

Bus Fleet Idling Practices

Bill Luke
Albany, NY.
May 2004

DOE/NREL



Tiger Team
Technical Assistance



Bus Fleet Survey Conducted



Fleets profiled :

- Tour Coaches
 - Metro Transit Buses
 - School Buses
- (diverse climate conditions)*

Questions posed :

- Routine Idling Practices
- Cold/Hot Weather Idling
- Official Policies/Regulations
- Idle Control Technologies

Common Responses

- Our Buses don't do any excess idling, It's those "other" bus fleets
- Some have No Formal Idling Policy
- Most feel it is a driver education problem, Not a technology problem
- Most have a 3-5 minute idling limit when buses are not carrying passengers or loading
- Block heaters and systems that require buses to be "plugged-in" are not practical because of parking & infrastructure limitations or fleet rotation practices

Cold Weather Practices

- 30 minute warm up period before placing buses in service.
- Sub-Freezing weather – start and (fast) idle buses 30 minutes every 3 to 4 hours through the night to assure drive-out in the morning.
- No special overnight idling practice needed if buses are stored indoors.
- Although CNG buses may be easier to start (than diesel) in extreme cold weather, driveability can still be poor since various auxiliary systems still require engine heat or warm-up time to operate properly (so no difference in idling practice).

Hot Weather Practices

- 30 minute AC cool down period typical before placing buses in service.
- Buses must be shut down if waiting period exceeds 15 minutes (but then you may need another 30 minute cool down before bus can be placed back in service)
- No special practice for school buses not equipped with air conditioning

Idling Regulations

- Three states provided copies of bus/truck idle limit regulations or legislation that had been passed (NY, MA, CA).
- 5 minute limit for layovers or while at terminals
- Hybrid buses allowed to idle for longer periods if necessary to charge batteries.
- Buses observed emitting black smoke for more than 10 seconds while stationary, or 90 seconds while moving, must be reported immediately.
- Violations of bus idle rules can result in fines of \$100 - \$500 and driver disciplinary action.

Other Observations

- Not much difference between bus types (by use) as originally thought
- Concern with bus idling seems to be more closely related to emissions/health impact , not energy waste (especially with school buses).
- No new technologies are being employed to minimize idling by those surveyed.
- All those surveyed are very interested in learning more about idle reduction technologies or participating in new technology field tests