we would do that, but not any more. I remember many trips where we found ourselves driving from motel to motel trying to find a room available at a price we could afford. In the end, we sometimes found ourselves driving through the night, taking an occasional nap in rest areas.

Planning started with some basic concepts. The first and the last big leg would be on the Auto Train. This is a long standing east coast travel alternative used by gas car drivers for years. It is especially useful for electric car drivers like me.

So we will leave from Winter Haven and drive to Sanford. Take the train to Lorton, VA and drive from there to family in Falls Church, VA. After spending some time there, we will head north. It is clear we can not drive to NY on a single charge. So, without doing any research, I came up with a tentative plan in my head. The trip to NY would be two days of driving with an over night stay in or near Philadelphia. This would require a stop in Baltimore to give us a boost on our way. I was not sure we could get to Philadelphia on a single charge. The second day we would drive to a family home in Huntington, LI with a possible stop along the way for a quick boost.

After spending a few days there, we would head further north to family in Rhinebeck, NY with a possible stop for a boost along the way. From there, after an afternoon visit, we will head to New Paltz, NY where we will spend time with family.

From there we will continue the return trip stopping in Wycoff, NJ where we will have lunch with family before continuing south to Philadelphia where we will visit the "Rocky Steps" and do some touring.

After a few nights we will retrace the route home through Baltimore and Falls Church where we will spend more time with family.

With this sketched outline in mind we started looking at actual distances and used Plug Share to find convenient charging locations. We started with the familiar since we had already been to Falls Church in our Nissan LEAF twice on the Auto Train. Our routine has been to stay at the Marriott Residence Inn Orlando the night before departure where two level 2 charging stations are available at the hotel. On arrival in Falls Church we will charge at 110 volts 15 amps using our modified Tesla UMC (Universal Mobil Connector) as we have in the past with the LEAF 110 volt Cord.

Next we found several garages in Baltimore with level 2 charging stations. Several were SEMA stations for which I do not have a card, but one in the "Little Italy" garage had a Charge Point station for which we have a card. We found some Walgreen's and Kohl's with level 2 stations a little further along the way as backup.

We found a LEEDS Certified Wyndham Hotel in Mount Laurel, NJ with both level 2 and a level 3 CHADEMO fast charger which the RAV4-EV can not use. But for overnight charging the level 2 station is more than adequate.

We found backup charging stations nearby and charging at Rutger's campuses along the way to LI.

Next we found a Hilton Garden Inn at Melville, LI just 7 miles from our family's home. We chose this hotel because they have on site Charge Point charging stations.

On departure, we planned to head north. We had an ambitious Sunday planned driving from the Hilton to Rhinebeck and then on to New Paltz all before dark. We found a Tesla model S owner in Dobbs Ferry listed in Plug Share with a NEMA 14-50 outlet he is willing to share. This is particularly attractive because in an hour we can pick up 28 miles of additional range which is better than the 20 we might get at a Charge Point station.

Charging from that point on would be with family at 110 volts and 15 amps if necessary in Rhinebeck and 220 volts and 20 amps in New Paltz and then 110 volts and 15 amps in Wycoff.

We found a very nice bed and breakfast in Summit, NJ that had a NEMA 14-50 outlet installed for a regular Tesla Roadster visitor.

In Philadelphia we found several garages with charging available. We chose the combination of the Hampton Inn Philadelphia Convention Center and the Parkway Public Parking at 1201 Filbert Street.

The remainder of the return trip south would include stops in Baltimore and Falls Church charging as and where we did on the way north.

Itinerary

Marriott Residence Inn Orlando
Arrive April 27
825 Heathrow Park Ln
Lake Mary FL 32746
(407) 995-3400

Amtrak Station Sanford SFA
Arrive April 28
600 S Persimmon Ave
Sanford FL 32771
(800) 872-7245
407-323-4800

Family
Falls Church Va
Depart April 30

Charge point---> 43 miles from Falls Church
The Hotel at Arundel Preserve
7789 Arundel mills blvd
Hanover md

Charge point ----> 54 miles from Falls Church
Walgreens Baltimore MD
2204 rolling rd
Windsor mill md

Charge point
Little Italy Garage
400 S. Central Ave.
Baltimore Md

Charge point ---->76 miles from Falls Church
Walgreens
8606 Philadelphia Rd
Rosedale Md.

Kohls 2 Blink chargers ----> 84 miles from Falls Church
300 Bridgetown pike
mantua NJ

level 2& 3 ----> 100 miles from Rosedale 123 miles to Hilton
Wyndham Hotel Thursday May 1st conf. # 84066482
1111 NJ-73
Mt Laurel NJ
tel:(856)234-7000
Depart May 2

Charging nearby ----> 100 miles from Rosedale
Marriott Residence Inn
1821 Old Cuthbert Rd
Cherry Hill, NJ
856-429-6111

Blink Charger pass required ----> 125 miles to Hilton
Camden College 1889 New Jersey 70, Cherry Hill,
Camden County,
New Jersey 08003

2 Charge point J1772 ----> 107 miles to Hilton

Rutgers ECO Complex

1200 Florence Columbus Rd

Bordertown NJ

Rutgers University Parking Blink 56 miles from Wyndham Hotel

67 miles to Hilton Garden Inn

79 Joyce Kilmer Ave.

Piscataway, NJ

----> 124 miles from Cherry Hill - 107 miles from Rutgers

Hilton Garden Inn Melville May 2 - 3 conf. # 3121470006

1575 Round Swamp Rd

Plainview, NY

(516) 755-5552

Depart May 4

Family ----> 7 miles from Hilton

Huntington, NY

Lou Arrive May 4

Dobbs Ferry NY

Family

Rhinebeck, NY

Family May 4 - 5

New Paltz, NY 12561-2651

Depart May 6

Family 59.3 miles from New Paltz

Wyckoff NJ

Charge point

51 Upper Montclair Plaza

Montclair NJ

The DeBary Inn 85.8 miles from Paul's - 35.9 miles from Jim's

**Arrive May 6
265 Springfield Ave
Summit, NJ
tel:(908) 277-0005**

Hampton Inn Philadelphia Convention Center

**Arrive May 7 - 8
1301 Race Street,
Philadelphia, PA 19107
855-271-3622
Depart May 9**

Four Points by Sheraton Philadelphia City Center
1201 Race St, Philadelphia, PA
(215) 496-2700

Parkway Public Parking
1201 Filbert street
Free J1772 \$35 for 24 hrs

Philadelphia Convention Center Garage
1027 Filbert street
Free J1772 \$35 for 24 hrs

**Family
Falls Church Va
Depart May 13**

Amtrak Ttrain Station LOR
8006 Lorton Rd
Lorton Virginia 22079
(800) 872-7245