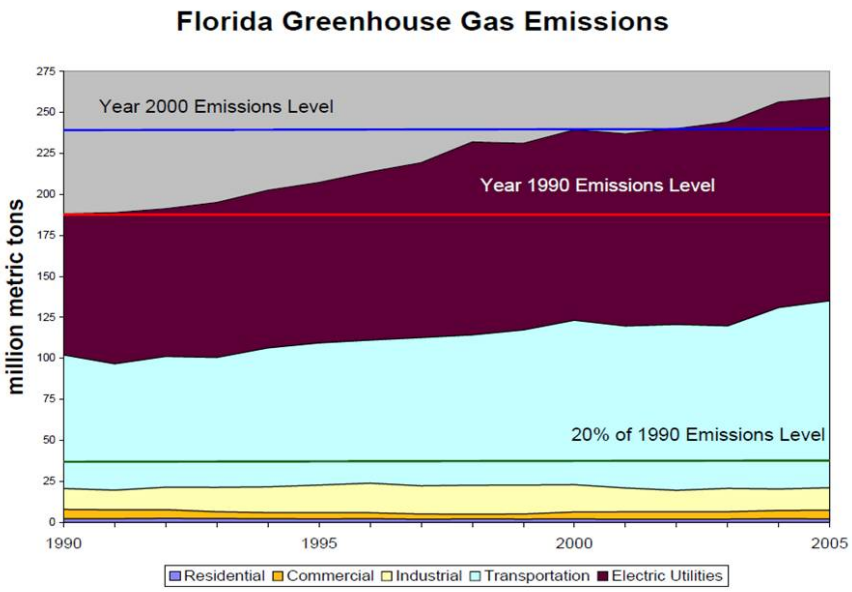
Questions & Answers

Florida's Proposed Adoption of California Motor Vehicle Emission Standards

Introduction

Why is the Department proposing rules to reduce greenhouse gas emissions from new motor vehicles?

- The Governor's Executive Order 07-127 requires the Department to "[adopt] the California motor vehicle emission standards in Title 13 of the California Code of Regulations, ...upon approval by [the EPA of California's] pending waiver, which includes emission standards for greenhouse gases."
- Transportation is an appropriate sector to regulate. Florida cannot achieve its goals for greenhouse gas reductions without addressing transportation; 40 percent of Florida's carbon dioxide (CO_2) emissions come from the transportation sector. Two-thirds of transportation emissions come from passenger cars and light-duty trucks; put another way, 27 out of every 100 tons of CO_2 in Florida comes from a passenger car or light-duty truck.



Why do the Department's proposed rules adopt California standards?

- To avoid a state-to-state patchwork of regulations, the Clean Air Act forbids every state (except California) from enacting emission limits for new motor vehicles. Section 177 of the Clean Air Act, however, allows other states to adopt standards identical to those in California.
- There are currently no federal regulations to reduce greenhouse gas emissions from new motor vehicles. The U.S. Environmental Protection Agency (EPA) is considering whether to take action, and the National Highway Transportation Safety Administration (NHTSA) has proposed Corporate Average Fuel Economy (CAFE) standards that would achieve greenhouse gas reductions, indirectly, through raising the minimum federal miles per gallon standard.

- The California rules have the following advantages over the federal programs:
  - They achieve greater reductions of greenhouse gases sooner.
  - They are a known, certain program versus proposed federal rules.

What are the California standards?

- The California rules contain the following elements:
  - Low emission vehicle (LEV) tailpipe standards, including a fleet average standard for non-methane organic gases (NMOG).
  - Greenhouse gas fleet average standards.
  - Zero emission vehicle rules.
  - Warranty and recall provisions, test methods, definitions, etc.
- This Q&A uses "tailpipe standards" to refer to LEV, as opposed to the greenhouse gas fleet average requirement. The difference is that vehicles must individually meet LEV tailpipe standards, while the whole fleet must collectively meet the greenhouse gas average.
- The greenhouse gas fleet average for large manufacturers is actually two averages; one for passenger cars and one for sport utility vehicles and most light-duty trucks. The standard begins with the 2009 model year, declines through the 2016 model year, and then continues on into the future at the 2016 level.

FLEET AVERAGE GREENHOUSE GAS EXHAUST MASS EMISSION REQUIREMENTS FOR PASSENGER CAR, LIGHT-DUTY TRUCK, AND MEDIUM-DUTY PASSENGER VEHICLE WEIGHT CLASSES[1]
(4,000 mile Durability Vehicle Basis)

Model Year	*Fleet Average Greenhouse Gas Emissions (grams per mile CO_2-equivalent)*	
	All PCs; LDTs 0-3750 lbs. LVW	*LDTs 3751 lbs. LVW - 8500 lbs. GVW; MDPVs*
2009	323	439
2010	301	420
2011	267	390
2012	233	361
2013	227	355
2014	222	350
2015	213	341
2016+	205	332

What is LEV, and how does it relate to the greenhouse gas standards?

- LEV means one of three things, depending on context.
  - The entire California air program for controlling emissions from vehicles is called the "low emission vehicle" program.
  - The tailpipe standards are also known as the "low emission vehicle" or LEV standards. The current version of these standards is often referred to as "LEV II."
  - The "LEV II" tailpipe standards require manufacturers to certify each vehicle to one of several categories or bins. The names of

the bins include "low emission vehicle (LEV)," "ultra low emission vehicle (ULEV)," and "super ultra low emission vehicle (SULEV)."

- So "LEV" could refer to the tailpipe emission standards for one category of vehicle, refer to the overall set of all tailpipe emission standards, or refer to the entire California program for controlling air pollution from vehicles.
- The specific bin (for example, LEV, ULEV, or SULEV) to which each vehicle is certified impacts the fleet average for NMOG, but it is not directly relevant to the fleet average for greenhouse gas.
  - The greenhouse gas rules do not require individual vehicles to be certified to any specific category or bin.
  - The greenhouse gas standard is a fleet average; no individual vehicle is in or out of compliance with the greenhouse gas rules.

Why do the Department's proposed rules not adopt the zero emission vehicle standards?

- The zero emission vehicle standards are a segment of the California rules that promote high tech vehicles like hybrids, battery electrics, fuel cells, and plug-in hybrids.
- CARB identified a need to change the rules to make them simpler and more technically realistic. The rule changes will institute a "new path" for promoting zero emission vehicles beginning in 2012.
- But since the new path is not final yet, there are no California rules for Florida to adopt. The Department cannot prospectively adopt future rules.

Are we ceding authority to California and the Air Resources Board?

- No. Rulemaking authority continues to reside with the Environmental Regulation Commission. The Department's proposed rule adopts standards identical to those in California because that is the only option available under the Clean Air Act for Florida to directly regulate greenhouse gas emissions from motor vehicles.

Who is CARB?

- The California Air Resources Board (CARB) is a state agency.
  - The Board itself is appointed by the Governor, makes regulatory decisions, and consists of specialists with experience in agriculture, automobile engineering, public health, and other fields.
  - The CARB staff works for the Board. Over 300 people work on reducing motor vehicle emissions, and another 125 work on climate change. Many are engineers, scientists, and PhDs.
- CARB sets clean car standards through extensive discussions with automobile manufacturers and through the following activities:

- Visiting research facilities in Detroit, Germany, and Japan
- Testing prototypes in laboratories
- Modifying vehicles to demonstrate emission reduction capability
- Studying costs and impacts on the economy
- Ensuring, through evaluations, that cars remain clean
- Initiating enforcement and recall when appropriate
- Acting quickly to modify a regulation when problems arise

- CARB makes all their regulatory decisions at public hearings. States are welcome to testify and suggest how the California program should evolve.

Tom Cackette, Chief Deputy Executive Officer, CARB. Notes for Minnesota testimony. April 7, 2008.

Applicability

Which vehicles are subject to the greenhouse gas rules?

- The Department's proposed rule exempts the following types of vehicles:
  - Emergency vehicles (fire trucks, police cars, ambulances)
  - Military vehicles
  - Custom-built ("specially constructed") vehicles
  - Vehicles designed exclusively for off-highway use
- The California greenhouse gas rules apply to passenger cars, light-duty trucks, and medium-duty *passenger* vehicles (MDPV).
  - Light-duty trucks are 8500 lbs gross vehicle weight (GVW) or less, and are designed primarily for transporting property or are available with features enabling off-road use. This includes most versions of the Ford F-150, Chevrolet Silverado 1500, and other similarly sized trucks.
  - MDPV are less than 10,000 lbs GVW and are designed primarily for transporting persons. Vehicles with open cargo areas 6 feet or more in length are not considered MDPV.
- The greenhouse gas rules, for example, do *not* apply to either of the following vehicles:
  - 2009 Ford F-250 Super Duty XL, 4-door, crew cab, four wheel drive, 5.4 L V8 (10,000 lbs GVW)

  - 2009 Chevrolet Silverado 2500HD, 2-door, 6.0L V8 (9200 lbs GVW, but not MDPV)

- CARB staff have prepared a list of specific vehicle makes and models that indicates which are exempt or included in the greenhouse gas rules.

Vehicle data obtained from Edmunds. Web page accessed October 10, 2008. http://www.edmunds.com

Does the Department's proposed rule alter which types of vehicles are exempt?

- The intent of the Department's proposed rule is to exempt the same types of vehicles as California (for example, military vehicles, police vehicles, fire engines, and ambulances). The specific language used in the proposed rule varies from the California language in an attempt to harmonize with existing Florida motor vehicle statutes.
- Regarding the MDPV definition, the Department has adopted this definition and language straight from the California rules.

What types of vehicles are eligible for the 4 percent exemption under the "Option 1" NO_X standard?

- Manufacturers can certify some of their trucks to an optional NO_X tailpipe standard that is *less* stringent than the normal NO_X standard. These trucks, up to 4 percent of a manufacturer's so-called "LDT2" fleet, are then exempt from the greenhouse gas rules.
- LDT2 means light-duty trucks from 3751 lbs loaded vehicle weight to 8500 lbs GVW. This includes almost all light-duty trucks such as the GMC Sierra 1500 Denali (4-door crew cab, 6.2 L V8, 6800 lbs GVW).
- During the September 29 briefing, however, the GM representative stated that GM has no trucks meeting this criteria.

Vehicle data obtained from Edmunds. Web page accessed October 10, 2008. http://www.edmunds.com

Are manufacturers who sell less than 60,000 vehicles per year exempt from the greenhouse gas standards?

- For large volume manufacturers, the greenhouse gas fleet average requirement begins in model year 2009, declines through model year 2016, and then continues into the future at the model year 2016 level. (Large volume manufacturers are those who annually deliver more than 60,000 vehicles to Florida for sale, lease, or rent.)
- The greenhouse gas fleet average requirements for intermediate volume, small volume, and independent low volume manufacturers are different. Beginning in model year 2016, these manufacturers must meet a single (i.e., non-declining) standard.
  - Intermediate volume manufacturers must meet a fleet average greenhouse gas standard beginning in model year 2016.
    - For passenger cars, either 233 g/mile CO_2-equivalent or 0.75 times its 2002 model year baseline.

        - For LDT2 and MDPV, either 361 g/mile CO_2-equivalent or 0.82 times its 2002 model year baseline.
    - Small volume and independent low volume manufacturers also have to meet one of the following fleet average greenhouse gas standards, beginning in model year 2016.
        - Match the greenhouse gas performance of comparable vehicles produced by a large volume manufacturer.
        - Meet 244 g/mile CO_2-equivalent for passenger cars and 361 g/mile CO_2-equivalent for LDT2 and MDPV.
        - (Vehicles where the engine, transmission, and emission control system are identical to a configuration certified by a large volume manufacturer are exempt.)
- Manufacturer size classifications are specified in section 1900 of the California Code of Regulations, except based on Florida deliveries.

Which model year emission rate will apply the first year Florida implements the greenhouse gas standards?

- The earliest model year for which the rules could be implemented is 2012. Implementation depends upon action in the federal courts and the Florida Legislature.
- If, for example, model year 2012 is the first year the rules are implemented, the model year 2012 standard may be the applicable standard. But the courts may determine that some sort of phase in period is appropriate for the states that have adopted the California greenhouse gas rules.
- In any case, the Department will not be looking backwards to determine compliance. In the example above, the Department would not be evaluating compliance for the 2009, 2010, or 2011 model years.

Cost

What is the average cost per vehicle of complying with the rules?

- For the vehicle's owner, the Department's economic analysis indicates a net savings of $1000 to $2300 per vehicle from better fuel efficiency.
- The up-front sales prices of vehicles are expected to increase as the manufacturers pass along the costs of developing and implementing the fuel saving technologies.
    - The Department's economic analysis evaluates various models and studies, and concludes that it is reasonable to expect near-term increases from about $100 to $700 per vehicle.

- These are the most realistic and appropriate costs to evaluate the economic impacts of the greenhouse gas rules. Using near-term values reduces uncertainty; to look to 2013 or beyond, an analysis would need to guess at the future prices of cars and trucks, gasoline and ethanol.

- Gas-saving features are coming out now in response to market demand for more fuel efficient vehicles.
  - As an example, Ford indicated that the fuel efficiency for the F-150 increased 8 percent over the whole model line between model years 2008 and 2009.
  - Each of the automobile manufacturing representatives at the September 29 briefing indicated that gas-saving technologies are on their new (model year 2009) vehicles or coming soon.
  - Given that manufacturers are already integrating gas-saving technologies into their vehicles, the CARB assumption that these vehicle improvements are cost-effective appears valid.

Eastern Research Group. Economic Analysis of Impacts of Adopting the California Low Emission Vehicle Program in Florida. September 5, 2008.

Will an increased cost per vehicle result in Florida dealers losing sales to Alabama and Georgia?

- Making a host of unlikely but conservative assumptions, the Department's analysis concludes that the upper-bound for lost annual sales is 2100 vehicles.
- This is the anticipated "worst case" for the Florida new car dealerships, and it assumes the following:
  - Buyers do not consider the net cost savings of the Florida vehicle, the increased fuel efficiency of the Florida vehicle, or the time and expense associated with purchasing from an out-of-state dealer.
  - Manufacturers and dealers will not market the fuel efficiency of their vehicles
  - Manufacturers will create a less fuel efficient but cheaper version of each vehicle for the Alabama and Georgia market.

- In context, 2100 annual vehicle sales is less than 2 percent of the sales in the 31 counties bordering Alabama and Georgia.

Eastern Research Group. Economic Analysis of Impacts of Adopting the California Low Emission Vehicle Program in Florida. September 5, 2008.

Why did the economic analysis use near-term costs (model year 2009 through 2012) to estimate typical price increases per vehicle?

- The Department's economic consultant kept the analysis as close to real-world data as possible. The analysis used 2007 data to show the actual mix of vehicles purchased in the most recent year available, and it used 2007 prices to go with the 2007 purchases.
- Because the analysis examined what the industry would have to do now, it evaluated the cost impacts associated with the short-term requirements. Short-term in this context means the first four years of the program, model years 2009 through 2012.
- The analysis would be too speculative, otherwise, and would have required the consultant to pick a future year for the analysis, forecast the vehicle mix, estimate the prices of gasoline and ethanol, determine a baseline increase in vehicle prices over time that accounted for near-term technologies, and make assumptions about inflation and the economy. Given the abrupt shift in nationwide automotive purchases in 2008, any forecast would involve additional assumptions and could open the analysis to additional criticism.
- Manufacturer product plans for the future are not available to the Department. The Department's consultant attempted to obtain the actual product plans submitted by the manufacturers to NHTSA so as to be able to evaluate the possible impacts on sales in the mid-term or long-term. But when the manufacturers submitted these plans to NHTSA, they did so under a claim of confidentiality.

What would be the impact of using higher, mid-term costs in the economic analysis?

- The analysis concluded that consumers purchasing vehicles under the greenhouse gas rules would experience a net savings. Using a larger price increase per vehicle does not change this conclusion.
  - As discussed above, uncertainties increase the farther out the analysis forecasts.
  - But depending on the vehicle price increase and the cost of gasoline and ethanol, the payback period may be longer.
  - Consumers may save a little or may save a lot, but consumers should come out ahead under any realistic scenario.
- Economic studies by CARB point to a net positive benefit to the state's economy. Consumers, instead of spending their money on gasoline, put their money into the state's economy.

Tom Cackette, Chief Deputy Executive Officer, CARB. Discussion with Department staff. October 16, 2008.

Did the economic analysis include opportunity costs associated with lost sales because of increased vehicle prices?

- Yes. The Department's economic consultant considered the reduction in vehicle sales due to increased prices. The loss in sales reflects both the decision to not purchase a vehicle (at all) and the decision to not purchase the vehicle in Florida.

What is a typical cost for delivery for vehicle sales over the internet?

- Purchasing a vehicle over the internet changes many variables impacting the dealership and the ultimate cost of the vehicle. According to the National Bureau of Economic Research, internet vehicle sales can influence the base cost, trade-in value, service costs, financing profit, and other factors in addition to delivery cost.

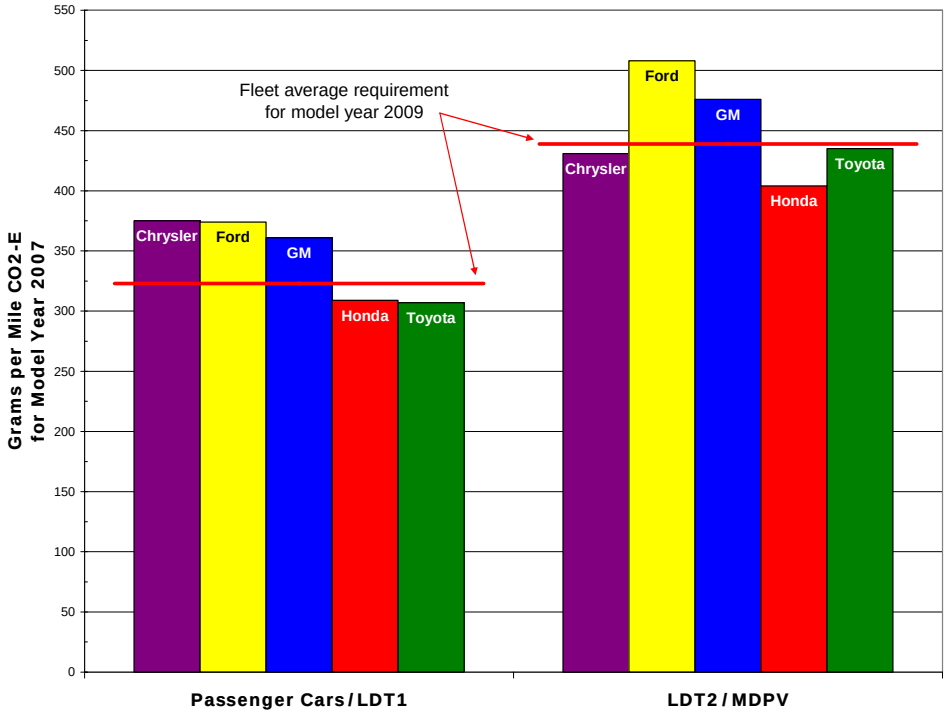
Fiona Scott Martin, Florian Zettelmeyer, and Jorge Silva Risso. National Bureau of Economic Research. Internet Car Retailing. Working paper 7961. October 2000. http://www.nber.org/papers/w7961

Availability

What sort of vehicles will be available in Florida under the greenhouse gas rules?

- The following model year 2009 vehicles emit greenhouse gases at a level below or close to the 2009 standard for LDT2 and MDPV (439 g/mile CO_2-equivalent).
  - Dodge Ram 1500 (537 g/mile CO_2-equivalent)
  - Ford F-150 (505 g/mile CO_2-equivalent)
  - Ford Flex (430 g/mile CO_2-equivalent)
  - GMC Canyon Crew Cab (418 g/mile CO_2-equivalent)
  - Chevrolet Colorado Crew Cab (418 g/mile CO_2-equivalent)
  - Volkswagen Tiguan (390 g/mile CO_2-equivalent)
  - Mazda 5 (365 g/mile CO_2-equivalent)
  - Ford Escape (350 g/mile CO_2-equivalent)
  - Chevrolet HHR (327 g/mile CO_2-equivalent)
- Each vehicle does not have to meet the standard; the standard is a fleet average. Every vehicle below the standard helps the fleet average through earning credits. Every vehicle above but near the standard helps since fewer credits are needed to offset the debits.
- These vehicles represent fuel-efficient choices with the capabilities that consumers need in their personal and work vehicles, such as:
  - Towing capacity
  - Room for 7 passengers
  - Flexibility of a 3-row SUV
  - Off-road capability
  - Minivan features
  - Crew cab pickups

- The Department performed an analysis of vehicle registration data for model year 2007.



  - It appears that the manufacturers are already close to or below the 2009 fleet average.
  - The Honda and Toyota 2007 fleets appear to be in compliance with the 2009 fleet average.
  - The Ford, GM, and Chrysler 2007 fleets are within 10 to 20 percent of the 2009 fleet average.
- Manufacturers have continued to improve the fuel efficiency of their vehicles since 2007. CARB expects manufacturers to be able to comply with the 2009 and 2010 averages without any further technological improvements to their vehicles. Since technological improvements have been made to vehicles, and fuel efficiency actually has improved, it appears that the greenhouse gas rules will not force a manufacturer to limit vehicle availability.

Are manufacturers likely to discontinue or limit the availability of certain types of vehicles?

- No. Mix shifting (discontinuing or limiting the availability of certain vehicles) is an unlikely compliance strategy.
  - The format of the standard (i.e., the design of rule) is extremely flexible and provides for many compliance options aside from curtailing the vehicles that cannot individually meet the fleet average.

- The largest vehicles are the most profitable ones.
  - Manufacturers are unlikely to abandon the market for large vehicles or cede market share to their competitors.
  - The cost of compliance is expected to be less than the profit on the vehicles.
  - Some of the expected technologies have already been shown to be cost-effective, because they are being implemented on currently available vehicles.
- The Department's estimate of fleet average greenhouse gas emissions for model year 2007 vehicles probably overestimated emissions by not taking advantage of the flexibility inherent in the rule. The estimate also included some vehicles that would qualify for exemptions under the greenhouse gas rules (e.g., trucks over 8500 lbs GVW that are not MDPV). Even so, the 2007 model year fleet performance compared favorably to the 2009 greenhouse gas standard. Given improvements from model year 2007 to model year 2009 as well as increasing market demand for fuel efficient vehicles in the future, manufacturers are likely to be able to continue to offer larger vehicles while meeting the fleet average requirement.

Ethanol

What is the outlook for ethanol in Florida?

- Florida consumes about 8.7 billion gallons of gasoline annually. All gasoline sold in the state must contain 9 to 10 percent ethanol (E10) by 2011.
- There are currently 19 stations in Florida selling E85 (85 percent ethanol); 11 are private (fleet refueling) and 8 are public stations.
- The public stations are in Hallandale Beach, Hialeah, Lake City, Miami, Ocoee, Palmetto Bay, Port St. Lucie, and Tallahassee.
- The Governor's Action Team for Energy and Climate Change has set a goal of using 20 percent of the available biomass supply per year to produce biofuels by 2025. If realized, this goal would result in significant cellulosic ethanol production:
  - 0.20 billion gallons/year in 2010
  - 0.81 billion gallons/year in 2015
  - 1.5 billion gallons/year in 2020
  - 2.2 billion gallons/year in 2025

- The targeted level of biofuel use includes some production of starch-based ethanol and biodiesel, and it would reduce annual greenhouse gases by a total of 23 million metric tons by 2025.

Section 526.203, Florida Statutes, "Renewable Fuel Standard."

Governor's Action Team for Energy and Climate Change: Status on Biofuel Policy Recommendations. Stephen Roe, Center for Climate Strategies. 2008 Farm-to-Fuel Summit, Florida Department of Agriculture and Consumer Services. July 30 – August 1, 2008.

U.S. Department of Energy, Energy Information Administration. Web page accessed October 6, 2008.

National Ethanol Vehicle Coalition. Web page accessed October 8, 2008. http://www.e85fuel.com

Does the Department's proposed rule limit the production or availability of ethanol?

- Florida is not adopting the California clean fuel standards, so the Department's proposed rule will not restrict ethanol.
- Although ethanol is currently limited in California, it is limited for other reasons. California limits ethanol in their gasoline to about 5.7 percent because of concerns about smog-forming pollutants.
- To meet their greenhouse goals, however, California is moving forward with expanding the use of ethanol. Oil companies are now making an E10 fuel that passes the California clean fuel standards. And California funded 47 E85 stations in 2007.

Tom Cackette, Chief Deputy Executive Officer, California Air Resources Board (CARB). Notes for Minnesota testimony. April 7, 2008.

Can flex fuel vehicles (FFV) that burn ethanol be certified to the California tailpipe emission standards?

- Yes. There are 42 different FFV models currently certified to the California standards; 300,000 vehicles are on the roads in California that can use E85.
- Some manufacturers have indicated that FFV have difficulty certifying to the cold start requirements of the SULEV standard.
- Based on discussions with CARB and the Department's review of CARB expert analysis, the Department understands that CARB is working on this issue and does not expect it to be a problem.
- Recall that vehicles (including FFV) certify to one of several emission control levels (for example, LEV, ULEV, or SULEV). If the FFV cannot meet the SULEV standard, it can be certified to one of the other standards.

Tom Cackette, Chief Deputy Executive Officer, CARB. Notes for Minnesota testimony. April 7, 2008.

Tom Cackette, Chief Deputy Executive Officer, CARB. Letter to Minnesota Senator John Marty. March 12, 2008.

Do the greenhouse gas rules limit the availability of vehicles that can burn ethanol, diesel, or biodiesel?

- No. Under the Department's proposed rules, some existing FFV, diesel, or biodiesel vehicles may have difficulty certifying to the SULEV tailpipe emission standards. But a vehicle does not have to be certified to the SULEV standard. It can be certified to another standard.

- The greenhouse gas rules do not prohibit E85 or diesel vehicles just because those vehicles cannot certify to the SULEV standards.
- Certifying to the SULEV standard is not directly relevant to the greenhouse gas standards. The greenhouse gas value for a vehicle used when calculating the fleet average rate is independent of the vehicle's classification (for example, LEV, ULEV, or SULEV).

Credits

What sort of credits or other options for compliance with the greenhouse gas rules are available?

- As discussed above, manufacturers can exempt up to 4 percent of their LDT2 fleet.
- Manufacturers can also earn credits through the following:
  - Tightening air conditioning systems
  - Improving CO_2 performance of LDT2 or MDPV
  - Improving CO_2 performance of passenger cars
  - Acquiring credits from another manufacturer
  - Earning credits for performance in model years 2000 – 2008
  - Banking credits earned from model year 2009 onward
  - Borrowing credits from the future
  - Certifying vehicles to E85 to get a CO_2 discount

To get the E85 credit for CO_2 emissions, do manufacturers have to track actual E85 fuel usage?

- Yes. To get the E85 credit (a factor of 0.74, which is about a 25 percent reduction in CO_2-equivalent emissions), the rules require that manufacturers show that E85 fuel is actually being used in the FFV.
- This avoids giving credits for vehicles that will rarely or never actually use E85. At the same time, it provides an incentive to develop the state's E85 infrastructure.

Tom Cackette, Chief Deputy Executive Officer, CARB. Letter to Minnesota Senator John Marty. March 12, 2008.

How can manufacturers track which vehicles are being operated on E85?

- The Department will follow the California procedures in the incorporated rules for determining how manufacturers track E85 usage. CARB has indicated that manufacturers would not have to show every gallon of fuel for every mile travelled by every vehicle.
- As per CARB, some examples of acceptable demonstrations include:
  - Surveying vehicle owners.
  - Collecting and store E85 data via on-board computers.

- Obtaining representative samples of the above through agreements with a group of owners.
- Taking advantage of systems such as ONSTAR.

Tom Cackette, Chief Deputy Executive Officer, CARB. Letter to Minnesota Senator Marty. March 12, 2008.

Can manufacturers take credit for FFV and for air conditioning system improvements for the same vehicle?

- Yes. Based on the Department's review of the rules, manufacturers can simultaneously use credits generated through improving an air conditioning system and credits available under the optional alternative compliance mechanism for E85.

How do pre-adoption credits work (for model years 2000 through 2008)?

- Any manufacturer who achieves a fleet average greenhouse gas value lower than the model year 2012 requirement generates credits for each model year between 2000 and 2008.
- The California rules were not final until 2005 and do not regulate greenhouse gas emissions until model year 2009. The credits earned for superior performance in model years 2000 through 2008 were therefore always intended to be retroactive.
- Credits earned during the model years 2000 through 2008 are treated as if they were earned in the 2011 model year and retain their full value through the 2012 model year. The credits are then discounted over time and must be used by the end of the 2014 model year.

How much flexibility does Florida have to set up a compliance scheme different from that in California?

- As per the Clean Air Act, Florida can only adopt standards for new motor vehicles if they are identical to the California standards. The Department does not have the ability to add flexibility to the program, but the program the Department is adopting already has a great deal of flexibility.
- As an example, the greenhouse gas rules either do not apply or else provide exemptions for many of the vehicles for which the public, the manufacturers, and trade associations have expressed concern – in particular, the heavier light-duty trucks with large towing capacities.
- Implementation and enforcement of the rules, however, is specific to Florida.
- With regard to records, reports, and civil penalties, the Department will enforce the proposed rule under its own authority, as per Florida statutes.

Federal Rules

What is the difference in greenhouse gas reductions between CAFE and California if the analysis is only run through 2015?

- At the September 29 briefing, there was some confusion about the graph showing overall cumulative emission reductions from the proposed federal CAFE program compared to the California greenhouse gas rule.
- To summarize, the comparison presented at the briefing was fair, as both the federal and California greenhouse gas *reductions* were evaluated over the same set of model years (2011 through 2016).
  - The California analysis did not assume any actual reductions in greenhouse gases for the 2009 or 2010 model years. (The standards are not "technology forcing" until 2011, the same year the CAFE standards begin.)
  - Although the proposed CAFE runs only through 2015, the analysis predicted a CAFE standard for the 2016 model year. The analysis assumed that the federal CAFE standard in 2016 would be tighter than the 2015 standard, at a level sufficient to reach the Congressional mandate of 35 miles per gallon by 2020.

Why do some tables predict CAFE to achieve better miles per gallon than the California greenhouse gas rules for some years?

- The CAFE rules regulate miles per gallon, and NHTSA converted the CAFE miles per gallon standard into equivalent CO_2 reductions for comparison to the California rules. There are differences in assumptions and calculation approaches between NHTSA and CARB.
  - For example, diesel engines are treated differently. The CAFE rules focus on miles per gallon. For a gasoline and a diesel vehicle, both with the same miles per gallon, the diesel engine will have higher CO_2 emissions. (Gasoline is better.)
  - The California rules focus on greenhouse gas emissions. For a gasoline and a diesel vehicle, both with the same CO_2 emissions, the diesel engine will have higher miles per gallon. (Diesel is better.)
- This is one example of the complexities of translating and comparing CAFE to the California greenhouse gas emissions.
- Using CARB assumptions and calculations for converting the California CO_2 rules into equivalent miles per gallon shows that the California rules would achieve greater miles per gallon in every year.

CARB. Comparison of Greenhouse Gas Reductions for the United States and Canada under U.S. CAFE Standards and California Air Resources Board Greenhouse Gas Regulations. Enhanced technical assessment. February 25, 2008.

CARB. Comparison of Greenhouse Gas Reductions for the United States and Canada under ARB GHG Regulations and Proposed Federal 2011-2015 Model Year Fuel Economy Standards. Addendum to February 25 technical assessment. May 8, 2008.

Other Questions

What is the current status of all litigation associated with the California greenhouse gas rules?

- The primary legal challenge regarding the California greenhouse gas rules is pending in the D.C. Circuit Court. On March 6, 2008, the EPA published a Notice of Decision in the *Federal Register* that denied California's request for a waiver for the greenhouse gas rules. The waiver is necessary under the Clean Air Act before California (or any other state) can implement the greenhouse gas rules. California challenged the EPA decision, and the D.C. Circuit Court will hear the case. Oral arguments have not yet been scheduled.
- For Commissioners wanting additional detail, the Department has drafted a memorandum that summarizes some of the other cases associated with regulating greenhouse gases from motor vehicles.

Memorandum to File from Greg DeAngelo. Court Cases Relevant to Adoption of California Motor Vehicle Emission Standards. October 13, 2008.

Warming Law: Changing the Climate in the Courts. Part of the Constitutional Accountability Center. Web page accessed October 13, 2008. http://theusconstitution.org/blog.warming/

How do the passenger car and light-duty truck CO_2 emissions break down between instate residents and out-of-state visitors?

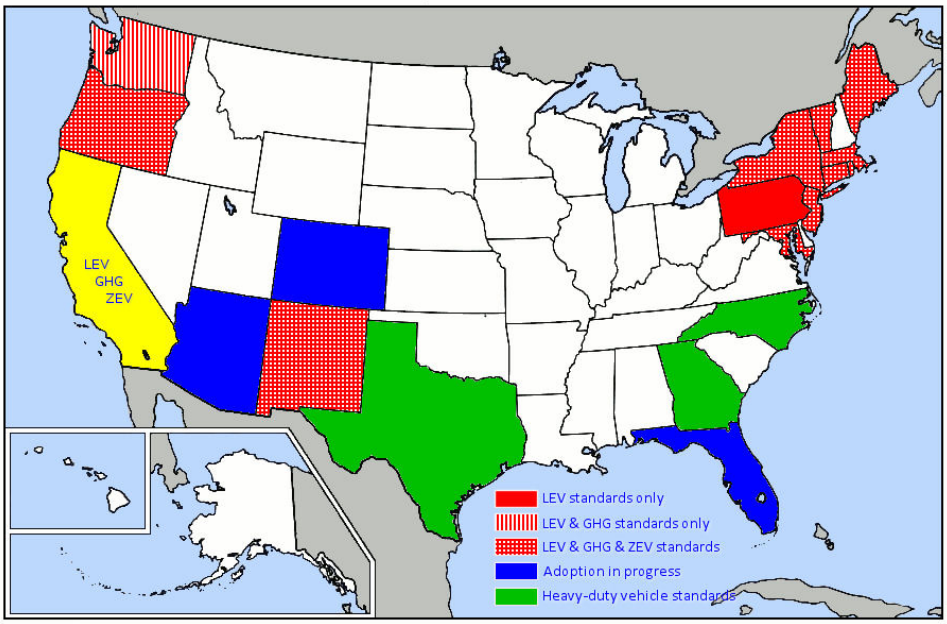
- The Florida Department of Transportation estimates that in 2006, non-resident vehicle miles traveled (VMT) accounted for about 8 percent of total VMT.
- The non-resident portion of passenger car and light-duty truck CO_2 emissions is probably similar to the VMT percentage, but at least part of this 8 percent would be non-residents renting and driving Florida vehicles.

E-mail correspondence from Huiwei Shen, Florida Department of Transportation, Office of Policy Planning, to Tom Rogers, Florida Department of Environmental Protection. October 10, 2008.

Florida Department of Transportation, Office of Policy Planning, and University of South Florida, Center for Urban Transportation Research. Trends and Conditions Report – 2008, Travel Demand: Visitors and Tourists September 2008.

What is the status of adoption of the California rules in other states?

- Twelve states have adopted all or part of the California emission standards for new motor vehicles. The states in red on the map below have adopted the tailpipe (LEV) standards, the LEV and greenhouse gas standards, or the LEV, greenhouse gas, and zero emission vehicle standards.
    - These states consist of Washington, Oregon, New Mexico, Pennsylvania, Maryland, New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, and Maine. All of these states have some form of vehicle inspection program, not necessarily just as a result of adopting the California rules.



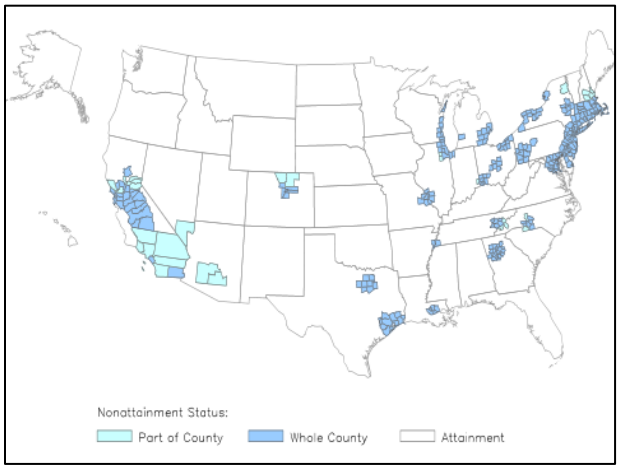
- Arizona, Florida, and Colorado have initiated the rulemaking process to adopt the California standards.
- Iowa, Illinois, Minnesota, Montana, and Utah are considering whether to adopt the California standards.
- Texas, Georgia, and North Carolina have adopted California standards for heavy-duty vehicles.

E-mail correspondence from Eric Skelton, Northeast States for Coordinated Air Use Management, to Julie Ferris, Florida Department of Environmental Protection. October 6, 2008.

U.S. Environmental Protection Agency, Office of the Inspector General. EPA's Oversight of the Vehicle Inspection and Maintenance Program Needs Improvement. Report No. 2007-P-00001. October 5, 2006.

Do the states that have adopted the California rules have nonattainment areas?

- The following map shows current nonattainment areas in the United States for the 8-hour ozone standard. Additional maps showing nonattainment areas for other criteria pollutants are available from the EPA web pages.



U.S. Environmental Protection Agency AirData online application. Web page accessed October 11, 2008. http://epa.gov/air/data/geosel.html

Do the states that have adopted the California rules deny registration to noncompliant vehicles?

- Of the 12 states that have adopted some portion of the California new motor vehicle emission standards, 11 deny registration to non-California certified vehicles. Maine, which has a decentralized motor vehicles department, does not have registration denial.
  - Registration denial, in this context, means that the state's motor vehicle department will not register a vehicle unless it is certified to the California tailpipe emission standards.
  - Denying registration is related to ensuring that individual vehicles are certified to the tailpipe emission levels.
  - Once certified, a vehicle gets a California emissions sticker identifying the "bin" or category to which it was certified (for example, LEV, ULEV, or SULEV).
- There is no analogous emissions sticker for the greenhouse gas program.
  - Automobile manufacturers must comply with the greenhouse gas standard on a fleet average basis.
  - Individual vehicles are not certified as "pass/fail" for greenhouse gases.
- Registration denial as practiced in these other states is not relevant (or even possible) for the greenhouse gas standard, since vehicles are not required to individually meet the fleet average greenhouse gas requirement.
- Regardless, the Department is willing, if the manufacturers and dealers believe that a registration component will solve the cross-border sales issue, to assist the Florida Department of Highway Safety and Motor Vehicles obtain legislative authority to implement a state-wide program.

How does the flexibility of the CAFE standards compare to the California greenhouse gas rules?

- A detailed analysis is not currently feasible, as the CAFE standards are not finalized.
- There are some major differences between the two programs, including but not limited to the following:
  - The proposed CAFE standards regulate miles per gallon based on vehicle "footprints," not direct CO_2 emissions from the vehicle.
  - The proposed CAFE standards would essentially create manufacturer-specific miles per gallon standards depending on the manufacturer's fleet mix.

What is the impact of the amendments to the proposed rule?

- At the December 2, 2008, meeting of the Environmental Regulation Commission, the Commissioners approved adoption of the Department's proposed Rule 62-285.400, F.A.C., with two amendments addressing the following topics:
  - Adoption-by-reference language glitch. The first amendment fixes an inadvertent glitch in the adoption-by-reference language of paragraph (9)(a). The fix assures that manufacturers are treated the same under the Florida and California rules. Specifically, manufacturers delivering vehicles to Florida will be considered "large-volume" manufacturers based on their California sales figures. This is consistent with how the California rules are implemented in the other states that have adopted the regulations, and it ensures that manufacturers are not "large" in one state and "small" or "intermediate" in another. The distinction is important because small and intermediate manufacturers have a different standard, which does not kick in until the 2016 model year.
  - Repeal the rule if federal government sets equivalent or stricter nationwide standards. The second amendment adds a new subsection (10), which requires the Department to initiate proceedings to repeal the rule if certain actions are taken by the federal government. The new subsection provides that, "If the federal government establishes an equivalent or more stringent nationwide standard for reduced vehicle greenhouse gas emissions, compared to this rule, either directly or through fuel efficiency standards, the department shall initiate proceedings to repeal this rule."