

Biography of Paul Wuebben



Paul Wuebben has served as the Clean Fuels Officer for the South Coast Air Quality Management District, Technology Advancement Office since 1993. He is responsible for technology policy development and commercialization activities related to alternative transportation fuels within the TAO's Mobile Source Division. He received his Master of City Planning degree from the Harvard University Graduate School of Design in 1976. He also completed course work at the Harvard School of Public Health as an EPA Fellow, and obtained a B.A. degree Magna Cum Laude, History/Urban Studies from UCLA in 1970. Since 1980 he has held several positions at AQMD:

- ❑ **Head of Mobile Source Control Planning** (1984).
- ❑ **Manager, Clean Fuels Program** within the Technology Advancement Office
- ❑ **Member, Methanol Task Force** (established by CARB, CEC and SCAQMD)
- ❑ **Chairman, SB 2297 (Rosenthal) Technical Review Committee** (*established to oversee the use of vehicle registration fees for alternative fuel research, development and demonstration*)
- ❑ **Chairman, California Electric Vehicle Task Force**, 1991 (*comprised of the ARB, CEC, SCAQMD, SCE, LADWP, SoCal Gas, PG&E to facilitate the development of electric vehicle technology*)
- ❑ **SCAQMD Representative, CA Smog Check Inspection Maintenance Review Committee** (1992 – 1996)
- ❑ **Alternate Representative on the AB 234 (Leonard) Legislative Advisory Board on Air Quality and Fuels** (*on behalf of the California Assembly Speaker Willie Brown*)
- ❑ **Transportation Energy Advisor to the Chairman, CARB**, Dr. Alan Lloyd (*on behalf of AQMD*)
- ❑ Primary author, "AB 2076 Report to the Legislature: Strategies to Reduce Petroleum Dependence"
- ❑ **Alternative Fuels Advisor to CalEPA Secretary** Dr. Alan Lloyd, 2005 - 2006 (*on behalf of SCAQMD*)
- ❑ Member, Western Governors Association Transportation Fuels for the Future Biofuels Task Force
- ❑ **Member, Refinery Production Advisory Working Group, CARB Phase 3 Gasoline Rulemaking**
- ❑ **Member, AB 769 Legislative Advisory Panel on Diesel Fuel convened by CARB**

Mr. Wuebben played a key role in the development of low sulfur (15 ppm) diesel regulations enacted by the AQMD Board in 2000. He has represented the SCAQMD in testimony before the U.S. Congress, the California Legislature, the CPUC, CARB, and CEC. He has served on Refinery Production and Emissions Inventory Working Groups which provided guidance to the ARB on revisions to the Predictive Model governing gasoline formulation requirements adopted by the ARB in June, 2007. He was a regular guest of Richard Saxton for a live viewer call-in segment on KWHY TV Channel 22 from 1993 through 2000.

Other Activities:

- Former Editorial Advisor to *Earthword - The Journal of Environmental and Social Responsibility*.
- World Health Organization Fellowship, awarded in 1984.
- Alternative fuels consultant on loan to the following organizations:
 - Nomura Research Institute in Japan (1988)
 - Ministry of Environment, Province of British Columbia, Canada (1992 & 1993)
- Member, International Organizing Committee, International Symposium on Alcohol Fuels (ISAF) since 1988
- Numerous conference presentations, including those organized by the Society of Automotive Engineers, National Science Foundation, National Petroleum Refiners Association, American Petroleum Institute, Cambridge Energy Research Associates, Power Gen Renewable Fuels, Calstart-Weststart, Air and Waste Management Association, Windsor Workshop on Alternative Fuels, , California Climate Action Registry, Natural Gas Vehicle Coalition, US DOE Clean Cities, ISAF, Transportation Research Board, and SCAQMD Technology Forums.
- Guest Lecturer on alternative fuels at:
 - ◆ Stanford University, Graduate School of Business
 - ◆ University of California, Irvine
 - ◆ University of Southern California
 - ◆ McMaster University in Ontario, Canada
 - ◆ Monterey Institute of Technology, Mexico
 - ◆ U.C.L.A Extension

Selected Peer Reviewed Publications and Presentations of Paul Wuebben:

“The Future of Electric Vehicles in Meeting the Air Quality Challenges in Southern California”, with Alan C. Lloyd and Jonathan Leonard, Society of Automotive Engineers, International Congress and Exposition, February 26 – March 2, 1990, SAE900580

“Electric Vehicles and Future Air Quality in the Los Angeles Basin”, with Alan C. Lloyd and Jonathan Leonard, Air and Waste Management Association, 84th Annual Meeting and Exhibition, Vancouver, BC, June 16 – 21, 1991.

“Gasoline Tolerant Methanol Fueled Ride Share Van”, with Wayne McMahon (CARB), Robert Nankee (Chrysler) and Richard Pefley (Alcohol Energy Systems), Society of Automotive Engineers, Future Transportation Technology Conference & Exposition, Portland, OR, August 1991, SAE 911630

“The South Coast Air Quality Management District’s Clean Fuels Program: Barriers, Issues and Opportunities”, Air and Waste Management Association, Transactions, PM10 Standards and Non-traditional Particulate Source Controls, Volume II, ISBN 0-923204-09-1, November, 1992

“Reinventing Gasoline”, Testimony to U.S. Congress, House Energy and Commerce Subcommittee on Energy and Power, Philip Sharp Chairman, Oct. 7, 1993, ISBN 0-16-044183-8, OSTI # 6696507, Government Printing Office, Jan. 1994.

http://www.osti.gov/energycitations/product.biblio.jsp?query_id=1&page=0&osti_id=6696507

“Hertz Rent-a-Car Experience with Flexible Fuel Vehicle Daily Rentals”, with Steve Linsteadt, Hertz Corp., International Symposium on Alcohol Fuels, Sun City, South Africa, April 14 – 17, 1996.

“The Permitting and Commercialization of Landfill Gas-Based Methanol Production Facilities”, with Shalini George, Larry Watkins and Alan Bonny”, in Applied Biochemistry and Biotechnology, 17th Symposium on Biotechnology for Fuels and Chemicals, edited by Charles Wyman and Brian Davison, Humana Press, Volumes 57/58, Spring 1996, ISSN: 0273-2289,

<http://www.springerlink.com/content/04u0t04700x03g1w/>

“Reducing California’s Petroleum Dependence”, principal author, with Chuck Shulock, Eileen Tuck and Tom Cackette (CARB), Gary Bemis, Susan Brown, Dan Fong and Sherry Stoner (CEC), published by CARB and CEC, P-600-03-005F, August 2003 http://www.energy.ca.gov/reports/2003-08-14_600-03-005.PDF

“Renewable Technologies: Gaps and Barriers”, to Power Gen Renewable Energy Conference, Las Vegas, NV, March 2, 2005, <http://pgre05.events.pennnet.com/content.cfm?Navid=2447&Language>

“Stakeholder influence on GHG Management”, session chair, GHG Registries and Competing in a GHG constrained World, April 18-20, 2005, Fairmont Hotel, Berkeley, CA, <http://www.climateregistry.org/resources/docs/events/past-conference/2005agenda.pdf>

“Environmental Technologies”, United Nations Earth Summit II, Santa Monica, CA, June 29, 2005, <https://www.arashi.com/pipermail/scpg/2002q2/001033.html>

“Air Quality and Alcohol Fuels: Challenges and Opportunities”, International Symposium on Alcohol Fuels XV. San Diego, CA, Sept. 26 – 28, 2005,
<http://www.eri.ucr.edu/ISAFXVCD/ISAFXVPP/AiQAFCO.pdf>

“Oxygenate Issues and Options”, presented at SCAQMD Ethanol Forum and Technical Roundtable, June 15, 2006, http://www.aqmd.gov/tao/ConferencesWorkshops/06_EthanolWS/11-PaulWuebben.pdf

“Air Quality Impacts from Ethanol Use”, presented at SCAQMD Ozone Forum and Technical Roundtable, Oct. 31, 2006, <http://airnet.aqmd.gov/>

“Alternative Fuels for Mobile Sources”, session chair for Air & Waste Management conference, Goods Movement in California: Challenges and Solutions, co-sponsored by SCAQMD and SCAG, San Diego, CA, Nov. 2-3, 2006, http://www.wecweb.org/Local_Events/AWMA_Conference_Program.pdf

“Biodiesel: Background and SCAQMD Perspective”, presented at SCAQMD Biodiesel Forum and Technical Roundtable, Nov. 7, 2006, <http://airnet.aqmd.gov/> or <http://www.biodieselnow.com/forums/t/8843.aspx>

“Overview of Air Quality and the Potential Role for Cellulosic Ethanol”, Cellulosic Ethanol Forum, SCAQMD, February 15, 2007,
<http://www.aqmd.gov/tao/ConferencesWorkshops/CellulosicEthanolForum/WuebbenSlides.pdf>

“Future Alternative Fuel Demand”, session chair, Air and Waste Management Association, Integration of Future Energy Demand with the California Global Warming Solutions Act, co-sponsored by South Coast AQMD, California Council for Economic and Environmental Balance, Southern California Air Quality Alliance, Southern California Society for Risk Analysis and Los Angeles Chapter of Women’s Environmental Council, Oct. 18 -19, 2007, Glendale Hilton

“SCAQMD Perspective on Fuel Ethanol”, to DOE Western Clean Cities Peer Review Meeting, June 24, 2008, <http://www.netl.doe.gov/publications/proceedings/08/clean-cities-ca/pdfs/6.24Tues/Wuebben%20-%20Local%20E85%20Policies%20.pdf>

“Electrochemical Energy Storage: Key Policy, Technology and Research Drivers”, presented to UCLA Institute of Technology Advancement, UCLA Faculty Center, April 22, 2009,
http://www.ita.ucla.edu/news/Wuebben_042209.pdf

“Biofuels: Next Generation Prospects, Barriers and Opportunities”, presented at Green Tech Connect Forum, sponsored by SCAQMD, Pasadena Convention Center, Aug. 4, 2009,
<http://www.threesquaresinc.com/gtt/wp-content/uploads/2009/04/paulwuebben.pdf>

“Electricity as a Low Carbon Fuel”, presented at Plug-in 2009 Conference, August 12, 2009, Long Beach, CA, http://phev.ucdavis.edu/plugin2009/pdfs/P_Wuebben_3B.pdf

which contributes to the “life cycle” emissions of a particular fuel pathway. Questions regarding indirect effects require particularly careful judgments about boundary assumptions, time frames and discount accounting principles.

I know I can make a meaningful contribution to the Working Group’s deliberation. My diverse alternative fuels and regulatory experience will be of direct value to help the Working Group retain a pragmatic sense of what is achievable while retaining as much analytical and transparent rigor as possible. The craft of the Working Group will be as much art as science. I believe I bring skills and judgment to help in both respects, without having any commercial ties to the outcome.

Thank you for your consideration of this application.

Please return to:

Ms. Manisha Singh, Air Pollution Specialist
Alternative Fuels Section
Air Resources Board
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