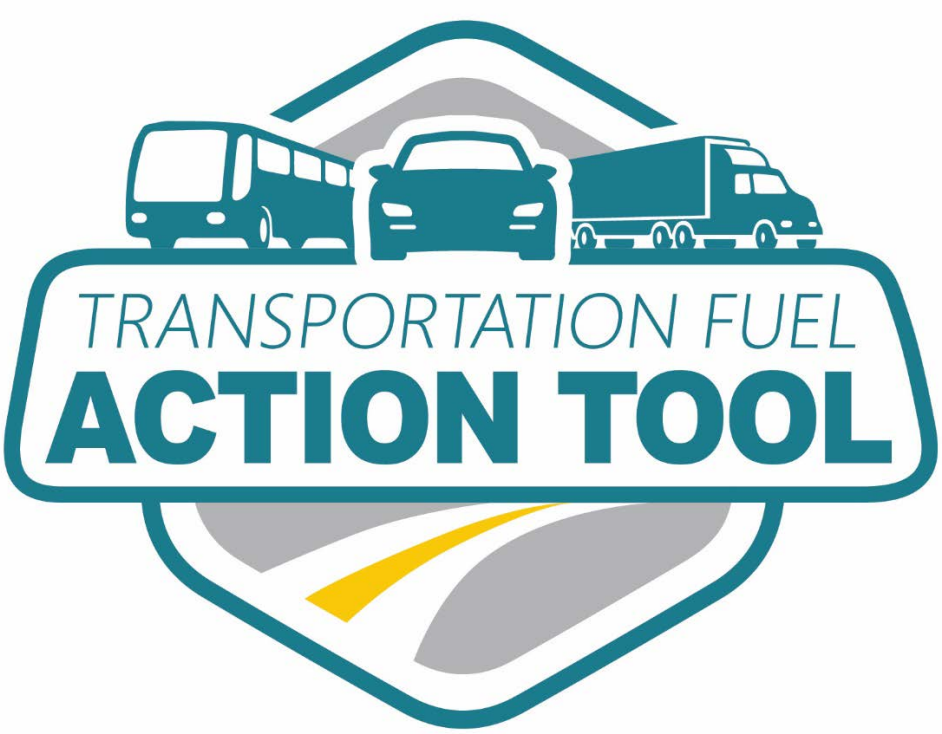


Background and Development

DECEMBER 2017

DECEMBER 2017

Special thanks to the following organizations for helping to develop the Transportation Fuel Action Tool

Background

Currently many transit authorities, businesses, and local municipal fleets throughout the state are faced with limited budgets and an increased need to evaluate capital costs and fuel expenses. Many others are facing the threat of nonattainment status with one or more of the National Ambient Air Quality Standards (NAAQS) which – if designated nonattainment – severely limits not just industrial growth, but growth in terms of transportation infrastructure. Moreover, an increased awareness of the convergence of health and mobility are causing many to evaluate efficiency and alternative fuels as potential viable options moving forward.

For example, the Greenville Transit Authority (GTA) owns 17 diesel motor buses which operate on 11 fixed routes and as backups in case of breakdown or during regular maintenance. Each weekday, a bus is in service for 14 hours, traveling approximately 200 miles. The fleet is aging and is nearing the end of its useful life, which means the vehicles will need to be replaced in the next few years. At that time, the GTA Board and Greenlink staff will be faced with a decision regarding the types of vehicles to procure for fleet replacement. As options are weighed, criteria such as cost – both for purchase and operations – as well as efficiency, appropriateness for routes and service, environmental impact, and local economic

impact will need to be evaluated. At the same time Piedmont Health Foundation (PHF) has committed to identifying transportation and mobility solutions that will help Greenville County residents get to where they need to go. Most recently, PHF has focused efforts on raising awareness regarding the transportation needs (increased frequency, extended hours of service, Sunday service, etc.) and a study of Greenlink's revenue compared to peer communities (local funds per capita by service area only amount to $3.76 per person). Through the Transportation Research Report, PHF learned that bus reliability has become an issue as the Greenlink fleet ages, and the Revenue Report has shown that funding is a constraint on capital purchases.

After attending a Transportation Association of SC "Health and Wellness Summit" in November 2016, Palmetto Clean Fuels (PCF) staff met and initiated conversations with a representative from PHF who shared the desire to focus on transportation and mobility solutions to Greenville County residents. This chance meeting led to additional conversations with the GTA.

To help establish criteria that the Board and staff use in considering capital replacement and fleet additions, and to provide data to weigh options against those criteria, PHF reached out to PCF (SC Energy Office) to explore a partnership to examine pros and cons of various vehicle types and determine the *most efficient use of limited resources with regards to the impacts of these decisions*. Using Clean Cities' tools and resources (like AFLEET), PCF developed a selection criteria tool and supporting materials for a toolkit pilot project. This toolkit will be used as a best practices model for other transit agencies and transportation providers in the state to use for capital considerations and alternative fuel fleets.

Process

PCF co-coordinators agreed to lead a study that resulted in a list of criteria for transit systems and fleets to consider when purchasing vehicles and the impacts of various vehicles and fuels against those criteria.

In developing the toolkit, PCF conducted research into a broad spectrum of potential tools to examine various aspects associated with transportation analysis, air quality assessments, and mobility management. PCF also sought the help of senior Energy Office staff to share ideas and brainstorm possible approaches. In the end, PCF co-coordinators chose to focus on compiling a set of tools that local planners might find useful without being overly burdensome to use. For example, certain air quality modeling tools (CMAQ) are expensive and require specific training and expertise to use, and therefore may be of little use to local planners and decision makers. Instead, PCF chose to highlight specific tools like AFLEET that are easier to use and provide important quantitative data used in decision making.

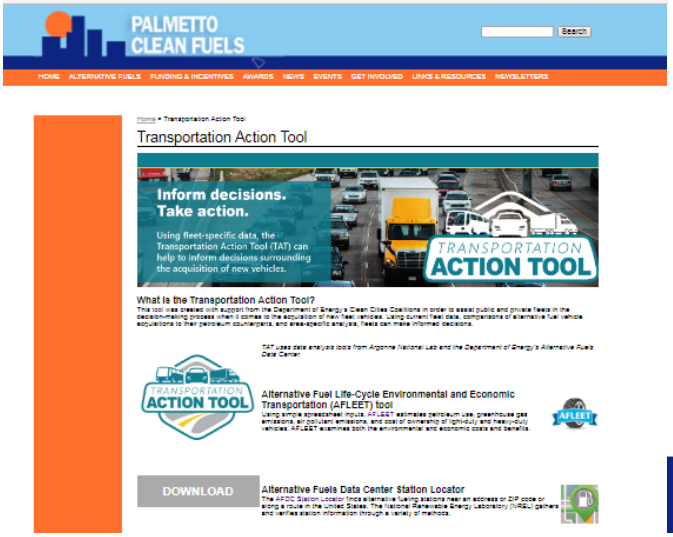
Deliverables

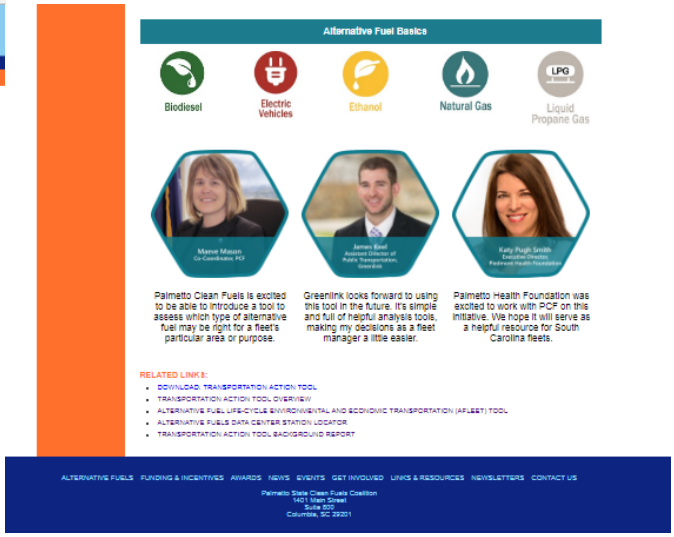
The study resulted in a list of criteria for fleets to consider and the impacts of various vehicles and fuel types against those criteria. PCF developed a decision matrix – along with compendium education materials - to provide local decision makers with the tools necessary to evaluate efficiency measures and potential alternative fuel options in their area. It is PCF's hope that this package will provide the tools and resources necessary to advance alternative fuels throughout the state via fleet conversions.

Transportation Fuel Action Tool

Dedicated Web Content

PalmettoCleanFuels.org/TAT





One Page Overview

Timeline

PCF co-coordinators have arranged and facilitated several telephone conversations, email communications and face-to-face meetings in order to facilitate the development of this project. These include:

11/3/16: PCF attends TASC Wellness Summit to present on Alternative Fuels

11/6/16: Email follow-up with PHF and request for additional information

1/3/17: Conference call with GTA, PHF, and PCF

1/9/17: PCF initiates email introduction between GreenLink and Duke Energy

2/22/17: Email follow-up PHF and PCF

3/30/17: Face-to-face meeting PHF, PCF, and GTA staff

4/17/17: Email follow-up on scope of work PHF and PCF

5/31/17: Email GTA shares fleet data with PCF for AFLEET analysis

7/12/17: Internal working meeting (PCF co-coordinators)

7/13/17: Email to schedule 2nd face-to-face meeting

7/28/17: Face-to-face meeting PHF, PCF, GTA

9/13/17: PCF strategic meeting

9/14/17: Building of Transportation Fuel Action Tool (TAT) began

9/27/17: PCF tool status meeting, draft one of TAT reviewed

10/18/17: Draft two of tool completed

10/19/17: PCF tool status meeting, presentation to Greenlink scheduled for 11/27/17

10/23/17: TAT sent to 2 ORS employees for testing

11/6/17: Background document for the tool created

11/8/17: Feedback received from ORS employees and edits made

11/12/17: Draft TAT webpage completed

11/13/17: PCF tool status meeting

11/15/17: Presentation to Greenlink postponed until after the first of January due to scheduling conflicts