

**TITLE 4. BUSINESS REGULATIONS  
DEPARTMENT OF FOOD AND AGRICULTURE**

**NOTICE OF ADDITION OF DOCUMENTS AND INFORMATION TO  
RULEMAKING FILE**

Pursuant to the requirements of Government Code sections 11346.8(d), 11346.9(a)(1), and 11347.1, the Department of Food and Agriculture is providing notice that documents and other information which the Department has relied upon in adopting the proposed regulations have been added to the rulemaking file and are available for public inspection and comment.

The Department has added the following documents to list of documents relied on:

SAE International, Surface Vehicle Recommended Practice SAE J1616 *Recommended Practice for Compressed Natural Gas Vehicle Fuel*, issued February 1994

SAE International, Surface Vehicle Standard SAE J1616 *Standard for Compressed Natural Gas Vehicle Fuel*, issued May 2016

California Air Resources Board (CARB) staff presentation *Public Workshop to Discuss the Need for Amendments to the Alternative Fuels Regulations Regarding Motor Vehicle LPG and CNG* held on June 21, 2000

Southern California Gas Company (SoCalGas) presentation *CARB Fuel Spec* at the CARB public workshop held on June 21, 2000

Clean Air Vehicle Technology Center (CAVTC) presentation *Impacts of Natural Gas Fuel Composition on Tailpipe Emissions and Fuel Economy* at the CARB public workshop held on June 21, 2000

CARB staff presentation *Public Meeting to discuss Motor Vehicle CNG Fuel Specifications* held on March 7, 2001

CARB staff presentation *Strawman Proposal for Public Meeting to Discuss CNG Motor Vehicle Fuel Quality* held on March 7, 2001

CARB *Proposed Amendments to the California Alternative Fuels for Motor Vehicle Regulations Staff Report: Initial Statement of Reasons*, released December 21, 2001 for public hearing on February 21, 2002:

- ISOR Appendix A Proposed Regulation Order
- ISOR Appendix D Methane Number and Fuel Composition
- ISOR Appendix E CNG Engine Performance

CARB staff presentation *Public Meeting to Discuss Proposed Amendments to CNG and LPG Motor Vehicle Fuel Specifications* held on February 14 –15, 2002

CARB *Draft Proposed Concept - Compressed Natural Gas Specifications* dated June 28, 2005.

CARB staff presentation and comment letters from the *Public Consultation Meeting to Discuss a Draft Proposed Concept to Revise the Motor Vehicle CNG Specifications* held on August 3, 2005:

- Larry R. Allen, Air Pollution Control Officer, San Luis Obispo County Air Pollution Control District, dated August 2, 2005 to Gary Yee, CARB. Comment on CARB's Draft Proposed Concept to Revise the Motor Vehicle CNG Specifications of June 28, 2005
- Terry Dressler, Air Pollution Control Officer, Santa Barbara County Air Pollution Control District, dated July 29, 2005 to Gary Yee, CARB. Comment on CARB's Draft Proposed Concept to Revise the Motor Vehicle CNG Specifications of June 28, 2005
- Bevilacqua-Knight, Inc.: *Comments On The Proposed CARB Alternative Fuel Specifications* by Steven Sokolsky
- California Natural Gas Vehicle Coalition: *NGV Commercial Fuel Spec* by Mike Eaves
- Engine Manufacturers Association: *Presentation at the CARB Workshop* by Roger Gault
- Gas Technology Institute: *Natural Gas Composition for NGVs* by William E. Liss
- Pacific Gas and Electric Company: *Comments to the CARB Draft Proposed Concept – CNG Motor Vehicle Specifications* by Tony Estrada
- Shell North America LPG: *Presentation at the CARB Workshop* by Edgar Kuipers
- SoCal Gas: *Comments on the CARB Draft Proposed Concept to Revise Motor Vehicle CNG Specifications* by Edwin Harte
- Southwest Research Institute: *Study on the Effect of Varying Fuel Composition on Fuel Supplied to Cummins and Detroit Diesel Gas Engines* by James Chiu
- Western States Petroleum Association and California Independence Petroleum Association: *Presentation at the CARB Workshop* by Tom Umenhofer

CARB staff presentation at *Public Meeting to Discuss Compressed Natural Gas (CNG) Motor Vehicle Fuel Specifications* held on May 19, 2010

CARB stakeholder presentations and comments at the *Public Meeting to Discuss Compressed Natural Gas (CNG) Fuel Specifications* held on May 19, 2010:

- SoCalGas/SDG&E Proposal to Revise the CARB Motor Vehicle Fuel Regulations May 19, 2010
- Steven Moore, San Diego Air Pollution Control District, Impacts of Potential Revisions to CNG Fuel Standard, May 19, 2010
- Comment Letters:
  - Tamara Rasberry, Sempra LNG to Floyd Vergara at CARB, June 3, 2010
    - Attachment 1. Proposed Specifications for Alternative Motor Vehicle Fuels
    - Attachment 2. Letter in support from Gunnar Lindstrom, Senior Manager AFV Sales & Marketing, American Honda Motor Co., Inc. to Edwin T. Harte, Low Emission Vehicle Program Manager, Southern California Gas Company, May 18, 2007
  - Les Bramburg, Sempra LNG to Floyd Vergara at CARB, June 3, 2010
  - Alfonso Baez, Senior Air Quality Engineer, South Coast Air Quality District to Floyd Vergara, CARB June 3, 2010
  - Roger T. Gault, Technical Director, Engine Manufacturers Association to Floyd Vergara, CARB, June 3, 2010
  - John D. Clements, Director of Transportation, Kings Canyon Unified to Floyd Vergara, CARB June 3, 2010
  - Charles Powars, Principal, St. Croix Research to Aubrey Sideco, CARB June 3, 2010
  - Michael L. Eaves, VP Technology Advancement, Clean Energy to Aubrey Sideco, CARB, June 7, 2010
  - Steven Moore, Senior Air Pollution Control Engineer, San Diego County Air Pollution Control District to Floyd Vergara, CARB, June 14, 2010. Enclosure: Cover Letter and Comments from SDCAPCD
  - Keith Iaia, Revolution CNG to Floyd Vergara, CARB, August 3, 2010
  - Jonathan Von Bogart, Central Coast Clean Cities Coalition Vice Chair to Floyd Vergara, CARB, November 22, 2010
  - Shaleen Clark, General Motors Power Train Fuels Group to CARB, June 3, 2010

*CARB Technology Assessment: Low Emission Natural Gas and Other Alternative Fuel Heavy-Duty Engines, September 2015*

- Comment 23: Letter to Daniel Hawelti, CARB Air Resources Engineer from Jerilyn Lopez Mendoza, SoCalGas
- Comment 24: Daniel K Carder et al, *In-Use Emissions Testing and Demonstration of On-Road Heavy –Duty Engines Final Report*, Contract No. 11611, July 2, 2014
- Comment 25: Steven Sokolsky et al, CALSTART CalHEAT Truck Research Center, *Heavy-Duty Truck and Bus Natural Gas Vehicle Technology Assessment*, SoCalGas Contract #5660028413, July 2014
- Comment 26: Wayne Miller et al, CE-CERT, *In-Use Emissions Testing and Demonstration of Retrofit Technology for Control of On-Road Heavy-Duty*

*Engines*, South Coast Air Quality Management District Contract #11612”  
July 29, 2014

- Comment 27: Geoff Jennings and Tom Brotherton, CalHEAT, *California Truck Inventory and Impact Study*, November 30, 2011

Letter to Mary Nichols, Chairman California Air Resources Board from Ryan Kenny, Clean Energy, Senior Policy, & Regulatory Affairs Advisor on CARB’s Technology Assessment: Low Emission Natural Gas and Other Alternative Fuel Heavy-Duty Engines, 2015

ACT Research *The Future of Natural Gas Engines in Heavy Duty Trucks: The Diesel of Tomorrow?* August 10, 2012

American Gas Association TIAX *Compressed Natural Gas Infrastructure – Final Report*

<https://www.aga.org/tiax-natural-gas-vehicle-market-analysis> accessed September 29, 2016

American Gas Association TIAX *Liquefied Natural Gas Infrastructure – Final Report*  
<https://www.aga.org/tiax-natural-gas-vehicle-market-analysis> accessed September 29, 2016

California Energy Commission Alternative and Renewable Fuel and Vehicle Technology Program, Paso Robles Waste & Recycle Compressed Natural Gas Fueling Facility Installation of a New Public Access CNG Fueling Station In Paso Robles Final Project Report CEC-600-2016-005, July 2016

California Public Utilities Commission Decision 06-09-039, issued September 21, 2006, “Phase 2 Order Addressing Infrastructure Adequacy & ...” Section IX. I. CARB CNG Specifications, page 163

Clean Energy Fuels v Cal PUC CA4/3 (filed 5/29/14, G048820)  
[courts.ca.gov/opinions/nonpub/G048820.PDF](https://courts.ca.gov/opinions/nonpub/G048820.PDF) accessed September 27, 2016

Cummins Westport ISL G Engine Product Bulletin

Cummins Westport on-line Fuel Quality Calculator  
<http://www.cumminswestport.com/fuel-quality-calculator> accessed September 22, 2016

EUROMOT MWM MN Programme download and readme.pdf file September 29, 2016  
[http://euromot.org/media\\_and\\_events/publications/mwm](http://euromot.org/media_and_events/publications/mwm) accessed September 22, 2016

Georgio Karavalakis et al, *Regulated, greenhouse gas, and particulate emissions from lean-burn and stoichiometric natural gas heavy-duty vehicles on different fuel compositions*, Fuel 175, 146-156 (2016)

Peterbilt press release *Peterbilt Introduces Cummins ISL-G Near Zero Emissions Engine For Models 567, 520, AND 320*, August 30, 2016.

<http://www.peterbilt.com/about/media/2016/510/> accessed September 27, 2016

Sierra Research Report No. SR2009-10-01 *Effects of Gas Composition on Emissions from Heavy-Duty Natural Gas Engines*, prepared for Southern California Gas Company, October 12, 2009

SoCalGas *Application to Establish a Compression Services Tariff*, A-11-11-011, filed November 3, 2011 with the California Public Utilities Commission available at [socalgas.com/regulatory/A1111011.shtml](http://socalgas.com/regulatory/A1111011.shtml) accessed September 28, 2016

SoCalGas *Schedule No. GO-BCUS Biogas Conditioning/Upgrading Services*, revision of CAL. P.U.C. SHEET NO> 51156-G filed January 22, 2015

<https://www.socalgas.com/for-your-business/power-generation/biogas-conditioning-upgrading> accessed 9/27/16

California Energy Commission (CEC) Energy Research and Development Division staff report *Natural Gas Research and Development 2014 Annual Report*, CEC-500-2014-102, October 2014

CEC Energy Research and Development Division staff report *Natural Gas Optimized Advanced Heavy Duty Engine Final Project Report*, CEC-500-2013-144, June 2012

CEC Energy Research and Development Division final staff report *2013 Natural Gas Issues, Trends, and Outlook*, CEC-200-2014-001-SF, July 2014

Tim Carmichael, California Natural Gas Vehicle Coalition, presentation at the West Coast Collaborative Technology Panel, September 14, 2014

Jonathan R. Camuzeaux et al, *Influence of Methane Emissions and Vehicle Efficiency on the Climate Implications of Heavy-Duty Natural Gas Trucks*, Environ. Sci. Technol. 49 (11). 6402-6410, 2015

*GAME CHANGER: Next Generation Heavy-Duty Natural Gas Engines Fueled by Renewable Natural Gas, Executive Summary*, technical white paper prepared by Galdstein, Neandross & Associates, funded by Agility fuel systems and six others, April 2016

Amy Myers Jaffe et al, STEPS White Paper: Exploring the Role of Natural Gas in U.S. Trucking (Revised Version), UCD\_ITS-RR-15-05, UC Davis Institute of Transportation Studies, publication date February 18, 2015

Margaret Smith, New West Technologies and John Gonzales, National Renewable Energy Laboratory, Costs Associated With Compressed Natural Gas Vehicle Fueling Infrastructure, US DOE EERE Clean Cities

These documents are available for public inspection at the Department of Food and Agriculture, Division of Measurement Standard, 6790 Florin-Perkins Road, Suite 100, Sacramento, CA 95828 from October 4, 2016 through October 18, 2016 between the hours of 8:00 a.m. to 4:30 p.m. Stakeholders and other interested parties may submit written comments on the added documents and information by mail, email, or FAX. The written comment period closes at 5:00 p.m. on October 18, 2016. The Department will consider only those comments received at the Department offices by that time. If comments are submitted by email, please include 'natural gas fuel regulation documents' in the subject line.

Submit comments to:

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