

Analysis of EPA Comments on Texas Clean Fleet Repeal

EPA Comments

“...the federal clean fuel fleet requirement must be fulfilled by measures other than federal requirements.”

“...Texas may substitute its Texas Clean Fleet (TCF) program with any other program that results in as much greater long-term emissions reductions as the CFF program.”

“In no event, however, can the substitute program be either the Tier II or heavy-duty diesel engines (HDDE standards).”

Reference to EPA guidance letter CCD-05-12 (July 21, 2005)

“It would, therefore, be premature to assert that either the Tier II or HDDE standards have superseded the CFF standards.”

“We recommend that a demonstration be provided in the final rule submittal to show what federal CFF credits need to be substituted by State rule credits for each affected nonattainment area.”

Draft Response

The August 1998 *Clean Fuel Fleet Program Implementation Guidance* (EPA420-R-98-011) is available on EPA’s Clean Fuel Fleets (CFF) webpage, which was last updated on May 23, 2001 and is located at <http://www.epa.gov/oms/regs/fuels/cff/cffp-imp.pdf>. Page 4 of this guidance states that “Clean-Fuel Fleet light duty standards are the same as for Low Emission Vehicles (LEVs)...” The full useful life Clean Fuel Vehicle (CFV) LEV standards are summarized in the table below and were extracted from the following sources:

- Clean Air Act, Section 242, Requirements Applicable to Clean Fuel Vehicles Phase II (beginning with 2001 model year) for the 100,000 Mile Standard;
- Code of Federal Regulations, Part 88 - Clean-Fuel Vehicles, Subpart A - Emission Standards for Clean-Fuel Vehicles, Section 88.104-94 - Clean-fuel vehicle tailpipe emission standards for light-duty vehicles and light-duty trucks, Tables A104-2, A104-4, A104-6; and
- EPA Federal and California Exhaust and Evaporative Emission Standards for Light-Duty Vehicles and Light-Duty Trucks, February 2000. EPA420-B-00-001, which is available at <http://www.epa.gov/otaq/stds-ld.htm>.

Vehicle Class	NO_x <i>(grams per mile)</i>	NMOG <i>(grams per mile)</i>	CO <i>(grams per mile)</i>
LDV	0.3	0.090	4.2
LDT1	0.3	0.090	4.2
LDT2	0.5	0.130	5.5
LDT3 (0-3,750 ALVW)	0.6	0.180	5.0
LDT3 (3,751-5,750 ALVW)	1.0	0.230	6.4
LDT4	1.5	0.280	7.3

With the advent of the National Low Emission Vehicle (NLEV) program beginning in the 2001 model year, the majority of the light-duty vehicles purchased around the country met LEV or better requirements. Therefore, if subject fleets were going to purchase “LEV-or-better” vehicles anyway, the CFF requirements were redundant for most light-duty purchases beginning with the 2001 model year. Certainly, there were exceptions to this, but the phase-in of the Tier 2 standards from the 2004-2007 model years make the CFF requirements redundant for all subject vehicles.

Therefore, staff believes there is no requirement for Texas to provide a substitute program that will yield equivalent benefits to the TCF program. The primary benefits of the TCF program are the result of subject fleets having purchased “LEV-or-better” vehicles in the 1999 and 2000 model years, prior to the introduction of the NLEV program. Without the TCF program, these subject fleets would have purchased higher emitting Tier 1 vehicles. These 1999 and 2000 “LEV or better” vehicles are still operating on the road today and still yielding benefits, which would only be removed if the TCEQ now required those fleets to replace these older “LEV-or-better” vehicles with equivalent 1999 and 2000 model year Tier 1 vehicles.

The TCEQ is simply proposing to repeal the redundant “LEV-or-better” requirement for new vehicle purchases. In short, there are no new additional benefits to be gained from the TCF program, but the current benefits from existing TCF vehicles shall remain.

In their comments, EPA references a July 21, 2005 letter to manufacturers (CCD-05-12). Provided below are excerpts from this letter:

“Subsequent to publishing its CFV regulations, EPA has promulgated new emission standards that are generally more stringent than or equivalent to the CFV emission standards for light-duty vehicles, light-duty trucks, and heavy-duty engines.”

“Tier 2 LDVs, LDT1-4s, and MDPVs certified to the following Tier 2 bin standards are equivalent to or more stringent than CFV LEV emission standards:

LDV	Bins 1-7 and Bin 9
LDT1	Bins 1-7 and Bin 9
LDT2	Bins 1-9
LDT3	Bins 1-10

LDT4 Bins 1-10
MDPV Bins 1-11”

“The following determinations are made for 2005 and later model year Otto cycle heavy-duty vehicles:

8,501-10,000 GVWR Otto-cycle heavy-duty vehicle chassis standards are more stringent than the CFV Otto cycle heavy-duty engine LEV emission standard.

10,001-14,000 GVWR Otto-cycle heavy-duty vehicle chassis standards are more stringent than the CFV Otto cycle heavy-duty engine LEV emission standard.

The following determinations are made for 2005 and later model year heavy-duty Otto cycle engines and diesel engines:

Current emission standards for heavy-duty engine Otto cycle engines and diesel engines are more stringent than CFV LEV heavy-duty Otto cycle engines, or heavy-duty diesel engine emission standards.”

The excerpts from the July 21, 2005 letter provided above support the TCEQ position that any vehicle purchased beginning with the 2007 model year is going to meet the “LEV-or-better” benchmark. Provided below are the full useful life Tier 2 standards extracted from Table SO4-1 in EPA’s February 10, 2000 Tier 2 / Low Sulfur Final Rule. Also provided are excerpts from the qualifying notes which accompany the table.

<i>Bin Number</i>	<i>NO_x</i> <i>(grams per mile)</i>	<i>NMOG</i> <i>(grams per mile)</i>	<i>CO</i> <i>(grams per mile)</i>
<i>11</i>	0.90	0.280	7.3
<i>10</i>	0.60	0.156 / 0.230	4.2 / 6.4
<i>9</i>	0.30	0.090 / 0.180	4.2
<i>8</i>	0.20	0.125 / 0.156	4.2
<i>7</i>	0.15	0.090	4.2
<i>6</i>	0.10	0.090	4.2
<i>5</i>	0.07	0.090	4.2
<i>4</i>	0.04	0.070	2.1
<i>3</i>	0.03	0.055	2.1
<i>2</i>	0.02	0.010	2.1
<i>1</i>	0.00	0.000	0.0

Notes:

- Bins 9-11 are deleted at end of 2006 model year (end of 2008 model year for HLDTs and MDPVs).
- Higher NMOG and CO values for Bins 8-10 are for HLDTs and MDPVs only.
- Bin 11 is for MDPVs only.

- Higher NMOG standard of 0.156 grams-per-mile for Bin 8 deleted at end of 2008 model year.

Shown below is an extract from the file entitled “T2EXH.D”, which is provided with the latest version of the MOBILE6.2 model, available at <http://www.epa.gov/otaq/m6.htm>. This table summarizes the assumed distribution of Tier 2 vehicles by vehicle class and bin for the 2007 model year:

<i>Bin Number</i>	<i>Vehicle Class</i>				
	<i>LDV</i>	<i>LDT1</i>	<i>LDT2</i>	<i>LDT3</i>	<i>LDT4</i>
<i>1</i>	0%	0%	0%	0%	0%
<i>2</i>	10%	10%	0%	0%	0%
<i>3</i>	30%	30%	0%	0%	0%
<i>4</i>	20%	20%	0%	0%	0%
<i>5</i>	40%	40%	40%	0%	0%
<i>6</i>	0%	0%	30%	0%	0%
<i>7</i>	0%	0%	30%	0%	0%
<i>8</i>	0%	0%	0%	100%	100%
<i>9</i>	0%	0%	0%	0%	0%
<i>10</i>	0%	0%	0%	0%	0%
<i>11</i>	0%	0%	0%	0%	0%
<i>Total</i>	100%	100%	100%	100%	100%

As shown, all of the 2007 LDVs and LDT1s are assumed to be Bin 5 or better. For NO_x, VOC, and CO, the Tier 2 Bin 5 useful life standards of 0.07, 0.09, and 4.2 grams-per-mile, respectively, are all equal to or less than the LEV NO_x, VOC, and CO standards for LDVs and LDT1s of 0.3, 0.09, and 4.2 grams-per-mile, respectively.

The 2007 LDT2s are assumed to be Bin 7 or better. For NO_x, VOC, and CO, the Tier 2 Bin 7 useful life standards of 0.15, 0.09, and 4.2 grams-per-mile, respectively, are all equal to or less than the LEV NO_x, VOC, and CO standards for LDT2s of 0.5, 0.13, and 5.5 grams-per-mile, respectively.

The 2007 LDT3s and LDT4s are assumed to be in Bin 8. For NO_x, VOC, and CO, the Tier 2 Bin 8 useful life standards of 0.2, 0.125, and 4.2 grams-per-mile, respectively, are all equal to or less than the LEV NO_x, VOC, and CO standards for 0-3,750 ALVW LDT3s of 0.6, 0.18, and 5.0 grams-per-mile, respectively. Even the higher 0.156 NMOG Bin 8 standard which expires with the 2008 model year is less than the LEV LDT3 0.18 NMOG standard. For this example, the 0-3,750 ALVW LDT3 LEV standards were used because they are more stringent than the LEV standards for both 3,751-5,750 ALVW LDT3s and LDT4s.

Provided below is a similar distribution of vehicle class by Tier 2 bin for the 2009 model year:

<i>Bin Number</i>	<i>Vehicle Class</i>				
	<i>LDV</i>	<i>LDT1</i>	<i>LDT2</i>	<i>LDT3</i>	<i>LDT4</i>
<i>1</i>	0%	0%	0%	0%	0%
<i>2</i>	25%	25%	0%	0%	0%
<i>3</i>	55%	55%	0%	0%	0%
<i>4</i>	10%	10%	20%	0%	0%
<i>5</i>	10%	10%	20%	74%	0%
<i>6</i>	0%	0%	30%	0%	0%
<i>7</i>	0%	0%	30%	0%	0%
<i>8</i>	0%	0%	0%	26%	100%
<i>9</i>	0%	0%	0%	0%	0%
<i>10</i>	0%	0%	0%	0%	0%
<i>11</i>	0%	0%	0%	0%	0%
<i>Total</i>	100%	100%	100%	100%	100%

As shown, any Tier 2 vehicle purchased in 2007 or later will meet the “LEV or better” benchmark required by the CFF guidance. Even though the July 21, 2005 EPA letter implied that LDV and LDT1 Tier 2 vehicles for Bin 8 would not meet “LEV or better”, the MOBILE6 model assumes that there are no Bin 8 LDVs and LDT1s. Similarly, the EPA letter implied that LDT2 vehicles for Bins 10 and 11 would not meet “LEV or better”, but the MOBILE6 model assumes that no Bins 10 and 11 LDT2s exist for 2007-and-later. Finally, the EPA letter implied that LDT3 and LDT4 Bin 11 vehicles would not meet “LEV or better”, but MOBILE6 assumes that no 2007-and-later Bin 11 vehicles exist. In fact, EPA’s Tier 2 rule clearly states that Bin 11 is for MDPVs only.

Staff believes a similar demonstration is not necessary for heavy-duty emission standards because the July 21, 2005 EPA letter clearly indicated that all 2005-and-later heavy-duty vehicle emission standards are more stringent than CFV LEV standards for heavy-duty vehicles. As shown, staff believes it is not premature, (i.e., reference EPA’s comment that “it would, therefore, be premature to assert that either the Tier II or HDDE standards have superseded the CFF standards”).