

BuFFeT Bus Fuels Fleet Evaluation Tool

Researchers at the University of South Florida have developed an analysis tool that can be used to assist public transit agencies with evaluating cleaner fuel options for heavy-duty bus fleets and making effective vehicle acquisition choices.

Over the past decade, transit bus fleets in the United States have been impacted by new legislation, including stricter exhaust emission rules for heavy-duty vehicles and mandated reductions in the sulfur content of diesel fuel. The revised standards, along with rising fuel prices and growing concern over air quality and global climate change, have encouraged transit system operators to investigate new approaches regarding vehicle acquisition decisions and fleet maintenance practices. This has prompted renewed interest in the availability of an easy-to-use planning and analysis tool. As such, the development of an updated and finalized version of the original cost modeling tool is warranted.

The product of our research is a user-friendly, easily-modifiable Visual Basic computer application designed to work with the Microsoft Excel platform. The planning tool comprises a life-cycle cost calculator, a sensitivity analysis, and a summary of pollutant emissions generated by each vehicle type. The outcome of each analysis may be used to support transit agency choices related to bus acquisition or regular operations.

A step-by-step BuFFeT user guide, supporting background data, and sample analyses are also included providing a well formed self serving package that can be easily used by any person with a basic knowledge in MS Excel. This tool would be very beneficial to not only the Department of transportation but also in the field of Energy Conservation.

ADVANTAGES:

- Versatile and easy to distribute
- Quickly performs life-cycle costs
- Analysis displayed as both spreadsheets and charts
- Flexible – can be used in variety of transit groups
- User friendly

Tool to Save Fuel in Transportation Fleets

