Life Cycle Modeling of Tech & Strategies for a Sustainable Freight System in California Dataset

Dataset available at: https://doi.org/10.25338/B8NS4T

(This dataset supports report **Life Cycle Modeling of Technologies and Strategies for a Sustainable Freight System in California,** https://doi.org/10.7922/G2X928J)

This U.S. Department of Transportation-funded dataset is preserved by the California Department of Transportation in the digital repository Dryad (https://datadryad.org), and is available at https://doi.org/10.7922/G2M61HH8.

The related final report **Life Cycle Modeling of Technologies and Strategies for a Sustainable Freight System in California**, is available from the National Transportation Library's Digital Repository at https://rosap.ntl.bts.gov/view/dot/53769.

Metadata from the Dryad Repository record:

Abstract: California's freight transportation system is a vital part of the state's economy, but generates a high portion of local pollution in parts of the state with poor air quality. In recognition of these challenges, Executive Order B-32-15 encourages adoption of advanced vehicle technologies and infrastructure, as well as the use of alternative energy and fuels in the freight sector. These measures are echoed in the state's Sustainable Freight Action Plan. Most emissions reductions from freight vehicle activities are expected to come from the deployment of new emissions control devices, efficiency improvements, and zero emissions vehicle technologies for on-road trucks. Where emissions occur, and how emissions of different pollutants are affected by factors including vocation, duty cycle, powertrain configuration, and fuel pathway, will influence the effectiveness and economic costs of emissions reduction strategies. This research will apply a life cycle perspective to assess the energy use, greenhouse gas emissions, air quality impacts, and costs of on-road freight vehicle technologies and operational strategies identified under the Sustainable Freight Action Plan. Findings will be synthesized and reported as abatement costs and will be a first step in building a supply curve for GHG mitigation from the freight sector.

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Dataset description:
This dataset contains 1 .zip file collection described below.

doi_10.25338_B8NSAT_v2.zip:
This collection contains 14 files and 4 file types, listed below:
- .csv: The .csv, Comma Separated Value, file is a simple format that is designed for a database table and supported by many applications. The .csv file is often used for moving tabular data between two different computer programs, due to its open format. The most common software used to open .csv files are Microsoft Excel and RecordEditor, (for more information on .csv files and software, please visit https://www.file-extensions.org/csv-file-extension).
  - vehicle_scenarios.csv
  - fuel_prices.csv
  - fleetDNAsummary.csv
  - EMFAC2017_vehicle_pop_baseline.csv
  - EMFAC2017_emissions_rates.csv
  - electricity_emissions_perkwh.csv
  - conventional_GREET_WTP_LCIs.csv
  - charing_infranstructure.csv
  - CAstate_avg_dmg.csv
  - Batter-cost-energy.csv
  - allfreightFleetNDA.csv
- .R: For more information on this file type please visit https://www.file-extensions.org/search/?searchstring=.R&searchtype=2 for more information.
  - Freight_LCA-TEA_Model.R
- .txt: The .txt file type is a common text file, which can be opened with a basic text editor. The most common software used to open .txt files are Microsoft Windows Notepad, Sublime Text, Atom, and TextEdit (for more information on .txt files and software, please visit https://www.file-extensions.org/txt-file-extension).
  - Data_and_Model_Read-Me_File.txt
- .rtf: The rtf file extension is used for documents written in Rich Text Format, a text format with some very basic formatting preserved. The .rtf file type can be opened with Microsoft Word, (for more information on .txt files and software, please visit https://www.file-extensions.org/rtf-file-extension).
  - Data_and_Model_Read-Me_File.rtf

National Transportation Library (NTL) Curation Note:
As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (https://doi.org/10.21949/1503647) Section 7.4.2 Data, the NTL staff has performed *NO* additional curation actions on this dataset.

NTL staff last accessed this dataset at https://doi.org/10.25338/B8NS4T on 2020-12-07.

If, in the future, you have trouble accessing this dataset at the host repository, please email NTLDataCurator@dot.gov describing your problem. NTL staff will do its best to assist you at that time.