

# Nissan LEAF Trips from Christiansburg or Blacksburg VA

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## Introduction

The Nissan LEAF (<http://www.roperld.com/science/nissanleaf.htm>), a 100% electric car, can travel from Christiansburg or Blacksburg Virginia to many surrounding communities and back on a full charge or by an hour or two of charging at a destination before returning.

It is assumed that the LEAF will be driven at the speed limits and that the accelerations will not be extreme. To minimize the energy use, drive in ECO mode instead of Drive mode.

The author of this report drove most of these trips. Some, as indicated, have been calculated but not driven (<http://www.roperld.com/science/NissanLEAFRangeCalculation.pdf>).

## Round Trips by One Full Charge (< 80% of 21 kWh= $\sim$ 17 kWh)

I consider a round trip possible with one full charge if there is 20% of a full charge left at the end of the return trip; this allows for unplanned change of route.

- Christiansburg to Roanoke Airport: An Ironto/I-81 route or an Elliston/I-81 route uses less energy than an I-81 route. (Calculated trip) There are two level-2/240-volts chargers at First Team Nissan (6520 Peters Creek Rd, near the airport) in case one is needed. It would be better to park the LEAF at the Falling Branch parking lot and take the Smartway bus to the airport. (<http://www.smartwaybus.com/>)
- Blacksburg to Roanoke Airport: An Mt-Tabor-Rd route or an Ironto/I-81 route or a Catawba-Rd route. (Calculated trip) There are two level-2/240-volts chargers at First Team Nissan (6520 Peters Creek Rd, near the airport) in case one is needed. It would be better to park the LEAF at the Corporate Research Center parking lot and take the Smartway bus to the airport. (<http://www.smartwaybus.com/>)
- Blacksburg to downtown Roanoke by a Catawba Road route. There is a level-2/240-volts charging station at the Virginia Museum of Transportation (303 Norfolk Ave SW) in case it is needed.
- Christiansburg to Pearisburg; since Blacksburg is closer to Pearisburg, that trip can be made, also.
- Blacksburg to Pulaski; since Christiansburg is closer to Pulaski, that trip can be made, also.
- Blacksburg to Floyd; since Christiansburg is closer to Floyd, that trip can be made, also. There is a level-2/240-volts charger at Hotel Floyd (120 Wilson St), in case it is needed.
- Blacksburg to Mt. Lake and Cascades Park in one trip

- Christiansburg to Mt Lake (calculated trip)
- Christiansburg to Cascades Park (calculated trip)
- Blacksburg to Grandin Theatre by Catawba Road route
- Christiansburg to Grandin Theatre by I-81 (calculated trip)

## **Round Trips with a Few Hours of Charging at the Destination**

The amount of charging I seek at a destination is such that there will be 20% of a full charge left at the end of the return trip; this allows for unplanned change of route.

- Blacksburg or Christiansburg to Wytheville. There are two level-2/240-volts charging stations at Blue Ridge Nissan (1305 East Main St).
- Blacksburg to Bluefield WV. There are two level-2/240-volts charging stations at Cole Nissan (Rt 460 Green Valley). (calculated trip)
- Blacksburg to Covington. There are two level-2/240-volts charging stations at Covington Nissan (1915 Hot Springs Rd). (calculated trip). Trips on to Hot Springs VA or White Sulphur Springs could be made with charging at Covington.
- Blacksburg to Pipestem Resort State Park WV. There is a standard 120-volts outlet in front of the McKeever Lodge which can be used to fully charge the LEAF overnight.
- Blacksburg to Hungry Mother State Park VA.