



**Adding Brake Performance and Emissions
Testing
to the
Bus Testing Program**

**Walter Kulyk
Director, FTA Office of Mobility Innovation**

October 31, 2007

Workshop Agenda



- ◆ **Welcome, and Introduction** **1:00 pm – 1:30 pm**
 - ◆ Walter Kulyk
 - ◆ Director, Office of Mobility Innovation, Federal Transit Administration (**FTA**)

- ◆ **Overview of the Bus Testing Program** **1:30 pm – 1:50 pm**
 - ◆ David Klinikowski
 - ◆ Director, Bus Testing Program, Pennsylvania Transportation Institute (**PTI**)

- ◆ **Test Protocols & Equipment** **1:50 pm – 2:30 pm**
 - ◆ W. Scott Wayne
 - ◆ Assistant Professor, West Virginia University (**WVU**)

- ◆ **Break** **2:30 pm – 2:40 pm**

- ◆ **Discussion** **2:40 pm – 4:00 pm**

Notice of Proposed Rulemaking (NPRM)



- ◆ Pursuant to statutory changes, FTA must amend its bus testing regulation to add braking performance and emissions testing.
- ◆ As part of that process, FTA must first issue an Notice of Proposed Rulemaking (NPRM) setting forth its proposed changes and seeking public comments on them.
- ◆ The NPRM may seek additional comments on and suggestions for other regulatory or sub-regulatory (e.g., procedural) updates to the regulation based on 17 years of experience conducting the Bus Testing Program under the current regulation.

FTA Wants Your Input



- ◆ **Rulemakings are a public process**
- ◆ **A Notice of Proposed Rulemaking (NPRM) is just that – a proposal**
- ◆ **Your ideas, suggestions, comments, and concerns are vital to ensuring a final rule that benefits all stakeholders**

Background



- ◆ **In the late 1980s, Congress became aware of significant numbers of transit bus models that were not able to withstand the rigors of daily transit service.**
- ◆ **Congress recognized a need for unbiased information about the performance and durability of transit buses.**

Legislative and Regulatory History



◆ Legislation

- ◆ **Bus Testing Program established in 1989 by STURAA**
 - Required testing of new bus models for maintainability, reliability, safety, performance, structural integrity, fuel economy, and noise (consistent with APTA “White Book”)
- ◆ **Expanded in 1991 by ISTEA**
 - Required additional tests for braking performance and emissions (not implemented)
 - FTA pays 80% of testing fee
- ◆ **Reauthorized by TEA-21 and SAFETEA-LU**

◆ Regulation

- ◆ The FTA Bus Testing Regulation is codified at 49 CFR Part 665

Program Outputs



- ◆ The principal output of the program is a report documenting the results of each bus test
- ◆ Bus Testing Reports and selected data are available on the Bus Testing Database at www.altoonabustest.com

Rulemaking Process Timeline



- ◆ **Industry Workshop – today, October 31, 2007**
- ◆ **NPRM Publication - TBD**
- ◆ **Public comment period – open for 60 days from NPRM publication**
- ◆ **Publication of Final Rule for braking and emissions – summer 2008**
- ◆ **Review and possible revision of (non-regulatory) test protocols – 2009-2010**

How to Comment on the NPRM



- ◆ We encourage you to be candid. Today's discussion will help to identify issues and explore options, however...
- ◆ *ONLY comments posted to the rulemaking Docket can be considered in preparing the final rule*
 - ◆ Docket address: **www.regulations.gov**
 - ◆ Docket # **FTA-2007-0011**
- ◆ Anything posted to the Docket can be viewed by the public

FTA Contacts



- ◆ For technical issues, Marcel Belanger, Bus Testing Program Manager, FTA Office of Research, Demonstration, and Innovation (TRI), (202) 366-0725, marcel.belanger@dot.gov.
- ◆ For legal issues, Richard Wong, FTA Office of the Chief Counsel (TCC), (202) 366-1936, richard.wong@dot.gov.

Brake Performance Testing



- ◆ **How should new bus models be tested for braking performance?**
 - ◆ Stopping performance and stability on various surfaces
 - ◆ Parking brake performance on steep grades
- ◆ **PTI has developed a braking performance test procedure and acquired testing equipment.**

Emissions Testing



- ◆ **How should new bus models be tested for emissions of the EPA criteria pollutants?**
 - ◆ Non-methane hydrocarbons (NMHC)
 - ◆ Oxides of nitrogen (NO_x)
 - ◆ Particulate matter (PM)
 - ◆ Carbon monoxide (CO)
- ◆ **How can the test measure emissions of two gases with significant global warming impact?**
 - ◆ Carbon dioxide (CO_2)
 - ◆ Methane (CH_4)

Emissions Testing (cont.)



- ◆ **FTA has established collaboration between PTI and WVU**
- ◆ **WVU has experience in testing emissions from heavy-duty vehicles and has been working with FTA under cooperative agreements for the last several years**
- ◆ **WVU can provide technical assistance to PTI in:**
 - ◆ Developing test procedures (based on EPA and SAE protocols)
 - ◆ Specifying and setting up PTI's emissions testing laboratory
 - ◆ Conducting emissions testing during the start-up period

Applicability & Phase-In



- ◆ **When should the Brake Performance and Emissions tests be applied to new and partial testing contracts?**
- ◆ **Should the new tests apply to all buses immediately upon the effective date of the new regulations?**
- ◆ **Should the tests should be phased in?**
- ◆ **If so, based on what standards?**

Partial Testing Criteria



- ◆ **What “major changes” in components or configuration on a previously-tested bus would trigger partial testing for braking performance or emissions?**

Other Issues for Consideration



- ◆ **Proposed new, revised, or dropped definitions**
- ◆ **Ways to improve Bus Test data reporting**
- ◆ **Selection of appropriate service life categories – who should decide and how?**
- ◆ **How to test buses that would exceed legal weight ratings when filled to available passenger capacity**
- ◆ **How to treat related models in a “Family of Vehicles”**
- ◆ **Whether and if so how to separately report test data for third-party chassis**
- ◆ **Whether and if so how FTA should make “pass/fail” determinations or recommendations of bus models**

