Read Me

1. **data folder**
   1. **Lifetime Tax Calculator.xlsx**

This Excel spreadsheet will calculate the lifetime fees accrued by different vehicle models in all 50 states. These fees are broken down by category and summed in the “Total Fees” tab. The “State Sales Tax”, “Federal Fuel Tax”, “Title, Registration Fees”, and “Inspection Fees” provide the basic corresponding data by state. The calculation sheet includes calculations for fees that change over time, technology, weight, and horsepower. The spreadsheet can calculate fees based on vehicle parameter inputs in the “Vehicle Information” tab.

* 1. **vehicleinputs.csv**

The parameter values in the csv file are the inputs used in the “Lifetime Tax Calculator.xlsx” file to generate the input files: “camry.csv”, “civic.csv”, “f150.csv”, “leaf.csv”, “prius.csv”, “priusphev.csv”, and “volt.csv”. These values were gathered from publicly available model data from respective manufacturer websites (using base MSRP), all for model year 2012.

1. **inputs folder**
   1. **2012\_population.csv**

Population of each state in 2012. Source: https://www.census.gov/popest/data/state/totals/2012/

* 1. **aeo\_byregion**

This folder contains light-duty vehicle sales (projections) from the Annual Energy Outlook (AEO) compiled by the Energy Information Agency. The data are from the 2013 AEO and are broken down by region, where the continental USA is divided into 9 different sections.

* 1. **camry.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Toyota Camry inputs found in “vehicleinputs.csv”.

* 1. **civic.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Honda Civic inputs found in “vehicleinputs.csv”.

* 1. **eia\_projection.csv**

This file contains light-duty vehicle sales (projections) form the Annual Energy Outlook (AEO) compiled by the Energy Information Agency. The data are from the 2013 AEO.

* 1. **ev\_sales.csv**

This file contains monthly sales of all electric vehicles on the market (or have been on the market) from December 2010 through September 2013. Data are collected from hybridcars.com from the market-dashboard.

* 1. **f150.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Ford F150 inputs found in “vehicleinputs.csv”.

* 1. **forecasts\_v2.csv**

This file contains a compilation of studies and their projected % market share adoption of electric vehicles from 2008 through 2050. Refer to Figure 4 of the research article for links to references.

* 1. **highwayfinanaces.csv**

This file breaks down total national revenue and expenditure flows: revenues from fuel taxes (“fueltax” column), total revenues (“total” column), total expenditures (“expenditure” column), and running balance (“balance” column) from 1987 through 2011. Data collected from Table fe210 from the US Department of Transportation, Federal Highway Administration.

* 1. **hybrid\_sales.csv**

This file contains monthly sales of Toyota Prius and Honda Insight from January 2000 through July 2002. Sales obtained from automotivenews.com

* 1. **leaf.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Nissan Leaf inputs found in “vehicleinputs.csv”.

* 1. **percentdiff\_bystate.csv**

This file contains the difference between percentage of sales by state for all cars (total sales in a state/total sales in the country) and percentage of sales by state for Priuses (total Prius sales in a state/total Prius sales in the country). The sales are aggregated from monthly sales data from January 2002 through July 2012. The difference is given for every state, though there is no column for state name (they are arranged in alphabetical order by state). Data aggregated from proprietary dataset provided by RL Polk.

* 1. **prius\_statepercentages.csv**

This file contains the share of Priuses sold in each state relative to the entire US by month. The data run from January 2002 through July 2007 and are aggregated from a proprietary dataset provided by RL Polk.

* 1. **prius.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Toyota Prius inputs found in “vehicleinputs.csv”.

* 1. **priusphev.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Toyota Prius PHEV inputs found in “vehicleinputs.csv”.

* 1. **priussales\_bystate.csv**

This file contains the number of Priuses sold in each state relative to the entire US by month. The data run from January 2002 through July 2007 and are aggregated from a proprietary dataset provided by RL Polk.

* 1. **statefinances.csv**

This file contains a basic breakdown of state revenues (columns B-M) and state expenditures (columns N-S). All figures are in thousands of dollars and represent the finances in 2011. Data collected from Table sf21 from the US Department of Transportation, Federal Highway Administration.

* 1. **total\_statepercentages.csv**

This file contains the share of cars sold in each state relative to the entire US by month. The data run from January 2002 through July 2007 and are aggregated from a proprietary dataset provided by RL Polk.

* 1. **volt.csv**

Results from the “Total Fees” tab of the “Lifetime Tax Calculator.xlsx” model with Chevrolet Volt inputs found in “vehicleinputs.csv”.

1. **vehicletax\_graphs.R**

This file contains the R code used for various calculation and plotting purposes for the associated research paper. Code is commented throughout for clarity, further information can be requested at headisbagent@gmail.com.