

# Nissan LEAF Enthusiasts in Southwest Virginia

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[http://www.roperId.com/Science/NissanLEAF\\_SWVa.pdf](http://www.roperId.com/Science/NissanLEAF_SWVa.pdf)

<http://www.roperId.com/Science/LEAFEvent18Sept2012.pdf>

## Introduction

The Nissan LEAF is an important paradigm shifter for personal transportation. Those involved in an important paradigm shift need to cooperate in learning about what is involved and how to make the shift accelerate. This is an attempt to initiate such cooperation by bringing together LEAF drivers in southwest Virginia so that they can share information about driving a LEAF. Tentatively the group is called LEAF\_SWVa. Drivers of other electric vehicles and hybrid vehicles are invited to attend.

The organizer, L. David Roper in Blacksburg Virginia, leased a 2012 LEAF in May 2012. The first meeting of the group will be from 1 Pm to 3 PM on Saturday 29 September 2012 at New River Nissan at 2130 North Franklin St in Christiansburg VA.

Invite your local press to attend the meeting.

## Charging your LEAF at the Meeting

Four free level-2/240-volts and several level-1/120-volts charging stations are available for use on site before, during and after the meeting. There are 4 level-2/240 volts charging stations available in Blacksburg, two free ones at the Kroger Fuel Station on University City Boulevard 8 miles from the meeting location, a credit-card-actuated one at the Shell Fuel Station 6 miles from the meeting location and one at the organizer's house 8 miles from the meeting location; arrangements can be made to leave LEAFs there to charge during the meeting. Of course, there are several level-1/120-volts outlets that can be used at numerous other locations; many of these are located in the Kent Square Garage at 203 Draper Road SW in Blacksburg. These charging stations can be viewed at <http://www.plugshare.com>.

Some of you may have high mountains to climb either coming or going, or both, to the meeting and may have to charge somewhere along the way one or both ways or come the day before or stay the day after for more charging time. You can come early on the day and stay late on the day to charge if you wish. You may want to use some aids in planning your trip that are given near the end of this document.

Those who plan to attend the meeting should contact Dave Roper at [roperId@vt.edu](mailto:roperId@vt.edu) so that it will be assured that sufficient charging stations will be available for those who attend and that other adequate arrangements can be made. See the form at the bottom to be filled out and sent in. If you want to send a document before the meeting about your experiences driving a LEAF, such documents will be copied and made available to the participants at the meeting on a flash drive. If you have a web page about your experiences driving a LEAF, please send the web link to the organizer.



## Meeting Agenda

The tentative agenda for the meeting is:


1. Introduction of the LEAF or other EV owners, with each describing their experiences driving the LEAF.
2. Discussion of any LEAF or other EV technical details or questions from the LEAF owners and Nissan representatives.
3. Discussion of how to best disseminate information about owning a LEAF or other EV to the general public.
4. Discussion of how to encourage the installation of level-2/240-volts and level-3/480-volts charging stations in our area. Discussion of such efforts that are underway and the results so far.
5. Discuss whether to have more meetings of the LEAF\_SWVa group. If so, discussions about a permanent name for the group will ensue.
6. Answer questions from the press. Invite your local press to come to the meeting.

If you want to suggest other agenda topics, contact Dave Roper at [roperld@vt.edu](mailto:roperld@vt.edu) .

## Organizer's LEAF Web Links

- <http://www.roperld.com/science/ElectricVehicles.htm>
- <http://www.roperld.com/science/NissanLEAF.htm>
- <http://www.roperld.com/science/LEAFRoper.pdf>
- <http://www.roperld.com/science/LEAFRoperDrive.pdf>
- <http://www.roperld.com/science/NissanLEAFRangeCalculation.pdf>
- [http://www.roperld.com/science/NissanLEAFTrips\\_BurgToROA.pdf](http://www.roperld.com/science/NissanLEAFTrips_BurgToROA.pdf)
- <http://www.roperld.com/science/ChargingStationsSWVaSWv.pdf>
- <http://www.roperld.com/science/LEAFRoperTrips.pdf>

You may want to use the following information in planning your LEAF or other electric-vehicle drive to Christiansburg VA:

1. Use <http://maps.google.com/> to plan the trip.
2. After getting the directions, click on the link button  near the top to copy the URL (press CTRL-C).
3. Use [http://www.gpsvisualizer.com/profile\\_input](http://www.gpsvisualizer.com/profile_input) to change the units to U.S. and then paste the Google-Maps URL in the "Or provide the URL of data on the Web:" box (press CTRL-V). This will give you the elevation profile of your trip.

### Nissan LEAF Range Chart for 24kWh Battery

English

Level Road, No Heating or Air Conditioning, Battery Temp 70F/20C, Windows Closed



Speed MPH	35	40	45	50	55	60	65	70	75	Miles/kWh
exactly	exactly	exactly	exactly	exactly	exactly	exactly	exactly	exactly	exactly	exactly
- or -	- or -	- or -	- or -	- or -	- or -	- or -	- or -	- or -	- or -	- or -
	<b>6.3</b>	<b>5.9</b>	<b>5.2</b>	<b>4.6</b>	<b>4.3</b>	<b>3.9</b>	<b>3.6</b>	<b>3.3</b>	<b>3.0</b>	
	5.56	6.78	8.65	10.87	12.79	15.38	18.06	21.21	25.00	kWh

Battery Gids	Fuel Bar	9/bar	8.5/bar	8/bar	7/bar	6.5/bar	6/bar	5.5/bar	5/bar	4.5/bar	Fuel Bar
281	100.0%	132	121	111	97	89	82	75	68	62	12
257	91.5%	125	114	105	92	85	78	71	65	59	11
236	84.0%	116	105	97	85	78	72	65	60	54	10
219	77.9%	107	97	89	78	72	66	60	55	50	9
199	70.8%	98	88	81	71	65	60	54	50	45	8
186	66.2%	89	80	73	64	59	54	49	45	41	7
169	58.0%	80	71	65	57	52	48	43	40	36	6
149	50.9%	71	63	57	50	46	42	38	35	32	5
122	43.4%	62	54	49	43	39	36	32	30	27	4
102	36.3%	53	46	41	36	33	30	27	25	23	3
88	31.3%	44	37	33	29	26	24	21	20	18	2
73	26.0%	32	27	23	19	17	15	13	12	11	1
49	17.4%	24	20	17	14	13	12	11	10	9	Low Battery
25	8.9%	8	7	6	5	5	4	4	3	3	Very Low
4	1.4%	8	7	6	5	5	4	4	3	3	Very Low

**Turtle** **Get Safely Off Road Now! Less than One Half Mile at 25 mph Max** **Turtle**

mph	35	40	45	50	55	60	65	70	75
Miles/kWh	6.3	5.9	5.2	4.6	4.3	3.9	3.6	3.3	3.0

**\* Fuel Bar 1 will remain illuminated with Low Battery Warning; switch to Low Battery range data \***

Range below Fuel Bar 1 can be significantly reduced with any battery cell imbalances

This chart's range data is not associated with the LEAF's dash or center console range data

Data based on 21kWh usable battery capacity factor. **MAXIMUM RANGE at 12mph exactly** (not average speed)

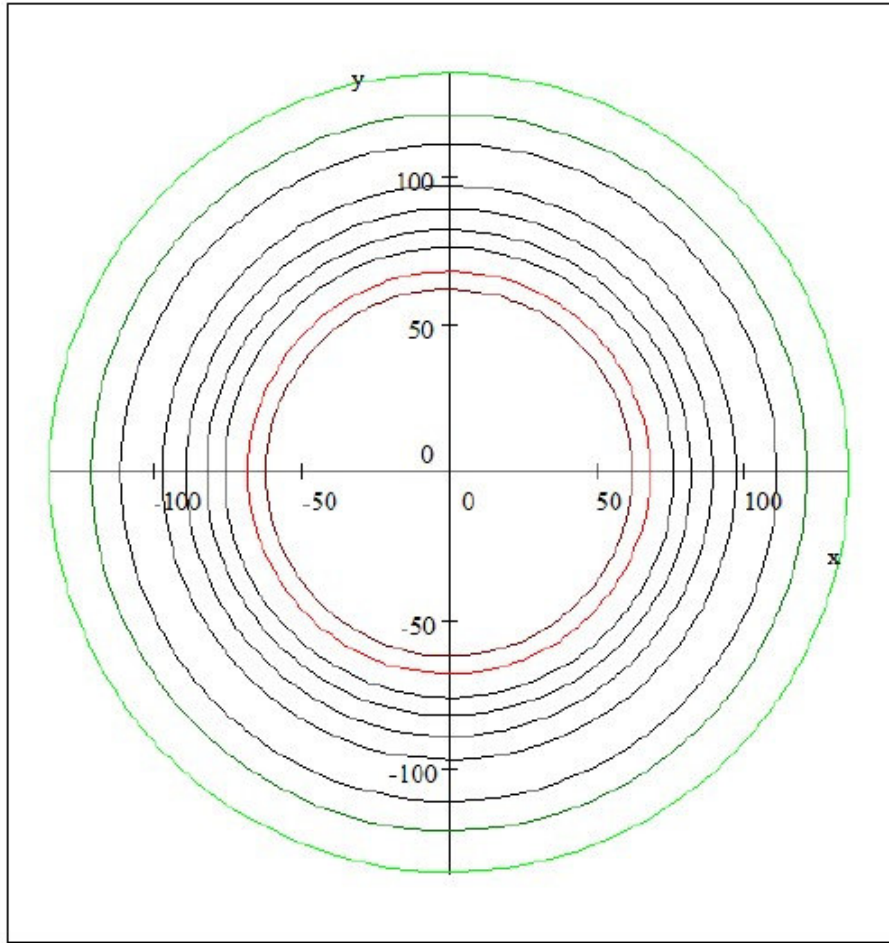
Add **One mile** of range @ 60mph (or 3.9m/kWh) for every **12 minute** charge at **120 volt** charge w/3.3kW charger

Add **One mile** of range @ 60mph (or 3.9m/kWh) for every **5 minutes** of charge at **240 volt/16amp** w/3.3kW charger

For Urban Stop-Go driving, select data from column that matches estimated miles/kWh column, NOT speed

1. Elevation increase: Subtract One Fuel Bar for every 1000 ft/300m
2. Elevation decrease: Add One Fuel Bar for every 2000 ft/600m
3. Wind: Select Speed based on Headwind; 60mph with 10mph headwind equals 70mph data
4. Temperature Increase: Add 1% to range for each 4F/2C above 70F/20C
5. Temperature Decrease: Subtract 1% from range for each 2F/1C below 70F/20C
6. Battery Degradation: Subtract 2% from range for every 10,000 miles / 15,000 km on car
7. Climate Control: Subtract One (Two) Fuel Bar(s) per each hour at 1.5kW (3.0kW) of heat/cool
8. Density Altitude: Increase range 1.5% per 1000 ft/300m for air density above sea level
9. Loading: Heavy cars use more energy than light ones; plan accordingly

**DISCLAIMER:**  
YOUR RANGE MAY VARY  
USE AT YOUR OWN RISK  
English  
Ver 7d



Nissan LEAF Range Circles (35-75 mph in units of 5 mph)

## Information about participants at the meeting.

Your name and location:	
How many people will you bring to the meeting?:	
How far will you travel?:	How many miles?
How long a level-2 charge will your vehicle need?:	How many hours?
Do you know of others who will attend?:	How many?
When you will arrive (time and date)?:	
When you will leave (time and date)?:	
I want to purchase a sandwich and drink at noon:	Yes or No

**Please send this information to L. David Roper at [roperld@vt.edu](mailto:roperld@vt.edu) . Phone: 540-230-4787.**

If you want to send a document about your experiences driving a Nissan LEAF or other electric vehicle, such documents will be copied and made available to the participants at the meeting. If you have a web page about your experiences driving a Nissan LEAF or other electric vehicle, please send the web link to the organizer.

## Items for Meeting

- Nissan LEAF T-shirts for each attendee who drives a LEAF:  
<http://nissanleafstore.spreadshirt.com/men-s-100-electric-A7131363/customize/color/7>
- Three combination padlocks with 3-16 shank" (for locking the level-1 EVSE cord to the charging port) as door prizes.
- Two chrome ELECTRIC signs to put on the sides of a LEAF: as a door prize for LEAF drivers:  
[https://salsa.democracynaction.org/o/2711/shop/item.jsp?storefront\\_KEY=553&t=&store\\_item\\_KEY=3660](https://salsa.democracynaction.org/o/2711/shop/item.jsp?storefront_KEY=553&t=&store_item_KEY=3660)
- One motion-sensing LED light with magnet to attach inside charger cover as a door prize for LEAF drivers: <http://www.sylvaniaonlinestore.com/p-122-led-motion-sensor-light.aspx>
- Two sun-visor extenders as a door prize for LEAF drivers: [http://www.amazon.com/Gray-Sidewindow-VisorExtenders/dp/B002JR949K/ref=wl\\_it\\_dp\\_o\\_pC\\_nS\\_nC?ie=UTF8&coliid](http://www.amazon.com/Gray-Sidewindow-VisorExtenders/dp/B002JR949K/ref=wl_it_dp_o_pC_nS_nC?ie=UTF8&coliid)