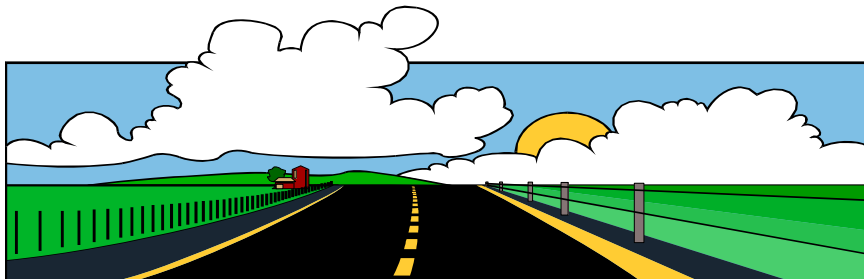


Clean Technologies Forum



September / October 2007

CARB In-Use Off-Road Rule

On July 26, 2007 Air Resources Board (ARB) unanimously voted to adopt the proposed in-use off-road diesel vehicle regulation, along with some additional modifications. The regulation will significantly reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions from the nearly 180,000 existing off-road diesel vehicles in California by requiring fleet owners to accelerate turnover to cleaner engines and install exhaust retrofits. Implementation of the regulation is expected to prevent approximately 4,000 premature deaths through the year 2030.

For more information call the diesel vehicle information hotline at (866) 6-DIESEL or (866) 634-3735 or visit: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

Plug-IN Hybrid School Bus

After much anticipation, California has finally received its first Plug-In Hybrid School Bus in Napa Valley on August 10, 2007. Developed by Advanced Energy, these buses are 40% more fuel efficient offering 12 miles per gallon as opposed to the conventional bus rated at 7 miles per gallon. This PHEV's hybrid technology is similar to that of the Toyota Prius but with the addition of a more powerful Lithium-Ion battery. When driven on the electric battery PHEV buses have zero emissions. Overall, these buses will reduce nitrogen oxide emissions by 60%, particulate matter emission by 90%, and carbon dioxide emissions by 30%. Each bus is \$225,000, but the energy saved and the emissions reduced help offset the additional cost.

PG&E AG-ICE Program Closed! Options Still Available

The Pacific Gas & Electric (PG&E) AG-ICE program is closed to new applicants effective August 1, 2007. However, new customers are still eligible for low cost electricity. The PG&E AG-4C rate structure offers electricity for as low as \$0.116/kW-hr or \$1.60/gallon diesel-equivalent for farmers willing to use power outside of peak summer hours (Monday-Friday 12:00 PM - 6:00 PM) while avoiding large winter demand charges. Even without the AG-ICE program there is still an economic advantage for farmers willing to avoid electrical demand during summer weekday between noon - 6 p.m. under the AG-4C plan.

Off-road diesel in CA has risen steadily about 7% annually for the last 10 years, while PG&E rates have risen annually at or below 7% since deregulation, so the risk of increasing cost is nearly equal for both fuels.

The Carl Moyer program will fund most of the cost involved with swapping your old diesel pump engines for new electric motors and electric panels. The Carl Moyer program has already helped to fund 297 diesel to electric ag-pump conversions in the Sacramento Air Basin. Please find our application on-line at www.airquality.org/mobile/moyer or call us today at (916)874-4800 or 1-800-880-9025.

New Emission Standards being met with Diesel Emission Technology

NOx emissions from diesel engines continue to be regulated by the EPA. The new standard for 2007 diesel engines is 1.2 grams per brake hp hour. This provides a reduction in diesel emissions of 90% from the 2004 NOx standard of 2 grams per brake hp hour. The 2010 standards will be even more stringent, reducing the maximum NOx emissions levels to 0.2 grams per brake hp hour.

In an effort to meet these standards the Chemical Engineering Division of Argonne National Laboratory has been researching the use of cerium oxide coating on NOx catalysts. The coating converts NOx into N2. The conversion eliminates the need for other additives such as urea as a reductant in the reaction. To make this technology viable for commercial use, further work needs to be done to improve the catalysts performance. Under normal diesel exhaust temperatures the NOx removal efficiency has been boosted to as much as 95%-100%.

On-board Fuel Storage Cylinder Inspection Safety Training

Presented by: the Natural Gas Vehicle Institute (NGVi)
September 18-19 in Las Vegas.

The U.S. DOT states that CNG on-board fuel storage containers should be inspected for damage or deterioration every 36 months or 36,000 miles, whichever comes first. Completing a CSA NGV Fuel Storage Cylinder Inspection Safety Training provides you with all the training needed to perform these required inspections for your company. CSA America's certification exam is offered at the end of each of the training sessions. Passing the CSA exam further insures that you meet the qualifications to perform cylinder inspections. For more information or to register, go to www.ngvi.com or call 1-800-510-6484.

Scholarship monies are available that will pay for the training and CSA exam. For more info, go to:
<http://www.cleanvehicle.org/technology/cylinder.shtml#5>

4th Annual Advanced Stationary Reciprocating Engines Conference

Please join the California Energy Commission and Industry co-sponsors for this year's conference that will approach stationary reciprocating engines from both technical and policy perspectives, with an emphasis on issues specific to California, and what one needs to know to effectively do business in the state. This year's conference will include topics such as alternative fuels and greenhouse gas emissions to put additional emphasis on low-emissions and high-efficiency topics compared to those dealt with in previous conferences.

September 18 - 19, 2007

Location: Southern California Gas Company's Energy Resources Center, 9240 E. Firestone Boulevard, Downey, CA, 90241.

For more information:
<http://www.energetics.com/recips07/>

The Clean Technologies Forum is brought to you by:



Co-sponsored by:



Sacramento Regional Clean Cities Coalition

THE CLEANER AIR PARTNERSHIP

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Save the Date

Biofuels Drive Economic Solutions Forum

Date: September 20

Location: Las Vegas NV

Sign-up at www.afvi.org

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