

VEHICLE EMISSIONS LABELING WORKSHOP



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Today's Agenda

- ◆ Legislation AB1229 Summary
- ◆ Proposed Recommendations
 - Smog Scale
 - Global Warming Scale
- ◆ Label Design
- ◆ Q/A and Further Discussions

AB 1229

Summary

- ◆ Revise existing Smog Index Label to include information on the emissions of global warming gases
- ◆ Applies to 2009+ MY vehicles sold in CA
- ◆ Includes:
 - All passenger cars
 - Light duty trucks 8,500 lbs. GVWR or less
 - Medium duty passenger vehicles 10,000 lbs. GVWR or less

AB 1229

Summary Continued

- ◆ Revised Label shall include:
 - Smog score
 - Global warming score } Ave, Best, Specific Vehicle
 - include upstream emissions
 - Brief explanation of both scores and how motor vehicle use contributes to global warming
 - Use of at least one color ink in addition to black
 - Scale to represent all vehicles within MY

Proposed Recommendations

- ◆ Work with US EPA and adopt relevant portions of Green Vehicle Guide label concept for use in California
- ◆ Extensive market studies and consumer acceptance already performed
- ◆ Use simple 0-10 scales for both smog and global warming indices
- ◆ Identify cleanest vehicles with “SmartWay” logo

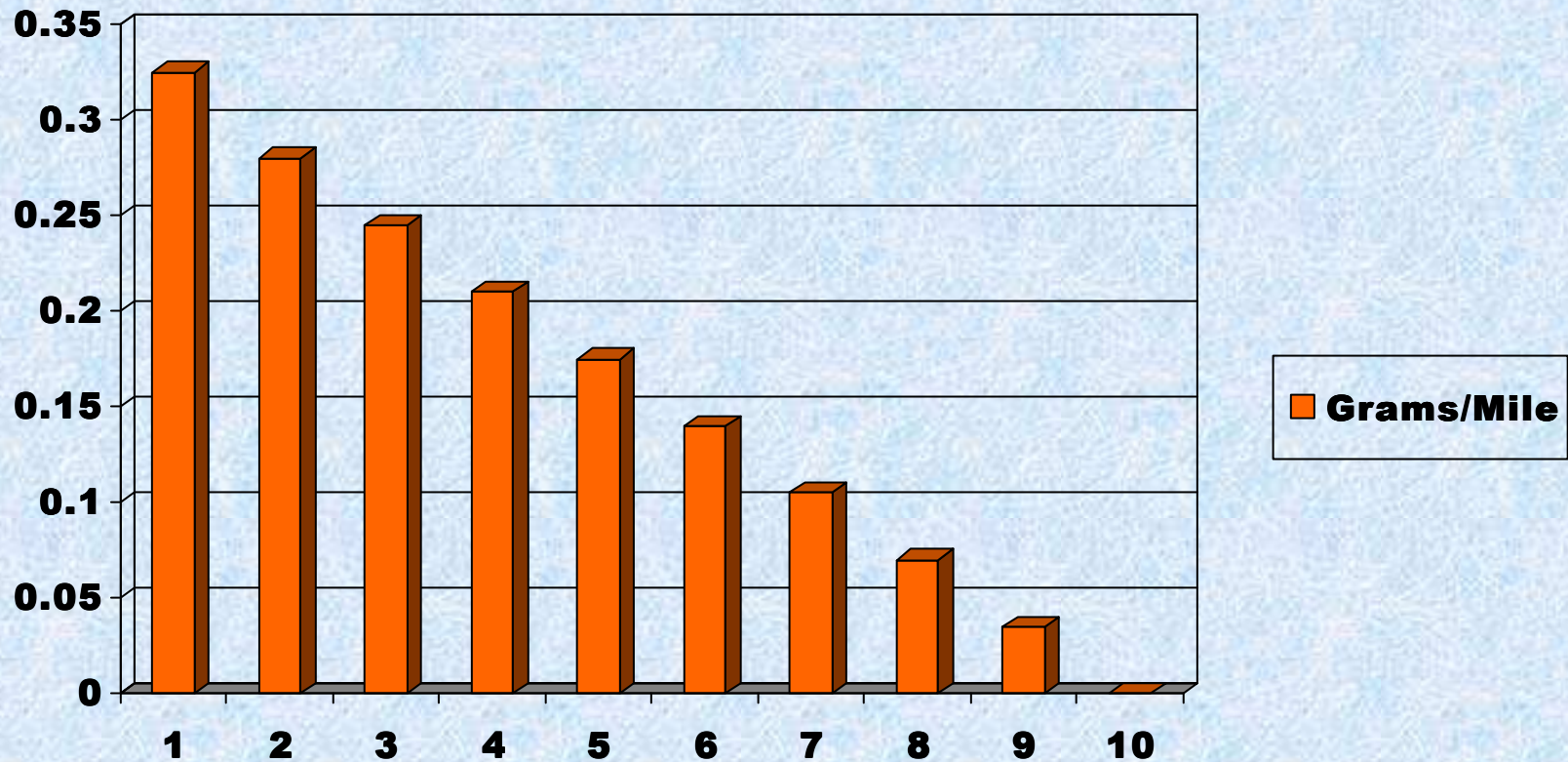
Proposed Recommendations

- ◆ Provides consistency between CA and US EPA labeling
- ◆ Use one scale for all PCs, LDTs and MDPVs

Comparison of 2009 California LEV II and Federal Emission Standards (bins) (NMOG+NOx - g/mi at 120,000 miles)

Emission Category/Bin	NMOG+NOx
ZEV - Bin 1	0.00
PZEV - SULEV - Bin 2	0.030
Bin 3	0.085
Bin 4	0.110
ULEV	0.125
LEV - Bin 5	0.160
LEV (option 1) - Bin 6	0.190
SULEV (MDPV)	0.200
Bin 7	0.240
Bin 8(a)	0.325
ULEV (MDPV)	0.343

Proposed Smog Index Score



Proposed Smog Score Comparison (NMOG+NOx - g/mi at 120,000 miles)

Emission Category/Bin	NMOG+NOx	Proposed Score
ZEV - Bin 1	0.000	10
PZEV	0.030	9.5
SULEV - Bin 2	0.030	9
Bin 3	0.085	7
Bin 4	0.110	6
ULEV	0.125	6
LEV - Bin 5	0.160	5
LEV (option 1) - Bin 6	0.190	4
SULEV (MDPV)	0.200	4
Bin 7	0.240	3
ULEV (MDPV) - Bin 8(a)	0.325	1

Global Warming Score

- ◆ New for California
- ◆ Challenge is to find CO2 data from all sources
 - Including upstream emissions

Global Warming Score

- ◆ Scale to reflect CO2 equivalent based on Section 1961.1

- $\text{CO}_2 \text{ Eq} = \text{CO}_2 + 296 \times \text{N}_2\text{O} + 23 \times \text{CH}_4$

- $- A/C_{\text{Direct Allowance}} - A/C_{\text{Indirect Allowance}}$

- ◆ To include upstream emissions

- Gasoline fuel is normalized to 1.0

- Other fuels modified relative to gasoline

CO2 Data From 2007 MY California Certifications

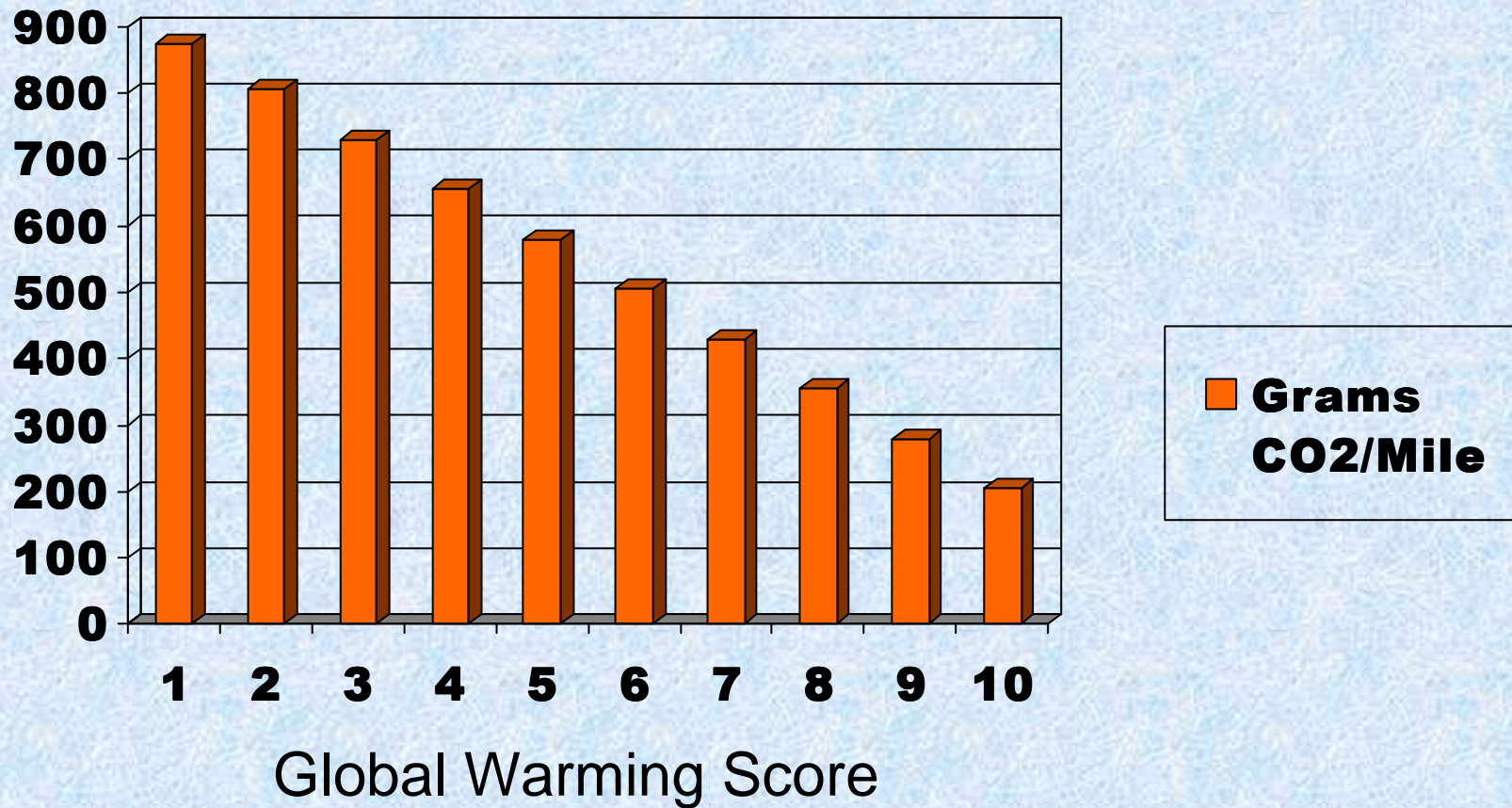
- ◆ 368 vehicles certified in CA
- ◆ 147 voluntarily provided exhaust CO2 data
- ◆ 21 voluntarily provided CH4 data
- ◆ 2 voluntarily provided N2O data
- ◆ Sample size = 40% of population

Data Distribution

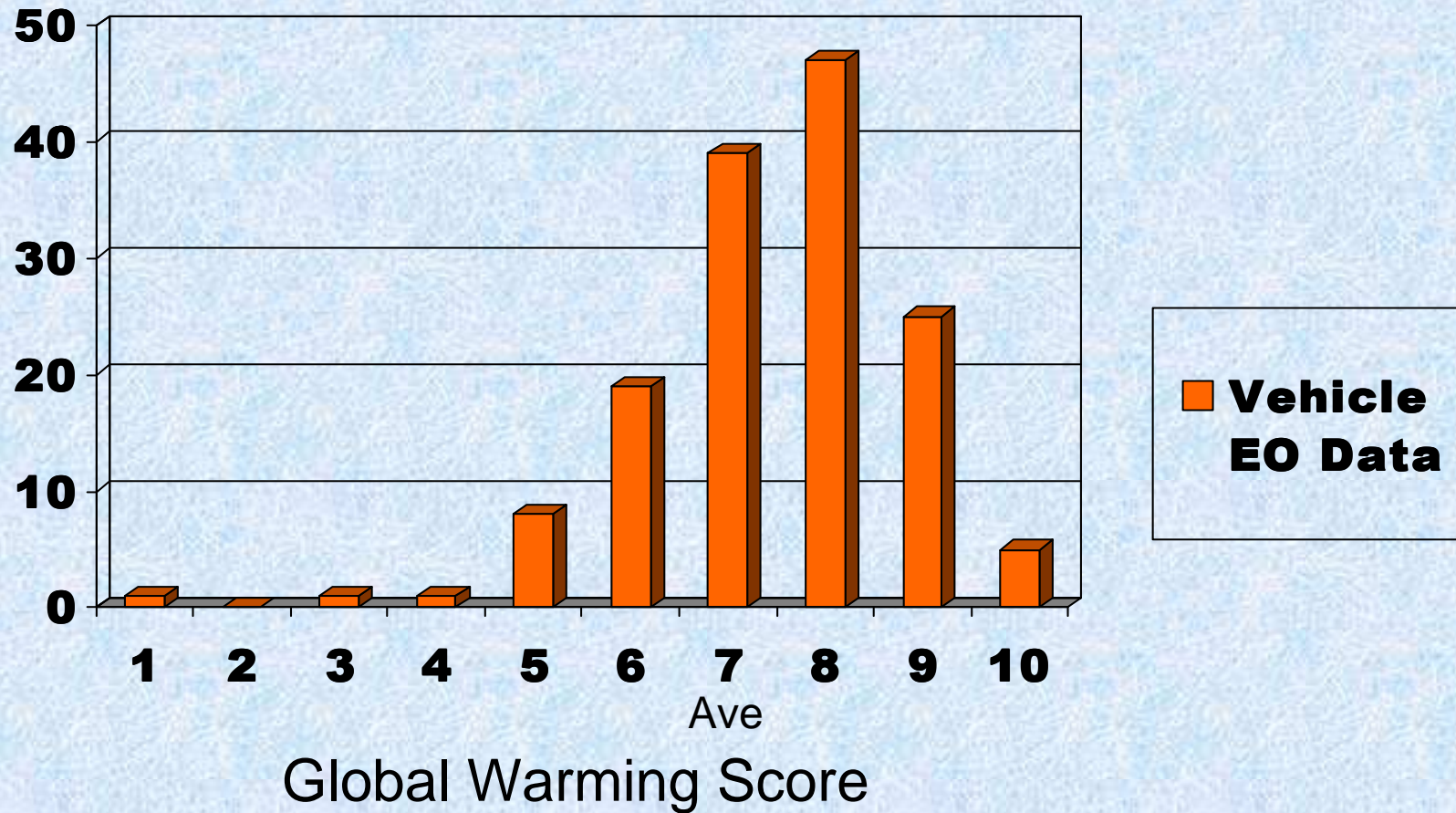
	California*
Minimum	130
Maximum	874
Range	744
Average	358

* Includes MDPV data

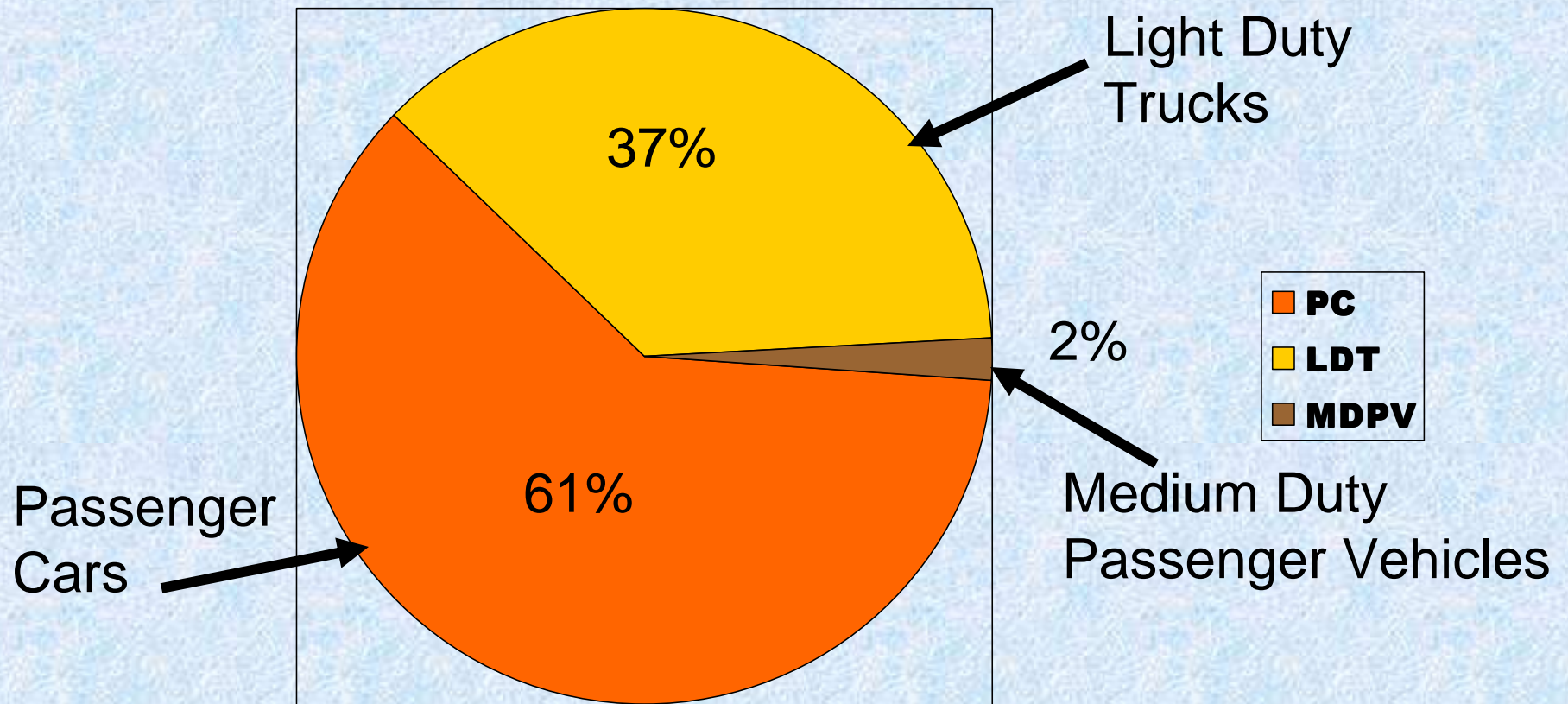
Straight-Line Extrapolation



Straight-Line Analysis



Vehicle Class Distribution*



* Based on EO certification

Statistical Analysis

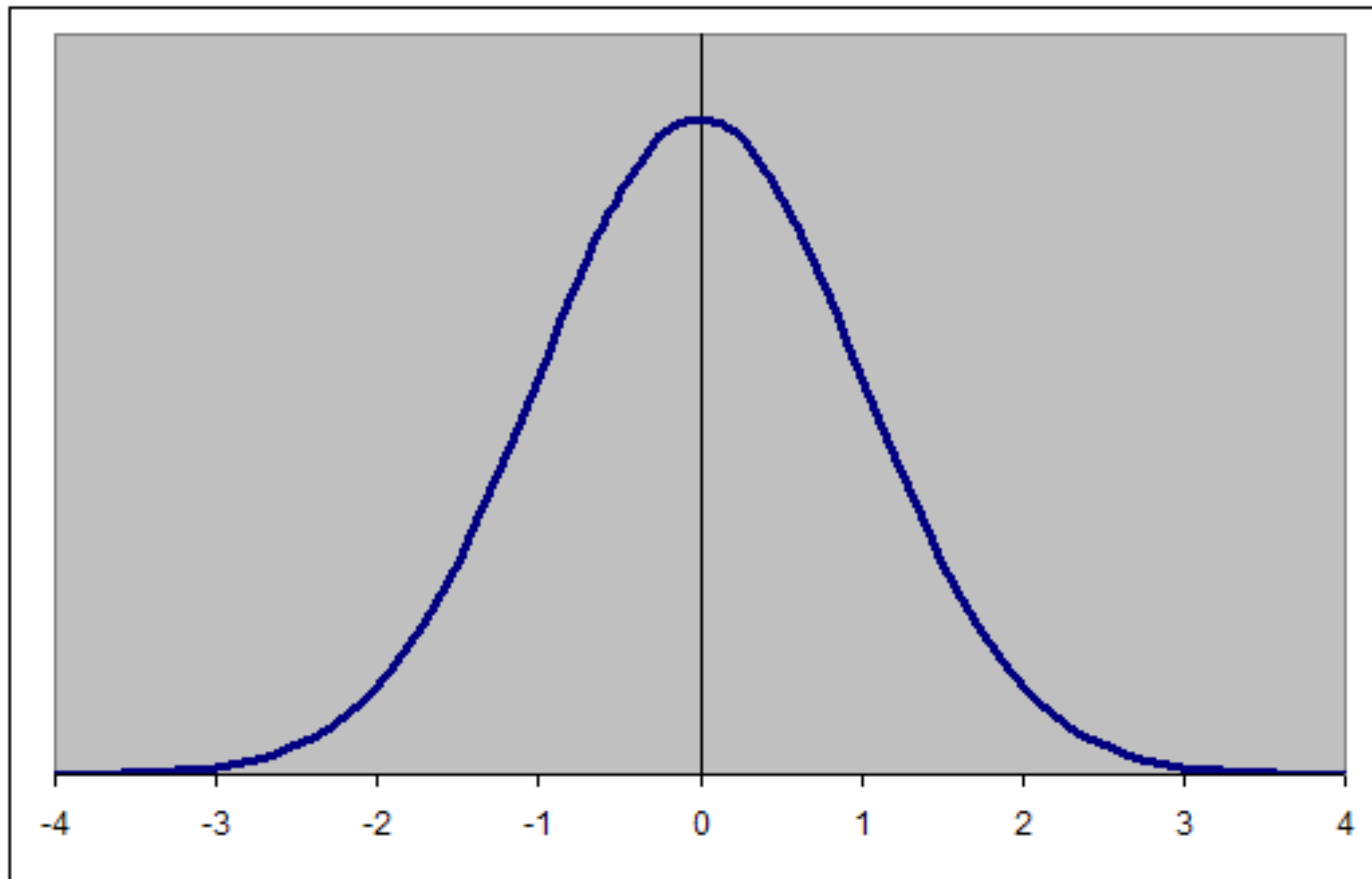
	California*	Federal
Minimum	130	133
Maximum	874	662
Range	744	529
Average	358	348
Standard Deviation	101	76

* Includes MDPV data

Proposed Global Warming Scale

- ◆ Utilize California average
- ◆ Standard deviation based on Federal data
- ◆ Use 2-sigma normal distribution
 - Accounts for 95% of the population

Typical Distribution



200

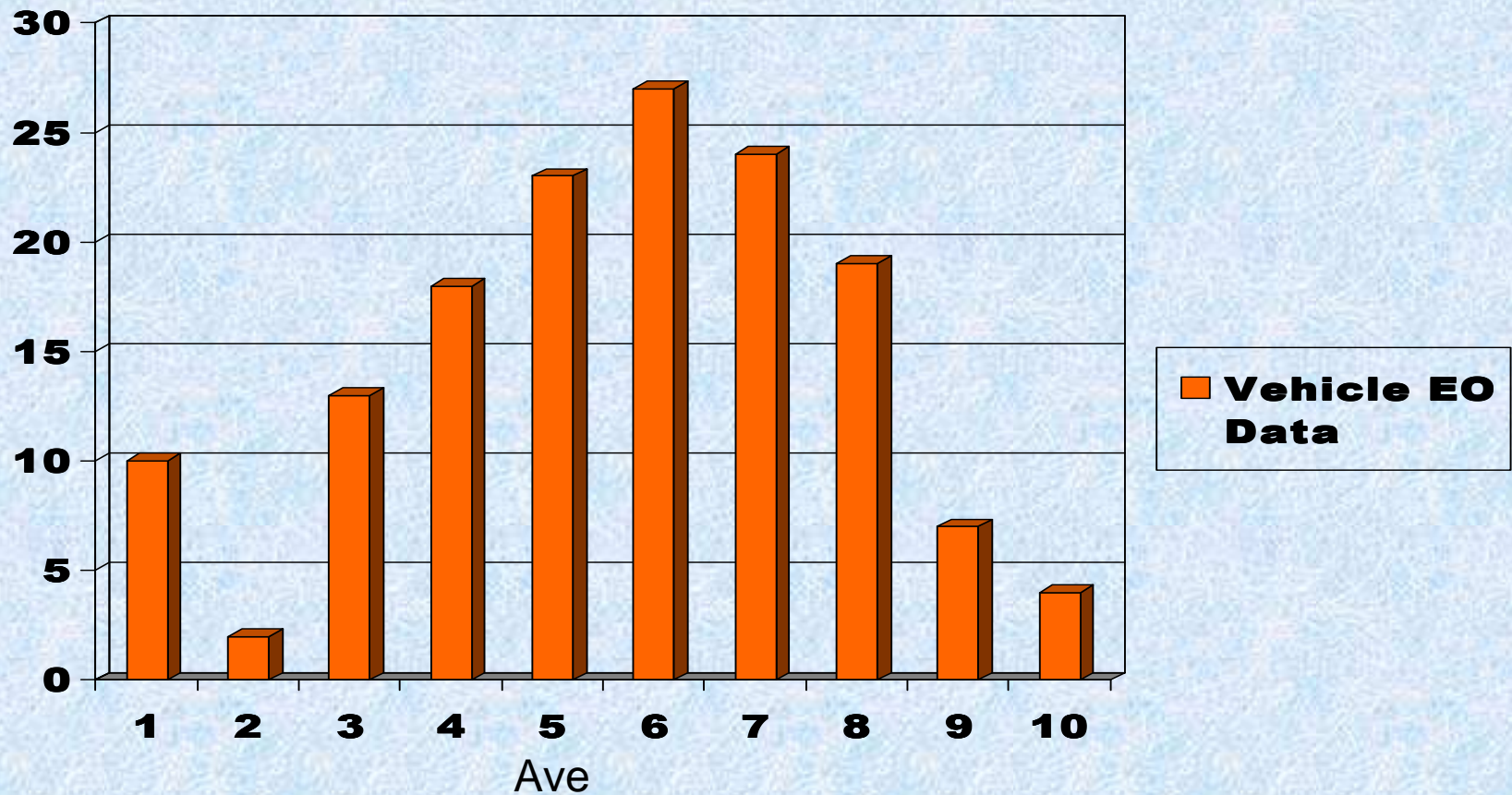
360

520

Proposed Global Warming Scale

	Current US EPA Scale (g/mile)	Proposed 2009 California Scale (g/mile)
10	Less than 204	Less than 200
9	204-245	200-239
8	246-290	240-279
7	291-336	280-319
6	337-381	320-359
5	382-426	360-399
4	427-472	400-439
3	473-517	440-479
2	518-562	480-519
1	563-608	520 and up
0	609 and up	

Proposed Global Warming Score

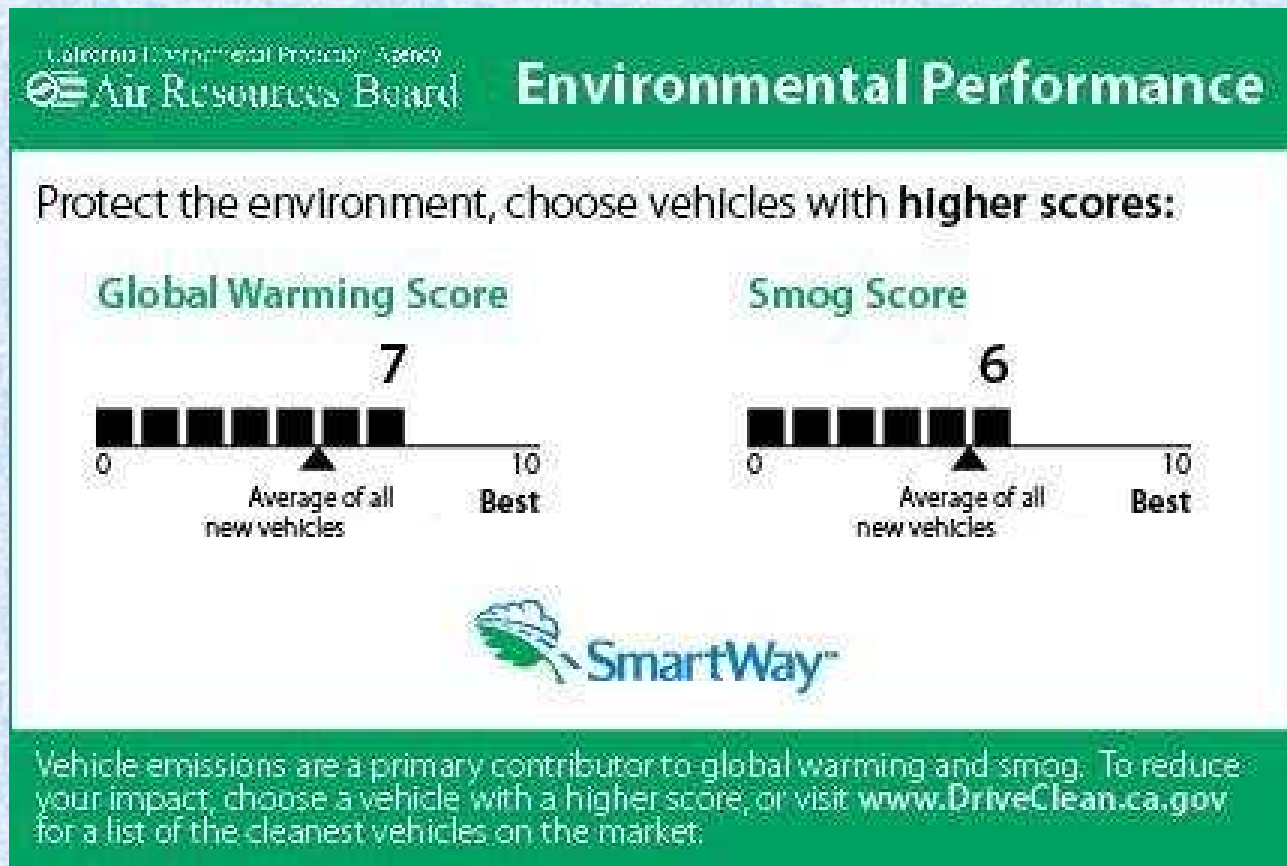


Global Warming Score

Scale Adjustments

- ◆ Global Warming Scale to be adjusted as follows:
 - Regulatory changes to AB1493
 - Every 4-years

Sample Label



Label Parameters

◆ Ink Color

- Potential Issue: Most, if not all, OEM's use only black ink printers for labeling

◆ Propose

- Use pre-printed color border or color printer for 2009 MY
 - Color to be specified by ARB
- Phase in color "SmartWay" logo by 2010

Label Parameters

◆ Size

- Current Smog Index label for one scale averages 1.5-inches x 4-inches
- Therefore label size must be increased to display 2 scales

◆ Propose

- New label size to be 4 inches x 6 inches
- ARB may consider a reduced size for select vehicles

Label Parameters

- ◆ Placement
 - On either side window to the rear of driver
 - OEM may incorporate into Monroney sticker
- ◆ Font to be specified by ARB
- ◆ Scale style to be specified by ARB
- ◆ Focus Groups to verify consumer understanding

Timeline

- ◆ Lead Time
 - Goal is to complete regulation in time for 2009 MY vehicles
- ◆ Release of Staff Report
 - Early May 2007
- ◆ Board Hearing
 - June 21, 2007
- ◆ Adoption of Regulation
 - 1st Quarter of 2008

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